The Architectural FORUM Magazine of Building

UNIVERSITY OF HAWAII

JUL 13 1948



June 1948

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The Architectural FORUM

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VOLUME 88, NUMBER 6

IDEA HOUSE FEATURES Jumate at " your tingertips Servel all-Year Air Conditioning provides carefree comfort through every season dirt, and irritating pollen, bringing welcome relief Co-sponsored by the Walker Art Center in Minneapolis asthma and hay fever sufferers. Furniture and dra

and the Home Institute of the Northwestern National Bank, Idea House II is one of a series built to demonstrate advanced ideas in home planning and equipment. It features one of the most important developments in year-round comfort . . . "climate at your fingertips" provided by Servel All-Year Air Conditioning.

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Cools in summer, heats in winter

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During the winter months, the same comp Servel unit supplies plenty of clean, even warr Just the right amount of moisture is added for comi There are no "layers" of hot or cold air. And in betw seasons, the Servel All-Year Air Conditioner circul cleaned air throughout the house at the prevailing door temperatures.

Operating costs are low

Yet with all these benefits, the Servel All-Year Conditioner costs surprisingly little to operate. M tenance costs are low, too. Like the famous Se Gas Refrigerator, the Servel All - Year Air Conditi hasn't a single moving part in its refrigeration sys to make noise, to wear or need repair.

The Minneapolis Idea House II dramatically illusites how Servel All-Year Air Conditioning can help u bring a "new quality of living" the year-round to y home you may design or build. What's more, ien you plan your new houses around the Servel it, you'll find it possible to make many design innotions and construction economies.

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A joint announcement by Revere Copper and Brass Incorporated



HOUSTON BUILDS THE FIRST HOUSE FOR THE REVERE QUALITY HOUSE INSTITUTE

THE completion of the first house under the auspices of the Revere Quality House Institute is an important event because it represents the successful beginning of the Quality House program. Here we see demonstrated the results of a new type of cooperation between architect and builder, a cooperation designed to benefit not only them, but also the home-buying public.

It is confidently expected that the publicity being put back of the program will create a different kind of market for homes. That market will look for not just a place to live in, but a structure possessing identifiable quality.

Thus architects and builders will find new opportunities to turn out better homes, homes that are fully representative of their talents and skills, homes they can sell on a profitable basis because the public will demand them.

As time passes and more and more houses are built according to Institute standards in various parts of the country, you will find an ever-increasing public demand for the best you can do, and an eagerness to buy quality.

Revere joins with its progressive co-sponsor, The Architectural Forum, in saluting the first Revere Quality House, in Houston, Texas.

THE SIGN OF QUALITY. This sign and seal will ide tify houses whose principles, standards a specifications meet the requirements of a Revere Quality House Institute. It is the buye assurance that though the price may be me erate, the value is high. All Institute hou are independently designed by local archite with regard to local conditions, and are erec by local builders under the constant sup vision of the designers.



Floor Plan of "The House of Expanding Rooms." F area, 1060 square feet, plus 210 square feet under for carport.

and The Architectural Forum



"THE HOUSE OF EXPANDING ROOMS." First house to be completed under the auspices of the Revere Quality House Institute. Location: Wakefield Drive at Dubarry Lane, Oak Forest Addition, Houston, Texas. Open for inspection in June. Cost, about \$10,000 exclusive of land.



LAN A. Here we see the folding partitions pushed ack, making one room out of living, dining and recrea-ion space.

REE! The activities of the Institute are publicized nation-wide, through advertisements nd publicity releases. In addition, there are free ooklets.

"A Home of Our Own" describes the aims and urposes of the Institute. This is now ready. "The House of Expanding Rooms" gives the de-ails of the house in Houston. Now in preparation.

Ready shortly.

We shall be glad to send you a copy of each of ese. Be sure to address:

REVERE QUALITY HOUSE INSTITUTE P.O. Box 1134, Grand Central Station, New York 17, N.Y.



PLAN B. And here three rooms have been made out of one, for three different uses, meeting changing family

FROM THE GROUND UP

· Foundation is a waterproof concrete slab, reinforced.

• Framing is the conventional wood stud and rafter construction common to all parts of the country.

• Exterior walls: brick, Mexican adobe type; redwood siding; cedar shingles.

 Privacy: no bedroom windows open on adjacent property. Dining area windows looking on street are high. Masonry wall on street side of living room shields from street. Picture windows in living room look into garden area. Extended wall and sliding gate provide privacy for carport, service, play and laundry areas.

· Built-in masonry and copper planting boxes are provided for landscaping to blend house to ground. There is a planting garden niche in living room brick wall.

· Windows are casements, metal framed. At certain points door and window glass is set in movable strips, like venetian blinds. 100% ventilation is provided. Large attic fan draws in fresh outdoor air when desired for cooling.

· Roof: 16-oz. standing seam Copper is not only handsome but will last as long as the house. Eaves have sufficient overhang to exclude direct rays of the summer sun, and also rain except in high winds. Since you can leave these sheltered windows open, summer showers will have their full cooling effect.

· Insulation: all exterior walls and roof insulated.

• Heating: thermostatically-controlled gas-fired warm air furnace installed in attic, with ducts to all rooms.

· Plumbing: Copper Water Tube throughout, for economy of installation and permanent, rust-free, full-flowing service. Includes service lines from street and all interior lines.



They created "The House of Expanding Rooms": Fred J. MacKie, Jr. and Karl Kamrath, MacKie & Kamrath, Architects, 2713 Ferndale Place, Houston 6, Texas; Frank W. Sharp, Builder, 2202 Rosslyn Road, Houston 8, Texas.



NEW KELVINATORS...all one width...



MAKE PLANNING EASIER THAN EVER!

Now You Can Choose from 5 New Kelvinator Refrigerators all 31¼" Wide...4 New Kelvinator Ranges and a Home Freezer, all 39" wide.

Yes! The *identical widths* of Kelvinator's 5 new 1948 Refrigerators plus 4 Ranges and a Home Freezer, all *one width*, give you a ready reference for easy kitchen planning. And when you plan this easy, Kelvinator way, your clients can choose *any combination* of top-quality Kelvinators within their budgets without a change in floor plans!

Ultimate in efficiency...Kelvinator's new kind of refrigerator is refrigerated from Top-To-Bottom. It provides $8\frac{1}{2}$ cu. ft. within the shelf area, plus approximately 2 cu. ft. used by the new refrigerated Fruit Freshener. Takes no more floor-space than many refrigerators of smaller capacity. Companion-piece...Kelvinator's "Automatic Cook" Electric Range, now with all controls on the new back panel...easy to see and use. "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! And there's the new 6 cu. ft., Space-Saver Home Freezer to give any family deluxe eating with economy.





For Smaller Kitchens ... "Space-Saver" Package gives Small Kitchens Big-Kitchen Advantages!

"Space-Saver" Refrigerator, 24" wide, is full 6 cu. ft.-holds 50% more food than the prewar model of identical outside dimensions. Companion range is only 21" wide-new design permits installation flush against wall. Features a full-size oven...three new, Electric-Fast, tilt-up surface units-one 8", two 6". Kelvinator quality throughout.

> For further information, write Kelvinator Division, Nash-Kelvinator Corporation, Detroit 32, Michigan.

NEWS

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BUILDING MONTH. As the cold gray cloud over Middle Europe momentarily lightened, the U. S. shook off some of its fear of the future and began to believe in the substantial blessing of the now. Industry was running wide open: manufacturers generally seemed to have surmonted the uncertainties washed up by the commodity price break last February; consumer durables were at peak levels, leading the general rise. And, while many an architect still complained bitterly of deferred projects, this unalterable statistical fact loomed above doleful individual reports: customers are crowding into the Building market as never before.

Nobody could deny that the price of building was shunting an undetermined number of customers out of the market. But a contrariwise and, for the present at least, stronger

force was pushing others in. The situation could be described briefly: the number of customers who can afford to pay the current price of building is still decisively weightier than the number who cannot.

That the relationship between these two forces will not be radically altered this year is virtually a certainty. There were many who believed it would not be altered in the foreseeable future.

One firm element of support for the building market was apparent in the new Federal Reserve Board survey of consumer spending plans. Some 2.6 million families told Board interrogators they plan to buy houses this year. Compared to the 3.2 million who showed as house customers in the Board survey a year ago, this figure measured some shrinkage in the big housebuilding backlog. But it did promise demand strong enough to keep housebuilding at its present record level for at least two years. The survey also showed that these customers have begun to adjust to the current price of housebuilding. On an average, they said they hope to pay about \$7,500-as compared to the more optimistic \$6,400 mentioned last year.

Building's problem was still the same: to sharpen its pencils, eagle-eye its methods, watchdog its price. To drift with the stillrising inflationary tide would obviously court disaster. It would precipitate the sharp reversal in the relation between the purchasing power of Building's customers (record corporate and individual earnings) and the price of Building's product which alone can bust the Boom.

There were some impressive signs that Building was no longer drifting with the price tide, but had started to row briskly in the opposite direction. Customers especially for small commercial construction—were reporting a surprising number of bids close to contractor's cost. A growing number of contractors were facing the fact that working closer to the cost line was a way to keep organizations geared to volume building in steady operation.

"Building costs have stopped going up," said Dow Service vice-president Myron L. Matthews flatly. Matthews told State Housing Commissioner Herman Stichman's Housing Institute in New York that the "general situation in 91 cities east of the Mississippi River is less acute than it has been at any time since V-J day. The increases have lost their zip, the average increase for the area amounting to a modest 3 per cent. Many of these cities show 'no change' and others show reductions. "Were the world political situation to maintain the status quo of March, 1948 it would be reasonable to expect building costs to stay about where they now are throughout the 1948 building season."

In figuring current building cost, the Dow spring survey credits 7 per cent better production, and says this improvement is due to four factors: 1) a more even flow of materials and equipment to the job site; 2) reduced need to substitute upgraded, uppriced and unfamiliar materials and equipment for standard ones; 3) reduction in stand-by time; 4) better production per man.

WASHINGTON

TALKED TO DEATH T-E-W bill will probably not survive

As the big political guns began booming offstage, the poor old T-E-W housing bill was slowly being talked to death. It seemed well-nigh impossible that the mountainous forces of legislation would bring forth even a mouse of a housing bill before adjournment.

There was one small chance: in an election year, Republicans don't want to be responsible for failure to make a single legislative gesture on this hot domestic problem. Some said that Senator Taft, to save his bill, would agree to House-dictated cuts in its public housing section.

Others argued that the whole bill ought to be cut into its various parts (credit aid, public housing, slum clearance) and that each of these ought to be restudied in the light of the present rate of building activity and the many inflationary pressures on the building market.

HOUSES FOR SOLDIERS

Congressmen thought the generals could get along on a good deal less

One whacking big building job moved closer to a start as the House passed a bill calling for \$207 million worth of Army and Air Force construction. A companion bill, which will put up \$209 worth of buildings for the Navy, was about ready to be presented on the House floor.

Fifty per cent of the Army and Air Force building money will go for housing—lack of which has been the biggest block to recruiting key noncom personnel, who don't want to leave their families. The rest will be spent for new bases both at home and abroad, including secret air bases in Alaska and Newfoundland and a huge heavy bomber base at Rapid City, S. D.

The military building money was held up while budget-conscious Representatives argued over how big a house a general should be allowed. The bill called for generals' houses costing up to \$27,000. Most thought this too much, and a floor amendment said the generals will have to get along with 1,080 sq. ft. Figuring on the \$13 per sq. ft. cost estimate given them by military construction estimates, House members said this would mean \$14,040 houses for generals—and plenty big enough.

LIFE-AND-DEATH

Steel allocators say no to steel house, but will take another look

If some key Congressmen said privately that steel shortage would pinch enough by fall to bring steel controls, most optimistically thought that the voluntary allocation program run by the Commerce Department would do the job. But last month brought a sample of the life-and-death power the allocators may be obliged to wield. In the first scramble for steel under the voluntary program, the infant steel-house industry was a near victim.

The steel-house producers had asked for 58,000 tons of steel—enough to make 7,590 units this year. But the Steel Products Advisory Committee (its members: steel company vice-presidents in charge of sales and distribution) said no. The steelmen said it was not reasonable to try to make all-steel houses in the teeth of a world steel shortage. They pointed out that all-steel houses use from 4 to $9\frac{1}{2}$ tons per unit, while conventional houses require only about $1\frac{1}{2}$ tons.

Foremost among the steel-house makers whose future hangs on the Committee's decision stood Lustron's Carl Strandlund, with some \$18 million of government and private money staked on production this year (see FORUM, May '48). Back of Lustron stood veterans' groups, Congressmen, the Housing and Home Finance Agency, the Commerce Department itself. They turned on the heat. It was enough to make the steelmen take a second look.

There are two Advisory Committees in the vital steel industry. The Steel Products Advisory Committee is the "junior" of the two. Its vice-president members study allocation requests and send their recommendations on to the Steel Producers Advisory Committee, a "senior" group composed entirely of steel company presidents. The presidents had okayed the vice-presidents' first two decisions: 1) allocation of 160,000 tons of steel to the Atomic Energy Commission; 2) allocation of 212,000 tons for production of warm air heating equipment for houses. But when the vicepresidents turned down all-steel houses, the presidents inclined an ear to the Commerceled protest. They did not overrule their vicepresidents. They did ask them to take another look.

In late May the fate of the all-steel house was still unsettled. Washington insiders were betting that Strandlund and others would get at least some of the steel for which they are hotly contesting. LABOR

OPEN SHOP

Jersey newcomer picks a fight with the toughest building locals in U. S.

Like many another Navy man up and down the world, Seabee Commander Arthur H. Padula looked forward to his hometown newspaper. He was rebuilding factories in Seoul, Korea when he slit open the copy of the Newark News that settled his postwar future. In it he read what the Planning Commission had to say about Newark: 44,000 of its houses were not fit to live in, 38,000 of them lacked private baths and toilets, 41 per cent of the whole city had been built before 1900. Right then Padula decided that his particular postwar corner meant doing something about all this.

He had done some housebuilding before the war, his father had spent a lifetime building in the Newark area, and he had learned a lot about speed and system in the Seabees. But it was three more years before he got a chance to start.

The Big Idea. Two months after his discharge in 1947, Padula went to a city auction. The city was offering a 51 acre tract with the condition that the buyer build veterans' housing. Padula bid \$165,000 and paid cash. An hour later he broke ground at the site.

He intended to build the biggest veterans' development in New Jersey: a \$12 million job to house 2,400 families. His plans called for high-grade construction: two- and four-family brick-veneered units, with gas heat, steel beams, aluminum casement windows and door frames, copper leaders and gutters, fluorescent lighting in the kitchen. State housing officials called it the best house construction in the state.

By last week, 58 buildings were finished and 112 families had moved into them. But 23 half-finished buildings were standing idle. Out in front marched the biggest picket line seen in Jersey in many a month. Nineteen AFL locals had massed their men against Padula's threat of an "open shop."

The Big Stick. The trouble had started before the foundations were in. First it was jurisdictional strikes: The carpenters refused to let the laborers touch lumber—even for stacking. The sheet metal workers, who worked an hour longer than the carpenters, couldn't cut a hole in the wall after the carpenters went home.

Then the unions fought on whether an automatic skill saw would be used to precut lumber. Padula won. The next fight was whether all trades would work a uniform day and week. Padula lost. But he fought for continuous use of concrete forms and won. He insisted on the use of automatic jack scaffolds, and won again.

Then the unions laid down their demand for a 40 cent hourly wage raise, all around. Padula threw up his hands. The wage boosts, he said, would add \$1,200 to the cost of each 2-family building—or a staggering \$1,250,000 to the cost of the rest of the job. Padula's lenders refused to boost the size of the mortgage—or advance any more construction money. Back of the tough talk of. the tough Jersey locals, Padula saw something that looked frighteningly like a shut-down. Fighting mad, he called the union men together and fired them. He would, he said, establish an open shop.

As Padula's "open shop" made headlines, many a builder—and many a union boss wondered if this would turn out to be what the Taft-Hartley Act augured. For decades, the building trades had been a well-nigh impregnable rampart of labor's bloodily con-

The Newspaper PM, Inc.



PADULA: dream's end

tested, bloodily defended closed shop. Could Padula invoke Taft-Hartley bans on the closed shop and the secondary boycott, break the iron grip of the most powerful building locals in the U. S.?

The Essex County Building Trades Council wields the club of labor monopoly with the strong arm of Boss Hague's Democratic political machine. For the Boss, the Council has always been ready to furnish demonstrations, parades, election workers—or whatever might be required. In return, the Boss's omnipotent nod has sent contracts to the men who played ball with the Council. Only once had the power of the Boss failed to work: Hague hadn't saved Council boss Joseph Fay from a Sing Sing sentence—but then Fay had made the mistake of trying to extend his extortion racket east of the Hudson.

Years ago the Associated Contractors of Essex County had learned it was good business —and good politics—to deal with the Council. Like other big building contractors who had learned to live with labor, they had no real objection. Council-enforced wage rates merely standardized an important element in competitive bidding; otherwise, they were passed on in cost-plus contracts. It was the customer who paid.

The contractors were doing no cheering for Padula; they had already signed up for the 40 cent boosts. They wanted no all-out war with the Council—at least, not until they thought they could win. They remembered when jurisdictional strikes had stalled \$59 mil-

lion worth of construction last fall-the Standard Oil plant, the Mercury-Ford plant, the Bell Telephone laboratory among others.

Leading the picket line himself, Council president Whitey Holzlohner shook hands with the non-union men who one by one drifted off Padula's job. He regarded Padula as an innocent upstart. Picketing had been enough to bring this "open shop" close to a standstill. And he could get a lot tougher-if he had to.

By month's end, it looked as if he might not have to. Nor did Padula's fight seem likely to precipitate a Taft-Hartley test on the closed shop. Padula had not, as he threatened, gone to court. The state mediation board had intervened, hoping to make peace. Nobody-not even Padula-thought Essex County was the place for a showdown on the closed shop.

DESIGN

PRESCRIPTION

A.I.A. thinks it can help reduce frustration in modern living.

Where do most U.S. citizens meet the law? In the traffic courts, says the American Institute of Architects, adding that these are usually dingy and makeshift-not at all calculated to overwhelm the offender with a sense of the dignity and justice of our government.

The A.I.A. thinks that not only traffic courts, but most public buildings need to be redesigned, and has set up a study committee to help out. "We do not hope to present civic planners with stock plans," said the new committee's chairman, architect James W. Kideney, Buffalo, "but rather with a check list and analysis of the functions which should be common to most buildings housing local governments. Such buildings will vary with the character of each American community." Assisting Kideney are Harvard professor Walter F. Bogner and architect Perry C. Smith.

The committee believes that lack of planning in government buildings is responsible for considerable "discontent and frustration" and intends to make it easy as pie to find your way to the marriage license bureau, for instance.

ARCHITECTURE AS A DRIVING FORCE

Extract from the Current Work Bulletin of the Architectural League of N.Y.

"Peter Freuchen, Explorer-Luncheon-March 25, 1948. Viggo Rambusch, Chairman.

"This was a delightful luncheon meeting by the famed Arctic explorer who lived in the Arctic and gave us to understand that all is not as difficult as we would expect if you have a sense of humor and a capacity of living with few if any neighbors. The luncheon terminated with a few Eskimo chants."



DECLINE OF THE TRIPLEX

Some gold-plated tenants (see cuts) sought the aid of the rent control law last month. New York's River House, which press agents call the "world's most luxurious apartment building," was about to succumb to a trend that had already hit some less famous buildings. Tishman Realty & Construction Co. had bought the 26-story building for an unmentioned price, planned to cut up its 79 lavish duplex apartments to make twice as many.

Albert L. Waks





Finn

rhom.

photo

Life

Photo

NBC

INP

Writer Quentin Reynolds

Cornelius Vanderbilt Whitney

NRC's Niles Trammel

A. & P.'s George L. Hartford

River House probably deserves its title. To claim it, another developer would have to beat River House's swimming pool, ballroom, 40 ft. drawing rooms and private yacht landing. Few would care to claim River House's doleful financial history. Built on the brink of the Bust at a cost of \$27.23 per sq. ft., the development was planned as a cooperative, with units to be sold at prices ranging from \$40,000 to \$275,000 (for a triplex penthouse). Only a handful were sold before the era's high tide of bankruptcy washed out this \$10 million investment. Tishman bought the property from trustees. Among them: the RFC, which had taken over from the once-famed Prudence Co.

Unperturbed by the stop-eviction fight organized by these well-heeled tenants, Tishman pointed to a statute permitting eviction where a building owner intends to provide more apartments. Said Tishman politely: "We will, of course, offer them room in the new four- to six-room units."

Maj. Gen. Wm. Donovan







ROBERT TAFT, Ohio's Senator and co-author of the T-E-W housing bill, was born in a big Victorian house overlooking the Ohio river. His 15-room Greek Revival house (above) is on 60acre "Sky Farm" near Cincinnati.

Here's what the

Barring some unforeseeable political phenomenon like the nomination of General Eisenhower, somewhere among these familiar faces is the next President of the U. S. What this man thinks about housebuilding will be the most influential opinion in the nation over the next four years. But since the next President is very likely to be a Republican, with a majority in Congress, the opinions expressed here by the six Republican aspirants have importance even beyond that. As party leaders, these six men will write the party platform, set party policy and dictate the character of housing legislation.



ARTHUR VANDENBERG, Michigan's Senator and Republican foreign policy leader, is a former newspaper publisher. He was born in a modest frame house in Grand Rapids, now calls this biggish brick and stucco house in the same city home.







THOMAS DEWEY, Governor of New York, was born over a general store in Owosso, Mich. A lawyer by profession, he now spends weekends at this unostentatious country house at Pawling, a 486-acre farm 50 miles from New York.



HAROLD STASSEN, a lawyer, was three times elected Governor of Minnesota. Born on a 40-acre truck farm, he now lives in this red brick, 8-room house in South St. Paul, which he bought for \$12,500 in 1938.



EARL WARREN, son of a Southern Pacific carbuilder, was born in a dingy 5-room house in Los Angeles. A lawyer twice elected Governor of California, he lives in Sacramento's gingerbread governor's mansion.





JOSEPH MARTIN, Speaker of the House, is also an insurance broker and newspaper owner. Born in North Attleboro, Mass, near the blacksmith shop where his father worked, he owns this house in the same town.



PRESIDENT HARRY TRUMAN was born in a white cottage in Lamar, Mo. He entered public life as a county judge. When he leaves it, he will likely return to his own home in Independence, whose filigreed cornice speaks its 80-years.





HENRY WALLACE, former vicepresident of the U. S., was born in a modest Iowa farmhouse. A onetime farm paper editor who started his public career as Secretary of Agriculture, he now breeds chickens on this Westchester farm.

Photos: AP, Eugene Smith, Cincinnati-Post, Wide World, Don Berg, Hansel Meith, John Phillips, Harris & Ewing, Nina Leen, Ed Clark, Halsman, Will Connell, Jim Coyne, Earl Hense, Acme.

next President of the U.S. thinks about Housebuilding

In view of the current housing shortage, do you think there are problems in the housebuilding industry which the government should take action to help solve? If so, what and how?

VANDENBERG: No comment.

TAFT: "Since 1943 when I was appointed chairman of a Senate subcommittee to study and formulate plans for a postwar housing program, I have been concerned with legislation to deal with the entire housing problem from a long-range standpoint. Under our system of free enterprise, the problem must be met in the main by private industry, and government can only assist and supplement. The Taft-Ellender-Wagner bill extends and expands the federal help to private housing just about as far as it is possible to go. I do not think we have neglected any field in our effort to stimulate private housing."

DEWEY: "For a whole generation the number of added units of housing has failed to keep pace with the growing population and rising standard of living.

"Moreover, the art of building—particularly construction of one-family homes—has failed economically and technologically to keep pace with the ability of other industries to produce goods at constantly decreasing cost, improving quality, and increasing volume. The productive genius of modern America has, up to now, failed the home-buyer.

"The retarding factors are well known. They involve practices of construction, styles of construction, restrictive building codes, slavish adherence to traditional tastes and above all our failure to apply to building the ingenuity, imagination and techniques that have made possible the productive wonders of our time.

"The housing shortage is an unmet challenge not only to government, but to our entire economy. It is not going to be met by any single, sudden stroke of genius. It merits the most intense thought and effort of us all combined with study and effort on a new scale to bring down the costs of construction."

STASSEN: "In addition to the current programs, I consider that the federal government should make a major effort to break through the lag in building methods. This requires federal leadership toward modernizing building ordinances, lifting restrictive practices of some unions, and ending combinations of some material men and contractors, which together have prevented progress in housing comparable to progress in mass production. Toward that end I favor major backing for architectural and engineering advances in design and production, with new and economical methods of combining plumbing, heating, lighting and other utilities and use of new materials with mass on-the-site construction methods. Such projects should be carried through under private contract and only in metropolitan areas where cities, unions, and material men do modernize their rules. Results of this pioneering would be immediately available without cost to all builders.

"The government should commit itself to remove ultimately as many units in the slums as are built in these mass production projects so as not to discourage private construction. Materials should be expended for these major projects so as not to interfere with the flow of materials for all normal types of private building activity."

WARREN: "Every worker should be able to secure decent housing for himself and family. I hope it can be done through private enterprise and every effort should be directed toward that end.

"Perhaps it will take some form of subsidy to speed the necessary action. This could take the form of tax forgiveness, yield insurance, low interest rates, or favorable leasing of public land. But, if we are to do the job through private enterprise, we must either force prices down, or offer some form of subsidy in order to provide a sufficient number of low-rental units for the workers who need housing desperately.

"The alternative would seem to be a sufficient amount of public housing to fill this need."

Warren also thinks that the federal government should initiate a conference on building code reform and should be more effective in pressing anti-trust actions in the building field. **MARTIN:** "We believe private enterprise will help the people get houses instead of blueprints and newspaper headlines."

TRUMAN: "To obtain good housing at reasonable prices requires broad-scale efforts to reduce building costs. The basic problem facing the housing industry in this regard is to achieve the constant improvements in productive efficiency characteristic of other great industries of our country.

"The vigorous program of research to develop new building materials and more efficient building methods on which the building industry has made an encouraging start, can be aided by the government. In addition the government can assist the industry through a sound program of research concerning the housing market and related community-development problems.

"Restraints on channels of distribution, price-fixing and other practices in violation of the anti-trust laws add to the cost of housing. More vigorous enforcement of these laws depends upon the appropriation by the Congress of additional funds that have been requested for the anti-trust division."

WALLACE: "Private enterprise has consistently failed to meet the housing needs of over half the American people. Government should take direct responsibility for meeting these now critical needs in the following ways:

Encourage modernization of the industry by supporting a national building code based on performance standards; by breaking monopoly control of building materials through use of price controls, allocations and anti-trust prosecutions; by support of pilot plants and industrialization of the house building industry, through loans and subsidies where needed; and by providing adequate funds and direction for research and planning.

Establish a long-range government housing and community development program for families not provided for by private enterprise, on a sufficient scale to supplant outworn dwelling units and provide for housing needs on a continuing basis."

Are you in favor of the Taft-Ellender-Wagner general housing bill?

VANDENBERG voted for the T-E-W general housing bill and voted against an amendment offered on the Senate floor to strip off its public housing provision.

TAFT joined with Senators Ellender and Wagner in introducing this comprehensive housing bill in 1945. He has actively (and unsuccessfully) sponsored it every year since.

DEWEY: No comment.

STASSEN: "I approve the T-E-W as it passed the Senate April 22, 1948 with the Flanders amendments. But the program I have recommended above and given in more detail in the housing chapter of my book *Where I Stand* would be more desirable."

WARREN: "With minor reservations, I favor

the Taft-Ellender-Wagner Bill." The Governor has declared himself especially interested in the bill's provisions for attracting private capital into rental housebuilding and for federal loan grants to launch private rebuilding of blighted areas.

MARTIN told a recent press conference that, while the T-E-W housing bill hasn't been given (Continued on page 14) the same high priority as the draft and reciprocal trade extension bills, House Republicans still have some kind of long-range housing bill on their "must" list for this session. He did not specify what kind of bill it would be.

TRUMAN has many times appealed to Congress

for prompt passage of the T-E-W bill. WALLACE: "I am in favor of the T-E-W bill with reservations. Since 90 per cent of the benefits under the present bill are for highcost housing, we propose these amendments: Increase public housing five times.

Do you think federal government should take responsibility for building low rent housing for the lower income group? If so, how many units a year should be built?

VANDENBERG voted for the New Deal housing program, but objected to the per unit cost of public housing as higher than what 80 per cent of taxpayers could afford to pay for their own homes. He also objected to the "emergency" pressure back of the bill and observed, "Let us remember that this bill runs for 60 years; and, my God, we are not going to have 60 years of emergency, are we?" He voted against TVA.

TAFT: "We have also to meet the question arising from the many areas of slum dwellings which have gradually developed. While private enterprise is replacing many of these, experience of 50 years has shown that private building does not eliminate the slums; and the result of simply tearing them down is to develop slums in other areas exactly as the previous slums were developed.

"The difficulty which has created this situation is that housing is still too expensive for the income of the people. There is a considerable group of persons who are unable to pay for decent houses. If we could reduce the cost of housing sufficiently, we might solve the problem without any governmental subsidy. But until that is done, some plan of subsidized housing for the lowest income groups must be devised. I believe that such a plan is only possible through a public housing program through which rentals are subsidized for the lowest income groups only. Such housing should be limited to about one-tenth of all housing being built and should be available to persons whose income is 20 per cent less than that required to pay the rents for private housing—not necessarily new—available in the community. I would hope that in time private industry will have found methods of reducing costs that may eliminate the need for any further public housing."

DEWEY: "The great job ahead must be to get the benefit of private funds and expert private management. It will be cheaper. It will do a better job. It seems clear to me that we must first develop a great combination of all the investment resources in our cities for the clearing of great areas and the building of large projects with private capital from insurance companies, banks and individuals."

The Dewey administration has spent \$70 million for emergency housing for veterans and has administered a \$300 million fund for state-subsidized public housing set up in 1939. Dewey asked the legislature for a \$135 million increase in the public housing fund in 1947.

STASSEN: "With the extreme shortage that now exists, it is desirable for the government to build 125,000 units of low rent housing a year for at least four years as provided in S. 866. Greater emphasis on state and local contributions is desirable. Federal leadership in the improvement of building methods is Adjust present cost limitations upwards to cover today's high construction cost.

▶ Increase farm construction and repair loans three times.

Prohibit discrimination and segregation in federally aided housing."

more important ultimately in housing than is direct building for lower income groups."

WARREN: "Public housing is a device of last resort."

MARTIN voted against the Act which launched the USHA low-cost housing program and, according to the National Public Housing Conference, has consistently opposed public housing legislation since.

TRUMAN: "The measures for cost reduction which I have recommended—even when they become fully effective—will not provide adequate housing within the reach of our lowestincome families.

"We have a national responsibility to assure that decent housing is available to all our people. To do this we must resume the program of public aid to low-rent housing, first authorized under the U. S. housing act of 1937.

"I recommend that the Congress authorize sufficient Federal funds to permit construction by local housing authorities of 100,000 public housing units each year for the next five years."

WALLACE: "For the present emergency, the government should build four million low rent housing units in two years. Thereafter, enough to supplement private building in a general program to house the homeless in decent homes and apartments within ten years."

Have you any suggestions for improvements or changes in FHA credit assistance to private housebuilding enterprise?

VANDENBERG: No comment.

TAFT'S bill provides for extending FHA credit assistance to longer term mortgages for lowcost houses and for cooperatives, to yield insurance for rental housing, to production loans for prefabers and large-scale builders, etc.

DEWEY: No comment.

STASSEN: "The T-E-W bill is satisfactory in its credit assistance provisions."

WARREN: "In the construction of homes, it is the shortage of materials and inflationary prices that retard progress. It is not lack of financing.

"Up to now, the net effect of federal participation has been to help those who could afford to purchase homes at ever mounting prices. A great many workers and veterans, made desperate by the absence of rental units, aided and abetted by the federal government and egged on by salesmen, have chained themselves to over-valued and often shoddy houses, to the tune of \$60, \$70, or \$80 a month, when they ought to be renting at \$40 or \$50.

"Here in California we have a financing setup for veterans that enables them to buy houses and farms at 3 per cent, but prevents them from going in debt over their heads for overinflated or inferior properties. As much should be done on a national scale."

MARTIN: No comment.

TRUMAN: "The development of large-scale operations, both on-site construction and prefabrication, has been delayed by serious gaps in financing methods. In the case of on-site construction I recommend that the government be authorized to guarantee loans for working capital during the period before regular mortgage loan financing is available. In the case of prefabrication I recommend that the government's present power to guarantee production loans should be extended to cover the entire period between the time the house is started in the plant and its site erection."

WALLACE: "FHA credit assistance to private housebuilding enterprise could be considerably improved by increasing the amortization period of the mortgage, reducing interest rates, and changing the method of operation to serve average families instead of the upper 10 per cent."

Would you favor a Cabinet post for housing and planning?

STASSEN: "I favor a reorganization of the federal government, streamlining it on business executive lines, and I would view housing as a proper assignment for an assistant secretary in one of the major departments such as Commerce or Interior." **WALLACE:** "I would give Cabinet status to the Federal Works Agency and center housing and planning operations there."

MARKET

BARRIER FALLS

Race covenant ban opens new building market, may cut prices on old property.

When the Supreme Court ruled that race restrictive covenants can no longer be enforced by State courts, it removed the last of the legal barriers which have pinned U. S. minority groups in racial and religious ghettoes (see FORUM, Jan. '46). With this collapsing legal barrier went the main prop supporting artificially high prices on residential real estate in crowded Negro neighborhoods, and many an investor was already re-examining his portfolio.

Loren Miller, a Los Angeles lawyer who helped argue the race-restrictive covenant cases in the U. S. Supreme Court, said in the *Nation*: "The decision . . . admits Negroes and members of other proscribed groups to the open housing market from which they have been excluded for three decades. That exclusion . . . forced the Negro buyer or renter to pay whatever price was exacted in an artificial seller's market. The Negro buyer can now drive a sharper bargain, and one of the immediate results may well be a decline in property prices in defined Negro neighborhoods."

The Court's decision also spotlighted a still seriously undersupplied section of the Building market: the large number of Negroes (one-tenth of the nation) who can afford to buy new houses and good quality used housing. Said Miller: "Advantaged middle-class Negroes will certainly begin to seek homes in preferred residential districts, and by overbidding the market will just as surely find willing sellers."

Gentlemen's Agreement. If the last legal barrier to the full and free operation of the housing market was gone, other barriers still remained. These were the barriers of public opinion (which has long confused the appearance of urban blight with the appearance of a minority group), of financing uncertainties (FHA, heretofore asking for the protection of race-restrictive covenants, has not yet indicated what its policy will now be in insuring properties in neighborhoods in the line of Negro expansion) and of "gentlemen's agreements."

The Supreme Court decision did not ban "gentlemen's agreements" to keep minority groups out of "protected" neighborhoods. It merely said that parties to such agreements cannot ask the courts to enforce them. This means that if a Negro is able to persuade an individual owner to sell him a home in a "restricted" neighborhood, adjoining property owners will no longer be able to go into court and obtain an injunction stopping the sale and dispossesing the Negro. Such injunctions have hitherto been granted by lower courts and sustained in a number of cases by state courts.

(Continued on page 16)



VERTICAL PLANKS OVERLAP AND INTERLOCK



LOXIDE PRECUT SYSTEM ADAPTED FOR ARCHITECT-DESIGNED HOUSE

Richard Gump, head of San Francisco's famed Gump's department store, has been doing a lot of talking about the new house he is building in Sausolito, Since Gump knows a lot of well-to-do San Franciscans, his enthusiasm for the structural system being used in his house makes him an excellent promotion man for Loxide Structures, Inc., which supplied it. This Tacoma firm precuts lumber according to a system of overlapping vertical planks. These planks are locked together by plywood splines and the whole joint is reinforced by an inside batten (see drawing). The overlap gives structural support approximately equal to 6 in. studding. The system was tried out by the Navy for Alaskan barracks during the war and is now being widely sold on the West Coast for small houses, built according to Loxide standard plans.

Gump's architect, Francisco J. Centurion, Jr., chose to use Loxide siding in the larger house shown here because he likes the overall texture of the overlapping verticals. If Gump has his way, a good deal more Loxide may appear in California custombuilt houses.



OVERLAPPING VERTICAL MEMBERS IN CEDAR GIVE HOUSE A RICH TEXTURAL FINISH



The Supreme Court ruled for the first time that use of the courts to enforce a private covenant is exercise of state power and, as such, unconstitutional. "These are cases in which the states have made available . . . the full coercive power of the government to deny to petitioners, on the grounds of race or color, the enjoyment of property rights in premises which petitioners are willing and financially able to acquire and which the grantors are willing to sell."

Exclusion of racial and religious minorities has always been part of a bigger problem-the spread of blighted urban areas. At various times in U. S. history, one minority group or another has dominated the unskilled and poorly paid worker force of an area. This group then tended to become identified with the slum housing in which it was obliged to live. For example, in Boston and some Midwestern communities, there are still remnants of old restrictive clauses aimed at Irish workers who came over in great numbers in the post-Civil War period to do pick and shovel work on the railroads.

Slums are Slums. City planners and thoughtful property owners know that basically it is the rot that spreads from older city sections that damages property-and not the appearance of a minority group. That slums are slums no matter who lives in them has been amply demonstrated in England, where the population is much more homogeneous.

Some facts that sketch the size and shape of the Negro market for good quality private housing came last month from the Housing and Home Finance Agency. Negroes doubled their earnings during the war period and made substantial improvements in their housing. They became home owners: proportion of nonfarm home owners among Negroes rose by 40 per cent, among whites by only 27 per cent. They paid higher rents: by 1947 one out of every ten Negro families living in nonfarm rental housing was paying \$40 or more a month They moved into better quality housing: the proportion of nonfarm houses occupied by Negroes which were in good structural condition with private bath and toilet increased by 57 per cent; the increase for whites was only 19 per cent.

But how far the supply of Negro housing still falls short of need was also clear in HHFA's statistical footprint of the 1940-47 period. Samples:

About 2.7 million Negroes migrated in these war years, and most of them left the farm for cities.

The Negro population increased at a much faster rate than the number of dwelling units it occupied (11.6 per cent vs. 6.9 per cent). The reverse was true for whites (7.5 per cent vs. 12.5 per cent). The urban Negro population rose by one-third; its housing supply by only one-fourth.

By 1947, the proportion of substandard houses occupied by Negroes was still almost six times as high as that for whites.

BASEMENTLESS BOOST

An efficient utility "ell" is cheaper

Long one of the banners of modern architecture, the basementless house has been endorsed by the first documented study of exactly how much it saves in construction cost. In a typical small house, a storage and utility "ell" can be provided at \$435 less cost than a basement-according to a cost analysis made by technicians in the Housing and Home Finance Agency.

While all architects know that space provided at the first floor level for storage, laundry, etc. means extra convenience in household operation, some builders and home buyers have wondered if it doesn't mean extra cost, too. Now HHFA, figuring on the basis of current costs in the Washington, D. C. metropolitan area, says no and proves it with this cost breakdown:



Additions ...

Savings

\$ 435

SAVINGS THROUGH THE ELIMINATION OF BASEMENT:

DETAILED BREAKDOWN OF COST DIFFERENCES- Deductions and additions reflect the cost differences between the house with a basement and the same house without a basement but with an attached utility ell on the first floor level. Costs include contractor's overhead and profit.

DEDUCTIONS		ADDITIONS		EXPLANATION
Quantity	\$	Quantity	\$	
		The street of		BASEMENT
185 cu. yds.	95			Bulk excavation.
2 cu. yds.	4			Trench excavation.
23 cu. yds.				
116 ft.	52.			Wall footings.
880 sq. ft.	685	• • • • • • • • • • • • • • • • • • •		Basement foundation walls, parging and damp- proofing.
5 windows	56			Basement windows plus screens.
5 windows	04	ana ana ana ana ana ana		Girder plus two columns with footings.
32 ft.	020			Basement floor slab on gravel fill.
757 sq. ft.	232			Wall plate or sill.
116 ft.	18	a. a		Recomment stains
1 stair	37			Basement stairs.
				FIRST FLOOR CONSTRUCTION
832 sq. ft.	312			Wood joist floor framing and sub-flooring.
600 sq. ft.	388			Finish wood flooring and paper underlay.
117 sq. ft.	69			Floor covering and plywood underlay—kitchen and bathroom.
	44			Entrance platforms at grade in lieu of elevated
				platforms and steps.
		141 ft.	23	Perimeter forms.
		969 sq.ft.	452	Reinforced slab on gravel fill. Slab thickened under exterior walls and bearing partitions. Roofing felt under slab.
		141 ft.	160	Insulation and flashing at slab perimeter.
		733 sq. ft.	210	Floor covering (exposed slab in heater space and storage closets in utility ell).
				UTILITY ELL (Floor slab included in "First Floor
				Construction")
		144 sq. ft.	152	Exterior wall framing, sheathing, paper, siding, cornice and rake moldings, and painting, plus two corners and one louver.
		1 window	51	Window, plus weatherstripping, screen and shade.
		1 door	52	Exterior door.
		216 sq. ft.	39	Partition framing.
		136 sq. ft.	33	Ceiling framing and insulation.
		638 sq. ft.	174	Wall and ceiling fiinish and decorating.
		2 doors	91	Interior doors.
		41 ft.	24	Interior base.
		186 sq. ft.	64	Roof framing and sheathing, plus two valleys.
		156 sq. ft.	30	Roof covering and underlay, plus flashing two
				valleys.
		14 ft.	9	Gutters.
		11 ft.	8	Downspout, plus one splash block.
				PLUMBING
			40	Laundry tray and water heater re-located on first floor level.
				HEATING
			55	Forced warm air system with metal prefabricated chimney in lieu of gravity warm air system with masonry chimney.
			84 007	
Total	\$2,102	Total	\$1,667	



CLOSE THE DOOR ON TRAGEDY WITH

WELDWOOD FIREPROOF DOORS

> A Wood-faced Fireproof Door which carries the Underwriters' label

Underwriters'Laboratories,Inc. Inspected O FIRE DOOR FOR OPENING IN VERTICAL SHAFT

> This metal label is fastened to the top edge of every Weldwood Fireproof Door.





Red Dowel

A red dowel, set into the stile edge band 4 inches from the top, permanently identifies allWeldwoodFireproof Flush Doors.



This beautiful new Weldwood Fireproof flush door provides much-needed fire protection for office buildings, hotels, hospitals, schools, and other large public buildings. It is available in $1\frac{3}{4}$ " thickness and in standard sizes.

Fireproofed Edge Banding

Door is completely banded on all four edges with solid, fire-proofed hardwood that matches the faces.

Kaylo Core

Core of the door is the new incombustible Kaylo mineral insulation, manufactured by American Structural Products Co., subsidiary of Owens Illinois Glass Company.

Cross Banding

1/16" veneer cross banding is bonded to Kaylo core with TEGO waterproof resinous phenolic glue.

Face Veneer At present, handsome Birch veneer forms the hardwood faces. A wide variety of other decorative woods available on special order.



Look at the superiority of Weldwood Fireproof Doors over conventional no fireproof, 6-panel doors. After nine minutes and six seconds, panels of convetional door have burned through. In an actual building, the room behind to conventional door would already be a seething mass of flames.



Picture taken from the inside ten minutes after fire started shows absolute p tection afforded by Weldwood Fireproof Door. After withstanding the inte fire for sixty minutes, the Weldwood Fireproof Door still prevented passage fire, smoke, heat. gases and remained cool to the touch on the unexposed si



NOW, FOR THE FIRST TIME, YOU CAN OBTAIN ABSOLUTE FIRE PROTECTION <u>COMBINED</u> WITH THE RICH BEAUTY OF REAL WOOD-FACED DOORS

Weldwood Fireproof Doors bear the official label of the Underwriters' Laboratories (official testing agency for fire insurance underwriters).

They attained the one-hour fire rating by withstanding a freeburning fire for one hour, the ultimate temperature being 1700°. And after that, the impact of a 30-pound pressure hose stream, applied 20 feet from the fire side, for one minute.

Tests indicate that Weldwood Fireproof Doors could have saved much of the life and property loss caused by major hotel fires in recent years. The National Fire Protective Association, in its official report of the Winecoff Hotel fire, says: "A single fifty-dollar door installation at the entrance to the stairway from the third floor (if closed) would have prevented the spread of fire to upper floors."

Weldwood Fireproof Doors are a *must* for hospitals, schools, institutions, offices, and apartment buildings.

And these amazing doors are as *beautiful* as they are *safe!* They're dimensionally stable . . . stay straighter and are lighter in weight than other fireproof doors. The original cost is moderate, maintenance cost is practically non-existent, and Weldwood Fireproof Doors last for the life of the building.

Only the amazing new Weldwood Fireproof Door offers all those advantages! For additional information write to: United States Plywood Corporation, New York 18, N. Y.

UNITED STATES PLYWOOD CORPORATION

55 West 44th Street, New York 18, N. Y.

Increased Safety

The only wood-faced fireproof door which bears the Underwriters' label. All Weldwood Fireproof Doors are approved for class B openings.

Beauty

Because of their beautiful wood faces Weldwood Fireproof Doors harmonize perfectly with any decorative scheme. At present, Weldwood Fireproof Doors are faced with beautiful Birch veneer. A large variety of other handsome hardwood faces is also available on special order.

Durability

The Underwriters' Laboratories tested a Weldwood Fireproof Door for durability by mechanically opening and closing it 200,000 times. It was slammed shut with considerable force 100,000 times. At the end of the test, the door was unaffected and still opened and closed perfectly.

Dimensional Stability

Weldwood Fireproof Doors are so dimensionally stable that we guarantee them against sticking in summer or rattling in winter due to any dimensional changes in the door.

A Weldwood Door with Kaylo core, after being subjected to unusual and extremely severe conditions for almost three years, is still operating perfectly, and is as good as the day it was installed. The inside of the door has been subjected constantly to a relative humidity of 90° to 95°, and the opposite side exposed to the natural elements of the weather. There is still no warpage and no change dimensionally!

Light Weight

At last ... a really fireproof door that is *not* heavy or unwieldy. A child can open and close Weldwood Fireproof Doors with ease. A standard 3 x 7 door weighs approximately 80 lbs.

Vermin and Decay Proof

The mineral composition Kaylo core used in Weldwood Fireproof Doors is permanently resistant to fungus, decay, and termites. This superior and trouble-free door is made to *last!*

High Insulating Qualities

Another noteworthy characteristic of Kaylo insulation is its high insulating value over a wide range of temperatures. It is efficient against temperatures from freezing up to that of superheated steam. A Weldwood Fireproof Door installed with weather stripping provides more insulation than double glazing.

Moderate Cost

Hospitals, schools, institutions, offices and apartment buildings cannot afford to be *without* the architectural beauty and absolute fire protection of Weldwood Fireproof Doors. Investigate these doors for use on your next job. You will be pleasantly surprised at the low initial cost, and the minimum of maintenance required.





Construction Details of WELDWOOD FIREPROOF DOORS

Wood Edge Banding

The entire perimeter of the door is banded with genuine hardwood, treated with Protexol Class "A" fireproof agent.

Composition of Core

Hydrous calcium silicate with fiber binder, having a nominal density of twenty (20) pounds per cubic foot. The material tested in flexure as a simple beam will have an average module of rupture of 150 p.s.i.

Adhesive

Core and wood edge bandings bonded together with WELDWOOD UREA 250-2. Entire core sized two sides to insure perfect glue bond of cross bands to core. Cross bands and faces bonded to core by HOT PLATE process with waterproof Tego sheet resinous phenolic glue.

Veneers

1/24" Birch faces - 1/16" cross banding.

The individual sections of Kaylo core are joined together with tongue-andgroove joints as shown in detail sketch at right. This assures maximum strength and rigidity.



The Kaylo core of the Weldwood Fireproof door is made up of accurately designed sections as illustrated above. This method of construction assures complete dimensional stability and is the result of extensive testing and experimentation.

UNITED STATES PLYWOOD CORPORATION 55 West 44th Street, New York 18, N. Y.

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853. Case Vitreous China Plumbing Fixtures

17

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HANDS ACROSS THE SEA

I FTTFRS

Forum:

It is hardly possible to express the value, which has The FORUM for us, Dutch architecture students. I can assure you, that every month, after the arrival of your magazine, my room is crowded with friends of mine, who all want to be the first to have a look at the issue. Every time it is a surprise what The FORUM brings.

And it is only due to our lack of dollars that lots of young architects don't have the opportunity to take their own subscription. There is not anything of that kind in Holland....

F. W. DE VLAMING, Architect Delít, Netherlands

Forum:

I've been taking The FORUM for the past year or so, and am of the opinion that it's a top ranking architectural magazine, both in the United Kingdom and the U. S. A.

That is my humble opinion which I offer by way of congratulations to a staff which really keeps up with, and are sometimes ahead of contemporary architecture

However, I'd like to see some reference sections on all aspects of architecture. This isn't an original idea, but is what appeared in 1939 issues of the British architectural magazine then known as "Architectural Design & Construction." I think sections like those are really invaluable to everyone in the profession.

MARK P. DAVID Glam. S. Wales, England

POROUS GLASS BLOCKS?

Forum:

There is a statement in connection with glass block (FORUM, Mar. '48, p. 164) that is sufficiently inaccurate to call for a comment.

In describing "Plastic Sealant," the following comment is made: "As glass blocks are not porous, ordinary mortar cannot form a good mechanical bond. Thus cracks develop in the mortar from shrinkage, water enters, freezes and causes the block to crack."

Actually, Portland cement-lime-sand mortar as specified for glass block construction produces a very good bond for any type of glass block that is manufactured in this country. Wind pressure tests have been run on medium sized panels with no wall ties in them so that resistance to failure depended entirely upon mortar bond and mortar strength. A panel of 8 in. blocks 6×10 ft. so constructed has withstood panel pressure of more than 2,500 lbs. before failure. This is equivalent to the pressure developed by a 115 mile per hour wind. This gives you some idea of mortar adhesion to glass block. H. W. PAUL

Toledo, Ohio

It sure does .- ED.

RURAL VENTILATION

Forum:

We are very pleased with The FORUM'S presentation of our tenant house. We think that you have done a remarkably fine job in getting into the article so many of the points we were trying to make.

Regarding your statement about lack of cross ventilation in the second-floor bedrooms, we too have been greatly concerned about that and, in our set of blueprints developed since sending you material on the house, we have included windows in the north wall of both bedrooms ...

GRACE MORIN

Professor of Rural Housing Cornell University

Ithaca, N.Y.

FRANCE FOREVER

Forum:

We Americans enrolled at the Ecole Des Beaux Arts and graduates of Yale School of Architecture were very interested in The FORUM review (Feb. '48) of the school's exhibit.

Your opinion is accurate in a way, but we feel that the exhibit was not completely representative. There was a great amount of preciousness . . . and imperviousness to present day conditions, although at the same time there were some few students attempting to do intelligent contemporary work.

... The trouble with the place lies partly with the students who are caught between the archaic school system and the present way of life in France, students who find themselves accepting the type of problems given them because they believe that more realistic projects would not any better prepare them for what they can expect after graduation—peoples' tremendous respect for tradition, authority and age; no responsibility until the age of 40; and very little work anyway.

However the major portion of the blame lies with the stuffy administration of the Ecole, in spite of Mr. Louard's rosy picture. The school does not encourage intelligent contemporary design; it still insists upon the esquisse, the rendered problem, and the profound respect for the Beaux Arts traditions. The result is that students still design in the Renaissance fashion whether they like it or not....

We think the Beaux Arts system still

satisfies the needs of France today but it is no longer useful for America.

> John S. Sandifier, Jr. Paul Whitney Webb

Paris, France

MODULOR RESERVE

Forum:

I wish to thank your reader Courtland C. Fleming for his interest on the Modulor (Feb. '49) and for the research leading to his proposal to base the two Modulor series on the inch.

I would like to note some more divergences of opinion on the Modulor which came to my attention while working on its practical applications in the design field. Art historians view Modulor with certain reserve. The harmonic scale is a newcomer in the architectural field, in spite of the fact that Bramante and Palladio have used it in developing some of their plans. Art historians are more inclined to trust the right angle triangle with sides proportional to 3, 4, 5 which enable the Persian architects to design their domes, or the Price triangle with sides of 1, $\sqrt{\phi\phi}$, which is responsible for unquestionable buildings like the great pyramids. Anything as recent as the Renaissance is obviously subject to revaluation.

Reservations were expressed also by some who are particularly involved in the problems of "modular coordination." Like Mr. Fleming, they disagree with the basic magnitude of Modular-a man 6 ft. high. Hartland Thomas, member of the Architectural Science Board of the Royal Institute of British Architects, writes: "This standard man is smaller than me and taller than you." He is more in favor of a magnitude of 40 in. adopted by Gropius and Konrad Wachsman in the General Panel Corp.'s house, as a minimum lateral dimension for a human enclosure (stairs, w.c., etc.). The double of this magnitude, 80 in. instead of the 89 in. of Modulor, will be sufficient for a minimum vertical dimension for a human enclosure. However, roughly speaking, 40 in, is the equivalent of a meter and, I believe the problem should be formulated as follows:

Should the Modulor or any other harmonic scale be based on any existing system of measurements, metric (Gropius, Hartland Thomas); inch and foot (Courtland C. Fleming); or on a *man's* height however arbitrary this height may be? And, last but not least, should we have faith *only* in systems proved by five millenia of practice? STAMO PAPADAKI

New York, N.Y.

.... hum?—ED.

(Continued on page 22)



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JIG TIME

LETTERS

Forum:

I have never been for prefabrication, though I have been accused of inventing the term, back in 1918 when I devised Standard House No. I for the U. S. Housing Corp., in Washington. My research has been pointed toward the "little builder." He puts up 75 per cent of our small houses, but he is as hard to corral as a honey bee. "Fifteen years after," I am still on his track. In a few weeks I am going to Cape Cod to start an experiment in \$4,000 houses for amateur ex-G. I. builders.

The job is preliminary to writing a manual devised to show small builders how to apply modern techniques to small house production. I started the manual in Paris in 1945. Under my plan, the local lumber dealer pre-cuts an exceedingly simple lumber list. (50 per cent is short length stock, only 3 ft. 8³/₄ in. long).

Then the dealer packages the material into sub-assemblies and slips them to the customer. A net consignment. This is saving number one.

The customer knocks the sub-assemblies together on a work bench, indoors, away from weather hazards, in jig time, as practically all he has to do is to drive nails. The time saved is about 75 per cent. Saving number two.

Of course he has plans, shop details and material lists furnished to him free. Saving number three.

The erection, on any type of foundation, is quick, easy and positive. And the resulting structure is far more scientific than ordinary carpenter framing, and far stronger. So much for the shell. The remainder, exterior and interior finishing, depends on his desires and pocketbook. Under this scheme, even at today's prices, a \$4,000 modern, two bedroom cottage is not an impossibility.

Robert Gappan

New York, N. Y.

RESOLVED

Forum:

The following resolution was passed by the Union County Society of Architects and was considered at a joint meeting of the Executive Committee of the New Jersey Chapter, A.I.A. and the New Jersey Society of Architects held on January 8.

"Resolved: That it is the sense of this meeting, that this the Union County Society of Architects is and always has been unalterably opposed to the merchandizing of plans in any form and for the reason that we believe such is contrary to the best inter-

(Continued on page 26)



Lucky the building owner who modernized his uncontrolled steam heating system with a Webster Moderator System in time for the 1947-48 heating season. Frequent cold waves made it necessary to keep heat on for extended periods. With Webster Moderator Control, there was no waste of fuel through overheating, no heating complaints.



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EGC

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LETTERS





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ests of the individual home builder and also the public at large."

I was directed to advise you that our Executive Committee and Board of Directors approve this Resolution.

CLEMENT W. FAIRWEATHER, Secretary N. J. Chapter A.I.A.

N. J. Society of Architects

Metuchen, N. J.

WRIGHT AND WRONG

Forum:

Your Wright issue was indeed an achievement, both for The FORUM and for Mr. Wright himself, and there should no longer be the least cause for doubting his preeminence in this century.

I see in the recently arrived February issue, however, that you are reduced, per usual, to presenting almost entirely "building" and not architecture. It is not your fault that there is so little effort to distinguish good from bad, and I join with others in again urging you to take a few lessons from The Architectural Review, especially from their policy of historical and esthetic criticism. You cannot dismiss this plea by saying, "Then there would be no place for The Review." Firstly, The Review has a small audience in this country; secondly, its coverage is chiefly of Europe, and England in particular; lastly, I doubt if its unique character could even be approached by any other journal or group of individuals. Its chief concern at present is with the past century (of periods other than the present century), and certainly there is as much valuable material of that era in this country as in Europe. As for contemporary trends, criticism, foresight and leadership are as necessary here as they are in England. Your recently presented article from James M. Fitch's new book was highly-readable, thoughtful and interesting, and shows what can be done consistently, and since Mr. Fitch is on your board, you are not all engineers.

You may feel that there is no permanent or featured place for such articles in The FORUM, and that it would tend to antagonize and estrange architects and builders, who, it seems, are primarily interested in picking up new ideas and tricks. There may be truth in this, but in that case The FORUM is not leading. It is conforming to the demands of the business-minded. If tricks are to be picked up (and such does mean, potentially, an exchange of ideas), they can be taken as easily from one poor building as from two or three of the same category. Instead of presenting two or three buildings each month that are not and never will be "architecture," you might introduce each month, without harming

(Continued on page 30)







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FOR AUTOMATIC FIRING WITH OIL, STOKER OR GAS your reputation or subscription list, at least one article devoted to critical study of historical and contemporary moods and developments in architecture. There are many people in this country and elsewhere who contribute such articles to art and artminded periodicals and journals, yet who seem to receive rare encouragement or support from American architectural magazines. Their contribution goes unheeded except by a few, mostly their fellow-writers. The bugaboo of eclecticism has driven the non-technical into the background, and any fervent interest in anything before 1900 savors of heresy or artiness. The people of this era will be as narrow-minded toward certain phases of the past of art as were those of the Nineteenth Century towards successively-antagonistic styles. People are still insensible to the architecture around them and to its potentialities, and constant presentation of boxes will only deepen the crust. The English Review is more truly democratic in its attempt to open eyes to the present and to the past; to call for good, available objects of everyday use; to make people realize their heritage, their obligations and to point to the line of their advance, than are American architectural periodicals, with their prefabricated houses (which few outside the profession have as much as seen), their emphasis on the latest type of truss, etc. What is to be done with all these wonderful inventions? No architectural magazine in this country is setting an example . . . crusading for the "ideational" factors of architecture, art and design . . . The nearest to such a pattern in this country is California Arts and Architecture. It is hampered by provincialism, through which shine from time to time, however, glimpses of growing maturity which will surpass the East, if it doesn't watch out.

JOHN B. HILLS

New Haven, Conn.

... California Here I Come.-ED.

Forum:

One of the age-old policies of successful merchandising has been that the "customer is always right." It was therefore very amusing to note in the February issue (Architect Bites Client), that when the advocates of that policy become "customers," it does not apply to them.

As a veteran in the store planning and designing field, I have seen quite a number of the actual and published works of the architects involved in this controversy (Gruen & Krummeck), as well as that of the many other firms which have been setting the pace in the field of store work. And too, I have kept in step with all the

(Continued on page 34)



labor, and costs less to buy and to apply yet has all the advantages of heavy copper —the demand for Wasco Copper-Fabric Flashing is greater now than ever before.



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See Sweet's 8 d-6. Write for File Folder, "Improved Method of Handling Turn-up", and Sample.

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In Cleveland, good citizenship has not only made good government, it has also produced one of the nation's finest cultural centers. And commercially, the great competitive spirit which has made Cleveland our sixth largest city is reflected in its constantly expanding skyline. Here again, a famous skyline also marks the progress of Otis. Twothirds of the elevator installations in Cleveland are by Otis. The latest count is 2,560!

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What happens as you wait for an elevator? Traffic engineers say you feel pretty good for 20 to 30 seconds. Your collar gets hot in 30 to 60 seconds. After a minute? You really blow your top. What to do about sluggish service? Otis modernization!



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service can be predictable. How? With Otis elevator maintenance. It's keeping the elevators in 1429 hospitals doing the job they were built to do – continuously and

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ORDERED . INSTALLED . OPERATED AS ONE COMPACT UNIT

Here is a new heart for your building's power distribution system—the Westinghouse Close-Coupled Air-Cooled Power Center. It saves time in ordering, installation and operation. It eliminates piecemeal assembly on the job! It can be installed anywhere indoors without a vault—because it is completely air-cooled. It's lighter, too. Install it anywhere in the building with complete safety.

This complete station assembly results in substantial savings in materials and labor, and cuts service interruptions. It permits location of the Power Center at or near the centers of load.

The Westinghouse Air-Cooled Power Center is only one item of the complete equipment Westinghouse can supply. Others are: motors, control, circuit breakers, panelboards, lighting, elevators, Precipitron and air conditioning—in fact, all the apparatus needed for any building's electrical system. By ordering from one supplier, you place responsibility in one place . . . save time in ordering, installation and co-ordination for operation.

Complete specifications on all equipment are available to help you PLAN NOW for postwar construction. Phone your Westinghouse Office, or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-94681





Call your Westinghouse representative today for advice and practical help in laying out your postwar power and lighting distribution systems. It pays to blueprint now for tomorrow's needs.

AIR-COOLED POWER CENTERS FOR BUILDINGS

LETTERS

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No matter how large or small the system – Dunham products are your assurance of maximum heating efficiency. Simplicity of installation and economy of operation, plus freedom from maintenance difficulties account for the enthusiasm expressed for Dunham. When you specify Dunham products, you know that thousands upon thousands of installations all over the country bear out your own good judgment. C. A. DUNHAM COMPANY, 400 West Madison Street, Chicago 6, Illinois.



principles of modern store design, as advocated in The FORUM, but only where definite, practical value was assured have I adopted them. That practice has applied also to the constant flow of products and materials, for which I have relied on The FORUM for many years to keep me informed.

Being of the old school, I have naturally admired the departures from some of the old principles, and perhaps have even envied the daring expressed in the plans and designs, but have in the end, invariably crawled back on the stool and continued planning for practical utilization, forgetting about the creating of a monument to design, or designer.

It is therefore refreshing to find that in this present case, the merchant is finding his way back to the solid principles that were the foundation upon which the now enormous retailing field was built. Back, particularly to the principal of area utilization, where wasted square footage in angular planning means wasted dollars in sales volume. Back to where the National Retail Dry Goods Association's, "Merchandising and Operating Results" instead of Sweet's Catalog again becomes the bible for store planning and designing. However, I shouldn't say "back" . . . rather, "forward," again on the old, firm road of sound, solid merchandising principles of planning, that have, for many years, unbeatenly carried the rolling load of ever-increasing retailing progress.

But let us look into the question of whether the "customer" is right, or wrong. 1. He has, in reality, two merchandise classifications. He therefore wants the

affect of two separate shops. Why not? ... 2. The main access to the store is from the rear parking lot. Those who have parked, or are parking, are intent upon

parked, or are parking, are intent upon coming into the store. So why the display windows back there, which would be effective only during open store hours? . . .

3. The merchant wants a large display area at front, but a check-up of foot traffic warrants only a shallow display. This adds up to a theory of "half as many people half as much display." . . . You can't sell to the people passing by in an automobile, so you've got to interest them in stopping and getting out for a look. If the passing glance while riding does not indicate enough on display to warrant stopping ... then the expense and effort extended has been wasted....

4. They want a squared line set-up, and not the angled wall arrangement. Well, on angular inside planning, there's generally a loss of about 5 per cent of the usable floor area. At \$50 per sq. ft. average sales, this could tally up to about (Continued on page 38)



with McKINNEY Door Control Butt Hinges

These quality butt hinges are designed especially for hospitals, institutions, schools, and other buildings where dependable, quiet, positive-acting door service is required.

They assure the quiet and efficient door operation so essential to hospitals and other institutions. They control the swing of the door and prevent slamming by drafts or by persons.

The door may be opened to any desired position, where it will remain stationary, in spite of any air currents yet it can be closed or opened with very little effort.

There are no springs to get out of order. Tension is readily adjustable on the door with the use of a small wrench.

McKinney Door Control Butt Hinges are made of wrought steel—highly polished—equipped with phosphor bronze bearings. Available in all standard sizes —with ball or button tip.

Constructed on the famous McKinney standard of quality.

> See Sweet's Architectural File for details or write



What's your score?

(A three-minute test on the effective use of wiring materials)



1 Existing service entrance consists of 3/4-inch conduit, containing two No. 8 Type R wires. How can this installation be made suitable for an electric range, without tearing out the conduit?

A _____ Install a second service entrance.

____ Run two No. 6 Type T wires and one

- bare No. 8 conductor in existing conduit.
- Tap into the next door neighbor's circuits.



2 An electric device that can be seen but not heard helps any builder or architect to sell good wiring to clients. What is it?





3 Many electricians are saving time in box installations on residential wiring jobs. How are they doing this?

A _____ By using precut wooden spacers.
B _____ Through the use of S-type bar hangers.
C _____ By nailing boxes directly to the plaster.

son hig wo ins

4 Even "cool" fluorescent lighting societimes must withstand fairly high ambient temperatures. What would you choose to safeguard such installations?



1 Okay, if you chose B. And you'll be wise to make it General Electric thermoplastic every time you choose a building wire, because General Electric has always been a leader in the production and sale of thermoplastic insulated wire.

2 General Electric's silent mercury switch makes B the only correct answer for modern planners. It is now T-rated at 10 amperes, 125 volts, and is a beauty to look at in any installation. Lasts a whale of a long time, too.

3 Pick B for this one. G-E S-type bar hangers are made to fit framing spaced from 6 to 24 inches. A new, heavy-duty stud affords ample support for any modern fixture.

With a G-E S-type hanger, a box can be located on the bar at any point between studs simply by tightening a single screw. **4** If you picked C, and specify it for your "hot" jobs, you won't go wrong. In fact, always say Deltabeston when heat is a problem in wiring installations.

We hope this little quiz was fun. And maybe it will give you a better picture of General Electric Construction Materials the full line for all wiring needs. Each part of the line is made for ready use with other G-E wiring materials. It's a line that has been designed for convenience—in specifying—in installation—and in maintenance. And it is backed up by experienced men who are always ready to help you with engineering and application counsel on your every project. It's the kind of one source, one complete line service that makes it easy for you and your clients to do a top-notch wiring job. If you want information on any of our products, please write to Section K6-64, General Electric Company, Bridgeport 2, Connecticut. *Trade-mark Reg. U. S. Pat. Off.

Construction Materials GENERAL & ELECTRIC

Answers



Typical L-type Curtis Kitchen-modern and space-saving



Curtis units in U-type kitchen



Curtis kitchen-dinette plan for small home or apartment

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A compact straight-wall assembly of Curtis Cabinets

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SECTIONAL KITCHEN UNITS

Whether the kitchen is large or small—whether it is for new construction or remodeling—whether it is L-shaped, U-shaped or corridor type—you can plan an efficient, eye-pleasing arrangement with Curtis sectional wood kitchen units.

For Curtis offers 21 basic unit types of floor and wall cabinets—a total of 75 sizes. Dimensions of units have been standardized to coordinate with other standard kitchen equipment. Installation is quick and easy. Expert machining and workmanship produce units, which, when bolted together, are firm, square and perfectly aligned.

Curtis cabinets are made of wood—for beauty, sturdiness and lasting satisfaction. These cabinets are prime coated—but may be given any final color finish desired by the owner, who is not limited to a *white* kitchen.

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Includes a basic circuit breaker unit providing 4 single pole, 1 double pole and 2 single pole, or 2 double pole circuits in combinations of 15, 20, 30, 40 or 50 amperes making up 33 standard devices. FLUSH or SURFACE mounting with 70 AMPERE MAINS for small homes and 100 AMPERE MAINS for larger homes.

"AD-ON" UNITS: 1, 2, 3, or 4 single pole circuit breaker units rated 15, 20 or 30 amperes are easily plugged in on basic block.

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- Replaces fusible switch provides both circuit protection and disconnect means. • Gives 2-way Protection—holds harmless over-
- loads—trips fast on shorts.
- Eliminates fuses—nothing burns out—nothing to replace—no live parts exposed. <u>Anyone</u> can quick-
- ly restore service. • Non-tamperable—unit is factory calibrated, test-
- ed and sealed. Underwriter: approved. • Simple mechanism — few moving parts — long
- mechanical life.

er or air-conditioner. Low cost ... elimination of separate devices for extra circuits saves equipment, mounting,

Few homes have enough circuits to serve

The new Square D MB-4 Service and Load

Center provides room for future circuitssimply add on single pole units as needed to

connect that new laundry equipment, attic

fan, dishwasher, garbage disposer, food freez-

the many appliances added after the electri-

cal system has been installed.

ADD CIRCUITS

Easily, Quickly At Low Cost



LETTERS



How to select, install and adjust diffusers for greater control of air conditioning performance. KNO-DRAFT ADJUSTABLE AIR DIFFUSERS

FREE to those who design, install and maintain air conditioning equipment.

The new handbook contains the latest engineering data on air diffusion in general and the use of adjustable air diffusers as a positive means of eliminating drafts, hot spots, cold spots, poor humidity control, stratification, air noise, ceiling smudge and other complaints. It is profusely illustrated with photographs, sketches, charts and dimension prints for quick, accurate Selection—Application—Location—Assembly—Erection—Testing—Adjustment of Air Diffusers and of Accessory Equipment such as air equalizing grids, mounting rings and air sectorizing baffles.



Beauty of an air diffuser lies in its simplicity and ability to blend with an interior. Kno-Draft Diffusers in their original aluminum furnish an interesting and unobtrusive decorative accent. Painted to match the ceiling, they become self-effacing. Because of their simplicity of design, they blend easily with modern or period interiors.

Utility of a diffuser lies in its ability to create "custommade" air distribution patterns. The air direction and volume on each Kno-Draft Diffuser can be altered *a/ter* installation. This eliminates the tough job of deciding everything about the air movement in advance. Also, you can change the air pattern with the season or when processes, people or partitions are relocated.

For your free copy of the new handbook on air diffusion, please write Dept. T-102.



\$25,000 per year in lost selling area. For being able to add that dough in the volume column of my ledger, if I were a merchant, I'd stand the fixtures on end, if I had to!

... Perhaps I have held strongly to some of the old ideas, and might be considered reactionary or "old-fogey", but I firmly believe that those old ideas, dressed up in today's fineries, are still the most substantial. After all, the girl who carefully stored her wardrobe of a few decades ago, is one of today's best dressed women.

W. ALVIN ALBACH, Designer Chicago, Ill.

ATOMIC ENERGY

Forum:

It is surprising to see published in the current April 1948 FORUM a proposal by Churchill-Severud for an atomic city, conceived in terms of a geometrical study in circles and hexagons. This layout does not seem to adequately provide for city functions, nor could it by any stretch of the imagination withstand atomic warfare.

The nature of atomic energy, and the type of resultant damage which may be caused by an atom bomb explosion is neither completely nor effectively reflected by the Churchill-Severud city plan.

There is no more appreciative difference in the pattern of this layout than there was in the type of city which was designed in the year 1567 by Pietro Cantaneo who invented the many angled plan with the central citadel as fortification against the artillery of that day. In more recent times the Maginot Line was built as an answer to the heavy artillery of World War I, but the bombers of World War II soon antiquated the Maginot Line and proved its obsolescence. Proof of the destructive force of the bomber was the damage imposed upon the seemingly defended Dutch city of Rotterdam in 1940. The lessons of World War II have heralded the necessity for new defense patterns by the advent of the atomic bomb, and the guided missile.

Perhaps the structural concrete forms of this city plan as proposed would resist an atomic blast or pressure force at certain distances from ground zero of the explosion, but that is all. If a Nagasaki type atom bomb detonated at the center of the honeycomb pattern, the following damage would in all probability result:

(1) Each hexagon cell of the honeycomb, confined within a diameter of approximately 3,000 ft., makes a confined and vulnerable target with respect to the atom bomb as well as other destructive missiles.

(a) The experience of World War II (Continued on page 42)



HERE'S ANOTHER OF SUNFOC'S famous "firsts"...the biggest advancement the refrigeration industry has known in years.

The Sunroc Super Cooler combines the advantages of a water cooler and a refrigerator. In a compact unit, it provides properly chilled drinking water, three ice-cube trays, and a generous refrigerated storage compartment. Its modern styling harmonizes with any environment. It is engineered for maximum dependability and economical, trouble-free operation.

There are a thousand-and-one places in which only a Sunroc Super Cooler will serve. It's just the thing for business and professional offices . . . ideal for homes and apartments, where there's widespread need for a water cooler with refrigerating features. Get the full story of the Sunroc Super Cooler. Mail the coupon today.

America's most complete line of water coolers, \$199.95 np, F. O. B. Glen Riddle, Pa.

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Now your doorways can have the complete beauty you've always wanted. The new YALE COMPACT DOOR

CLOSER is smaller—36% less bulky than previous types. And it's streamlined—no more ugly "bulges" to make the "door closer corner" an eyesore.

Rotary piston checking improves efficiency while making the new beauty possible. It gives an even circular stroke; continuous checking over a full 180° arc. Provides two-speed closing adjustments.

With its better-looking bracket and unobtrusive design, the YALE COMPACT MODEL solves the door closer problem—and yet costs no more than old-fashioned door closers with "bulkitis."

Leading builder's supply dealers are displaying the YALE COMPACT DOOR CLOSER. See it—specify it.

MORE BEAUTY . SMALLER SIZE . SMOOTHER ACTION . SAME PRICE



FREE: 4-page folder illustrating simple operating method, leakproof feature, famous YALE workmanship, "hold-open" device, etc. *Mail coupon now*.

THE YALE & TOWNE MFG. CO., STAMFORD, CONN.
Please send me free 4-page folder and "The Inside Story" on YALE COMPACT DOOR CLOSER.
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No other siding has all these advantages!

Construction of an 8-room home in fashionable Atherton, California, proves typical advantages of building with new Kaiser Aluminum clapboard Siding. The clean, even lines of this revolutionary new material give this home a kind of beauty hard to match. Every piece is precision-produced of high grade aluminum . . . perfectly uniform . . . *flawless!* It's the logical successor to other materials in homes of *any* price!



KAISER ALUMINUM clapboard Siding can't be disfigured by knots or splits. It can't rot, warp, rust or crack. And a zinc chromate prime coat applied at the mill readies it for beautiful, long-lasting paint finishes which won't flake, peel or chip. The new material won't absorb paint, either, so it needs less. Best of all, it costs no more than other fine materials!



HERE IS THE ONLY metal siding with a pre-formed curved surface. The plain upper edge of each piece slips into the slotted lower edge of the piece above. Nailing down the lower edge produces a strong tension. Result: A rigid, weatherproof joint. Work is speeded because of pre-punched nail holes. Money is saved because only half the usual number of nails are needed. And no wood sheathing is required!



TIGHT, CLEAN-CUT butt-joints are easily made with back-up plates available with the new siding. Paint finishes completely conceal the joints. Notice, too, that all nails are hidden. The concave surface makes beautiful, ³/₄" deep shadow lines and eliminates oil can sheen, waves and buckles. The new material can't be damaged by termites, rats or other vermin, and never needs the usual kind of maintenance.



CARPENTERS *like* to work with Kaiser Aluminum clapboard Siding, for they can use ordinary tools. To show how light this strong material is, the man at the top of the page is carrying 200 base feet! Prepare to specify Kaiser Aluminum to *your* clients! They'll *want* it – for no other material can match its unique *combination* of advantages. Write today for free booklet packed with information and pictures.

Kaiser Aluminum clapboard Siding specifications: Length . 10, 12, 14 and 16 ft. standard lengths Width . 6%" Thickness . .030" Weight . .580 lbs. per 1143 base feet (1000 sq. ft.) . Shipped in cartons containing 200 base feet, weighing 106 lbs. overall. . . .



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McQUAY research and engineering skill has produced something new in central air conditioning units—a unit which through increased range and flexibility brings better air conditioning efficiency to both the comfort and the process fields. With a capacity range (in eight models) of from 3 to 50 tons, McQuay's new units have been designed to promote ease of installation—maximum serviceability. Sectionalized construction includes com-

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pletely removable panels for easy maintenance. All connections are exposed and conveniently grouped to simplify installation and servicing.

GREATER

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GREATER

FLEXIBILITY

For universal year 'round air conditioning use, these units include Ripple-Fin coils, long famous for heat transfer efficiency. See the McQuay representative in your area, now, or write McQuay, Inc., 1609 Broadway Street Northeast, Minneapolis 13, Minnesota.

41



LETTERS





This preference for Salter Masterpiece Fixtures is fast becoming a common expression when plumbers, builders, architects, and home owners select brass plumbing trim and fixtures. And for good reason too ... since thousands

have discovered that Salter quality of design, appearance, and construction plus exclusive "EZE" close operation are unparalleled. Standardization of fixtures and parts meet today's modern specifications ... and precision production and testing equipment maintain masterpiece craftsmanship which further assures complete user satisfaction. The Salter Masterpiece Line embodies many types and styles for the bath, lavatory, kitchen and laundry, as well as the valves and fittings necessary in the basic supply installations. For service, always install Salter Masterpiece Fixtures... they are available at leading wholesalers everywhere.

Also ask about the New Line of Salter Feather-Touch* Fixtures which feature today's simplest and softest closing valve...It's revolutionary!

H. B. Soliton, MFG. CO. Ninth Street, Marysville, Ohio



indicates that congested central areas cluttered with buildings similar to this sketch make any defense plan difficult.

(b) In contrast, small concentrations of residential building units in open spaces present small targets and an area which is more easily protected. Experience indicates that open areas between building groups are immensely important, for a blast is more easily expended and is less effective in air.

(1) The most successful type of residential district could consist of apartment type buildings separated by large spaces. This offers less target area than other arrangements of housing. With this type of building layout bombproof shelters may be distributed according to a rational and strategic plan. The scale of the distance of people to shelters becomes determined by the ability of people to run to them, for that is precisely what they would tend to do in an emergency. In medium height buildings, apartment dwellers can be rapidly transported to shelters by the shortest routes, partly subterranean.

(2) In the event of a direct hit by an atom bomb on the center cell of the honeycomb, the interior area would be completely destroyed, and in all probability the hexagon structural concrete shelter system would be greatly damaged because its complete enclosure would offer resistance to the blast and thereby serve to intensify the shock waves.

(a) In the event of a direct blast, persons within the shelters would be physically injured due to the secondary effect of the blast as it reaches those shielded, for pulses are transmitted throughout a stricken object.

(3) The large radius of this honeycomb atomic city is noted to be approximately 4,500 feet. If the dwellings which are shown in each hexagonal cell are of ordinary construction, as the plan seems to indicate, then nearly all of the dwellings of this city proposal would be damaged beyond normal repair.

(a) At a distance of 6,000 feet the pressure of a Nagasaki model atomic bomb is about a ton per square foot or 2,000 pounds. Most American skyscrapers are designed to resist a horizontal force of 30 to 60 pounds per square foot or a hundred mile an hour wind, and consequently they would collapse.

(b) If the hurricane type of horizontal force is impeded somewhat by the protecting hexagon shelters, then the suction wave of the blast which follows the pressure wave would complete the damage.

(Continued on page 46)

FINGER-TIP LIGHTING CONTROL IS OFFERED BY POWERSTAT

MOTOR-DRIVEN DIMMERS

Future issues of this publication will carry further information on POWERSTAT Lighting Control. Keep informed. Write for Bulletin 347.

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THE COMBINATION of tough Tygon vinyl plastic inseparably bonded* to quiet, resilient, resin-impregnated cork forms a floor tile with all the top qualities of the best smooth surface floor coverings.

Plastile's Tygon top surface wears longer, with greater uniformity; resists oil, grease, water, alcohol, acids and alkalies; does not rot or chemically deteriorate with age. Plastile's resin-impregnated cork base makes walking easier, quieter.

Being molded, Plastile is free of stresses . . . poses no shrinkage or expansion problems. The cork sub-base bonds easily and tightly to wood or concrete.

For better floors - specify Plastile!

* Patent applied for



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Yes, case histories prove that after modernization, rentals increase and maintenance costs decrease. It is only natural that a sleek, well dressed building lobby should promote satisfied tenants and greater sales.

Architects and building planners in every section of the country call upon Dahlstrom for their elevator entrance modernization jobs. Over 43 years of experience have taught them skill in design...so that each entrance is structurally and aesthetically correct.

A large Dahlstrom design and engineering staff is at your disposal, without obligation, to help you solve any elevator entrance problem. You are also invited to avail yourself of the many Dahlstrom free planning services which include complete color sketches, color decks and information booklets on elevator entrances.

Write for information today!



Representatives in Forty Principal Cities



A helpful folder containing operation, maintenance, and care of finish information of value to building operators and owners. Send for your copy.



in heating and plumbing because they're the best for both important jobs!



The attractive little playroom is a good example of the practical use you can make of a small basement when your heating unit is both good looking and compact. The MOHAWK Winter Air Conditioner shown here lends a distinctive, pleasing decorative note to this basement setting, while providing clean, dependable heat to the entire house. Famous for its beauty, sound engineering features and sturdy construction, the Mohawk burns natural, manufactured, mixed or liquefied petroleum gas with maximum efficiency and economy.



You achieve the ultimate in bathroom luxury when you choose the NEO-ANGLE bath and harmonizing fixtures from the American-Standard line. The bath, occupying space only about four feet square, is the recessed model of the Neo-Angle with its two integral seats and wider, flatter bottom; the lavatory is the graceful ROXBURY with large square bowl, tapered legs, and convenient towel[®] hars. Fittings and other exposed metal finished in gleaming, non-tarnishing Chromard. The water closet is the MASTER ONE-PIECE, with quiet, thorough syphon vortex water action.

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As the world's largest manufacturer of heating equipment and plumbing fixtures, American-Standard is your most dependable source for both. Not only does American-Standard give you the widest choice of styles, types, models and sizes, but it also is your assurance of the finest quality in both heating equipment and plumbing fixtures. That's why more American homes have heating and plumbing by American-Standard than by any other single company. Yes, you'll find that it pays to "make it American-Standard all the way"! For detailed information about the complete range of products, contact your Heating and Plumbing Contractor. American Radiator & Standard Sanitary Corporation, P.O. Box 1226, Pittsburgh 30, Pa.



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S. H. COUCH COMPANY, INC. DEPT. 306, NORTH QUINCY 71, MASS. PRIVATE TELEPHONES for HOME and OFFICE. HOSPITAL SIGNALING SYSTEMS APARTMENT HOUSE TELEPHONES and MAILBOXES. FIRE ALARM SYSTEMS for INDUSTRIAL PLANTS and PUBLIC BUILDINGS.



(4) The atom bomb is essentially a poison weapon.

LETTERS

(a) An atom bomb exploding at the center of the middle hexagonal cell would emit gamma rays which would penetrate these structural concrete shelters and cause slow death to a great portion of those who have sought refuge in the shelters, permanently disabling others.

(b) Neutrons penetrating these shelters could reach those presumably protected and induce harmful radioactivity in the body.

(5) There is an absence of all important green-belts of foliage about this city. Green-belts are a necessity to minimize the great intensity of visible light which is emitted by an atomic bomb explosion.

(a) The intensity of unshielded visible light traveling at the rate 186,000 miles per second, could cause temporary blindness to persons beyond the radius of this atomic city proposal.

Although the Churchill-Severud plan for an atomic city which appears in the Architectural FORUM does not have a proper perspective of the nature of atomic energy and appears to be impractical, there is no need for alarm. There is ample evidence that what is best for peacetime is also best in war. The decentralized city planning of the type which was proposed in the July 1943 Architectural FORUM as "A Program for City Reconstruction" and which was also published on page 213 of the book "Can Our Cities Survive" by J. L. Sert and Congres Internationaux d'Architecture Moderne appears to be a step in the right direction. Although the single township as shown could not resist an atomic blast, construction of properly designed dwellings units plus strategically located shelters could be achieved.

All of the factors, social and economic, as well as those for atomic and bacteriological defense, and based upon the human scale of values, are necessary considerations to guide the architects, city planners, and engineers in order to evolve proper community patterns for the functional atomic city. It is recommended that when planning cities to resist an atomic explosion, close consultation with the nuclear physicist and electronics engineer who are experienced to advise in atomic energy problems of this sort would be a requirement. The Churchill-Severud idea to see an atomic city above ground may be worked out, but certainly not along the lines of confined planning which their sketch in The Architectural FORUM clearly indicates it to

DAVID BAKER Washington, D. C.



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IN THE FORUM

Behind the scenes with FORUM contributors



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GORDON BUNSHAFT (p. 87) is the partner in charge of design for the New York office of Skidmore, Owings & Merrill. Before wartime duty with the Corps of Engineers in Europe, he was in charge of design for the Chicago office of the same firm. An M.A. graduate of M.I.T., he won that school's traveling fellowship plus the Rotch traveling fellowship in 1935. He joined Skidmore, Owings & Merrill in 1937.











has spent almost three design decades in New York. Organized in 1921 as Schultze & Weaver, the firm took its present name in 1940 after the latter's death. Among its souvenirs: New York's famed Waldorf-Astoria, Palm Beach's Breakers Hotel. Founding father Leonard Schultze had previously been design chief for Grand Central Terminal and its adjoining skyscrapers. Partners Eugene V. Meroni and William Sunderland had both worked with Schultze before joining him in the new firm in 1921. Partner Lloyd Morgan has been in the office since 1926, is remembered as Yale professor and head of his own New York atelier.

LEONARD SCHULTZE & ASSOCIATES (p. 92)

RENE P. TRAVELLETTI and **W. LINDSAY SUTER** (p. 110) shared Chicago offices for several years before deciding they could get along as partners. Travelletti is a native of Switzerland, Suter of Canada; both studied in France and at Armour Institute where Suter has taught for the past ten years. Travelletti has also designed for the movies.

JON KONIGSHOFER (p. 114) is a native Californian who gained experience working for his builder father in San Francisco during the Twenties and now practices amidst the "old world charm" of Carmel. As wartime skipper of an LST, he absorbed ideas of ship design, admits that lines strikingly reminiscent of the prows of these craft have crept into his postwar houses. The prow front of his own home caused a small local furor.

SIMON B. ZELNIK (p. 118) was born in Lemberg, Austria, trained in both Europe and America (the Beaux Arts and Cooper Union). From 1928 on he taught architectural design at New York University and since 1932 has also maintained an independent practice. He has made something of a specialty of the Barricini Candy Shops, also counts to his credit Lindy's, Child's (N. Y. Paramount and Atlantic City), the Elgin and Colony Theaters.

THOMAS GREER COLES (p. 121) counts the war (which he spent designing army, navy and marine bases) as a dividing line in his career. Formerly he specialized in residential work in and around New York. Since his return he has added commercial jobs to his residential practice, starting with the design of offices for William Sloane Associates, Publishers. He studied at Columbia University, served an apprenticeship with McKim, Mead & White.

WALTER DORWIN TEAGUE (p. 122), pioneer industrial designer, heads a technical staff of architects, engineers, designers and other specialists, maintains offices in both New York and Los Angeles. Besides work for Ford Motor Co., Boeing Aircraft, Bausch & Lomb etc., Teague has expanded his horizons to take in housing and community planning. The towns of Tonawanda and North Tonawanda, N. Y. are currently under his microscope.



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IN THE FORUM



Julio Vilamajó—1894-1948

"My country," he was fond of telling foreign visitors. "is far from the world—the smallest bit of a country. We have hold of only the last hair on the tail of the fox!" But for all his charming modesty, Julio Vilamajó was a big man—independent, vigorous and cultured. Like his native Uruguay, he was very much a citizen of the world: and, when he died on April 12, at the age of 53 in Montevideo, both Uruguay and the world had lost a great architect.

When Vilamajó came to New York last year, as a member of the United Nations Headquarters Design Committee, his position in Uruguay was already unique. In a very real sense, he was the "dean" of his country's architects. Educated at the University of Montevideo's School of Architecture, he won the first of many honors—first place in the competition for Montevideo's Anteneo Auditorium—in 1916. He joined the faculty in 1918 and two years later won a traveling scholarship. This took him to Europe where he visited Spain, France, Italy, Greece and Africa—traveling, as one admirer put it, not to copy but to see. He returned to Uruguay in 1925.

Architecturally, Vilamajo's influence is reckoned by his colleagues as immense. As a designer, he won competition after competition, thus leaving his imprint on many of the country's most important structures. Capstone of this successful career was his appointment as architect for the University's School of Engineering (p. 104), unfinished at his death. In his work he displayed skill, independence and a vivid romanticism which made it difficult to classify him, stylistically. But as a professor in the School for almost a quarter of a century Vilamajó's influence was even greater. He was, all agree, a magnificent teacher. His versatility was famous: in addition to his passionate attachment to architecture, he designed jewelry, made lithographs, produced ceramics and glassware. He was interested in chemistryespecially perfume distillation; and, his great curiosity matched by his ingenuity, he even took up movie making, producing many animated shorts.

"Bold, outspoken, staunchly independent, he never took a commission he did not believe in," says one of his students. "Once he took a job, he lived with it night and day, studying every detail with infinite care. Yet he loved life and people too. Uruguay has lost a beloved friend and master in the death of Julio Vilamajó."

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AN ART COURSE will be held in Cuernavaca, Mexico, this summer from July 5-August 28. Beginning and advanced studies in color, design and abstract composition are included in the program to be sponsored there by the Rudolph Schaeffer School of Design, whose permanent address is 136 St. Anne Street, San Francisco 8, Calif.

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of modern abstract design done by Warner Prins. This set, of which the largest is 18 x 15 in. and 22 in. high, costs \$140. The 26 in. square table, fitted with more conventional tiles by Fritz von Hermann, costs \$130.

AWARDS

DESIGN OF A "SHOWPLACE" COSMETIC SALES AND MANUFAC-TURING CENTER was the problem set for U. S. students of architecture, landscape architecture, painting and sculpture who participated in the 21st collaborative competition sponsored this year by the Association of the Alumni of the American Academy in Rome.



First prize of \$200 was awarded to a Cranbrook Academy of Fine Arts collaboration (sketch above). This plan by W. C. Muchow, Matt Kahn and D. R. Knorr, takes advantage of the country site specified by the rules to allow for large pool and garden areas in front of the manufacturing and office sections of the building (left and center). A long pavilion (right) approaching the road line provides elegant reception and display space, and amply fulfills the hypothetical company's wish to draw public attention to the plant and its product.

A Cornell University team merited second prize (\$100); and honorable mentions were won by Cooper Union and by Cornell, Notre Dame and Western Reserve Universities.

The jury was composed of E. V. Meeks, Lorimer Rich, Morris Ketchum, Jr., Francis Cormier, A. F. Brinckerhoff, Richard Murdock, Francis Bradford, Russell Cowles, Allyn Cox, Gaetano Cecere, Isamu Noguchi and Wheeler Williams.

EXHIBITS



BROADWAY SIGHTS, the summer show at the Museum of the City of New York (April 28-October 3) sets out to give a pictorial history of this famous thoroughfare which runs in a long diagonal across Manhattan Island. With a wealth of material from its own stores and a number of interesting borrowed items the show hops from era to era and event to event over the 320 years of Broadway's existence. In pogo-stick fashion it takes in theaters, churches, farms, townhouses, fires, funerals, parades and parks. (Continued on page 68)



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There are two important functions of clean air in the enamel spray phase of production in the washing machine plant of The Apex Electrical Manufacturing Company in Cleveland. And DUST-STOP Air Filters, a Fiberglas product, were selected for this dual job.

First, clean air in this spray booth, where dust could mar the smooth, white enameled surfaces, means fewer rejects and imperfections. The DUST-STOP Air Filters, behind the operators in the view above, trap dust particles, let only clean air enter the booth.

Then, too, there is a fine mist of paint in the air around the booth, in spite of water curtains and other precautions. If this mist were to contact aircooled motors, located just outside of the spray booth, and their electrical controls, frequent and costly shutdowns would result. This equipment room, too, is protected by DUST-STOP Air Filters.

Packs of adhesive coated Fiberglas fibers constitute the filter medium of DUST-STOP replacement-type air filters and account for high filtering efficiencies. Standard DUST-STOP frame cells are easily assembled to provide filter capacity for the smallest to the largest heating, ventilating or airconditioning system. DUST-STOPs provide clean air at low cost. They're economical to install, inexpensive to replace . . . For complete information, write Owens-Corning Fiberglas Corporation, Dept. 830, Toledo 1, Ohio. In Canada: Fiberglas Lanada Ltd., Toronto, Ontario.



*FIBERGLAS is the trade mark (Reg. U. S. Pat. Off.) for a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation.



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Where men and medicine meet there's Brick and Tile

Great hospitals, clinics and laboratories long have been built with timetested Brick and Facing Tile. Attractive, flexible design . . . permanence ... ability to stand heavy traffic . . . ease and economy of maintenance . . . colorful, light-reflecting interiors that are easy to clean and keep clean are some of the values brick and tile give to modern medical buildings. To help you apply these advantages and the economies of modular coordination, two new handbooks "Brick Engineering" and "Tile Engineering" are available at \$2.50 each, postpaid. Write to Dept. AF-6, Structural Clay Products Institute, 1756 K Street, N. W., Washington 6, D. C.



Model "dream houses" similar to the one in the RKO Radio Picture "Mr. Blandings Builds His Dream House," starring Cary Grant and Myrna Loy (a Selznick Release), will be seen by home owners all over the country.

> ..builds client acceptance

Mr. Blandings builds his Dream House

> THROUGHOUT THE COUNTRY, model "dream houses" are being built to the pattern set in the current movie hit, "Mr. Blandings Builds His Dream House," and many of them are equipped with G-E heating units.

> Each section of the country can have the type of heating it prefers ... because General Electric has four kinds to offer ... gas and oil boilers ... gas and oil warm air furnaces.

> Thousands of prospective home owners will see General Electric equipment in these homes. Millions more will read about it in national advertisements... will give a hearty welcome to that equipment in their own homes or developments.

> That's one more reason why it will pay you in owner satisfaction to specify G.E. for home heating. Call your General Electric distributor for full information. General Electric Company, Air Conditioning Department, Section H8136, Bloomfield, N. J.



Automatic Gas and Oil Heat



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for YOU

G-E Oil-fired Warm Air Furnace G-E Gas-fired Boiler

G-E Gas-fired Warm Air Furnace



What's in a phrase?

We have tried to put our conception of the Lustron Home into a concise meaningful combination of words. We call it

"... a new standard for living."

Of course, the idea in these words will convey different implications to different people. Here are some of the things we think four basic groups of people will read into it.

To the Buyer

Obviously, the family who buys a Lustron Home has a right to expect easier, better living.

More house for the money—more than 1000 square feet of usable, livable floor space. More utilities included in the basic purchase—kitchen cabinets, combination dishwasher-clotheswasher, exhaust fan, automatic water heater, automatic oil or gas heating plant, complete bathroom fixtures.

Twice the storage space of a comparable conventional house in Lustron's built-in "closet walls." Built-in features and radiant panel heating system unobtainable in any other house at any price. No repainting, redecorating or reroofing ever needed in this porcelain enameled steel home. The only cleaning materials are soap, water, and a damp cloth.

To the Architect

To the architect, "a new standard for living" means that Lustron is pioneering—in an extremely broad section of the entire housing market—the use of new ideas in construction and in structural methods.

Most architects know porcelain enamel as a quality building material for restaurants, store fronts and other commercial buildings. Until now it has been a high-cost material. Our mass-production methods make this quality material available for home construction—truly "a new standard for living."

We are winning new adherents for radiant panel heating, for built-in storage wall units, for full insulation as a primary requisite in construction, for the one-floor basementless home, for sliding doors and large windows, for poured concrete floor slabs.

And because Lustron Homes will put these new ideas to such practical tests on such a vast scale, architects will soon find clients in all income brackets more receptive to incorporating these modern trends in plans and individual home contracts.

To the Lending Institution

Banks, savings and loan associations, mortgage houses, and government agencies will find a new standard of value in home construction in Lustron's "new standard for living."

The great strength of all-steel construction plus the lasting qualities and easy maintenance of porcelain enameled steel means permanence, low rate of depreciation, higher resale value over a longer time.

Low carrying charges (well within the reach of modest incomes) cover not only a substantial house but also a "package" house, in which all utilities, built-in storage units and combination dishwasherclotheswasher are included on one mortgage. The Lustron Home is delivered complete, ready to live in—the buyer's funds are not spread over separate installment payments on a great number of items.

To the Builder-Dealer

Lustron's plan of working through soundly financed builder-dealers in established communities means that construction costs can be stabilized and accurately controlled. There can be no unforeseen construction delays, no substitution of materials.

Builder-dealers put their time against construction and sales. They waste no time on procurement, in vain searches for scarce materials. They erect a complete Lustron Home in approximately three days after completion of the concrete foundation, and get on to the next job—giving the building industry the quick turnover it has needed for long.

Lustron Homes are now on exhibition in New York, Washington, Milwaukee, and other cities. They will soon be on display throughout the country.

Deliveries to builder-dealers will start late June or July. We invite you to inspect the Lustron Home in your community and for more details, write us.

LUSTRON CORPORATION 4200 East Fifth Avenue Columbus 16, Ohio © LC
our slogan...



Permanent, easy to maintain, extremely little depreciation-these advantages are basic in the low-cost Lustron Home. Porcelain enameled steel panels can never rust, decay, fade, weather or stain. The Lustron Home never needs repainting, redecorating or reroofing.

Detail drawings show soundness of Lustron construction methods.





In spite of its good material, the total show never equals the sum of its parts.

Ignoring the admirable display techniques developed by its neighbor museums (the Modern Art and more recently the Metropolitan) the City Museum has muffed its chance for a wonderful show. Distinguished, if not masterly paintings by such well known artists as George Bellow, Edward Hopper and John Sloan are overwhelmed with masses of prints and photographs. Anyone intent on gaining information about New York's architectural and social history, however, will find the show a valuable one. Like a walk along the street it chronicles, BROADWAY SIGHTS is wearing on the back and on eye-but diverting just the same.

THE CLEVELAND MUSEUM OF ART is holding its 30th May show this year (lasting through June 13th). This series of exhibits has been among the largest of regional art shows and includes examples of local design in enamel, silver and other metals as well as painting, sculpture and photography. During their 30-year history the exhibits have resulted in the sale of 11,298 pieces at a total net of \$286,077.

THE AMERICAN FEDERATION OF ARTS announces that it has prepared two new traveling exhibits-"The St. Louis' Jefferson Memorial Park Competition," which comprises 35 drawings of the most outstanding designs submitted for this recent \$125,000 competition, won by Eero Saarinen; and "Ghosts Along the Mississippi," photographs by Clarence Laughlin tracing the development of indigenous architectural design along the river banks. Further information may be obtained from the Federation at their offices, 1262 New Hampshire Ave., (Continued on page 74) NW, Washington 6, D. C.



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 $(9'' \times 15'')$. The correct mixing formula is given on the reverse of each page.

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COLOR GUIDE



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PRECISE MEASUREMENT . . . Of exact static pressure drop across each J & C unit and proper blower size for each J & C Model. EXHAUSTIVE TESTS . . . of J & C units provide installation engineers with the data needed for correct installations. ONLY IN THE LABORATORY . . . may technicians definitely establish:

Correct Pressure Loss Measurements Proper Temperature Rise Accurate Flue Gas analysis Known Heat Transfer

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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.

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The Sign of the times is "CERTIFIED ADEQUATE WIRING"

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"Certified adequate wiring . . makes possible . . full use of electrical service . . my own electric home, and each one in our adequately wired home development . . will still be modern years from now because of adequate wiring," says Mr. W. H. Jewett, Fullerton, Cal. builder.

Proof Adequate-

another home-building project featuring Certified Adequate Wiring—the Jewett Development Co., Fullerton, Cal.

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. It helps you sell houses easier and quicker because: (1) it overcomes today's buyer resistance; (2) it assures promotional support from your electrical industry.

What It Means To The Home Buyer: Adequate Wiring makes even a moderate-cost house, or a remodeled 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 for each deed.
- 4. If there is no Adequate Wiring Bureau in your area, write us for details of how to use "Adequate Wiring" as a sales feature.

Modern Flooring Techniques: No. 2 of a series of articles on the use of asphalt tile flooring prepared by leading architects and building authorities for the information of the architectural and building professions.

The Tile-Tex Company, Inc. pioneer maker of asphalt tile





in its building and modernization program

By Fred Schmid, Vice President

In Charge of Construction and Design, Rexall Drug Co.

Asphalt tile has many uses in our building and modernization program primarily because of its low initial cost and its adaptability to changing store conditions. We have found it especially

suitable when installing new floors in existing drug stores because the speed of installation insures a minimum interruption of store business.

Our experience, furthermore, has been that asphalt tile is a sturdy, long-wearing floor material. It is not as resistant to wear as certain types of cement-finished floors, of course; but this one factor is more than compensated for by the wider group of colors available in asphalt tile, the infinite number of patterns and designs which can be worked from this all-purpose flooring material, and its resilience and safety under-foot.

LIGGEPP'S

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The ease and low cost of maintaining asphalt tile is of particular interest to us as chain store operators. To assure maximum service and to protect the beauty and surface of the material, our Maintenance Department is careful to furnish all of our store managers with the simple instructions necessary for maintenance of asphalt tile floors.

> Ade Schumacher, Rexall Vice President and Regional Director and Fred Schmid discuss a flooring problem with Builder Louis C. Dunn and Architect Albert F. Roller (reading left to right) for one of the Rexall Drug Company's more than 10,000 company and in dependently owned stores.



USES FOR ASPHALT TILE IN THE REXALL DRUG COMPANY CONSTRUCTION PROGRAM:

New Store Construction: Asphalt tile is used in a new store when we have a comparatively short lease, or the location does not warrant heavy construction expenditures, because the material is economical from an installation and maintenance standpoint and still has long life. The tile is installed over the entire store area to save the additional expense of extra flooring in the aisles behind counters. Asphalt tile has proved to be a comfortable walking and working surface for employees who spend long hours on their feet. By covering the entire area we also eliminate the need for floor alterations or repairs when it becomes necessary to change the layout of counters or showcases.

In flooring a new store where both a long lease and extremely heavy store traffic must be considered, we usually specify terrazzo because of its greater resistance to wear. Even here, however, a greaseproof asphalt tile is used behind the soda fountain. It is easier underfoot and isn't affected by food greases.

Modernization of Existing Stores: For upgrading drug stores at low cost we give an old store a "new look" by improved lighting, interior repainting and, where the existing floor is worn out, old fashioned or in need of repair, a colorful, new asphalt tile floor. One of the big advantages of using asphalt tile is that we can usually install the floor overnight without interfering with the business of the store.

Store Expansion: When we have the problem of enlarging an existing store already floored with asphalt tile, we find it's a simple and inexpensive matter to cover the new area with a matching tile. If, for one reason or another, an entirely new floor is needed, it's important to our plan of operation to know that here, too, we can easily cover first the new then the old area without curtailing operations in the existing store.

Independent Stores: The benefits of our experience with asphalt tile and other flooring materials used in Rexall's 480 company owned drug stores are passed on to the almost 10,000 Rexall independent agents! As part of the service furnished them for planning, building and equipping their stores, we suggest wall colors, ceilings, store fronts, lighting—in fact a complete designdecoration plan. Asphalt tile, in colors that tie in with the overall decorative scheme, is specifically recommended to them as the ideal floor covering material.



This Glendale, California Rexall outlet (below left) acquired the "new look" with a new, marbleized asphalt tile floor in a smart, gray-green checkerboard pattern. To direct store traffic to the prescription department, an inexpensive asphalt tile insert was used.

New floor going in—quickly, and with a minimum interruption of store business! This attractive asphalt tile floor (upper photo) in marbleized gray plays the key role in the overall modernization of this Rexall Drug Store in Downey, California.

Ready for business—and lots of it! (lower photo) Modern trends in store decoration call for extensive use of color. The wide color range in which asphalt tile is available simplifies the problem of tying floor, walls and furnishings together in the overall decorative scheme.



Office Buildings: The offices and corridors of our new world headquarters building in Los Angeles are floored with asphalt tile. The material when used in offices offers many of the same practical advantages it does for store use. Moreover, it's a good flooring for office areas because of its resiliency, pleasing colors and sound deadening qualities. Acoustical ceilings are used throughout our headquarters building which makes the need for overall sound deadening an important consideration.

* * * *

Many, many thousands of retail establishments throughout the country, selling every imaginable kind of merchandise, handling widely varying traffic loads, and catering to both class and mass patronage are today surfaced with Tile-Tex* Asphalt Tile! Whatever your problem in flooring, look first to this quality asphalt tile—thoroughly proved in almost a quarter of a century of serving America's flooring needs. For more information concerning this all purpose flooring material or reprints of this article, write The Tile-Tex Company, Inc. (subsidiary of The Flintkote Company), Chicago Heights, Illinois. Sales offices in Chicago, New York, Los Angeles and New Orleans.

The TILE-TEX Company CHICAGO HEIGHTS, ILLINOIS

REGISTERED TRADEMARK OF THE TILE-TEX COMPANY, INC.



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is the toughest, longest-lasting, best-value built-up roof that can be made



BARRETT SPECIFICATIONS, published in Sweet's and also available in the Barrett,Reference Manual for Architects and Engineers, stipulate exact quantities and qualities and proved application techniques to produce a uniformly dependable result. They stipulate . . .



A FINAL POURING (not mopping) of Barrett Specification* Pitch into which, while hot, the gravel or slag is firmly embedded. This forms the famous Barrett armored surface which means extra protection against weather, fire and mechanical damage.

Barrett Specification* Pitch and Felt
 BARRETT APPLICATION METHODS
 The Gravel or Slag Armored Surface

4. The Barrett Approved Roofer

THE SUPERIORITY of the Barrett Specification* Roof is due to the combination of highest-quality roofing materials, the protective surface of gravel or slag, and scientifically standardized application techniques used by Barrett Approved Roofers. The result is a roof so good that it can be bonded against repair and maintenance expense for periods up to 20 years—a roof so good that it regularly outlasts the bonded period by many years.



PROPER PREPARATION of the roof deck, according to type and incline. They specify the number of plies of Barrett Specification* Felt to be used, the exact quantities of Barrett Specification* Pitch, and precisely how they shall be applied. They also require . . .



YOUR FINAL ASSURANCE of "the finest roof it's possible to build" is the "Section test" made by the Barrett Inspector. This operation provides an unfailing check upon the quantity of materials used and the applicator's adherence to the stipulations of Barrett specifications.



THE BARRETT DIVISION ALLIED CHEMICAL & DYE CORPORATION 40 Rector Street, New York 6, N. Y. 36th St. & Gray's Ferry Avenue Philadelphia 46, Pa. 2800 So. Sacramento Avenue Chicago 23, III. In Canada: The Barrett Company, Ltd. 5551 St. Hubert St., Montreal, P. Q. *Reg. U S Pat. Off.;



Zonolite Plaster Speeds Construction and Provides Values Found in NO Other Material

In "Pittsfield Village," large Michigan housing project, Zonolite Plaster Aggregate was used throughout. This material provided a lightweight, fireproof plaster of high insulating and sound deadening qualities. The Zonolite plaster was applied over gypsum board lath.

Architects and engineers are interested in the weight saving features of Zonolite Plaster Aggregate. It weighs only 8 pounds per cubic foot as compared to 100 pounds per cubic foot for sand, thus greatly reducing dead load in buildings—as much as five tons in the average house. As it applies faster and easier, it speeds up construction.

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In recent test by Underwriters' Laboratories, Inc. 1 inch of Vermiculite Plaster on metal lath used as protection for steel floor and structural members, received 4-hour fire rating, the highest rating awarded any material. Chart shows results and maximum temperatures reached. This construction is the lightest, least expensive and thinnest fire protection ever to withstand this test.

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A modern, blended heating system for modern office comfort...a heating system that gives you individual room control, gentle draft-free, warmed air circulation without the use of moving parts that wear out — that's what Modine Convector Radiation offers you. If you're planning to build or remodel an office building, laboratory, or showroom, specify the dependable heating comfort, distinctive style, space saving, cleanliness, and long service of Modine Convector Radiation. Look for Modine's representative in the "Where-to-buy-it" section of your phone book, or write for free literature.

MODINE MFG. CO., 1507 Dekoven Ave., Racine, Wis.

ANNOUNCEMENTS

TEXTILE COMPETITION

THE INTERNATIONAL TEXTILE EXHIBITION, sponsored by the Woman's College of North Carolina University, Greensboro, N. C., announces its 1948 competition for textile designs. Seven groups of entries are listed: woven rugs, woven clothing fabrics, woven draperies and upholstery, napery—woven and/or printed, printed textiles, woven synthetics and woven linen. Purchase awards (covering the article submitted, not the design) are \$250, \$200 and \$150 for the three best rugs submitted; and \$100, \$75 and \$50 for the three best designs in each of the other classifications. All further information may be obtained from the Secretary of the International Textile Exhibition at the Department of Art of the Woman's College. Entry blanks must be received by September 17th.

ARCHITECTURAL CLASSIC AGAIN AVAILABLE

THE LIFE WORK OF THE AMERICAN ARCHITECT FRANK LLOYD WRIGHT, for a long time out of print, is now available in a limited edition bound from original press sheets. Published in Holland in 1925, this book is the most complete source on Wright's early work and is the book which made Wright an international force. The Life Work (with English text) contains 197 illustrations of Wright's early buildings as well as articles on his design by Lewis Mumford, J. J. P. Oud, Eric Mendelsohn, Louis Sullivan and Frank Lloyd Wright himself. Books are obtainable at Kroch's Bookstores, Inc., 206 N. Michigan Ave., Chicago, Ill. at \$17.50 a copy.

NEW OFFICES

ERTZ, HARTFORD & KUETTNER, architects, have opened offices at 1205 S.W. 18th Ave., Portland 5, Ore. (Continued on page 80)



- RIM DEVICE, (illustrated), MORTISE, and VERTICAL ROD types
- HEAVY BRASS in standard sizes and made to dimension
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SPECIFY A BUILT-IN BREEZE

Backed by 17 years experience, Bar-Brook Breezebuilders* are engineered for a lifetime of cooling comfort. When efficient, economical cooling is desired, you can specify Bar-Brook Fan Units with confidence. Write today for complete information and specifications.

BAR-BROOK MFG. CO., INC. SHREVEPORT, LOUISIANA



Not only Bendix washers but **Bendix dryers** 100 · · · are part of these new Gross homes!*

Why?

"Look-Ahead Builder" John C. Gross tells you two unbeatable reasons why he installs Bendix equipment in Gross Homes.

"Better looking . . . and better living!"

Installing a Bendix automatic Washer, and a Bendix automatic Dryer, says Mr. Gross, increases the value of the property . . . makes it more completely equipped for modern living. And elimination of unsightly clothes-poles and clotheslines from back yards increases the beauty of house and grounds.

It's not by accident that America's blue-chip builders, like Mr. Gross, and many others, make Bendix equipment a part of every blue-print. These smart builders know that a home planned for easier living is a home that the housewife wants. Also, Bendix Washers and Dryers can be sold on a package-mortgage basis — costing just a few additional cents a month — so it's a bargain in the woman's eyes, as well as a boon!

So take a tip from the men who display the "Sign of a Look-Ahead Builder" on their developments! A reputation for giving more for the housing dollar today, will help keep you building and selling houses tomorrow — when the housing boom is over!



DISPLAY THE SIGN OF A "LOOK-AHEAD BUILDER"!

* Gross Homes Development in St. Louis, Mo. All homes completely equipped, including Bendix automatic Washers and Bendix automatic Dryers. Prices range from \$19,500 for 5 rooms (1,450 sq.ft.) to \$23,000 for 6 rooms (1,790 sq. ft.).

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The all new Bendix De Luxe-can even put in its own soap! Compact, efficient, counter-height for easy convenience. (Automatic soap injector optional).

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The matchless Bendix Dryer - beats the weather to a frazzle, saves work, saves time, a boon to your women prospects. Plan for this Bendix duet!

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TRYING to keep costs down on air conditioning jobs? Then you'll like the time-saving, space-saving features of a General Electric Central Plant Air Conditioner.

This compact, light-weight equipment can be arranged in 12 different ways . . . for either horizontal or vertical discharge of air . . . motor and coil connections on either right or left side.

All basic sections will pass through a standard

30" door. That means no knocking down of walls ... no disassembling of sections into small pieces.

A horizontal or vertical G-E Central Plant Air Conditioner... for standing or suspended installation ... will give your client long-lasting, reliable service at lower overall cost. Check with your local G-E Air Conditioning specialist.

General Electric Company, Air Conditioning Department, Section A8136, Bloomfield, New Jersey.



How to deal with condensation .. Balsam-Wool has the answers!

As an architect or builder, you know what condensation within walls or ceilings can do to any building structure. Balsam-Wool offers an effective answer to such problems. Completely sealed in a moisture-proofed covering—with two or more vapor barriers— Balsam-Wool provides maximum protection. Complete details are available in Balsam-Wool Application Data Sheets.

Use your Balsam-Wool Data Sheets to provide specific information on a wide variety of insulation application problems. These sheets are illustrated with authoritative charts and diagrams such as are shown on this page. If you do not have a complete set of Data Sheets—contained in an A.I.A. file folder—they are yours for the asking. Just mail the coupon!







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Here's everything you want in windows — from the slender look that means more glass area for size of opening, to the beautifully designed locking hardware and positive ventilation control. Lupton Metal Windows are perfect for the small modern home, as well as for the lovely suburban residence. Even on a budget, there is no more satisfactory window. Extended hinges permit cleaning glass from inside the room. Air flow is controlled by roto-operators located at the sill. Weather-tight, cannot shrink. Casements are held firmly at any degree of opening and can be locked or released without opening the screen. Metal frame screens and glass insulating panels can be attached easily from inside the room. There is a Lupton Metal Window for every type of building. Write for our catalog or see it in Sweet's.

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THE NEW SPENCER SERIES "21"

Designed to burn any type of fuel —easily and quickly converted. Year-round domestic service hot water. A sectional boiler designed with iron to iron air tight fit. Attractive, colorful jacket combined with modern design door assembly that features pyrex observation ports.

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• A long history of manufacturing quality boilers.

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THESE FACTS give you easy installation and complete customer satisfaction by Spencer's trouble free operation. It's the know how that counts! Since 1888 Spencer has manufactured the quality boiler—and has pioneered many outstanding developments in the heating industry. The Spencer line today includes a series of steel tubular boilers—second to none in proven design, quality and workmanship. There is a proven Spencer to meet your every heating requirement.



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Steel heating jacketed boiler for homes and smaller commercial buildings. For mechanical or hand-firing —easily and quickly converted. Features include easy accessibility for cleaning—precision ground water cooled flue and fire door frames. Available with year-round domestic hot water heating method.



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ANNOUNCEMENTS

ARNOLD LAWRENCE, architect, announces the opening of his office for general practice at the Orford Bldg., 869 Main St., Manchester, Conn.

MILTON SHERMAN, A.I.A., is now re-established in private practice at 141 N. E. Third Ave., Miami 32, Fla.

WILLIAM BRACKETT, JR., architect, announces the opening of his office in the Technical Bldg., Asheville, N. C.

BERNARD MELNIKER & ASSOCIATES, engineers and industrial and product designers, are now in practice with offices at 2510 W. Seventh St., Los Angeles, Calif.

CHANGES OF ADDRESS

ABRAHAM WARONOFF, R.A., announces that he has moved his office to 1110 13th St., N.W., Washington, D. C.

THE SAN FRANCISCO HOUSING AUTHORITY has coordinated all operations into its new building at 440 Turk St.

SCHREIER, PATTERSON & WORLAND, architects, are now located at 1420 K St., N. W., Washington 5, D. C.

S. Z. Moskowitz, A.I.A., announces that his offices are moved to the Deposit and Savings Bank Bldg., Wilkes-Barre, Pa.

PAXTON, KRUEGER & ASSOCIATES, INC, an industrial design firm. are now in offices at 350 Fifth Ave., New York, N. Y.

DUE CREDIT

We regret that credit to Thorn & Jorge was omitted from our write-up of the New York City showroom and offices for A. D. Juillard & Co. (March FORUM, pp. 108-9). Thorn & Jorge were architects for the job.



You can't beat cork for staircases. You can't beat cork for flooring, whether it's used in a residence, an office, a church, a school, a public building of any kind. Cork is long-lasting, beautiful, warm and quiet. It keeps its resilience for years and years. It's

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THIS attractive Portland, Oregon, home contains plenty of Douglas fir plywood, but it's mostly "behind the scenes" - in wall sheathing, in roof sheathing, in subflooring. Built on a hill-top lot with sweeping view, the house is subjected to sweeping winds as well. Kenneth Striker, the original owner, says: "In spite of the wracking action of the wind, the Plyscord sheathing kept the structure so rigid that after four-and-a-half years there were only four small plaster cracks, due to atmospheric conditions rather than structure. When I build again, Plyscord will be a 'must' in the specifications." The present owners, Mr. and Mrs. John Dierdorff, who purchased the house in 1944, say the house is still rigid and tight, and has required an absolute minimum of maintenance. Architect for the house was Richard Sundeleaf; builder was Julius Zink.

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81



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For technical data and installation details, consult GLASS section of Sweet's Architectural Catalog, or write Dept. E-17, American Structural Products Company, P.O. Box 1035, Toledo 1, Ohio.





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The Architectural FORDRUM Magazine of Building

Ezra Stoller: Pictorial Services CORNIN F The second states

A REMODELED NEW YORK LIMESTONE PROVIDES A SHOWCASE SETTING FOR PRODUCTS DISPLAY





DEFT REMODELING

creates a compact sales machine with a billboard front

Real estate brokers with listings of well-located old residential property will have more than a casual interest in this skillful architectural exploitation of the big showcase potential of such buildings. The trend to remodel these old brownstones for use as office space may have been launched by shortage of space and present record square foot rates in commercial buildings, but it seems likely to be accelerated by such imaginative solutions as this New York property by Skidmore, Owings & Merrill. However, this extremely attractive job demonstrates, among other things, that the firm attracted by the advertising value and display possibilities of a "building of one's own" had better count on more than piece-meal remodeling.

When Owens-Corning Fiberglas Corp. was unable to find larger quarters for its New York sales office, it bought a four-story-and-mezzanine, brownstone front building on E. 56th Street and called in S-O-M. The corporation asked for emphasis on display of the multitude of Fiberglas products and for the incorporation of these acoustical, insulating and decorative materials in the structure in as many new ways as possible. The

architects were given a remarkably free hand as to just how this was to be done.

Fiberglas officials expressed a general satisfaction with the existing facade (cut above) and an understandable reluctance to undertake the expense of a new one. But Gordon Bunshaft, S-O-M's partner in charge of design, argued from the start for a new front which would open up the first floor display area and dramatize the character of the building. When the need to strengthen bearing walls, to shore up floors and make other structural improve-

4th FL 3d FL StaiR 3d FL WELL 2nd FL Ist FLOOR BASEMENT SUB-BASEMENT

ments became apparent, Fiberglas agreed with the architects' proposal to rip out the mezzanine above the old display window and replace the whole front. The original stair tower was retained and a self-service elevator added.

The architects alloted the first story and a half to display space, with direct access from the street. Headquarters of the textile division were centralized on the basement level. The long narrow shape of the brownstone, with windows only at front and back, turned out to be rather well-adapted to the requirements of the sales departments. These were laid out on the second and third floors, with a single file of desks and individual offices in front. The president's office was assigned to the top floor, with a large conference room at the rear.









NEW FRONT, of glass, aluminum, limestone, yields two-story, 18 ft. display window. Stairs under cover give easy access from street to display floor. Separate service door at left leads directly to fireproofed stair tower, and is skillfully incorporated in entrance treatment. Whole effect is quiet, impressive.



UPPER FLOORS provide



SALES OFFICE on third floor shows incorporation of lighting in acoustical ceiling, a device worked out in varying forms and materials on all floors. Here Fiberglas acoustical board is laid on around light troughs. Reception area, visible beyond first desk, is just opposite elevator, and is done in bright-colored Fiberglas fabrics, contrasting with the bluish grays predominating as background colors on all floors.

Expanded aluminum sheets, 3 ft. wide, are stapletacked as wall facing and backed by a stiff, parchmentlike Fiberglas mat. Back of the mat, 3 in. thick Fiberglas batts are laid on as insulation, held by Fiberglas cord. Signs on each floor point out all products used.







CONFERENCE ROOM occupies the rear of the top floor. Its decorative acoustical ceiling is made of Fiberglas swirl mat, cemented to Fiberglas acoustical board. The folding doors used to divide the conference area into two smaller rooms are made of a gray, resincoated Fiberglas fabric, and Fiberglas curtains in this room are gray, white and silver. Wall in background of picture is natural-finish red birch. Small conference rooms are also provided in rear of sales floors.

laboratory proving-ground for manufacturer's products





WALLS of huge wartime bomber plants were finished. for purely functional reasons, with insulating Fiberglas mat and wool behind painted metal lath. In this building, this functional wall treatment is successfully exploited for decorative value and the metal lath becomes matched sheets of perforated aluminum.



DISPLAY AREA on street floor has a luminous ceiling made of a plasticized Fiberglas mat sandwiched between two sheets of glass. This is hung from a suspended metal grid. The mat was originally developed as a lampshade material. The firm thinks that plastic laminators will eventually supply a product which can replace this sandwich construction.

CONSTRUCTION OUTLINE: Exterior walls - brick; inside-wood furring, plaster or special Fiberglas, Owens-Corning Fiberglas Corp. ROOFING-built-up tar and felt, Lewis & McDowell. SHEET METAL WORK: Flashing-Fiberglas, Owens-Corning Fiberglas Corp. Gutters-cop-Ducts-galvanized steel. INSULATION-Fiberglas, per. Owens-Corning Fiberglas Corp. WINDOWS: Sash (front) -aluminum, Trio Industries; (rear)-steel, S. H. Pomeroy Co. STAIRS (fire)-steel, Fassler Iron Works, Elevators -Marcato Elevator Co. FLOOR COVERINGS-asphalt tile, H. M. Crossom. FURNISHINGS-Knoll Associates, Inc., Nessen Studios, W. J. Sloane, Ivel Construction Corp., Jens Risom, Apeda Studios. PAINTS-Konover Painting Co. ELECTRICAL INSTALLATION: Wiring-steel conduit. Switches-toggle. Fixtures-fluorescent and incan-descent. PLUMBING: Soil pipes-cast iron. Waste and vent pipes—galvanized steel. Water closet connections— lead. Water pipes—brass. HEATING—steam system. AIR CONDITIONING — Chrysler Corp. Grilles — Mayer Refrigerator Co. REGULATORS-Minneapolis-Honeywell Regulator Co. Filters-Fiberglas, Owens-Corning Fiberglas Corp.



POSTWAR CO-OP's

Unlike their predecessors in the gilded Twenties, today's cooperative apartment houses are based on sound financing, good design and special attention to the details of comfortable living.

The cooperative apartment, fair-haired real estate child of the Twenties and white elephant of the Thirties, is again riding the top-of-the-market in Manhattan residential building. Since the war, private money (except for Metropolitan's gigantic investment in Stuyvesant Town) has shown little interest in mediumpriced rental housing. The luxury apartment house is its current lodestone and of the eleven completed or under construction since the war, eight have turned out to be co-ops.

The reasons are not hard to find. In a period of dwelling shortage and rising prices, the co-op (at least in the larger cities) looks like the answer to a builder's prayer. It eliminates the necessity of high rents, based on inflated costs and continued over many years, come good times or bad. It encourages high quality construction when most builders are cutting every possible corner. To the tenant buyer it often represents the only method of securing desirable living quarters in a market short of rental apartments. The decision to turn co-op was made by many New York builders under the late OPA, when official rent estimates could not be squared with rising costs. Since the demise of price control they have stuck to the idea as a means of sidestepping embarrassingly stiff rents.

The co-op first came into fashion after World War I during a period of inflation and shortage similar to the present. The early ones were well-financed, but the trend soon developed gold rush proportions. Inflated building on inflated land was topped off by dubious mortgage financing. The luxury co-op became a speculative operation, not only for builders, but for buyers who saw a chance for quick turnover and thus quick profits on a relatively small investment, like buying stock on margin. When last heard of before the crash one such single apartment was selling for \$450,000 with a whopping yearly maintenance charge of \$22,000.

Even before the market collapsed, the co-ops were getting into financial difficulties because of tenant default on operating expenses, taxes and mortgage charges. The remaining tenants then had to assume the defaulted load—a process which snowballed into foreclosure. By 1934, over 75 per cent of the co-ops in both Chicago and New York had gone under.

Not until the middle of World War II did they show signs of reviving. "Re-co-oping" of the old apartments began as a means of wriggling out from under wartime rent ceilings. It gained momentum after VJ day as maintenance costs climbed while ceilings remained fixed. Most of the sales were made at less than the original cost of the building and at much less than their reproduction value. The scheme appealed to tenants because of the housing shortage and the fear of inflated rents once controls were dropped. However, in some cases it was a matter of quick and easy blackmail. One apartment house on Chicago's Gold Coast was bought by a promoter for \$280,000, sold back to its desperate tenants for a neat \$430,000. There was enough of this type of operation and of newspaper publicity on it to give the phrase "co-op apartment" a tinny ring to the ear of the average citizen.

However, most of the current reconversion ventures as well as the new luxury cooperatives are not fly-by-night ventures. They stand on a much firmer financial base than the Klondike co-ops of the Twenties. In addition, tax revisions and lease changes have provided new attractions for tenant-buyers. Under new income tax regulations, co-op owners are allowed to deduct their share of the building's mortgage interest and real estate taxes from gross income. Since these charges normally amount to between one-third and one-half of the yearly maintenance fee, this represents a real saving for highly surtaxed tenantowners. Under several new plans, the builder has also undertaken to protect owners from increased maintenance charges caused by inflation or tenant default. This is accomplished with a guaranteed trust fund set aside for emergency purposes. Co-op lease changes are equally important. During the Twenties, most owners were tied to their building with 99-year, no escapeclause leases. The only out was to sell. In the depression when no takers could be found, the millstone quality of a co-op could hardly be overstated. Today, most co-ops are set up with relatively short-term leases and frequent escape clause renewals. If a tenant defaults on his payments and cannot find a buyer, he turns his stock over to the tenant organization. He loses his investment, but not his shirt.

Whether these co-ops will follow the same cycle of boom and bust that their forerunners in the Twenties went through is still anybody's guess. Admittedly they are being built at inflationary cost. With the luxury builders still enjoying a seller's market, there is as yet no speculative turnover. The once-burned, twice-shy philosophy of both banks and builders should effectively brake any such tendencies. At present the success of the co-ops is being measured in terms of the housing shortage, and as long as it lasts vacancy risks are small. If and when the shortage eases, the co-ops—like any current building venture—will stand or fall on the intrinsic merits of their financing plans plus the value which they offer to demanding tenants.

Seidman Photo Service



CO-OP at Madison Avenue and 74th St. built by Sam Minskoff & Sons also goes in for balconies and lots of glass. There are 100 suites in the 15story and penthouse building. All apartments have already been sold.

[&]quot;CARNEGIE HILL" CO-OP, built by City Investing Company at 15 E. 91st St. boasts large windows and private balconies. Because of a small plot, the building occupies every foot of its zoning envelope.

The conventional co-op has always been a speculative venture for the builder. He takes his profit from equity down payments made by the tenants, turns the mortgage over to a bank and is quickly out of the financial picture. This apartment house at 15 E. 91st St. is unusual because it is a co-op built as an investment property—traditionally a contradiction in terms. Robert W. Dowling, President of City Investing Co. is responsible for this new twist which is typical of his unorthodox methods of operating. Instead of selling out the entire mortgage to another outfit, he has taken his profit as a builder and in addition retained half of the \$2,500,000 mortgage, thus gaining an excellent property for his investment company. He also intends this as a guarantee of good faith to tenant-buyers. With Dowling backing his own speculation it could hardly be less than a sound proposition.

City Investing Co.'s subsidiary will retain half the mortgage until July, 1949, when the indebtedness will be refinanced and the mortgage extended to October, 1962. Until 1957 the Dowling organization will retain an interest of at least \$500,000, provided that the building remains a co-op and the mortgage is not paid off. In addition the company offers a five-year guarantee to absorb any rise in maintenance costs beyond 10 per cent and a ten-year guarantee of responsibility for defaulting owners.

Another aspect of the Dowling finance scheme is the low down payment required of tenants. Instead of the usual 50 per cent equity, 50 per cent mortgage, he asks for only an 11 per cent equity, 89 per cent of the sales price going into mortgage. Competitors argue that the small equity payment makes the building's carrying charges abnormally high, a dangerous situation in case of depression. For instance, a conventional co-op (see chart below) built by Percy and Harold Uris at 880 Fifth Ave. charges \$15,200 equity for a four-room apartment with carrying charges of \$160 per month. Dowling's four-room apartment, requires only \$3,450 down payment, but has a larger carrying charge of \$264 per month. In defense of his plan, Dowling explains that low equity makes purchase easier during inflation and that deduction of high maintenance charges from income tax gives his tenant an actual money advantage. By the end of ten years he will have as much equity in the apartment as did the Uris purchaser with his original down payment.

Despite both the housing shortage and Dowling's favorable tenant policy, twelve of his 41 apartments remained unsold last May. Managing agents of the co-op explain this as a result of their extremely selective tenant policy plus the fact that they started renting out of season. Competitors suggest that tenants shy away from the overly-elaborate financing scheme. At any rate, other Manhattan luxury co-ops were selling fast this spring under orthodox financing. LEONARD SCHULTZE & ASSOCIATES, Architects CITY CONSTRUCTION CO., Builders EDWARDS & HJORTH, Structural Engineers ALBERT FENTZLAFF, INC., Mechanical Engineers SLOCUM & FULLER, Heating Engineers RICHARD CRITTALL RADIANT HEATING CO., Heating Advisors

DESIGN OF THE APARTMENT was set by very obvious considerations, as is the design of most of the apartments being built today . . . a feeling of substantial style was one of these considerations. Another, obviously, was the book of zoning regulations which were the governing factor in deciding where setbacks should occur. Yet another and necessarily the most important, were cost and return sheets, which dictated in the sternest of symbols, currency, just how many apartments must be included, and what type of apartments could be sold for prices which would Justify the entire operation economically. Schematic floor plans, right, show how the correct number of apartments of each size were fitted together within the zoning envelope, from doctor's suites on first floor to set-back pent houses at top. If ceilings had been 3 in. higher, say designers, one entire floor would have been sacrificed.

COMPARATIVE PAYMENT SCHEDULES SHOW HOW BUILDER SHARES INVESTMENT WITH TENANT

APARTMENT AT 15 EAST 91ST STREET, four rooms, oneand-a-half baths and porch.

Cash purchase price over mortgage indebtedness. \$3,450.00

 Share of annual operating expenses and surplus
 \$ 585.24

 Share of annual real estate taxes and mt'g. interest
 1,648.00
 2,233.24

 Share of annual amortization payment
 929.27

Total of all annual charges \$3,162.51

APARTMENT AT 880 FIFTH AVENUE, four rooms, two baths.

Cash purchase price over mortgage indebtedness.\$15,200.00

 Share of annual operating expenses and surplus
 \$554.40

 Share of annual real estate taxes and mt'g. interest
 924.00
 1,478.40

 Share of annual amortization payment
 430.00

Total of all annual charges \$1,908.40



A NEIGHBORHOOD IS RESHAPED WITH IMAGINATION AND MONEY

The City Investing Co., says headman Robert W. Dowling, is a manufacturer of real estate values. This largest U. S. company dealing exclusively in real estate-one of the few real estate outfits listed on the big board at the N. Y. stock exchangehas a big approach to the neighborhood problem in building. Dowling and his men do not search for suitable sites in already posh neighborhoods where they can bring up their towering stacks of luxury apartments in the right company-the usual realty technique. What City Investing looks for are slightly run down districts which they can take over and "rescue" profitably. Their aim is to build and refurbish in a big enough way to create, or recreate land values, and they have been singularly successful in this section of New York City,

New York is a town whose development has never slowed down sufficiently to stabilize many real estate sections. Just as social classes and economic classes have shifted, so has the "tone" of neighborhoods. People always were expecting to earn enough next decade to move to a *better* section with *better* people—and often they have done that, and so have their neighbors. The cultural leveling brought by great equalization of educational opportunities has also done much to keep many groups of immigrantsinto-the-middle-class on the move from one section to another.

But up to now, New York builders have not *rebuilt* sections systematically. They have not realized the short commercial life of dwellings in New York City, although the swift death of commercial structures has been better comprehended. Investors like Dowling, however, are now beginning to look for "soft" sections of Manhattan Island to develop into costly residential projects.

Fifteen East 91st Street is a prime example of this policy. It is one of two co-op apartments built in a certain "neighborhood" on Manhattan's Upper East Side which has been marked out for major investment by City Investing. The neighborhood, (bounded by 86th and 96th Street, between Park and Fifth) had long been in the process of settled mediocrity, with the exception of the large luxury apartments on Park Avenue and 86th Street. Along the other streets were brownstone houses, apartment houses of turn-of-the-century vintage. To the north, near 96th Street, the area declined into the forlorn type of dwelling that only once-flossy apartments can make.

This was the section selected by Dowling for development. Leaving the tonier blocks alone, he began buying properties along Madison Avenue, which divides the district in half. He then proceeded to plan three new luxury apartment buildings for the area, two on Madison Avenue and one on a side street between Madison and Fifth. The two buildings on Madison were built—15 East 91st Street and 47 East 87th Street, which is similar to 15 East 91st Street.

(Continued on page 97)

Luxury survives the onslaught of high building costs: the apartments have fewer

The essentials for luxury in postwar New York apartments remain the same as prewar demands: impressive size and space, location, and facilities. But luxury is much more expensive to create now, so a new cooperative apartment building must have something distinctively postwar to justify its added cost to the buyer, compared with prewar-built facilities. Size cannot be increased; present prohibitive costs reduce size. But space can be used better; planning can concentrate some services with gain to other areas; and favorable location is important.

The biggest improvement, however, to entice the attention of prospective apartment buyers is in facilities. This apartment building incorporates all the most forward developments in apartment facilities. The builders can point with uncontested pride to a set of advances including radiant heating, divided bathrooms, master television antenna, individual deep-freeze lockers, power circuits for individual air conditioning equipment, and the most modern of kitchen equipment. It is these refinements which often impress the prospective buyer most, and make 15 East 91st Street very impressive indeed.

The building is divided into a series of two-floor and one-floor apartments-duplexes and simplexes in the argot of the rental agent. The largest (except for a special penthouse) has three big bedrooms-with-bath, a dining room, living room, kitchen, pantry, and two maid's rooms, besides a large porch off the living room. Another seemingly very necessary part of these luxurious apartments is a roomy foyer. This touch of formality is an obvious waste of space physically-but not, it seems, economically. The porches in this building are not merely shallow, decorative rent raisers, but are big enough (11 x 10 ft. and 12 x 8 ft.) for furniture, and can be glassed-in during cold weather. Planning of some apartments is rather stiff, especially at the pair of entrances, but in tall apartments zoning and vertical service requirements always raise serious planning problems.



PORCH ADJOINS LIVING ROOM, CAN BE GLAZED IN



spacious rooms, but a number of compensating postwar features



LIVING ROOMS STILL ARE LARGE, BUT NOT IN GRAND MANNER



NEIGHBORHOOD (Cont'd.)

Dowling christened the new neighborhood "Carnegie Hill"—reasons: the area is high; the empty Andrew Carnegie mansion on



Fifth Avenue is included; a name is valuable. The next move was to set up a "Carnegie Hill Association," and invite property owners and tradespeople to join up for their own interests-part of the clever public relations program of City Investing. Through the Association, Dowling has campaigned for planting trees along Madison Avenue (a successful operation) and has also braced the Department of Sanitation and other city departments to improve the services in the area. The "Carnegie Hill Association," set up in a storefront office, keeps a vigilant look-out for disturbing elements in the area, and pursuades store owners to spruce up their fronts in keeping with the new quality in the neighborhood. A typical Dowling manuever took place during the course of construction of 15 East 91st Street when he noticed that the yards of some of the structures whose rears faced the new building were cluttered and unkempt. Individual agreements were made with these people to clean up their yards and porches. Paint,



picket fences and shrubs were soon very much in evidence.

When the development of this neighborhood has been completed—and the proper tone struck, the value of City Investing's original investment in land will have increased greatly. Every tree planted on that block is expected to bear financial fruit. This creation of new neighborhood values in an old section on the island of Manhattan is considered a shrewd commercial endorsement of some principles of city planning by experts in that field—constructive use of money, physically and economically.

Ezra Stoller:

Apartment buyers find the carefully selected equipment, advanced ideas,

Typical of the guardedly luxurious spirit of this apartment house are the wide corridors pictured on the right. There are no murals on the walls picturing the Dreamy Isles or hunters clad in pointed shoes, no throne chairs, no tapestries or other paraphernalia which-for reasons which have been suspect since the early days of Thorsten Veblen-clutter so many apartment house corridors and lobbies throughout the country. Also typical are the up-to-the-minute self-leveling elevators which serve each floor. These are operated by attendants, in the normal scheme of things, but may be self-operated by the tenant-owners without further adjustment should there be labor trouble or should there ever be a necessity to effect economies in the staffing of the cooperative venture.

Each apartment features a divided bathroom, serving the master bedroom. One half contains recessed bath and wash basin; the other a water closet and a second wash basin-earning the designation powder room. Some departure from the usual clinical approach to bathroom decoration was made here; tiles are used on the wall only in such watery regions as above tubs, and in showers. Through the rest of the bathrooms, wall areas above the tile base are covered in patterned wallpaper of a new type finished with washable plastic. Kitchens are arranged and finished conventionally, with the latest model equipment lined up in an economical fashion. In the basement of the apartment house are a set of individual deep freeze lockers for the residents, and also a communal laundry room, with tubs, ironing boards, and automatic washers and dryers.



Adolph Studly







SPLIT BATHROOM, VIEWED DRESSING ROOM: FROM ONE HAS BATH AND BASIN; OTHER HAS WATER CLOSET AND A SECOND BASIN.





KITCHENS HAVE LINEUP THE LATEST MODEL OF FACILITIES AND FIX-TURES; AT BOTTOM, PAN-TRY IS INCLUDED IN THE PLAN.

and sound construction the most attractive features of the building



William B. McClurg



FLOOR CONSTRUCTION





CONSTRUCTION OUTLINE has plenty of tips for apartment house managements who want to reduce maintenance and increase tenant satisfaction

STRUCTURE: Exterior walls-8 in. cinder block backing and 4 in. black speckled #985 clay coated face brick, Hanley Co.; inside-furring, metal lath and plaster finish. At sidewalk level light gray granite base course, John Swenson Granite Co., 8 cut finish with brick backing. Belt courses, sills and copings-Indiana limestone. Interior partitions (apartments)-2 in. solid plaster, channel furring, metal lath; 5 in. soundproofing partitions between apartments of structural hollow clay block; for elevator shafts and stairs gypsum and terra cotta block partitions. Columnssteel, Bethlehem Steel Co., encased in 4 in. common brick. Floors-Ceco steel floor joists for long span archs, Ceco Steel Products Corp., reinforced Gritcrete floor slabs, Aerocrete Corp. for long span construction containing shallow open web Ceco steel trusses with reinforcing bars threaded through and parallel to the short span. Also Gritcrete arches for short span construction. Ceilings-plaster, 3-coat.

ROOFING—(penthouse, tank and fan room) 10-yr. bonded composition, Koppers Co.; (flat roofs, setbacks, porches) promenade tile, Ludowici-Celadon Co.

SHEET METAL WORK: Flashing-16 oz. copper. Ducts-galvanized Iron.

INSULATION—5 in. partitions—2 in. solid plaster, doubled with 1 in. Sheetrock, U. S. Gypsum Co., between partitions, ceilings, floor slab and boiler room insulation. The Celotex Corp. and Johns-Manville Co.

WINDOWS: Sash — casement, aluminum, Albert Storms & Co. Glass—1/4 in. polished plate, Libbey-Owens-Ford Glass Co.

STAIRS (fire)—reinforced concrete, 3 ft. 8 in.; scissor type risers 734 in., treads 91/2 in. Interior stairs—oak.

ELEVATORS — two push-button operated, solid wood cabs, self-leveling devices, Otis Elevator Co.

FLOOR COVERINGS: Vestibule and elevator lobby—terrazzo. Main rooms oak flooring. Public halls, kitchens, etc.— Kentile, David E. Kennedy Co. Corridors and servant's rooms — linoleum, Congoleum-Nairn, Inc.

WALL COVERINGS-wallpaper, North American Wall Paper Co.

WOOD AND METAL TRIM: Sills, porch railings, parapets, door trim, etc. white metal. Handrailings, exterior door jambs, etc.—stainless steel. Shelving white wood. Mantels—birch and white oak. Doors—flush panel, 1¾ in. or 1¾ in. birch for interiors; copper covered Kalamein or hollow metal for utility rooms and corridors. Porches and terrace doors casement type aluminum. Main entrance doors—Herculite glass with stainless steel channel top and bottom, Pittsburgh Plate Glass Co.

HARDWARE: butts and hinges—steel with prime coat for painting. Locks (servant's rooms)—bit key type, individually keyed and subject to a master key; (bedrooms, inside rooms, etc.)—controlled by a turnplece from inside and an emergency key from outside. Door knobs—aluminum metal with anodized finish or wrought bronze metal with dull chrome finish. All other hardware has a satin chrome finish. Manufacturers—Yale & Towne Mfg. Co. and H. S. Getty Co.

PAINTING: Utility rooms—2-coat enamel or 2-coats of lead and oil paint. Stairhalls —1-coat size, 3-coats of lead and oil paint. Public halls—3-coats lead and oil. Elevator shafts and exposed terra cotta blocks—2 coats cement paint. Apartments —1 prime coat and 2 additional coats of lead and oil paint based on tenant selection. Cement floors—2-coats cement paint. Interior and exterior metal work—3 coats lead and oil.

ELECTRICAL INSTALLATION: Wiring (lighting)-3-phase, 60 cycle, 120/208 v. 4-wire A.C. Power-3-phase, 60 cycle, 208 v., 3-wire A.C. All local switches have composition or Bakelite bodies of the tumbler type, single pole, 3 and 4-way, rated at 10 amperes, 125 v. The switches are aranged in gangs, tandem or combinations. Lock switches and pilot switches where required. Fixtures-Lightolier Co. Washing machines - Launderall, F. L. Jacobs Co. Driers-General Electric Co. Special A.M., F.M. and television outlet in each apartment. Special power outlet in each apartment for convenient installation by tenant-owner of an air conditioning unit.

BATHROOM FIXTURES — American Radiator-Standard Sanitary Corp. Bathtub enclosures and shower stalls—G. M. Ketcham Mfg. Co. PIPES: Soil, branch wastes and vents—standard weight galvanized wrought iron. Water closet connections—drawn lead pipe, "D" weight.

KITCHEN EQUIPMENT: Cabinets — The Kitchen Maid Corp. Ranges—Vulcan gas, Standard Gas Equipment Corp. Refrigerators—General Electric Co.

HEATING — radiant heating system. Boiler—Titusville Iron Works. Oil burner —Combustion Div., Todd Shipyards Corp. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—Patterson-Kelly Co. Pumps for radiant heating system— Gardner-Denver.

SPECIAL EQUIPMENT: Outlet for amplified A.M., F.M. and television connected with Intra-Video master antenna system. Incinerator—Kernator Co. All the rooms can be heated to individual temperatures in this split circuit radiant installation





For those very important people, the apartment owners, heating at 15 E. 91st Street starts and ends with a thermostat on the wall of every major room. The thermostat controls the temperature of just that one room, which may be warm or cool, as the occupant decides. Buyerwise City Investing realized the vast appeal of such individual room controls; its installation of the biggest multiple dwelling panel radiant heating system in the U.S. is designed to warm and satisfy. All apartments are heated by low-temperature ceiling radiation from pipe coils in two separate sets of panels, one for normal heating and the other for extra heat in very cold weather, with some extra wall and floor panels.

The system operates with two principles in supplying hot water through the two circuits: one principle has to do with the amount of heated water which is sent through the pipes, "flow." The other is concerned with the temperature of that water. "modulation." In this finely figured system, both modulation and flow are variable, depending upon a set of three controls. The first is the individual thermostat, which sets the occupant's demand for a certain amount of radiation from the ceiling of any one room. The second control has to do with the method with which that demand for heat is met-in what combination of "modulation" and "flow" the heat is transported to the radiant panels of the room. This second control is an exterior thermostat which decides automatically-according to the severity of the weather outside-whether both Circuit "A" and Circuit "B" of the panel system should be heated, and having decided that, what temperature water shall be sent through one or both circuits. When the water has reached the room panel, the thermostat there swings into action admitting just the right amount of water to meet the exact temperature demanded-through use of air-operated valves on the intake.

The temperature of the heating water is modulated in still another way, through a system of zoning. Roof thermostats, one on the north side and one on the south side, are connected directly to the boiler room in the basement where they control separate mixing valves which regulate the amount of heat which will be sent to the warm and cold sides of the building. In general the aim is to provide just enough heat so that residents will be able to warm their rooms to a somewhat higher temperature than normal, anywhere in the building, should they wish to.

The ceiling pipe coils are embedded within 1 in. of the underside of the 5 in. floor slab, or are suspended in hung ceilings. Bathroom floors are warmed by coils under the tiles for foot comfort. Some exposed rooms near the top of the building have additional wall coils under windows which are big heat losers; these wall panels are fed from the "B" circuit. The designers expect floor to ceiling temperature differential throughout the building to be only about 2 degrees.



Montevideo's up-to-date central business district



... is girdled by big parks, where trees were planted by hand.



A series of bright, modern resort towns is strung along the coast



but her prime source of wealth is still the hill country ranches.



URUGUAY *

here are said to be more architects in Urughay, per capita, than in any other country in the world. Several of her presidents have been architects or engineers. At one time, the majority of her calinet ministers were architects, and at all times a large percentage of key government posts have been held by architects. One reason underlying this anomaly is, perhaps, Uruguay's high level of development. Although shifting international conditions have affected her export trade, she is still the richest country in South America for her population. Her history-officially begun in 1823 when she was formed as a buffer state between the two great rivals, Brazil and Argentina-has little of that backlog of painful primitive beginnings common to me are nations in the new world. Starting out as nothing but a fortress on a hill control Montevideo, she had developed by the end of the Nineteenth Century into a small export center for hides, cattle and wool, the produce of transitory cattle-herding stations throughout the inland hills. (The national prototype of Uruguay is still the Gaucho). Montevideo is, even today, her only sizable city, containing over a third of the country's total population of 2,200,000. It is the capitol, the port, the center of business, trade, all welfare offices, education and every other phase of Uruguayan national life. This geographical unity has undoubtedly simplified the evolution of Uruguay's advanced social program. The government owns and operates the port, banks, power plant, telephone system and the all-important A.N.C.A.P., a public agency which refines and sells all gasoline, oil and cement in the country. In terms of public service, Uruguay has the largest public hospital and finest program in South America; the greatest hydro-electric power station; and the best equipped and staffed city planning office. She has a sizable public housing program, a compulsory pension system, minimum wage legislation and excellent public schools. Even university training is entirely free, and her Schools of Architecture, Engineering and Urbanism are rated by many as the best and most influential on the Continent.

Most extensive and successful of Uruguay's planning projects has been the development of Montevideo's ocean fronts, a project which has paid large dividends by making the city a principal vacation resort for rich Argentinians. Since the turn of the century this once treeless stretch of coast has been planted with what are now extensive forests. A handsome ocean drive, or *rambla*, gives access to miles of uninterrupted public beach. Large modern hotels, built by the government, are spaced along the coast, as are the magnificent new university buildings.

To an outsider, the most amazing feature of Uruguay's progress is the fact that it was accomplished in a country so totally deficient in natural resources that its aboriginal Indians, the Guarani, could never progress past the Stone Age, while the Mayans and Aztecs, their neighbors, were developing high cultures. Uruguay has no metals, no fuel and almost no usable stone. Trees are very scarce and wood expensive. Native clay is of such poor quality that, until recent improvements in methods of firing, bricks crumbled after a very short time. Basic building materials are thus restricted to concrete, stucco and tile. In design terms, these limitations have led to an architecture of compression as opposed to one of tension, which presupposes the use of steel. Thus, much Uruguayan work, which might seem heavy to our eyes, is actually conforming to the demands of its material. To gain variety and emphasis within this rather inflexible compass is the problem which taxes the best efforts of Uruguay's architects today. Because money is still plentiful, a number avoid the struggle by relying on imported materials and styles-both Wright and Corbusier are popular. But an enthusiastic and farsighted group of architects is now working to express their esthetic theories without destroying the national character of their building.

^{*} Fourth in a series of surveys of contemporary architecture in the countries of South America, the material in this issue was assembled by Chloethiel Woodard Smith who, as Guggenheim Fellow in City Planning, toured South America for over a year.



ONE OF THE WORLD'S LARGEST, THIS 2,500-BED HOSPITAL IS HEART OF A CENTRAL INSTITUTE FOR URUGUAY'S FREE MEDICAL SERVICE

NOW COMPLETE (EXCEPT FOR CUT STONE FACING) AND OCCUPIED, MONTEVIDEO'S NEW CITY HALL IS NUCLEUS OF PROPOSED CENTER




TYPICAL OF RECENT PUBLIC BUILDINGS IS NEW SOCIAL SECURITY OFFICE



Social Services are broad, complete and well housed.

When it is remembered that Uruguay is one of the world's smallest nations, with a small population and no great natural resources, her accomplishments seem all the more remarkable. The three impressive buildings shown on these pages, which house some of her advanced social service agencies, are thus a very accurate index to both her architectural and social development. Every Uruguayan citizen is entitled to free medical and hospital service and the 18-story hospital in Montevideo (1) is a physical expression of this fact. The first of 11 units to be ultimately erected at the center, the hospital is a reinforced concrete structure whose 2,500 beds are placed in bays across the sunny (north) side of the building. Despite their understandable pride in the new building, which stands dramatically in the midst of a landscaped park, Uruguayans now feel that it represents too extreme a centralization of facilities-that perhaps smaller, decentralized units would have been better.

With one of the oldest and most effective planning boards in South America, Montevideo has been able to control her urban growth and famous seaside development to an enviable degree. One of the most ambitious schemes has long been for a new civic center—a plaza for the municipal building surrounded by theater, concert hall, art museum, shops and restaurants. The municipal building is now almost complete (2) and some of the other buildings may go through. But (Uruguay is not heaven) the rest of the project has run up against sharp opposition from the property owners involved and is now stalled—permanently, the architects fear.

The climate of Uruguay is very mild—from about 50 in winter to around 72 in summer—and this perhaps explains the sobriety of such modern work as the new home of the social security and pension administration (3). Without the heat and intense sunshine of tropical Brazil, there is no need for the ventilation and sun control devices so brilliantly exploited by the Brazilians (FORUM, Nov. '47).

 Medical Center, Montevideo: Carlos Surraco, Architect.
 City Hall, Montevideo: Mauricio Cravotto, Architect.
 Social Security Building, Montevideo: Arbeleche & Canale, Architects.











THE DINING ROOM IS FRAMED OF SKINNED POLES, ROOFED WITH THATCH

Uruguay has good recreational and educational facilities.

Although Uruguay consists largely of treeless, rolling hill country, with a temperate climate and fine beaches as her only assets, she has developed an amazing network of resort and recreational areas. Some of these are strung like beads along the Atlantic Coast; others are scattered through the interior, usually at national parks. Besides offering a wide range of recreational facilities to her own citizens, these resorts have become the source of a tidy income from Argentine tourists.

Precedent making among inland hotels is El Ventorillo at Lavelleja (4) in the hills northeast of Montevideo.



Designed by the late Julio Vilamajo, this charming project was one of his last. Here he was testing two of his pet theories: the need for a more decentralized development of the country; and the responsibility of her architects to develop a style which respected both her past history and present resources. At Lavalleja he employed local craftsmen and confined himself to local materials—stone, poles, thatch—in an effort to demonstrate that thoroughly contemporary solutions could be effected with both. The buildings shown are part of a larger projected group along the hillside. An artificial lake is being built in the valley below.

More than any other country below the Rio Grande. Uruguay-with her separation of church and Statehas a free, progressive educational system. School attendance is compulsory and the literacy rate correspondingly high. Capstone of this system, of which Uruguayans are understandably proud, is the University of Montevideo. Shown here is the new home of the School of Engineering. Also designed by Vilamajo, the structure is entirely of reinforced concrete, with inverted beams to give a smooth ceiling. In his effort to achieve an honest expression of this structural solution, Vilamajo insisted that the concrete itself be exposed. He experimented with many variations in design-some of them so expensive that the clients winced. When the administration insisted in sheathing part of the first floor in cut stone, the architect resigned.

As a companion to the Engineering School, the University has also just completed a handsome new plant for the School of Architecture (not illustrated), designed by the architect Ramon Fresnedo.

THE MULTISTORY CLASSROOM BLOCK IS FLANKED BY VARIOUS WORKSHOPS













Residential work reflects high living standards.

It is easy to assume, from her residential architecture, that Uruguay enjoys a climate which is cooler (politically as well as geographically) than many of her neighbors. This is substantially true. A small country with no substratum of primitive peoples or minority races, Uruguay is also largely free of those extravagant contrasts between wealth and poverty which mark her sister republics. Her typical middle class home looks very much like that of Denver or Indianapolis-and reflects about the same level of social and economic relations. Thus, in the newer residential districts, there are fewer of those high walls and barred windows so common across her borders (7, 9) though everyone "locks up" at night. By the same token there is a high percentage of single car garages. (The Uruguayans feel that they preceded the U.S.A. in the frank incorporation of the garage into the house proper. It often takes the form of a carport lined with ceramic tiles and forming a pleasant entrance to the rear garden). Much the same standards of comfort and utility run through the design of the many new apartment houses lining Montevideo's avenues.

Stylistically, Uruguay's current residential work reflects the fact that her architects are very much aware of what goes on in the rest of the world. There are the inevitable echoes of Corbusier (6) and Wright (7): but other, more indigenous, tendencies predominate and these are determined not only by climate and culture but also by the materials at hand. With all metals and most wood imported, the Uruguayan architect necessarily works within a reference frame of masonry construction. Another limitation he faces is the almost complete lack of standardization in building components-each element must be separately detailed. This condition led Vilamajo to experiment with prefabricated elements as long as 20 years ago. Today, many of the younger architects are working toward a standardization of basic building elements.

^{6,} House in Montevideo: Raul Cohe Piriz and Riccarde Carrere, Architects. 7. House in Montevideo: Hector Vignale, Architect. 8. House in Carrasco: Duhalde, Garcia Selgas & Paysse Reyes, Architects. 9. Two-family house: Gori, Salvo & Muracciole, Architects. 10. Prefabricated house in Montevideo: Julio Vilamajo, Architect. 11. Architect Mauricio Cravotto's own home and office. 12. Apartment in Montevideo: Julio Vilamajo, Architect. 13. Apartment in Montevideo: Gori, Salvo & Muracciole, Architects.
14. Apartment: de los Campos, Puente & Tournier, Architects.

Commerce and Industry are efficiently housed in sturdy structures.

Few countries in the world offer better grazing than Uruguay and, in a very real sense, her whole economic structure is based on this fact. Cattle and sheep raising occupy the rural part of the population and the processing of meat, wool and hides for export occupies most of the rest. Lack of fuel has, until recent years, limited the development of other industries. However, the current development of the Rio Negro hydro-electric power complex (a sort of diminutive TVA) is beginning to bring new industry. And new, well-designed factories are being built to house it (15).

Most of this cattle-based commerce and industry is concentrated in the capital (there are no other cities of over 50,000) and leads to a top-heavy condition of which the planners are well aware. However, this concentration in Montevideo has given her shops a cosmopolitan quality. Thus one new food and wine shop, designed by Vilamajo (20) boasts not only egg-crate lighting in front but a small fountain in the rear which runs wine instead of water. The multi-story windowless department store for women (16) is quite up to American standards of luxury while the Montevideo Stock Exchange (19) looks quite as secure as any—and a lot less forbidding than most.

The Uruguayan architects—despite their prominence in government—have never succeeded in passing a national registration law (the engineers have). But, from the streets of Montevideo alone, it is clear that they have established an *average* level of architectural competence which, if sober, is certainly high.

 Pharmaceutical factory: Luis Garcia Pardo, Architect.
 Department store and (17) Sales room and offices: de los Campos, Puento & Tournier, Architects. Filling station at Carrasco: Rafael Lorente, Architect. 19. Stock Exchange: Arbaleche & Canale, Architects. 20. Delicatessen and wine shop: Julio Vilamajo, Architect.

Photo Credits: 1—Foto Mendello. 3—Colorjotos. 4—del Rio Fotos. 5—G. A. Downs. 7—Foto Mandello. 9—Foto Technico. 10—Foto Jaeger. 11—Foto Mandello, Foto Torrents. 13—Foto Technico. 14—Foto Mandello. 16—Foto Technico. 18—Foto Mandello. 20—Foto Torrents, Foto Mandello.









A HOUSE DIVIDED The stubborn demand for





COMPLICATED DETAILING is exemplified by heavy pseudo-classic molding on the south east corner canopy of the porch. Example of smart detail: the porch is protected by Rolscreens which disappear simply and easily for entire openness and out-of-season storage and protection.

GLASS WALL OF LIVING AREA LOOKS SOUTH ON PLEASANT PRIVATE COURT . . .

Glass wall of living room is well placed for south exposure and privacy

Master bedroom, study, and Living wing overlook pleasant court

Driveway seems wasteful, using 1/3 of plot

House is intelligently placed on plot and various functions are arranged in an informal comfortable way



ompromise in modern house architecture cripples the design



BUT STREET ELEVATION HAS DIFFERENT CHARACTER; THE FRONT APPEARS COMMONPLACE IN ATTEMPT TO DISQUISE INTERIOR

Indoors, most people like modern architecture. They like the comfort and convenience which it gives them. But outdoors, standing on the sidewalk, most people still are appalled by the absence of the familiar picture postcard symbols of home in the appearance of an undisguised modern house.

They want—even demand—the conveniences and comforts of modern design, but they continue to reject the honest expression in the exterior of the kind of home which contains those conveniences and comforts. The kind of house they want is shown in the photographs on these four pages, and there are doubtless many FORUM readers who will agree with them. But in the opinion of the editors, this house near Chicago is a beautiful example of the impossibility of designing a really successful modern house which does not look like a modern house. Compromise crippled the design.

The architect, designing his home, approached the problem in a clearly intelligent, logical fashion. He placed the house on his site well, and oriented it with particular wisdom. The living-dining room wing is placed to the rear of the lot, facing south, with a broad expanse of floor to ceiling glass looking out on a pleasant, secluded court. Services are insulated from the family bedrooms by central passageways, and are on the less valuable side of the property, with a segregated service approach. The garage is wedded to the house. There is no basement. A great deal of meaningless ornament and decoration is left out. The design, in general, has an admirable informality, a clear abandonment of the tradition of putting the living room on one side of an entrance hall, dining on the other, stairway right of center. This is the excellent overall approach to small house planning developed by the pioneering architects of the last two decades.

But then the architect turned on the nostalgia. He set about creating an "acceptable" street facade. Perhaps he did this in the belief that the most gener-

WRITE TO 350 FIFTH AVENUE ...

Mr. Rene P. Travelletti, architect and owner of this house, was sent the layout, text, and captions for these four pages prior to publication. Mr. Travelletti prepared a rebuttal, which appears unedited on page 113.

The FORUM considers this house a particularly good representation of an increasingly popular design approach, expertly carried out within its own limits. These unfortunate limits are not the product of ulterior influences on the architect here as they usually are when he is not his own client; the design issue in this case is especially clear. The FORUM will welcome opinion on the house, the text, and Mr. Travelletti's cogent, good natured rebuttal. A workmanlike plan and pleasant terrace are denied by a nostalgic roof





DUMMY SECOND STORY is built to accent the entrance, and (see section) adds much unnecessary storage space and expense when built back over the living area.





WASTEFUL DESIGN spends space on entrance hall at expense of other rooms, with gross door. Note the interior door moldings and on the exterior the window peeping sweetly from the dummy second story, all attic and 18 yards long.





ally popular house for resale would be a "sweet" modern. Perhaps local building regulations forced the issue. It could be that his banker told him he had to give his modern ideas the *treatment*; bankers often do, confusing present sale values with future resale values, in massive ignorance of the fact that people's tastes are continuing to advance. At any rate, the architect yielded to someone's nostalgic yearning for gables and false proportions.

Another point to be raised in a design of this type is dependency upon the location of plot with regard to roads. Here the architect was fortunate, but consider his predicament if the land had been on the North side of an East-West street. The glass expanse would then logically occur on the south side, the street exposure—and where then would be the prim mask for the living room wing?

He did give his house the *treatment*. Where he went to some difficulty to make the back of the house expansive, well glazed, designed for pleasant living, he seems to have been equally bent on making the front a discreet denial of those aims. Unfortunately the damage penetrates deeper than surface appearance, as it always does in such compromises. You cannot change just the outside of a house. Any change in the outside is bound to affect the interior.

In this case the wish to change the character of the facade caused the adding of a false half story, a loft on top of the house that adds more than a third to the total cubage. The apparent reason for the second story gable is to emphasize the main entrance, coupled with the attempt to make the facade express a "cleaned up" traditional character. The second story forged by the gable has no rooms—with only a peephole window at either end, and is not feasible for future expansion of living facilities, since a pull-down stair is the only means of access. The ceiling of the living room is not raised by this shoving upward of the roof line. Spacious storage facilities exist in the house, without the attic. What then is the purpose of this expensive bulk—storage space for spent old emotions?

There are obvious reasons for the appeal which eclecticism has for the layman building a house. Any tried and true formula produces predictable results.

But this attempt to make modern architecture predictable or "palatable" by overlaying it with archaism indicates that such a method can only detract from the great physical advantages of truly contemporary building.



ARCHITECT'S REBUTTAL

This house was not built for resale, was not influenced by local regulations, nor by the mortgage banker; it was simply the house which we wanted. It was designed for this particular lot, and if it had been meant for a different exposure, it obviously would have been designed differently. The house was placed as near to the street as local restrictions permitted; the driveway and court provide some parking place needed on a fast traffic street.

Because all the principal rooms and activities are toward the back, there was little to express in the architecture of the street side. The character of the neighborhood and proximity to other houses suggested restraint in the same way that, although nudism is acceptable in the privacy of certain clubs, it is not customary in the street.



The reason for the second story gable is not to give a "treatment" but to provide space for two future bedrooms and a bath. Provision was made in the framing of the entrance hall ceiling for the erection of stairs, which, when installed, will reduce greatly the size of the hall.

The living area and the dining area should not be considered as two separate rooms, each one too small for the house. The intent is to have one large room for both activities, with a folding partition used occasionally.

The overhang ceiling is lower than that of the living room to eliminate glare. As it is, blinds are needed a good portion of the year.

All the working areas and food storage are on the same wall of the kitchen, so that the cook (in this case my wife) can watch the stove when working at the sink. This has worked very well for our small family, and when we entertain, the caterers find the 7 ft. aisle and the other counter extremely useful.

It seems to me that the editor is unreservedly committed to the extreme brand of modernism, but that he has failed to substantiate his theory of "A House Divided." If he had said plainly, instead, that the house lacks a certain exhibitionism, he would have been entirely right, but for me, if I have to choose between sweet or sour modern, I'll take sweet.

Small house proves that distinction is more a matter of brains than money

JON KONIGSHOFER, Designer and Builder THOMAS D. CHURCH, Landscape Architect

Eastern designers, when confronted with West Coast work, are apt to exclaim (a bit plaintively) "Well, with climate and topography like they've got, who couldn't design a dramatic house?" It is true, of course, that frostproof footings, heavy insulation and oversize heating plants play a relatively minor role in California architecture: but this is also true for most of the southern U.S.A. The Pacific Coast has some fine scenery: but so do Colorado, Tennessee, Vermont and a lot of other places you could name. The explanation is obviously not so simple. It is just as possible to build mediocre houses in Carmel as in Camden-in point of fact, they're probably as numerous in one spot as the other. But what does distinguish West Coast work is the large number of first rate designs and the high average level of domestic work in general. This phenomenon is the expression of a cultural climate, not just a physical one.

The little house of Mr. and Mrs. Robert Buckner is a case in point. Located on a natural semicircular shelf overlooking the Pacific near Carmel, it was designed to serve as a guest house for a larger place eventually to occupy the knoll above and behind it. It employs nothing very spectacular in the way of material or equipment. It is not very large and-by current standards-not very expensive (\$12,000 including built-in furniture and equipment). Yet it is on all counts a distinguished job. It fits with deceptive simplicity into a very difficult location-one of the client's requirements being that it should look well from above. It exploits a fine view with uncanny precision-even the wood dividers in the terrace were laid out with this in mind, while the curb was kept low so as not to block the view from inside the house. The interiors



SHELF IS LEVELED, FORMS FOR FOOTINGS IN PLACE



PERIMETER FRAME WILL CARRY RADIAL RAFTERS (BELOW)



FUTURE HOUSE, GUEST HOUSE FITS INTO LANDSCAPE WITHOUT FUSS, DE-SPITE ITS BOLD GEOMETRIC FORM. NOTE HOW ASYMMETRIC BRACING AND ROOF SLOPE ADD REPOSE TO BIRD'S EYE VIEW.





RADIANTLY HEATED FLOORS have continuous electric resistance coil embedded in light aggregate concrete slab. Coils were "tacked down" to base slab by blob of cement mortar pending pouring of finish coat (below).



lorley Baer



ouse has a sober structure and a very practical plan.

display the same competence—kitchen, bath, dressing room and bedroom are compressed into a narrow strip across the rear and the space thus saved is thrown with telling effect into a half-round living room. In fact, the owners have found the entire unit so satisfactory that there's some doubt now that the main house will be built at all.

This month the slope behind the Buckner's house near Carmel, Calif. will be a sheet of watermelon pink-thanks to the ice plant used as a ground cover. But this exotic note is incidental: generally speaking, the house is a neat example of practical planning and construction. Its location on a natural half-moon of a terrace dictated its shape and orientation; its ultimate function as a guest house determined its small size. Yet within these limits, a satisfactory permanent dwelling unit for two adults has been developed. Facilities have been compressed where compression is least disturbing-a complete kitchen, bath, dressing room and bedroom for two occupy an 8 ft. by 40 ft. strip. But small as they are, they are better equipped than many standard rooms. The rest of his space the designer has thrown into a living room of exhilarating size and openness. The fine view can be enjoyed from any spot in the room and-more unusual-the fireplace is located so that one can have fire and view simultaneously. Two additional persons can sleep here, on the built-in sofa beds against the straight wall. These pull out on rollers. They are separated by a storage cabinet for bedding and flanked by a desk at one end and a radio combination at the other. The kitchen has a sliding pass-window to the outside dining area on the terrace. Boasting its own barbecue, this spot is protected against the sharp winds from the ocean and the more overpowering aspects of the ocean view. As a working unit, the house is completed by the lockers across the back for firewood, garden tools, etc.

CONSTRUCTION OUTLINE: Exterior walls—studs, shiplap redwood and glass. Floors—concrete. Ceilings—exposed beams and sheathing. ROOF—built-up, crushed rock finish. INSULATION— Zonolite Co., Celotex Corp., Kimberly Clark Corp., SHEET METAL WORK—copper. FLOOR COVERINGS: Main room—carpet. Kitchen—garden tile. Bathrooms—rubber tile. PAINTS—Samuel Cabot, Inc., National Lead Co. ELECTRICAL INSTALLATION: Wiring system—conduit. Fixtures—General Lighting Co. KITCHEN EQUIPMENT: Range—electric. Sink—Crane Co.; Monel Metal, International Nickel Co. BATHROOM EQUIPMENT—Crane Co. HEATING: Electric radiant heating system; cables laid over Zonolite, Zonolite Corp. Water heater—Crane Co.







APPROACH ON HIGH LEVEL SHOWS A LONG SINGLE-STORY HOME OF CONTEMPORARY DESIGN, BUT THIS IS ACTUALLY ONLY TOP HALI

A large, informal house of great luxury and little ostentation

SIMON B. ZELNIK, Architect

JANDER & FORGIONE BUILDERS, INC., General Contractors JACK BARRICINI, Owner



There are not many residences being built today which include a billiard room, a lounge, a bar, a gallery, a recreation room, and a gymnasium—as does this luxurious home in Scarsdale, N. Y. Planned for a man and wife and two daughters, the building does not spend its resources in creating an overpowering facade, as have so many homes built on such a scale. The essential luxury here is, wisely, one of space. Three bedrooms for the family are supplemented by tremendous cubage—for a house—in foyers, terraces, and other spacious facilities for informal living and expansive entertaining.

The front facade reveals only a pleasant, one-story contemporary house of fair size, built on a $3\frac{1}{2}$ acre plot which slopes about 1 ft. in 8 down to an almost level plateau 15 ft. below the street. But the house stands on the edge of the steep break, and uses it to contain actually two big levels of large rooms. Exterior walls are stone and cypress siding, with concrete plank floors and a black slate roof. Interiors are walnut veneer and white plaster, with structural glass walls in the kitchen and master bathroom.

The importance of the lower level, which includes an extra bedroom as well as the more informal entertaining areas and services, is emphasized immediately upon entry to the house by the curved stairway in the entrance foyer, which climbs down an open well facing a two-story window.



KITCHEN HAS BOTH GAS AND ELECTRIC RANGES LIVING ROOM WAINSCOTING IS WALNUT VENEER



H -STUDY ENTRY gym \mathbb{R} GALLERY FOYER Charles I BED RM. BKFST BED RM. BED RM. DINING da THRRACH P SCALE 0' 5' 10' 15' 20' MAIN LEVEL DEN LIVING RM. NK DECK overhead door GARAGE STORAGE STORAGE BOILER R n BAR LOUNGE BILLIARD RM. AJ DZ CP L dn -BED RM. TERRACE LOWER LEVEL RECREATION RM.

VIEW FROM LOWER LEVEL; BALCONY CONNECTS TWO OF THREE UPPER BEDROOMS



Robert Greene



DRAMATIC CURVED STAIRWAY, SUPPORTED BY POSTS, STANDS IN WELL INSIDE A TWO-STORY WINDOW ON THE SOUTH

CONSTRUCTION OUTLINE: Foundation — concrete. Waterproofing—Anti-Hydro Waterproofing Co., Barrett Co. Floors—Flexicore Div., Price Bros. ROOFING—Barrett Co., Wm. F. Watson Co. SHEET METAL WORK— Chase Brass & Copper Co. GLASS—Libbey-Owens-Ford Glass Co. GARAGE DOORS—Overhead Door Co. ELEC-TRICAL INSTALLATION—General Electric Co., Ledlin Light Designers, Inc. KITCHEN EQUIPMENT—Chambers Co., Frigidaire Div., General Motors Corp., Federal Mfg. Co., Inc. BATHROOM EQUIPMENT—American Radiator-Standard Sanitary Corp. HEATING—hot water system. Air Conditioning—Carrier Corp. Boiler—Bryant Heater Co., Radiators—Tuttle & Bailey, Inc. Fire alarm—Faraday Electric Corp. Burglar alarm—Edward & Co.



VIEW FROM LOWER LEVEL SHOWS THE TRUE BULK OF THE HCUSE; LARGE WINDOWS AND PORCH MARK CENTER LIVING ROOM



OFFICES for a publisher and his staff, combining the trades of literature and business.



WAITING ROOM VIEW TOWARD INNER OFFICES

THOMAS G. COLES, Architect GINKOE CONTRACTING CO., General Contractors WILLIAM SLOANE ASSOCIATES, INC., Publishers, Owners

Publishers' offices should be more than suites of comfortable-or even inspiring-rooms for office workers. The designer, when planning a publishing house, should remember that the private offices have an additional function; they must serve as background for the sometimes mystic communion between author and editor. In this publishers' suite, both the general space and the smaller offices are planned to give an atmosphere of restraint and dignity to this background. Rooms of carefully plotted and graduated size house the various executives and editors, with a movable screen between the president and treasurer in a big room also used for conferences and receptions. Colors are deep blue-green, French gray, pale yellow and terra cotta, with walnut paneling.



CONSTRUCTION OUTLINE: Interior partitions-cinder block and plaster. Glass partitions-Mississippi Glass Co. and Pittsburgh Plate Glass Co. Tracks and rollers-Garden City Plating & Mfg. Co. FLOOR COVERINGS-American Tile & Rubber Co., Magee Carpet Co., Armstrong Cork Co. WALL COVERINGS-plywood and Flexwood, U. S. Plywood Corp. FURNISHINGS -Muroco Woodworking Co., Knoll Associates, Inc., George Jensen, Inc., Jofa, Inc., J. H. Thorpe & Co. and Thomas Geer Coles. DOORS-New Castle Products. PAINTS-Pratt & Lambert Co., Benjamin Moore & Co. and Gutta Percha Corp. ELECTRICAL FIXTURES-Edward F. Caldwell Co. and General Lighting Co. HEATING-forced warm air system. Air Conditioning-General Electric Co. Thermostats-Minneapolis-Honeywell Regulator Co. Venetian Blinds-Columbia Mills





TICKET OFFICES—a steamship company revamps booking services in three ports.

WALTER DORWIN TEAGUE, Designer EUGENE GERBEREUX AND C. STOWE MYERS, Associates





Dean Stone, Hugo Steccati

One of the large industrial design firms which maintain offices on both coasts was called in to refurbish this steamship company's ticket headquarters in Los Angeles, San Francisco and (page 124) New York. The two California offices were planned to be similar in character, and in some respects similar in detail. Large maps with the company's world-round route defined in neon dominate both starboard walls, and ship models sit near the glass fronts, which are based between low plant boxes. Interiors of both stores, bared by the glass fronts, clearly indicate the business of the tenant. Two service areas are provided: a counter, and small tables, where more time can be given to mulling over destinations in consultation with company representatives. The Los Angeles office (facing page) is the larger. Its ceiling is slanted downward and backward from the high canopy front to the floor level of a mezzanine built in the rear, thus creating second floor office space without loss of height in the main office. In the San Francisco office, below, the glass front itself is slanted.

LEANING GLASS FRONT REVEALS SERVICES; ONLY EXTERIOR SIGN NEEDED AT EYE LEVEL IS SMALL PLAQUE TO LEFT











BOOKINGS ARE MADE BOTH AT COUNTER IN FRONT OF MAP, AND AT SMALL TABLES

Julius Shulman

dn. _CONFERENCE

SECOND FLOOR

OFFICE

COZOULT

up I N G

SCALE - 0' 5' 10' 15' 20'

SEC'Y

FILES CONTAIN COLORED SLIDES TO BE SHOWN UNDECIDED TICKET BUYERS IN COUNTER VIEWER

FOLDING WALL SEPARATES ROOMS ON MEZZANINE



123

On the east coast the same company gives the same designers a somewhat different area to be finished.



ABOVE, ELEVATOR SIDE OF BOOKING OFFICES CONFERENCE ROOM IS TO REAR OF OFFICES



WALTER DORWIN TEAGUE, Designer ROBERT J. HARPER, Associate

The design of the New York office uses much the same materials and ideas, in slightly different fashion, for the steamship company's Eastern sales. The problem, however, is somewhat different, since the space is not street display frontage, but a regular office area entered from an elevator. Much of this area is given over to a business office, with the booking section small, as compared with the West Coast branches. The counter is eliminated, and the world map is smaller and presented in different materials, but the ship model and route lines appear again. One side of the booking office serves also as a waiting room. Cove lighting was the choice, with flush down spotlights. The large area of window—a possible distraction was masked without undue loss of light with a combination of long Venetian blinds and gathered curtains.

CONSTRUCTION OUTLINE: Interior partitions—cinder block. Ceilings— Muffletone finish, Celotex Corp. or Acoustone, U. S. Gypsum Co. GLASS PARTITIONS—Blue Ridge Glass Co. FLOOR COVERINGS: Carpets— Goodall Fabrics, Inc. and Bigelow-Sanford Carpet Co. Asphalt tile—Armstrong Cork Co. WALL COVERINGS: Wallpaper—Richard E. Thibaut. Cork board —Armstrong Cork Co. FURNISHINGS—Walter Dorwin Teague, Jacob Froehlich, Artek-Pascoe, Inc., W. J. Sloane, Metal Office Furniture Co., J. H. Thorp & Co., Inc. DOORS—Atlantic Metal Products and Superior Bronze Co. HARDWARE—Schlage Lock Co., L. C. N. Closers, Inc. PAINTS— National Lead Co. ELECTRICAL SWITCHES—Arrow, Hart & Hegeman Electric Co. PLUMBING FIXTURES—American Radiator-Standard Sanitary Corp. HEATING—York Corp. Grilles—Tuttle & Bailey, Inc.



SHIP MODEL AND MAP ARE PROMINENT IN ALL THREE BOOKING OFFICES

PRODUCTS AND PRACTICE

LIGHTING WITH PAINT. The new luminescents offer some interesting possibilities in decoration, illumination and safety measures. A survey of their commercial forms, limitations and sources.

Just as no color print can ever match the transparency from which the engravings were made, so no ordinary pigment can match a luminescent one. The reason is simple: in the case of print or paint, the colors seen are reflected light, while transparency and luminescents both act as actual sources of light. It is this added visual dimension which makes the new luminescent paints and pigments so intriguing to many architects. At the same time, however, they are repelled by the current use of these materials. As is so often the case with new products, the luminescents have suffered from frivolity in application and vulgarity in design. This has led many designers to conclude that they are novelty materialswithout real usefulness or permanent value.

Yet the fact is that the new luminescents open up new fields in building illumination, decoration and safety work. In the hands of imaginative designers, they can be used to reinforce existing illumination systems or do the lighting job all by themselves. They can yield new decorative effects, either in the dark or in full daylight or both. Or they can be used solely as safety devices to guarantee surefooted movement in the dark. Although they glow in the dark, like the old-fashioned radio-active materials used on clock faces, the new luminescents are chemically unrelated and operate on a quite different principle. Unlike radio-active pigments or elemental phosphorus, they give off light only when "excited" by an outside source of energy. This energy they absorb, convert and re-emit as visible, colored light.

If the luminescent material glows only while exposed to the light source, it is called a *fluorescent*. If it continues to glow after the light source is removed, it is known as a *phosphorescent*. Actually, phosphorescents glow both during and after exposure. The fluorescents are excited only by black light—i.e., that part of the spectrum between ultra-violet and visible light — while the phosphorescents respond to both visible and black light.

The active agents in luminescent paints are crystalline pigments which, chemically speaking, are sulphides of zinc, cadmium, calcium or strontium or combinations thereof.* These pigments are non-toxic (unlike radio-active

* Actually, none of the sulphides will luminesce without the addition of minute quantities of an "activator"—copper, bismuth, silver or manganese —which are thoroughly mixed with the pigments in manufacturing process. material, which are nowadays classed as a health hazard), stable and inert. They may be mixed into special vehicles to form paints and inks or used to impregnate papers and plastics. They may even be mixed with ceramic frits and baked right into porcelain enamel.

LIGHTING WITH PAINT

Wherever low levels of general illumination are required—theaters, night clubs, cafes, etc. —the luminescents obviously merit consideration, especially if the decor calls for brilliant color—an effect which, with normal pigments, requires high levels of illumination.

Today several companies are producing fluorescent paints with oil and tempera vehicles. packaged in both tubes and jars. One of the country's largest producers of pigments— New Jersey Zinc Co.—turns out a line of six colors: blue white, deep blue, green, yellow, orange and red. These are, of course, the black light colors—under daylight they appear as whites, pale yellows and buffs. However, fluorescent paints are now commercially available whose daylight colors closely duplicate the black light colors (see color palettes below) so that they have essentially the same values under either visible or invisible light. On the other hand, for those situations where

With luminescent paints, the designer can reproduce his daylight color scheme in darkness or alter it radically when the lights go out.

IN DAYLIGHT two effects are possible—untinted fluorescent paints in their natural colors (1) or fluorescent paints tinted to yield approximately the same colors under visible light as under ultra-violet (2).

IN DARKNESS both types will glow in a wide range of colors. While paints shown here are fluorescent, phosphorescents will yield the same general effect though in a somewhat narrower color range.











All photos courtesy New Jersey Zinc Co.



BLACK LIGHT INSTALLATION employs a series of 250 w. high pressure mercury arc floods with u.v. filter, each flanked by two 40 w. tubular black light lamps. Lights are concealed in a square cove at the base of the vault; their efficiency could have been improved with parabolic reflector (top right). COLONIAL INN at Avalon, Pa., is illuminated solely by fluorescent murals and a fluorescent-painted ceiling with its fluorescent stars. Despite the fact that the system yields only about half a footcandle illumination, time exposure of film shows that dark-adjusted eye can see quite well. Room's popularity indicates that the younger set likes the general effect.

DETAIL OF MURALS painted by Frances M. Munn (below) shows that fluorescent artists' paints permit color and detail approximating that of ordinary pigments. Although these tube paints can be mixed on palette, manufacturers recommend factory-mixed paints for large areas to guarantee good dispersion of luminescent pigments.



totally different effects are desired under visible and invisible light, one outfit is about to launch a line of four fluorescent colors (blue, green, yellow and red) all of which will seem white in daylight.

Since the pigments are chemically "compatible" with one another, it is possible to mix them (in either powder or paint form) to produce a variety of intermediate colors. For mural painting, such mixing would obviously have to take place under black light. And for broad wall surfaces (as opposed to murals) ready-mixed colors are advisable to guarantee even dispersion of the pigment.

PHOSPHORESCENTS HAVE THE AFTERGLOW

Most of what has been said about the fluorescent pigments applies equally to the phosphorescent. These latter, being chemically kin to the fluorescents, have much the same form, colors and properties. They have, of course, the strikingly different properties of (1) responding to visible as well as invisible light and (2) of glowing after the light source is removed or extinguished. The length and intensity of this afterglow varies from one pigment to another as well as with the amount of light to which it has been exposed. The rate at which the afterglow decays also varies. Some of them are visible to dark-adapted eyes as long as ten hours after light is extinguished; all of them will be fairly bright for one hour.

This property of afterglow is what probably dictates the principal architectural application of the phosphorescents—their use in safety work (exit markers in case of power failure, etc.). They have another interesting possibility, however—namely, that they could be used instead of ordinary paints to supplement or reinforce the colors of rooms designed to be seen under normal light. While of secondary importance from a lighting standpoint, this application might yield highly decorative effects.

In any event, the chances are that luminescent surfaces will always be supplementary lighting tools. Though it is technically possible to light rooms entirely with luminescent paints, it will probably be at very low levels of illumination. Fluorescent lamps use the same principle of converting ultra-violet rays into visible light and do it efficiently. But in the lamp the fluorescent pigment is directly exposed to the ultra-violet of the arc whereas a fluorescent-painted wall would only receive that portion of ultra-violet which passes through glass and, except in the most expensive quartz tubes, this is fairly low.

The real potentials of fluorescent paint are graphically demonstrated in the main room of the Colonial Inn at Avalon, Pa. (facing page). Here is a vaulted hall 60 ft. wide and 105 ft. long, entirely lit by luminous paint. Its true, the lighting level is low—.54 f.c. near the walls, .40 f.c. on the dance floor. But menus can be read and dance partners recognized and the teen age clientele seems to like it very much.

In addition to the 12 large fluorescent mural panels, the acoustically-treated vaulted ceiling is also painted with deep blue fluorescent paint. (In its natural form, this pigment is white with a bluish tint.) The entire room is lighted by a cove at the spring line of the PHOSPHORESCENT PAINTS could play important role in any building where sure, swift movement in dark is an important safety factor.



SAFETY DEVICES AND HIDDEN HAZARDS BOTH BECOME VISIBLE IN DARKNESS . . .



WHEN OUTLINED WITH PHOSPHORESCENT PAINTS, TAPE OR PLASTICS



vault which carries a row of 40 w. tubular black light lamps alternating with a 250 w. mercury arc flood equipped with u.v. filter.

SAFETY PAINT

Any hotel, theater, restaurant or school where a power failure might extinguish an exit sign at the precise moment when it is most needed; or any house with a stairway or sharp change in floor levels between rooms—indeed, any building where safe and swift movement in the dark might be a safety factor is a potential customer for the phosphorescent pigments in one form or another. Phosphorescent-impregnated plastics could be fabricated into exit signs, door knobs and medicine cabinets. As a matter of fact, since unlike the fluorescents they require no special light source, phosphorescent paint or even impregnated tape can provide markings almost anywhere.

Though the new luminescents have proved reasonably long-lived and stable, they will ultimately wear out. No one yet knows exactly when. Under certain conditions of exposure some of the pigments are subject to a photochemical reaction called "light-darkening" which sharply reduces their luminescence. But by and large, they will perform just as effectively as an ordinary paint. (For list of commercial sources of luminescent paints and black light equipment, turn to p. 166.)

This new stock house is built around two ideas, and, essentially, two materials. Neither are brand new: a light metal frame, with lightweight insulating materials clothing that frame. The structure is aluminum extrusions; the insulating material is Durisol. Using a modular system for fabricating the frame and wall units, Dr. Haig Galijikian expects to make available not only complete units such as the house pictured here, but will furnish sections and walls easily usable in any plan figured on multiples of 20 and 40 in. Advantages are in cost, which is low, and in speed of construction, which is great. Price of a complete 5-room house constructed with materials by Haig House Inc .- the company name-is estimated by Galijikian to be no more than \$8,600. This price allows 10 per cent profit for the builder and a \$500 allowance for the lot. The first house employing the company's structural system was erected at North Haledon, N. J. recently, in the fast time-after foundations-of 52 man days. Sponsors expect that the time for erection of this first Haig House will be bettered considerably when crews have acquired more experience.

The house, although the final picture scarcely indicates this, does represent a progressive compromise in the knotty problem of prefabrication. This specimen is in character a single story Riverside Church, with stone veneer applied on a metal frame of a very prosaic design. But there is nothing in the nature of the structural fabrication or the way it will be marketed which will limit designers. And much of the speed of complete prefabrication will be available to them in this combination of modern industrial materials.

The heaviest metal used is aluminum in .081 thickness in R361T alloy, exceptionally high in tensile strength. Nearly 90 per cent of all aluminum used in the special extrusions are in cruciform or semi-cruciform shapes for structural strength. Total number of parts going into the constructions of a 5-room shell will not exceed 500. All bolts, nuts, nails, screws, and pins in the total construction of the house may be held in the palm of one hand.

Distribution of Haig houses will be through licensed State dealers. Complete skeletons for 15 or 20 houses will be available, and each will be priced with either Durisol or Perlite walls. A packaged 5-room shell, similar to the one illustrated, will sell for \$3,620. The package will include floor joists, walls, roof trusses, floor, ceiling and roof slabs, windows, doors and trim.

The parent company, Haig House Inc. of Aberdeen, Md., will supply its various dealers with patented Haig House structural members and necessary equipment. These dealers will be free to supply any form of service they desire, whether it be sale of the packaged house to individuals or builders, or erection of the house. Haig House Inc. expects to supply ten houses each week through 1948. In 1949 plans call for production of 20 homes a day.



Lightweight joists are placed every 40 in. (above). Channel sections are laid on footings. Channels have a clip attachment (right) every 40 in. which clamps on to the joist and a socket arm directly above to hold the stud. Similar channel sections are used for partitions.





After channels are leveled, aluminum studs are placed in sockets which set 31/2 in. above the channel. Studs fit tightly in sockets. Tongue and grooved Durisol panels then slide in between studding as do windows.

Wall sections are locked together at the top with an extruded aluminum cap piece that rests on studs. Load bearing partitions are erected using the same channel, stud and Durisol block construction.

Aluminum roof trusses, weighing only 80 lbs., fit on top of cap members, drop down in lock sections every 40 in. Prefabricated stiffeners are installed and the roof is sheathed and roofed with asphalt shingles.



Cemesto is laid directly on joists. Over these a reinforced concrete floor is poured which ties the floor and wall together. Wood block flooring is cemented over concrete sub-floor.





ENTR. DR. JAME







Other wall materials can be used. House, right, in third day.

Veneer, stone here, can also vary with owners' wishes.

Completed Haig house. Designer is Theodore W. Dominick.

SEMI-STRUCTURAL BUILDING PANEL has insulating and noise reducing qualities, speeds erection, lowers building costs.

First manufactured in Belgium and used over a period of ten years in Switzerland, Durisol is now making its initial debut in the U. S. Manufactured here by Durisol, Inc. of New York, the multi-purpose, semi-structural material is made of chemically treated wood shavings which are mixed with cement and shaped under pressure into panels, slabs and blocks. Lightweight, fire-resistant and proof against deterioration, the new product combines the workability of wood with the durability of concrete. A 2 in. thick Durisol slab is said to have the insulation value of a 10 in. brick wall and to be an excellent soundproofing material. It weighs only 35 lbs. per cu. ft., has a K factor of .75 and a noise coefficient of .65.

Durisol is most commonly used in panel form. Available in various standard panel sizes in thicknesses from 2 to 5 in., the units are tongue and grooved on the long sides and can be nailed, drilled and cut with a saw. They are easily erected using impregnated felt or mastic to assure waterproof joints. If desired, they can be pre-coated at the factory with cement or plaster to reduce on-the-site costs.

The new semi-structural material has a multitude of applications and can be used with either wood, steel, concrete or aluminum framework. Panels are suitable for insulating walls, partitions, roofing and flooring, exterior walls and acoustical ceilings. Constructed dry, floor and ceiling slabs may be placed between the joists on battens or nailed, screwed or bolted to frame construction. In exterior walls Durisol may be used with wood posts and battens, bolted to standard steel studs or held with concealed studs as in the Haig House.

LOW-PRICE SLIDING CLOSET PANELS are simply fabricated of composition board reinforced with steel tubing.



This sliding wall panel for closets, designed to save wall and floor space, is aimed not primarily at the lavish residential field, the usual site of such luxury installations, but at the medium and low cost housing market. Fabricated of Masonite panels approximately $\frac{1}{4}$ in. thick, 2 x 8 ft., the sliding panels are reinforced longitudinally by open seam steel tubing. Oilite bearing sheaves carry them, running on a channel track which is installed simply on the closet sill, and the panel tops slide in a standard overhead guide screwed to the lintel.

Of an unusually uncomplicated design for such installations, the panels were designed by Charles K. Agle, of the New York architectural firm, Harrison, Ballard & Allen. Grant Pulley & Hardware Co. of Woodside, N. Y. developed the bearing sheave. The preassembled wall panels are equipped with their reinforcing and sheaves and are precoated by fabricators. Shipped to the job with fittings, their installation is a quick, simple matter.

Considerable money savings result in the avoidance of the usual framing and plastering over the closet opening, a comparatively costly operation. Closet door installation pictured here costs approximately \$21, including panels, with sheaves, top guides, and track.

KNOCK-DOWN GLASS PARTITIONS and picture windows built easily with new mechanically-connected aluminum frames.



REMOVABLE GLASS PANE allows access to interior of double-pane section, above left. In picture to right, easy assembling of the sections into walls of different sizes is demonstrated. No cement or putty is required. Fastening is mechanical, and wall can be demounted easily for complete salvage.



SIX-SECTION WALL below is example of use as interior wall or partition. Lighting may be installed inside wall.



Aluminum frame sections faced with tempered glass panes are used to assemble the "Temprex Livingwall," a new development with some interesting uses envisaged already. Used as interior walls and partitions and "picture windows" the self supporting blocks lock together mechanically and may be demounted easily for complete salvage.

Each Temprex block is a composite unit consisting of a die cast aluminum frame 20 in. square and $3\frac{7}{8}$ in. deep, with two panes of 7/32 in. Temprex glass $19\frac{1}{2}$ in. square. One of the panes is permanently sealed into the frame at the factory, providing a tight joint. An uncomplicated release fitting allows removal of the pane on the other side.

The tough glass used in the sections was developed during the war. It is engineered to support almost five times as much weight as ordinary glass, and also has a high resistance to impact, claimed to be seven times greater than ordinary glass.

Colors and patterns can be fired on the hard surface, and in one of the more spectacular uses of the panels, electrical outlets are installed in the cavity within the two glass surfaces. The surfaces are thus transformed virtually into a lighting fixture—with the glass wall not only transmitting light, but originating it. Bulb replacement is simple, with the removable panes. When the wired wall is used as a partition between two rooms, it of course serves to provide illumination in both.

One application emphasized by the manufacturers, Appleman Art Glass Co. of Bergenfield, N. J., is the adaptability of the two thickness glass wall to decorative window areas such as stained glass liturgical windows.

The "Livingwalls" are stiff, self supporting units which can be assembled without the use of any cementing agent. Simple interlocking devices, an integral part of the frame structure, join blocks together both vertically and horizontally.



Lionel Freedman: Pictorial Services





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Durall Aluminum Tension Screens are installed easily and quickly from the inside. Durall's sound all-metal construction eliminates costly repairs —it's light, flexible, has no side frames—comes complete with hardware ready to install. Patented devices keep it taut and trim and permit window washing without removing screen. There's no painting, no rusting, no staining. Here are economies for owner and builder alike!

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FOR DOUBLE-HUNG WINDOWS

NEW YORK WIRE CLOTH COMPANY 445 PARK AVENUE, NEW YORK 22, NEW YORK



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The high insulating efficiency of Fiberglas Insulations results from the countless tiny air spaces enclosed in a light-weight, woollike blanket of long, fine fibers of glass—a material that will not rot or decay, is odorless

OWENS-CORNING

BERGLAS

and will not retain odors, offers no food for rodents or vermin. This basic material is further processed into forms that meet the design and application specifications of the architects, refrigeration engineers and contractors engaged in this type of building construction.

You'll find profitable reading in the story of the Eglin Field installation, contained in the two folders illustrated above—and "Fiberglas Low-Temperature Insulations". Ask for forms B-47-16, I-47-5 and I-47-3. Owens-Corning Fiberglas Corporation, Dept. 830, Toledo 1, Ohio. Branches in principal cities. In Canada: Fiberglas Canada Ltd., Toronto, Ontario

*Fiberglas is the trademark (Reg. U. S. Pat. Off.) for a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation.

LOW TEMPERATURE

BUILDING REPORTER

William Leftwich



Holmes I. Mettee



FLEXIBLE PORCELAIN ENAMELED STEEL WALL COVER-ING is suitable for new or remodeling work.

Described as a porcelain "wall-paper," Mirawal is a new porcelain enameled steel wall covering that is so flexible it can be rolled into coils with a minimum radius of 6 in. without damage to the material. Made of 32 gauge steel which has been enameled, it is supplied in coils 100 ft. long by 16 in. wide and is available in black, white, gray, ivory, light green and blue. The new material is lightweight, heat and acid resistant and proof against rust, moisture, discoloration, rodent and insect pests. Actually a medium-priced wall covering that can be used equally well in new construction or remodeling of homes or stores, its cost runs about 35 cents a sq. ft. Installation of Mirawal is said to be simple enough that it can be made by any type of skilled construction labor and to require only the use of a pair of tin shears, some low cost special cement and a spatula. Application to the walls of an average size room is reported to take only a few hours. To date Mirawal has been used successfully in kitchens, laundries, recreation rooms, bathrooms and garages of homes and in butcher shops, dairies, bakeries and chain stores.

Manufacturer: Baltimore Porcelain Steel Corp., P. O. Box 928, Baltimore 3, Md.

THICK PLASTIC LAMINATES have many structural and industrial applications.

Nevamar is a tough, marproof, high pressure laminate that is produced in 48 x 54 in. sheets, in thicknesses ranging from $\frac{1}{8}$ to $\frac{5}{8}$ in. Extremely versatile, it is finished on one or both sides and can be used for wall paneling, wainscoting, toilet partitions, refrigerators, bottle coolers, etc. The new material is durable and rigid even in the $\frac{1}{8}$ in. thickness. It is said to show no appreciable fading after 100 hrs. of Fade-ometer exposure and to retain its super-hard, highly abrasion resistant, satin-like finish during years of hard use. Nevamar is also highly resistant to penetration and absorption of moisture. Non-porous and chemically inert, it is not affected by dirt, grease, alcohol, dilute acids or alkalies, ink or other similar foreign matter, is highly resistant to boiling water and burning cigarettes. The new laminates can be machined, drilled or sawed.

Manufacturer: The National Plastic Products Co., Odenton, Md.

FLUORESCENT PLASTIC is self-illuminating.

Described by the manufacturer as having "built-in edgelighting," Daylight Fluorescent Plexiglas is a new fluorescent form of acrylic plastic that glows under its own power. Upon exposure to daylight or normal room illumination it produces edge-lighted effects ordinarily obtained by directing light into the edge of acrylic material. The new plastic is impregnated with millions of fluorescent dye particles. Each particle, when struck by light rays entering the fluorescent sheet, reflects the light in all directions. These reflected rays, trapped within the polished sheet, travel through it by repeated interior-surface reflections to the edges, where they escape in a high concentration of fluorescent light. Similarly, letters and designs carved into or painted on one surface of the sheet are outlined in the same brilliant color that characterizes the edges. The new Daylight Fluorescent Plexiglas has many applications, such as for signs, decorative panels, dials, pointers, etc. Shatter-resistant and lightweight, it can be formed by methods applicable to standard acrylic sheeting, is supplied in red or green colors in standard size sheets up to 36 x 60 in., in thicknesses of .060 in., .125 in., .187 in. and .250 in.

Manufacturer: Rohm & Haas Co., 222 W. Washington Square, Philadelphia, Pa.

STAINLESS STEEL GUTTERS and SPOUTS are strong and corrosion resistant, need little maintenance.

Republic Steel Corp. is now offering a full line of stainless



steel roof drainage products including "K" gutter; plain round, corrugated round and corrugated square conductor pipe, "Snaptite" eaves trough and all necessary fittings. The equipment is

fabricated from satin finished 28-gauge Enduro stainless steel, type 301. Stronger than ordinary steel and corrosion-resistant the metal will not tarnish or rust, needs little or no maintenance and does not bleed or discolor paint on surrounding surfaces. It can be easily soldered and may be painted if desired.

Manufacturer: Berger Mfg. Division, Republic Steel Corp., 1038 Beldon Ave., N.E., Canton 15, Ohio.

FLOOR PAINT gives linoleum-like finish to wood, concrete or metal.

According to reports, one liberal coat of Pavinoleum floor paint will produce a durable linoleum-like protecting cover on wood, concrete, linoleum, stone, masonry or metal that will withstand both indoor and outdoor use. Applied by brush, the new fluid is spread thickly enough to cover cracks in floorboards or irregularities in concrete. It dries evenly throughout and can be waxed from time to time to prolong its lustrous finish. Alkali, saltwater and acid resistant, the new material is available in two types, in eight colors. One gallon covers from 150 to 400 sq. ft. depending on the surface. Type L Pavinoleum, for use on wood or linoleum, retails for \$6.65 per gal. Type C for concrete, stone, or metal retails for \$6.95.

Manufacturer: Pavinoleum Inc., 342 Madison Ave., New York, N. Y.

FOAMGLAS PIPE INSULATION can be used for both hot and cold lines, indoor and outdoor applications.

When installed according to the manufacturer's specifications, Foamglas pipe insulation is reported to be usable through temperature ranges from minus 200° F. to plus 800° F. for both indoor and outdoor applications. It is said to be especially suitable as a pipe protector in processing industries where exact temperature control is required, whether heat is to be retained or excluded, with its cost on an annual basis running less than that of other insulations. The new product retains its original insulating efficiency permanently. Composed of the same material and possessing the same characteristics as Foamglas blocks and slabs, it is unaffected by humidity, is highly resistant to fumes, vapors, acid atmospheres and many other elements which cause other materials to lose their insulating value. Non-combustible, it acts as a fire-retardant. In addition it is waterproof and vaporproof. (Continued on page 136) Foamglas pipe insulation is



Children's Aid Society Building, Buffalo, N. Y .- James W. Kideney, Architect

The friendly exterior of this building makes the promise that the offices it houses are pleasant in which to visit or work. The major source of this effect is in the fenestration.

Extreme simplicity in much of modern architecture would leave an impression of severity but for the decorative quality of a good window layout. The versatility of Hope's Windows is most helpful to the architect in securing his exterior effects. Hope's Windows also contribute many advantages to the user of the building ... maximum daylight, controlled ventilation, trustworthy weathertightness, positive and convenient operation and a most satisfactory long life without upkeep difficulties.

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

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS

BUILDING REPORTER

PREVENT THIS!



If you would prevent costly decay like the above . . . or are interested in effecting big savings in lowered maintenance and replacement costs . . . or if you're curious about new and effective uses for wood—uses once considered impossible—you should investigate the many benefits of Pentachlorophenoltreated wood.

Pentachlorophenol-treated wood is decay and termite protected wood that remains clean and easy to handle, and is paintable if the proper solvent is used. It's a sound investment that pays dividends in reduced maintenance costs. Pentachlorophenoltreated lumber lasts double and triple the life of untreated lumber. It's a wise management that specifies Pentachlorophenoltreated wood!

THE DOW CHEMICAL COMPANY MIDLAND, MICHIGAN



strong, rigid and lightweight, is easy to cut and fit with ordinary tools. It comes in two equal half sections, 18 in. long, and is manufactured for all sizes of pipe.

Manufacturer: Pittsburgh Corning Corp., 632 Duquesne Way, Pittsburgh, Pa.

BOILER UNIT supplies low temperature water for radiant heating and high temperature domestic water.

A packaged boiler especially designed for use with radiant heating installations, York-Shipley's new PB7-R unit provides both low temperature water for heating and high temperature water for domestic use. The low temperature compartment supplies plenty of evenly controlled 100° to 130° F. water for radiant heating (normal water temperature for radiant floor coils), or varied water temperatures from 80° to 200° F. for heating systems using standing or baseboard radiation. The rated domestic hot water capacity is 3 gals. per minute. Model PB7-R actually consists of two sections: a lower, outer water jacket and an upper boiler section. Low temperature water for the radiant heating coils is tapped from the cooler outer jacket, while the hotter upper section supplies hightemperature domestic water by means of a very long, instantaneous coil. An air chamber which accumulates the air released from the water and provides a cushion for the expan. sion of the water is built into the top of the boiler. This allin-one design eliminates the need for a separate expansion tank as well as the necessity of a separate hot water storage tank. The new completely self-contained unit (except for oil burner) is made in two sizes for maximum heat output of 81,000 and 110,000 BTU's per hr.

Manufacturer: York-Shipley Inc., York, Pa.

WATER HEATER includes magnesium alloy rod for protection against corrosion.

Bryant's new Model 115 water heater features low height, standing 5 ft. from its flat base to the top of its newly developed down-draft diverter in the 30 gallon size. Protection against corrosion, another big feature of the new model, is provided by the Protect-O-Rod, a magnesium alloy rod which extends into the water from the top of the tank, taking the brunt of electro-chemical corrosive action in the water. The manufacturer says one of these rods will last many years, and may then be replaced without elaborate mechanics. Because of this feature, the tank is backed with a



ten year protection plan. Constructed of heavy gauge steel, hot-dip galvanized, and designed to eliminate air pockets in the top, the new Model 115 is made in 20, 30, 40 and 50 gallon sizes, available for use with natural, manufactured, and liquified petroleum gases.

Manufacturer: Bryant Heater Co., 17825 St. Clair Ave., Cleveland, Ohio.

FOUR OIL-FIRED PACKAGED FURNACE UNITS cover 84 per cent of home heating requirements.

These four new automatic oil-fired furnace units, three compact packaged furnaces and a new conversion burner are designed to cover 84 per cent of *(Continued on page 140)*

At about half ... nationally the price of other advertised... rustproof gutters ample supply available now!

The Mighty Metal of the Air takes a Sensational New Turn...

One of a series of 4-color national advertisements on the new gutters preferred by Architects for choice of design ... by Builders for ease of handling and application... by Owners for appearance, performance and price!

ALUMINUM GUTTERS

Rustproof, at about half the price of other rustproof materials...Immediate Delivery!

No painting, no soldering... no stain from rust or corrosion. Ample strength, to take a full drainage load. Yet these Reynolds Lifetime Aluminum Gutters are much lighter on your eaves ... a 10-foot length weighs only about 3½ pounds! Complete with downspouts and accessories. Choice of Colonial box type or downspouts and accessories. Choice of Colonial box type or half-round design. See your local upplier now! Or write for literature. Reynolds Metals Company, Building Products Division, Louisville 1, Kenucky

Reynolds 13,000,000 FEET ALREADY SOLD AND DELIVERED! MADE BY THE WORLD'S LARGESY PRODUCER OF ALUMINUM BUILDING PRODUCTS; Clapboard Siding, Shingles, Sheet Roofing and Siding, Windows, Wall Tile, Reflect Clapboard Siding, "Alumi-Drame" (prefabricated utility building) Itive Insulation, "Alumi-Drame" (prefabricated utility building) BUNDLDS FIONEERING MADE ALUMINUM COMPETITIVE... TAKE ADVANTAGE OF ITI



More than 15,000,000 feet already sold! Write for illustrated A. I. A. File brochure! REYNOLDS METALS COMPANY, BUILDING PRODUCTS DIVISION Louisville 1, Ky.- Offices in 32 principal cities



Take it from LEVITT and Sons.....

Here comes Levittown!

"Six thousand new dream homes going up in Long Island in one of the most ambitious home-building projects on record. And every one of them will be designed for better living, with G-E Appliances," says William J. Levitt, president of Levitt and Sons. Read this famous builder's comments on how electrical planning makes homes more livable—and salable!

"People want dream homes"

"It pays to build them," says William J. Levitt, president of the Company.

Let Mr. Levitt tell the whole story—"What do they mean by *dream* homes? Well, here is what we have discovered.

"A dream home is a house the buyer and his family will want to live in a long time—a house that makes living comfortable and easygoing by taking the chores out of running a home. That goes for cottages as well as for mansions.

- "And here's one more thing that's been proved in our experience—profitably!
- "The best way to build a dream house is first to make sure it's designed for better living, *electrically*! Because an electric kitchen-laundry is the one big item that gives the homeowner all the advantages and modern conveniences that can make his home truly livable.
- "That's the best way to make the house salable, too!
- "Make all these electrical conveniences a part of the package, included in the price.
- "And it will sell faster! Especially when you've included


G-E APPLIANCES make homes more livable-and salable!

General Electric Appliances-the ones most women want most because they've proved plenty dependable."

What About Small Builders?

Whether you're building ten houses or a hundred and more, you stand to sell quicker for more profit when you include G-E conveniences.

Home builders everywhere have discovered G-E Appliances make more satisfied homeowners. They're not only dependable, efficient, but even more—economical. General Electric Appliances bring enough savings through low 'maintenance and running costs to actually make up for the small additional monthly payment—usually less than \$2.50.

Facts like that make for a lot less talking and a lot more conviction when you're selling a prospect. Sofor your next project—plan *electrically* with General Electric and *profit more!*

Learn the G-E Home Bureau Story

Contact your G-E distributor today. Or just drop a post card to the General Electric Company, Appliance and Merchandise Department, Bridgeport 2, Conn. Let us show you how to plan homes for better living, faster selling and bigger profits, *electrically*.

(Editor's Note): In a recent nationwide survey, 51 per cent of the men and 53 per cent of the women said General Electric makes the best electrical appliances!

The appliances most women want most





BUILDING REPORTER

TRANE heating and air conditioning helped these famous users...



Comfort

.

This modern recording studio specializes in putting speech on phonograph records. To give the studio fresh, tempered air without breaking the deep silence that is essential, a Trane Air Conditioning System was selected.

.

Liquids in this well-known meat packing plant were heated or chilled by pipe coils in huge vats. Cleaning the coils meant stopping production with consequent spoilage. A Trane System has ended both production halts and spoilage.

Process

Potatoes are cleaned, peeled, eyed, cubed, and then dehydrated in this modern plant. The dehydrating machine failed to remove enough moisture from the tubers, so an auxiliary Trane System was installed to reduce moisture content to below 7%.

there is a TRANE system to solve your problem

There is a Trane System to solve every kind of heating and air conditioning problem efficiently, whether it be comfort or process—domestic, commercial, or industrial. Trane systems are designed to fit your application by architect, engineer, or contractor. 200 Trane Sales Engineers offer their counsel. Users' names on request.



today's home heating requirements. Each model has a variety of applications, all come completely assembled and wired for immediate installation. One of the most versatile units is

Model 388 All-Purpose Furnace. Designed for use in small homes as a winter air conditioning system, its squirrelcage type blower circulates heated filtered air through the home during winter, filtered fresh air in the summer. When used without the blower, Model 388 can function as a gravity heating sys-



tem. The new unit has a bonnet output of 82,000 BTU's per hr., requires 331/2 x 53 in. of floor area, is 55 in. high. Another model, 378 Forced Air Furnace, is designed primarily for closet or utility room installation. This unit also has a bonnet output capacity of 82,000 BTU's per hr.; requires 233/4 x 331/4 in. in floor area, is 63 in. high. Model 458 is a floor furnace which can be easily installed between floor joists in basementless homes. Its BTU output is 50,000 or sufficient to heat three or four rooms. The new burner Model 598, for conversion of most types of furnaces to thermostatically controlled oil heat, can be installed in a wide range of furnaces with a minimum of cost. A feature of this burner is the "Telescope" air duct which permits all external controls to fit closely against the furnace allowing more usable basement area. The conversion unit has a full oil-firing rate of one gallon per hr. providing a maximum bonnet output of 70,000 BTU's.

Manufacturer: Evans Products Co., Plymouth, Mich.

LIGHTING CONTROL provides complete modulation of both color hue and intensity.

The new Rollocolor Lighting Controller, an invention of Englishman Rollo Gillespie Williams, enables every known hue of colored light to be provided by lighting equipment

without the necessity of changing color filters. Both hue and brightness change can be obtained instantly or gradually at any desired speed and can be pre-set. By moving a pointer over a special color scale upwards of 500 different hues of



colored light can be selected while the movement of another pointer over a parallel scale determines the illumination intensity of the color without disturbing its fundamental hue. With the new instrument, which is available for either manual or automatic operation and for remote control, color hues are always exactly the same and there is no fading. The uses of the new instrument are numerous. During daylight hours the controller can be used to vary shop window lighting to compete with various conditions of daylight. It also offers many opportunities for achieving dramatic and pleasing effects in mannequin shows and opens up vast possibilities in the field of decorative lighting for restaurants, hotels and stores. The manually operated Rollocolor controller unit here illustrated measures 27 in. x 27 in. x 36 in. deep and can handle a lighting load of 14 kw. A slightly larger model which will control a total lighting load of 36 kw. is also available. The automatic model, or the unit (Continued on page 144)





admits light and air.



GHT

H

PROTECTS against intruders, yet

SOLVES unusual problems, such as partitions for horse cars.

WHEELING CORRUGATING COMPANY · WHEELING · W. VA. Atlanta - Boston - Buffalo - Chicago - Cleveland - Columbus - Detroit - Kansas City - Louisville Minneapolis - New Orleans - New York - Philadelphia - Pittsburgh - Richmond - St. Louis



FORMS easily into all kinds of sanitary, easy-to-clean fittings.

Weigh all the advantages



V/W "AIRCRAFT BALANCE" means freedom from vibration

This unique V/W crankshaft and piston assembly is a study in static and dynamic balance and suggests a radial aircraft engine with its lower half placed in line with the upper. In addition to accurate control of the weight of individual parts, the arrangement of rotating and reciprocating parts in this ingenious V/W design results in vibrationless operation. As a result of these innovations, York engineers were able to produce the first refrigeration compressor that could be mounted on upper floors, in roof trusses, that required no special foundation.

Exclusive design is but one of the many features of V/W "the compressor that never wears out," and is representative of the character of York engineering throughout its complete line of refrigeration and air conditioning equipment.

York Corporation, York, Penna.



HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

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 Pacific District, for example, Manager Lauer located in Los Angeles, assisted by fourteen Yorktrained sales engineers, is at the service of York customers in this district. The highly practical, upto-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.



R. F. LAUER District Manoger

Assisted by J. N. Berger E. J. Berlet W. R. Eby Maron Kennedy W. B. Ludwig T. A. Marshall H. T. Orebaugh M. R. Overbye G. F. Sainsbury W. W. Sandholt C. A. Shapiro F. H. Stephens D. D. Stone G. H. Walker



Yes-it's Flexstone^{*} Each ply is a flexible covering of stone!

• The secret of a Johns-Manville Flexstone Roof is in the *felts*. They're made of fireproof, rotproof, enduring *asbestos*.

Flexstone Built-Up Roofs won't dry out from the sun... need no periodic coating. They're smoothsurfaced, too-permit thorough drainage... make any damage easy to locate and repair. They are engineered to each job... applied only by J-M Approved Roofers.

J-M asbestos felts are perforated to make application easier... give you a smoother job and conform better to irregularities in the roof deck.

Send for Flexstone brochure BU-51A. Contains complete specifications. Address: Johns-Manville, Box 290, New York 16, N.Y. *Reg. U. S. Pat. Off.

JM

Johns-Manville FLEXSTONE Built-Up Roofs

"AND THERE'S NO EXCESS WEIGHT





WINDOW APPEAL ...

as advertised in Better Homes and Gardens and The American Home.

Delivered to the job as complete units—prefitted, weatherstripped. There are 41 manufacturers; for the name of the one nearest you, write R*O*W Sales Co., Royal Oak, Mich.

Priced no higher than other of the rchited

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BUILDING REPORTER

used mainly for display work, is fundamentally the same as the manually operated unit except that it has additional apparatus which automatically provides color changes according to a predetermined sequence. Furnished with a plug and socket board underneath the color scale, all the operator has to do to select a range of color hues to be automatically reproduced is to insert 20 plugs at various positions under the color scale corresponding to the hues he desires.

Manufacturer: The Color Lighting Corp., 308 West 68th St., New York, N. Y.

MORE EFFICIENT GERMICIDAL LAMP has doubled bacteria killing power.

Westinghouse's new 25 w. Slimline Germicidal Sterilamp is reported to emit more than twice as much ultraviolet radiation as any lamp heretofore available. It not only produces more ultraviolet for each watt of electricity consumed, but it also provides an almost uniform level of radiation throughout its life. Tests made near the end of the lamp's 6,000 hr. rating, or after almost a year of normal usage, show that it still gives more ultraviolet radiation than other such germ killing lamps when new. According to the manufacturer, the 36 in. long, instant start Sterilamp may be operated at three different levels of ultraviolet intensity. Output varies depending upon the current rating of the ballast used. It combines the best electrical features of all previous ultraviolet lamps and is expected to cut the cost of ultraviolet protection almost in half. Manufacturer: Westinghouse Electric Corp., 306 Fourth Ave., Box 1017, Pittsburgh, Pa.

TABLE HEIGHT 3.5 cu. ft. REFRIGERATOR fits in modern small home or apartment kitchens.

Designed to fit with the sink, stove and other appliances to

form a continuous level of table area, the new 3.5 cu. ft. Lo Boy electric refrigerator offers the housewife an additional kitchen work space 24 in. wide by $22\frac{1}{2}$ in. deep. The unit, $34\frac{1}{2}$ in. high, can be placed next to a stove of exact height or below a standard table top range to save needed kitchen



space. Its porcelain interior provides 7.8 sq. ft. of shelf area, two ice trays and automatic lighting. The hermetically sealed refrigerating unit, 50 or 60 cycles, 110 v., A.C. is capable of handling twice the freezing capacity while the automatic temperature control is adjustable to nine freezing speeds. (Odd cycles or high voltage, or D.C. current is available on special order.) The new Lo Boy features welded steel construction, is finished in white baked enamel, retails for about \$229.95.

Manufacturer: Paley Manufacturing Corp., 244 Herkimer St., Brooklyn 16, N. Y.

TABLE TOP 31/2 CU. FT. REFRIGERATOR and 14 CU. FT. MODEL suit small and large home requirements.

The Jordon Refrigerator Co. has recently introduced two new refrigerators: model 10/4 combination refrigerator-freezer and the Jordonette table-top $3\frac{1}{2}$ cu. ft. refrigerator. Measuring 68 in. high, 39 in. wide and 29 in. deep, Model 10/4 occupies only a slightly larger space than the average house-hold refrigerator yet provides (Continued on page 148)

NG CUSHI

Wood WOW U

demands modern thinking, too...



Insulated wire and cable with Alcoa E. C.* Aluminum Conductor can save thousands of dollars on a single industrial plant. Aluminum's lighter weight at today's prices means a big difference in cost. For example, a 500,000 cm insulated aluminum cable weighs less than half the weight of an identical copper cable.

Aluminum's lighter weight means lighter supports. This can simplify structures where wire loads are heavy. It's easier to install.

Alcoa makes light, strong, conductive E. C. Aluminum; leading wire and cable manufacturers draw, strand, and insulate it, and sell it under their own trade marks. ALUMINUM COMPANY OF AMERICA, 1475 Gulf Bldg., Pittsburgh 19, Pa. *E. C.: Electrical Conductor Aluminum

The BIG Difference is in your COSTS!



YOUR SUPPLIER HAS IT!



The





Millions of people changed our name

You may think it strange that millions of people could have a voice in changing a company's name, but that is what has happened to The American Rolling Mill Company.

Several years after the company started operations in 1900, it adopted the trademark "ARMCO" for its special grades of steel. The ARMCO trademark —composed of the first letter in each word

of the company name—has been widely advertised and appears on all the company's products. Many ARMCO customers identify their use of these special-purpose steels with this familiar trademark.

Through the years—as the original small mill grew into one of the country's great steel companies—our customers, dealers and the public alike have preferred to call the company "ARMCO." So, in recognition of this preference, the name of the company has been changed from The American Rolling Mill Company to Armco Steel Corporation.

The change is one of name only. It does not affect ARMCO management, personnel and long-established policies. It *does* emphasize more strongly the importance of the ARMCO trademark, and increases its value to those who use ARMCO Special-Purpose steels in the things they make.

The alert research and production men who have perfected so many special-purpose grades of ARMCO steel will continue to improve present steels while developing new ones to help manufacturers build better products for the home, farm and industry. Armco Steel Corporation, Middletown, Ohio. Export: The Armco International Corporation.



ARMCO STEEL CORPORATION

THE FAMILIAR ARMCO TRIANGLE IDENTIFIES SPECIAL-PURPOSE STEELS THAT HELP MANUFACTURERS MAKE MORE ATTRACTIVE, MORE USEFUL, LONGER-LASTING PRODUCTS



--and meet all the specifications of the Aluminum Window Manufacturers' Association

The seal you see on every Adlake doublehung Aluminum Window is your guarantee of quality. It means that the window has met all specifications of the Aluminum Window Manufacturers' Association for quality of materials, soundness of construction, strength of sections, and air infiltration requirements.

This seal means you can recommend Adlake Aluminum Windows to your clients with confidence. To clients, it is concrete evidence that when you specify Adlake Windows, you specify the utmost in long life, good looks, easy operation. Cost-wise, Adlake Windows *pay for themselves* in a few years through *doing away with expensive maintenance*. No maintenance is required, other than routine washing.

Write today for complete data. Address: 1101 N. Michigan, Elkhart, Ind. No obligation, of course.



BUILDING REPORTER



You needn't lie awake nights counting sheep. You can count on the fact that home buyers prefer automatic Electric Water Heaters. To have them completely satisfied with the homes you build-both now and in years to come-install the kind of water heating equipment your customers want.

How to reduce construction costs and





NON-ELECTRIC INSTALLATION

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) DE-PENDABLE AND TROUBLE-FREE (as electric light); (4) ECONOMICAL (fully insulated storage, short hot water lines); (5) SAFE (all-electric dependable temperature control); (6) FLEX-IBLE (can be installed anywhere, even in living quarters; no flue or vent).

Electric Water Heater Section NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION 155 East 44th Street, New York 17, N.Y.

. FOWLER . FRIGIDAIRE . GENERAL ELECTRIC . HOTPOINT . B&F . BRYANT . CLARK JUD WHITEHEAD • KELVINATOR • MERTLAND X • RHEEM • SEIDELHUBER • SELECTRIC • * MONARCH SMITHWAY HOTSTREAM . SUNBEAU THERMO-WATT . UNIVERSAL . WESTINGHOUSE



14 cu. ft. of storage area. This includes 10 cu. ft. of normal temperature storage and a 4 cu. ft. frozen food locker which has facilities for freezing six large ice trays. According to the manufacturer, an outstanding feature of this model is that

both the fresh and frozen food compartments operate with one condensing unit and one temperature control. This feature is said to not only eliminate costly two temperature hook-ups but to provide economical operation. The 31/2 cu. ft. Jordonette for use in apartments, small homes, offices, etc., is 241/8 in. wide, 251/2 in. deep and 341/2 in. high to conform with kitchen cabinet height. It is available in normal temperature, low temperature and all ice cube maker models. The work top and interior are porcelain and the shelves are arranged for convenient storage of foods. The Jordonette is equipped with a 1/8 HP hermetically





sealed compressor unit and a two ice tray evaporator.

Manufacturer: Jordon Refrigerator Co., 58th & Grays Ave., Philadelphia 43, Pa.

IMPROVED REFRIGERATORS, ranges, radio and television sets are introduced by Crosley.

Five new refrigerators, three gas ranges, an electric range. a home freezer and numerous radio and television sets comprise the Crosley 1948 line.

Among the most noteworthy of these many products are the new Shelvador refrigerators which not only boast larger food storage spaces and general improvements but a reduction in retail prices equivalent to 7 to 16 per cent. The five new refrigerators range in size from 8.6 cu. ft. to 10.5 cu. ft. and in price from



\$259.95 to \$399.95. One of each of these size units features a 1.5 cu. ft. frozen food storage space and a secondary refrigerating system to provide high humidity for vegetables and pastries. The other models, except the minimum price 8.8 cu. ft. unit, have a 1.5 cu. ft. frozen food compartment which accommodates 50 lbs. or a three month's supply of frozen food; a normal cold compartment; convenient crispers; dry storage compartment and the Shelvador built-in door shelves. The minimum price unit includes all of these features except it has a .7 cu. ft. freezing and frozen food storage compartment. Other improvements in the line include: an increase in the capacity of the Electrosaver compressor unit, new styling, flexible ice trays, horizontal evaporator, flexible shelves and a new temperature control. The three 8 cu. ft. models measure 61 in. high, 303/4 in. wide, 245/8 in. deep. The 10.5 cu. ft. models measure 651/2 in. high, 331/2 in. wide and 247/8 in. deep.

Manufacturer: Crosley Div., Avco Manufacturing Corp., 1329 Arlington St., Cincinnati, Ohio.

EXTENSIVE AUTOMATIC WASHER LINE features automatic soap injectors, vibrationless, movable model.

With the introduction of five new models, the Bendix auto-(Continued on page 152) matic home washer line now

add customer features...

don't let competition

pull the wool over your eyes!



Why let competitors get the jump on you-when it's so easy to give home buyers what they want? Today the trend 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! Electric Range Section NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION 155 E. 44th Street New York 17, N. Y.

A-B STOVES ADMIRAL • CROSLEY ESTATE HEATROLA FRIGIDAIRE GENERAL ELECTRIC GIBSON • HOTPOINT KELVINATOR • LEDO MONARCH • NORGE QUALITY • UNIVERSAL WESTINGHOUSE





your clients can get PC Foamglas Insulation

• Many prominent concerns have deferred insulation programs until they could get PC Foamglas. Now—with our production doubled—all orders for Foamglas can be delivered promptly.

Foamglas is the only material of its kind. Big, rigid blocks are composed of millions of minute, closed, airfilled glass cells. Resistant to vapors, fumes and acid atmospheres—because it is glass—PC Foamglas retains its original insulating value permanently when installed according to our specifications and recommendations. Review your clients' insulation requirements as of today, for walls and ceilings, roofs and floors. If maintaining desired temperatures in their buildings involves special problems, our technical staff will be glad to discuss them with you. Meanwhile you can get full information on customary uses of PC Foamglas from our current literature. Send the coupon for your free copies. Pittsburgh Corning Corporation also makes PC Glass Blocks.

When you insulate with FOAMGLAS, you insulate for good





Here's What Better Homes & Gardens' 100% Service Means To You

BH&G has no fiction, no side lines. Cover to cover, ads and all, it's devoted 100% to service for better living. This means that the people who read BH&G don't do it casually. They're after something: ideas, information, trends. They get it. They come to you pre-informed about the ideas that you're trying to These brands are advertised in the JUNE issue of Better Homes & Gardens:

APPLIANCES

Amon Home Freezer Apex Washer Coolerator Refrigerator Coolerator Refrigerator Cooley Refrigerator Filter Queen Vacuum Horence Ranges Frigidaire Refrigerator G. E. Home Freezer G. E. Electric Range G. E. Lamps Gibson Refrigerator Acover Iron Horton Ironer Hotpoint Disposall Hotpoint Refrigerator International Harvester Home Freezer KitchenAid Mixer Knapp-Monarch Hot Norge Home Freezer Parfection Oil Range Philco Home Freezer Philco Refrigerator

Crane Philco Home Freezer Philco Refrigerator Proctor Iron Servel Refrigerator Servel Refrigerator Simplex Ironner Sunbeam Ironmaster Iron Swartzbaugh Rangette Toastmaster Toaster Universal Gas Range Victor Quickfreeze Home Freezer Vass Washer Voss Washer Welbilt Gas Range Westinghouse Waste-Away

Bell Electric Outlets Bell Telephone System Burgess Batteries Onan Power Plants HARDWARE

Dic-A-Doo Paint Brush Bath Dow Saran Screen Duco Cement Gabco Automatic Window Screens Gabco Automotic Antidat Screens Invizible Sash Balance Lowell Paint Spray Lumite Screen Plastic Wood Smooth-On Cements Speed Load Calking Gun Yale Hardware

HEATING, MAJOR

American Radiator Bryant

Dunham Hydro-Flo Iron Firem Janitrol an Petro Stokol

Superfex Williams Oil-O-Matic HEATING, MISCELLANEOUS

Misciel Fans Dust-Stop Filters Fan-Pac Attic Fans Haancack Outdoor Fireplace Heatilator Fireplace ILG Ventilation Price Outdoor Fireplace Superior Fireplace Ventilattic Fan

put across. They come as informed clients - saving you much time and many headaches. Here's what we're telling them in June: 12 Big Ideas (how they work in small houses); How to Read a Set of Plans; Here's What I'll do about Building (interviews with Presidential prospects).

MISCELLANEOUS(Cont'd)

ELECTRICAL & WIRING MILLWORK & LUMBER American Central Kitchens Crawford Doors Curtis Fenestra Steel Casements

Fenestra Steel Casements Mengel Flush Doors National Oak Floors RoW Windows Red Cedar Shingle Büreau Western Pines Youngstown Kitchens by Mullins

PAINT & RELATED PRODUCTS

Albron Cuprinol

Delaware Wall-Ever Delaware Wall-Ever Dutch Boy Blend Eagle RTU White Lead Flatlux Gildden Kyanize Mura-Tex NuEnamel ParaStoneTex Paratex Pittsburgh Setfast

> PLUMBING American-Standard

Wonsover

Briggs Crane Culligan Soft Water Evans Hot Water Hot-Roc Hot Water Tanks

Lustertone Sink Tops Orangeburg Fibre Conduit Permuiti Soft Water Rueem Hot Water Ruud Hot Water Servisoft Soft Water Smithway Hot Water Toastmaster Hot Water John. Wood Hot Water

INSULATION

Carey Celotex Chamberlain Flintkote Insul-Cotton Kimsul Reynolds

ROOFING & SIDING

Barrett Celotex Flintkote Kaiser

Reynolds Temlock

MISCELLANEOUS

Dow Magnesium Easi-Bild Patterns Fories Medicine Cabinets LOF Glass Majestic Home Incinerators Orlyt Greenhouse Portand Cement Pyrene Fire Extinguisher Rock of Ages Monuments Robertshow-Fulton Heat Controls

MIDCELLANEOUS(Conf'd) Rusco Venetian Awnings Spirella Corset Swaggerettes Gloves Tex-Knit Ironing Board Cover Warp's Venetian Blinds Westlox Time West Dodd Lighthing Conductors Zenith Hearing Aids OUTDOOR Champion Sprayer Clean-Cut Lown Mower Clemson Lawn Mower Dayton Irrigation Dobbins Sprayer Doo Klips Gensco Saw Hastings Soil Soaker Hudson Sprayer Hedgemaster Jacobsen Löwn Mower

Jacobsen Läwn Mower Jaci Tractor March Irrigation MontaMower Lawn Mower National Mower Parker Lawn Sweeper Penssylvania Lawn Mower Porter-Cable Hedgetrimmer Reo Lawn Mower Sensation Lawn Mower Spartan Sprayer Swan Rubber Hose Toro Lawn Mower True-Temper Tools Weed-Wand Whitwind Lawn Mower Wiss Pruners Wiss Pruners

CIRCULATION OVER 3,000,000 America's First Service Magazine

BUILDING REPORTER



comprises seven washers ranging in price from \$199.50 to \$319.95. These include a new standard and de luxe model; deluxe with automatic soap injector; Gyromatic with and without automatic soap injector: a postwar standard and a postwar de luxe model. All of the new units incorporate improved engineering, styling and washability features. Perforated baffles in the redesigned tub provide better washability while 402 r.p.m. of the cylinder in all models except the Gyromatic, remove more water in the extraction cycle. Star of the new line is the tableheight, vibrationless Gyromatic. A 9 lb. capacity unit with a balanced high speed spin (525 r.p.m.), it is the only unit in the line that does not require bolting to the floor. The control dial may be set for a maximum soaking period of 93/4 minutes after which the unit automatically provides a drain period, spray rinse and spin.



Following the maximum wash period of 14¹/₂ minutes there is a drain period, flush rinse and spin extraction plus two deep rinses each separated by a drain period and a spin extraction. Optional for both the Gyromatic and the new de luxe model is the exclusive soap injector feature which adds either soap or synthetic detergent in metered quantities. This injector permits the soaking and immediate washing of clothes without the operators attendance. Two indicators on the control panel may be set for the wash and soak periods so that a predetermined amount of soap, detergent or softener will automatically enter the washer as soon as the tub is filled. The new Gyromatic unit measures 29³/₄ in. wide, 36 in. high, 24³/₄ in. deep; weighs 356 lbs.; retails for \$319.95.

Manufacturer: Bendix Home Appliances Inc., South Bend 24, Ind.

GAS FIRED DOMESTIC INCINERATOR consumes garbage and rubbish efficiently, economically and without odor.

Gar-Disposal is a completely automatic, efficient home incinerator that disposes of garbage and rubbish in a safe.

sanitary, odorless, economical operation. Refuse is dehydrated by a patented down-draft principle plus heat from the pilot, is ignited by the pilot and fully consumed. According to the manufacturer the drying action usually takes place fast enough with the use of the pilot only. However, when it is necessary to reduce the contents faster, an auxiliary burner may be operated. Gar-Disposal has a capacity of 1.5 bu., is AGA approved for use with natu-



ral, manufactured or mixed gas and can be installed in the kitchen, utility room or basement with a 7 to 6 in. flue connection. Smartly styled in red, green or white enamel, it weighs 140 lbs., measures 321/4 in. high, 20 in. wide, 20 in. deep.

Manufacturer: Electrocap Mold Co., 115 E. Carson St., Pittsburgh, Pa.

INDUSTRIAL VACUUM CLEANER is self-cleaning.

The Eject-O-Vac is a new portable, self-cleaning industrial vacuum cleaner. Featuring a 15 gal. water trap to catch and

saturate the dust which can be flushed clean in less than a minute, there is no dust bag to empty or tank to dump. To remove the accumulated dirt from the machine a bucket of clean water is sucked into the tank, a lever reversed and the dirty contents ejected through the intake hose into the bucket, a sink, etc. Enough water is automatically retained in the unit to keep the trap effective



and if desired, a germacide may be added to destroy germs in the collected dirt. The vacuum can also be used to pick up water from the floor. Eject-O-Vac machines sell for \$275 complete with essential attachments.

Manufacturer: Continental Car-Na-Var Corp., Brazil, Ind. (Continued on page 156)

large or small...your building can be as modern as



Is your building a small apartment house, a "king-size" hotel or office building, or somewhere in between?

Whether it's small or large, the elevator service provided may determine how modern and profitable it will remain in the years ahead. Yet actually, no building need suffer from income losses due to outmoded elevator service!

Westinghouse has specialized in modernizing existing systems that have passed peak efficiency so that buildings of *every* size can have the benefits of really modern vertical transportation.

A Westinghouse elevator modernization program includes new equipment that provides smooth, quiet operation ... faster service ... modern car interiors, doors, and signals. Passenger service can be restored to top efficiency with, for example, Rototrol inductor floor landing, new dispatching systems, automatic doors, Selectomatic, and many other Westinghouse improvements.

If your elevators are growing old, modernization now may be advisable. For full information, write to the Westinghouse Electric Corporation, Elevator Division, 150 Pacific Avenue, Jersey City 4, New Jersey.

Vestinghouse

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ON

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For the newest in building and remodeling products, see your local Gold Bond Dealer first?

"The nicest young couple is paying our taxes!"

"I never believed a house could actually help pay for itself. But ours is doing it, and here's how: We had our architect plan a separate income apartment up-stairs! Now the rent more than pays our taxes. And we didn't have to sacrifice quality at one single point!"

Yes, you can build the kind of house you've dreamed about, out of the finest materials research has developed. Materials that add extra permanence, beauty, and fire protection—at no extra cost! In place of old style inflammable sheathing under clapboards or other outside finish you can have firesafe walls; stronger, more weatherproof at less cost. Just ask your architect or builder to specify National Gypsum's fireproof Gold Bond Gypsum Sheathing Then there's new Gold Bond Rock Wool Insula-

tion that keeps summer heat out, furnace heat in. Saves up to 40% on fuel costs. Don't skimp by using insulation only 1 or 2 inches thick. Full thick Gold Bond Rock Wool batts completely fill space between framing members, provide an effective fire-stop, and insure full insulation comfort. Can be "blown" into outer walls and top floor ceilings of existing homes. Call your local Gold Bond applicator, listed under "Insulation" in the phone directory. You'll have firesafe interior walls of lasting

beauty if you use Gold Bond Gypsum Lath and Plaster. For the newest in decoration, there's Gold Bond Sunflex Wallpaint that dries in an hour with

Bond Sunflex Wallpaint that dries in an hour with no painty smell! Your local Gold Bond lumber and building material dealer is headquarters for over 150 Gold Bond building products, each guaranteed to do a specific job better. Whenever you're ready to build or remodel, your Gold Bond dealer can give you good, practical advice. *See him first*!

NATIONAL GYPSUM COMPANY BUFFALO 2, NEW YORK

Gold Bond Building Products add greater fire protection, permanency, and beauty at no extra cost. These include fireproof wallboard, lath, plaster,

Standard Manuel	GOLD BOND FIREPROOF GYPSUM SHEATHING	GOLD BOND FIREPROOF	GOLD BOND FIREPROOF GYPSUM PLASTER	GOLD BOND FIREPROOF	GOLD BOND FIREPROOF	GOLD BOND SUNFLE
DEMAND	H- H HATK	u lla lit III			Gold Boad	120
THESE SIX	158		- Carlos	and the	Bost	h and
GOLD BOND	- AND	A local II	LEN L	1 For	Gold Bond	
FEATURES	ALA		1 APR			
IN YOUR	Big, weatherproofed panels of Gold Bond	Gold Bond Gypsum Lath	Gold Bond Gypsum Plas- ter is especially process-	Over the plaster, goes a coat of Gold Bond Fin-	Builds a fireproof blan- ket of insulation around the house for greater year	Dries in one hour with no objectional paint after-odor. Easier to a
NEW HOUSE	Storm Sealed Gypsum Sheathing add structural strength and built-in fire protection. Costs less than old-style sheathing.	base. Can't warp, expand or contract. Adds fire protection and structural strength for better wall and ceiling construction.	ed to bond perfectly with gypsum lath. Builds firesafe, rock-like walls and ceilings with greater durability and beauty.	ish Lime. This is the smooth white finish that you see in a new house before the wallpaper or paint is applied.	round comfort, family health, and fuel savings up to 40%. Available for new or old homes.	ply. This modern dec ration is now availab at your dealer's in a fu range of colorful tone

*Mark of distinction on the window of distinction

BILT-WELL

SUPERIOR

UNIT

This is the Superior Window that Bilt-Well Master Craftsmen so proudly offer . . . advanced design! Sturdily constructed! Smooth operation! Yes, their "experience" . . . their "skill" and their "expert knowledge" developed a Superior Window. . . . one in which the weatherstrip compensates for swelling and shrinking . . . maintains snug fitting, weather-tight windows . . . easy, quiet and smooth sliding.

Truly-the window of distinction!



WOOD WINDOW



Light, snug contact between sash and weatherstrip at all times, no stick, no dust, no draft.



Sash may be removed easily and quickly without loosening or removing the weatherstrip.

Gli-dor Cabinets Bilt-Well Medicine Cabinets Bilt-Well Ironing Board Cabinets Bilt-Well Mantels Bilt-Well Telephone Cabinets Bilt-Well Stair Parts Bilt-Well Unit Linen Cabinets Bilt-Well Breakfast Nooks



Superior Unit Wood Windows Bilt-Well Interior Doors Bilt-Well Exterior Doors Nu-Style Kitchen Cabinets Bilt-Well Entrances Bilt-Well Shutters Clos-tite Casements Bilt-Well Basement Windows

Bilt-Well Combination Doors Bilt-Well Louvres and Gable Sash Carr-dor Overbead Garage Doors Bilt-Well Corner Cabinets Bilt-Well Storm Sash Bilt-Well Screens

Manufactured by CARR, ADAMS & COLLIER COMPANY, Dubuque, Iowa

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BUILDING REPORTER



LOCK is adaptable to cabinets, cupboards and drawers. The new Yale 3-way cabinet lock is a pin-tumbler lock with a patented rotating cylinder that can be easily converted to any one of three different uses. With a small screwdriver the catch on the cylinder can be released and the lock converted from a drawer lock with the bolt moving vertically to a cabinet or cupboard lock for either right or left hand doors, with the bolt moving horizontally. The new unit is made of solid brass, is produced with both deadbolts and springbolts. *Manufacturer:* The Yale & Towne Manufacturing Co., 200 Henry St., Stamford, Conn.

UNIT TYPE LOCK for sliding doors is extremely versatile and easily installed.

Said to be a nearly universal lock for sliding doors, Rite-Lock



For complete details—or free consultation without obligation—call or write the nearest Richards-Wilcox office.



Series 500 is a new unit-type lock that is adjustable to various

door thicknesses and can be easily installed without mortising. Compact and modern in design, it provides positive trouble-free operation, is practical for use on entrance, bath or other interior doors. Three types of escutcheons, measuring $4\frac{1}{2} \times 2\frac{7}{8}$ in. and



tooled for interchangeability, make it extremely versatile. Each Rite-Lock is adaptable to doors of either hand, with or without dead lock on either side and emergency unlocking feature opposite. The new lock is adjustable to fit any door thickness from $1\frac{1}{5}$ to 1 15/16 in. Easily installed, a small notch of 3 5/16 x $2\frac{5}{8}$ in. in stile accommodates the unit. Strike mounts on surface of jamb. All exposed parts of the lock are in solid brass, available in a choice of four standard finishes.

Manufacturer: Adams-Rite Manufacturing Co., 540 W. Chevy Chase Drive, Glendale, Calif.

MODERATELY PRICED SECTIONAL FURNITURE for corner arrangements in homes, offices, restaurants, etc.

Composed of comfortable, upholstered quarter-circle curved and straight sections, Chew's Versaline furniture can be combined in any pattern to fit any corner or alcove. The curved pieces can be used alone or in combination with either single or double chairs and are equally suitable for space saving corner arrangements in home kitchens, dens or rumpus rooms; offices; restaurants; bars or stores. The simple design of the pieces and a wide color combination range permit Versaline to blend with architectural demands or room furnishings. Production line manufacture puts its cost way below that of custom-built corner arrangements or at about \$223 for a corner section and two chairs. The furniture pieces are constructed with plywood panels and reinforced joints. No-Sag springs, cushioned with rubberized hair are used in the back and removable seat, upholstery is durable Boltaflex. This all-plastic, fire-resistant material can be easily washed with soap and water, will not crack, peel, fade or sag. A table top to fit the open space in the corner made by the curved quarter. circle section is also available with the line.

Manufacturer: Chew Manufacturing Co., Connelly Springs, N. C.

WELL DESIGNED, INDUSTRIALLY PRODUCED FURNITURE is moderately priced.

Claywood Design Products' line of attractive modern furniture offers good design and excellent craftsmanship at a moderate cost. The simple lines of the pieces, designed by

Clayton Lewis, conform to home, office or hotel interiors. The use of native Oregon hardwoods such as western maple, chinquapin and ash, plus industrial production techniques brings the price within reach of lower income groups. Included in the new line are such pieces as dining, end and coffee tables; desks; side and lounging chairs; stacking stools; chests and beds. Several other pieces like



(Continued on page 160)



Strength and durability considered, CONCRETE JOIST CONSTRUCTION



In these days of high costs, economy in building is important, provided strength and durability are not sacrificed. Here is where concrete joist construction comes in—since it provides rigid, strong, sound-proof buildings which are fire resistive, yet construction cost is lower. That is because the amount of concrete and, consequently, the dead load, are kept to a minimum for any span or live load. The concrete joist and monolithic top slab are formed with cores of removable Meyer steelforms, supported on skeleton centering. Once the concrete has set, the forms are removed and re-used from floor to floor and from job to job. Therefore, a nominal rental charge can be made for each use. Construction is speeded up.

WHY SPECIFY CECO?

Ceco originated the removable steelform method of concrete joist construction. The company is first in the field—actually providing more services than all competitors combined. So, when concrete joist construction fits your need, call on Ceco, the leader over all. Thirty-five years of experience in the field, on the job, have given Ceco a sure grasp of all concrete joist construction problems. This fund of knowledge is yours to command, in 23 strategically located offices from coast to coast.



General Offices: 5701 W. 26th St., Chicago 50, Illinois Offices, warehouses and fabricating plants in principal cities Other Ceco Products Include—Reinforcing Steel, Welded Wire Fabric, Steel Joists and Roof Deck, Metal Windows and Doors, Metal Frame Screens, Aluminum Storm Windows, Metal Lath and Accessories

CECO STEEL PRODUCTS CORPORATION

In construction products CECO ENGINEERING makes the big difference



Mr. Micawber was only half-right !

M^{R.} MICAWBER'S financial advice to young David Copperfield is justly famous.

Translated into United States currency, it runs something like this:

"Annual income, two thousand dollars; annual expenditure, nineteen hundred and ninetynine dollars; result, happiness. Annual income, two thousand dollars; annual expenditure, two thousand and one dollars; result, misery."

Mr. Micawber was only half-right!

Simply *not* spending more than you make isn't enough. Every family must have a cushion of savings to fall back on . . . and to provide for their future security.

U. S. Savings Bonds offer one of the best ways imaginable to build savings.

Two convenient, automatic plans make the systematic purchase of Savings Bonds both sure and trouble-free:

I. If you work for wages or salary, join Payroll Savings—the *only* installment-buying plan. 2. If you're in business, or a farmer, or in a profession, and the Payroll Savings Plan is *not* available to you, then sign up at your bank for the Bond-A-Month Plan.

Each helps you build a nest egg of absolutely safe, 100% government-backed U. S. Savings Bonds. And these bonds make more money for you while you save. For after only ten years, they pay you back \$400 for every \$300 you put in them.

Join the Plan you're eligible for today! As Mr. Micawber would say: "Result, security!"

AUTOMATIC SAVING IS SURE SAVING - U.S. SAVINGS BONDS



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ON ROOFING JOBS **EN**genuity is the Real Cost-Cutting Factor

Fisher Body General Motors Corp.

Long experience, modern labor and time saving equipment, ample financial resources ... the factors that enable a roofing contractor to quote and successfully handle large jobs are well known to every architect, engineer and contractor.

the Blue Book of American Industry

Architects and Engineers: McGeorge-Hargett & Associates General Contractors: Albert M. Higley Co. Roof Area, 600,000 sq. ft. Roofed by "Industrial"

Pages from

Industrial Roofing and Sheet Metal Inc. qualify on all these counts. The company has the experienced manpower. It employs the most up-to-date equipment and facilities available. It enjoys ample financial resources.

But ENgenuity, the knowhow that comes only from long experience, the coupling of imagination with engineering skill and resourcefulness, the ability to devise new methods for meeting uncharted situations . . . that's the real cost-cutting factor. That's the reason so many nationally known architects, engineers and general contractors depend on "Industrial" to handle their roofing sub contracts.

In case after case, on many well known construction jobs, "Industrial's" ENgenuity was the deciding factor in keeping roof application costs to a minimum.

Perhaps "Industrial" can help keep roof costs in line on your jobs. Have us quote.



4815 LEXINGTON AVE., CLEVELAND, OHIO

BUILDING REPORTER



an extendable dining table, flexible storage units, etc., will be added soon. All woods are finished naturally in clear lacquer and hot wax, table tops and case work with bar-top lacquer. Colored lacquers are available at slightly extra cost. Chairs are upholstered in hard twist cotton cord in various colors, lounging chairs in cotton webbing. List prices of desk, dining table and chairs illustrated are \$96, \$89, and \$19.50 respectively, f.o.b. factory. (Desk with colored lacquered drawer front is \$105.60.)

Manufacturer: Claywood Design Products, 1515 Mill St., Springfield, Ore.

CABINET for convenient filing of blueprints and drawings is attractive, functional piece of furniture.

This non-tippable Draw-In-Dex Cabinet has been specially designed and engineered to solve an important problem for

Here's why LUMITE screening

is going into more homes—new and old—every day—everywhere!



CAN'T RUST OR CORRODE

Laboratory tests—and actual use under every kind of climatic condition—prove that LUMITE screening can never rust, rot or corrode. It is unaffected by salt air, smoke, acid or chemicals.

STAINPROOF

LUMITE screening can not absorb moisture or stains of any kind . . . will not support growth of mildew or fungi. It can never stain window sills or walls. The whisk of a damp cloth cleans LUMITE to factory newness.



Sold through hardware, lumber and



NEVER NEEDS PAINTING

LUMITE screening never needs painting or any protective coating. It's easier to handle . . . cuts time and labor in installation. It can be cut to fit with ordinary scissors—and it can't scratch or snag fingers.

LASTS A LIFETIME

LUMITE'S woven saran filaments are amazingly tough ... abrasion resistant. LUMITE has high dimensional stability —great resiliency—stays taut and firm. Under normal conditions it will outlast the house!

LUMITE actually costs less than any other quality screening material. Get the facts from SWEET'S FILE or write for samples to Dept. H-6, LUMITE DIVISION, Chicopee Manufacturing Corp., 47 Worth Street, New York 13, N. Y.



architects, namely, the safe, convenient and orderly filing of blueprints and drawings. In the cabinet, large sheets hang smoothly from suspenion rods, occupy a minimum of space, are properly indexed and immediately accessible. Any of the 1,000 drawings which the cabinet will accommodate can be quickly removed and replaced without dis-



turbing the others. Draw-In-Dex Cabinet measures only 4 ft. high, 2 ft. 6 in. wide and 20 in. deep. The specially designed suspension rods and hinges which support the drawingoperate in such a manner that when the cabinet's front panel is opened any drawing may be immediately filed or removed Draw-In-Dex Cabinet is ruggedly constructed of the finest woods, is available in any finish, and is equipped with highest quality hardware. Selling price is \$195 f.o.b. New York.

Distributor: Tate-Munz Inc., 52 Broadway, New York 4, N. Y

SMALL COMBINATION DRAFTING INSTRUMENT permits accurate on the job drawing.

Circ-L-Scale is a small plastic precision drafting instrument which functions as a compass, protractor, ruler and T-Square. One end of the tool incorporates a Lucite free-moving pivot button. One edge is equipped with pencil point holes for making circles from 5% in. to 6 in. in diameter. In use as a compass the bullseye pivot button is held on the desired center. pencil is inserted into the hole corresponding to desired radius and swung in a circular motion. Additional guide holes provide for making circles of from 1% to 1/2 in. in diameter. Circ-L-Scale measures 4 in. long, has 1/16 in. calibrations along ruler edge, also acts as T-Square and protractor. Retail price is 50 cents.

Manufacturer: Danat Co., 315 W. Van Buren St., Chicago, Ill.

ARTICULATED FLEXIBLE STEEL FORMS simplify forming battered curb face.

Blaw-Knox articulated steel face forms for combined curb and gutter construction provide the contractor with a complete steel form set-up for radius curb and gutter work where the

face of the curb is battered. The new forms consist of identical, straight, rigid sections 1 ft. long. A 10 ft. length is made up of ten such sections and a 5 ft. length of five units. Sections are assembled with a steel



cable which passes through eyelets welded at each end of each section and is fastened at opposite ends of the forms with an I-bolt and cable clamp. For the back of the curb and the face of the gutter, standard flexible steel forms are used and set in the usual manner. Each section of articulated flexible face form is keyed to a dividing plate and the cable is tightened. As the form sections are straight and rigid, it is necessary to eliminate the chord marks and finish the curb face to a true arc. With this additional work, however, the manufacturer claims that the system is simpler and less expensive than forming the curb face by alternate methods. Extra lengths of cable are available so additional sections can be added if necessary. When a short length of radius work is encountered sections can be subtracted.

Manufacturer: Blaw-Knox Co., 301 Fifth Ave., Pittsburgh, Pa. (Technical Literature, page 164)



Presenting THE SHOW ROOM HOMES of the Nation

THE HALLE HOME is one of many "show-room" homes TIMEreading families are building or planning to build in better residential communities from coast to coast...

> ... homes whose construction, materials, and equipment will be admired, noted, talked about-and bought by millions of other U. S. families.

Of course, not every one of TIME's 1,500,000 families has a home like this, in actuality or in the blueprint stage. But, as a group, they own almost 1,300,000 all-year homes and nearly 100,000 seasonal



TIME subscription #30-55119-08-04 went right along when Mr. and Mrs. David H. Halle moved into this new home in Pikesville, Maryland, recently.

TIME

homes—and 409,500 TIME-readers tell us they are interested in buying or building new homes.

With double the average U. S. family income, TIME families can afford to have homes that their neighbors admire. And so when you sell your new building products to the forward-looking, looked-up-to TIME market, you're well on the way to selling the rest of the country too.

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TECHNICAL LITERATURE

HERE THE PARTY AND IN THE	Part In
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PREFABRICATED HOUSES. Manual on Wood Construction for Prefabricated Houses. Superintendent of Documents, Government Printing Office, Washington 25, D. C. 330 pp. 7 13/16 \times 10!/4 in. Price \$1.50.

This manual has been prepared to assist prefabricators in the more efficient utilization of lumber, plywood and related materials so that production may be stimulated, technical problems overcome and better and more economical houses produced. Published by the Housing & Home Finance Agency and the Office of the Housing Expediter, it embodies the results of more than 12 years of research in prefabricated house design and construction by the U. S. Forest Products Laboratory and provides a basic source of scientific and engineering information about wood and wood-base materials used in housing. In addition to detailed discussions of methods, designs, production processes, equipment, inspection



The new 1948 O'Brien COLOR MANUAL and COLOR-SCHEME GUIDE is one of the most practical and convenient color tools ever prepared for architects' use!

Full page color swatches permit accurate visualization of more than 100 up-to-the-minute colors developed by O'Brien Color Stylists to harmonize with latest fabrics, draperies, floor coverings. Handy pocket size $-7" \ge 3\cdot3/8"$. Every color indexed by name and number! COLOR-SCHEME GUIDE includes suggestions for every type room in homes, buildings, institutions. Easy, *exact* paint mixing formulae. Eliminate guesswork, experimenting, confusion — *save valuable time*! Your O'Brien dealer has a copy for you, or send the coupon today!

*Investigate O'Brien's PEN-CHROME new "Blonde" Wood Finishes in ten useful, modern tints!



and other factory techniques, the manual includes chapters on modern glues and gluing methods; paints and painting methods for factory use and preservative treatments against decay, insect attack, fire and other hazards. It also discusses seasoning and handling of wood, plywood and other materials and the use of insulation. The strength of various materials, joints and fastenings and of complete panels of houses is analyzed in detail. More than 200 photographs and detail drawings, illustrating processes, designs and techniques employed by leading prefabricators are included.

PREFABRICATED HOMES. Commercial Standard CS 125-47. (Second Edition) Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 22 pp. 5 13/16 x 91/8 in. Price 10 cents.

Revised since the original 1945 issue to conform with current recommendations for new dwelling building code requirements, this standard is designed to establish a measure of quality for prefabricated homes. It provides minimum requirements for 1, $1\frac{1}{2}$ and 2-story prefabricated homes, covers such subjects as light and ventilation, space, access and privacy, structural strength of the various component parts, thermal insulation and condensation control, heating, plumbing and electrical wiring. It also includes general requirements for materials and workmanship, site erection and assembly of prefabricated units and protection during transportation and erection.

PILING. Foster's Light-weight Interlocking Steel-Sheet Piling. L. B. Foster Co., P. O. Box 1647, Pittsburgh 30, Pa. 4 pp. 81/2 x 11 in.

L. B. Foster's new light-weight interlocking steel-sheet piling is described in this folder. The advantages, physical characteristics and suggested applications of the high strength, box type corrugated piling are briefly reviewed.

STEEL FLOORING. Fenestra Building Panels for Up-To-Date-Houses. Detroit Steel Products Co., 2250 E. Grand Blvd., Detroit 11, Mich. 4 pp. $8l_2' \times 11$ in.

Information on Fenestra Steel Floor panels which combine joists, bridging and sub-flooring is provided in this folder. Subjects discussed include: advantages, sizes, safe loads, installation and finishes. Use of the panels in connection with radiant heating is also featured.

WALL COVERING. Marlite Plastic-Finished Wall and Ceiling Panels. Marsh Wall Products, Inc., Dover, Ohio. 8 pp. $8\frac{3}{8}$ x 11 in.

Marsh Wall Products' 1948 general catalog contains information on Marlite plastic-finished wall and ceiling panels. Marsh moldings, bathroom accessories, adhesives, calking and polish. The data on Marlite includes facts about use, installation, colors, patterns and finishes as well as specifications. The section devoted to Marsh moldings illustrates the various designs and patterns and gives complete information and specifications on the aluminum alloy, Presdwood and plastic types. The bathroom accessory line is also illustrated.

HEATING. Capture the Sun With Hydro-Flo Heating. Bell & Gossett Co., Morton Grove, III. 18 pp. $8 I_{2}' \times 11$ in.

Capture the Sun describes in simple language the application of forced hot water to all forms of panel and convector heating. It discusses the equipment (Continued on page 164)

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TECHNICAL LITERATURE



required for Hydro-Flo Heating and covers the application of this equipment to radiator, convector, baseboard and radiant panel systems. Other sections review the advantages of a B. & G. Hydro-Flo System, explain its efficiency in supplying hot water and tell how it can be used for zoning the home or apartment. Fully illustrated, the booklet also points out how Hydro-Flo can be applied to existing hot water systems.

PLUMBING FIXTURES. Prestige Feather Touch Fixtures and Faucets. H. B. Salter Mfg. Co., Marysville, Ohio. 8 pp. 81/2 x 11 in.

This booklet describes the recently introduced line of Feather Touch faucets which feature a new valve design to achieve finger-tip operation and drip-proof service. The opening section discusses and illustrates with cut-away diagrams the con-

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KITCHENS. It's the Ultra-Modern, Adaptable Parsons Pureaire Kitchen. The Parsons Co. 15000 Oakland Ave., Detroit 3, Mich. 4 pp. $8\frac{1}{2} \times 11$ in.

Parsons' packaged Pureaire kitchens, complete units that occupy less than 8 sq. ft. of floor space and include the range (either gas or electric), sink, oven, refrigerator and storage space, are featured in this brief but enlightening pamphlet. The four available models are illustrated and their specifications given. A brief list of the unit's advantages, a plumbing diagram and photographic examples of how the Pureaire fits in new or remodeled apartments, cottages, motels and small homes are also included.

MAINTENANCE. Copper, Brass, Bronze. Copper & Brass Research Association, 420 Lexington Ave., New York, N. Y. 28 pp. 8 9/16 x 11 in.

Probably the most complete work on this subject ever compiled, this handbook answers many questions on the maintenance, cleaning, restoration, finishing and coloring of copper, brass and bronze. The booklet discusses these problems objectively. It includes reliable formulas and directions and offers the best available advice on the maintenance of copper and copper-base alloys which are so widely used for architectural ornamentation, and utilitarian purposes.

REQUESTS FOR INFORMATION

DESIGNED FURNITURE MANUFACTURERS, 23 Pedersen St., Cape Town, South Africa, requests literature on the design and construction of restaurants, also on store fittings and modern furniture.

JOSEPH FRIEDMAN, housing manager, New York Housing Authority, Rego Park Houses, 60-14 97th St., Corona, N. Y. desires information on repairs, maintenance and replacement of items used in large public housing developments with special emphasis on electrical, plumbing and carpentry work.

KEITH HINCHCLIFF, Assistant Professor, University of Illinois College of Agriculture, Agricultural Experiment Station, Urbana, Ill. requests manufacturers' literature pertaining to small house construction.

KENNETH I. JOSEPH, Redbourne, Highlands Ave., Brentwood, Essex, England, requests information on the development of residential subdivisions, including planning, construction methods and materials.

JULES VOSCH, stained glass manufacturer, 215 Rue de l'Ete, Ixelles, Belgium, would like to contact U. S. firms that might be interested in handling their products in the U. S.

A. ARTHUR PASCUZZI, instructor, Essex County Adult Technical School, 222 Morris Ave., Newark, N. J. desires literature and samples of building materials for classroom use and discussion.

REQUESTS FOR LITERATURE

WILLIAM G. CHALMERS, designer, 149 St. Johns Rd., Toronto No. 9, Ont.

RALPH E. DALE, architect and builder, 1207 Trenton St., Seattle 8, Wash.

F. WALLACE DIXON, architect, 1200 18th St., N.W., Washington, D. C.

H. L. EISERLOH, architectural student, 2802 Rio Grande, Austin, Tex.

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P. Flexoid Laboratories, 19385 Mt. Elliott Ave., Detroit 12, Mich.

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P. Sama Paint & Lacquer Co., 1943 Webster Ave., Bronx, N.Y.

P. Sapolin Paints, Inc., 229 East 42nd St., New York 17, N.Y.

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F. BL. Stroblite Co., 35 W. 52nd St., New York 19, N. Y.

B. Vogel Luminescence Corp., 260 Napoleon St., San Francisco 24, Calif.

P. Worth Lacquer & Chemical Co., Inc., 540 Broadway, Brooklyn 6, N. Y.

The following manufacturers sell luminescent paints only in larger size packages or bulk quantities:

B. Burgess Fobes Co., 108 Commercial St., Portland 6, Me.

B. The Debevoise Co., 968 Grand St., Brooklyn 6, N. Y.

B. The Egyptian Lacquer Mfg. Co., Jacobus Ave., South Kearney, N. J.

B. Midcontinent Paint & Lacquer Co., 1921 Central Ave., Kansas City, Mo.

B. Phelan-Faust Paint Mfg. Co., 932 Loughborough Ave., St. Louis, Mo.

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REVIEWS



New World of Space. By Le Corbusier. Reynal & Hitchcock, New York. 128 pp. Illustrated 11 x 81/2. \$6.

Le Corbusier, architect, painter, writer. By Stamo Papadaki. The Macmillan Co., New York. 152 pp. Illustrated. 111/4 x 81/2. \$7.50.

Considering the frightening frequency with which books by Le Corbusier have been appearing (FORUM, Apr., Aug. '47) it is not exactly surprising to find the production schedule tripping itself, us, and two appearing at once in the U. S. Despite the fact that one is by him and the other about him and that they are published by competing firms, both are destined for the vast compost heap of recent literature concerning "Corbu." If things go on this way much longer, Kilroy will find himself elbowed out.

F. S. Wright, of the Institute of Contemporary Art in Boston, who wrote the foreword to New World of Space, claims that it provides a "visible summation" of Le Corbusier's work in painting and architecture, presented in chronological order. It's just as well that he used the term "visible" since "summation" can be applied only to the illustrative material which, happily, far exceeds the text. Actually, the book's greatest value is probably its chronology of mixed painting and architecture which at least permits the reader of average I.Q. to make some sort of an intelligent study and to draw his own conclusions. It is also convenient to find within a single binding all the masterpieces which have been kicking around individually, in duplicate and in triplicate for years. The text is as outrageous as ever with all the familiar Corbu understatement and incoherence that merely implies an egotism of fantastic proportions. In view of the fact that the Macmillan book contains a chapter on Le Corbusier, Writer, this criticism may be a trump on the partner's ace. Therefore, let us hasten to add that writer Papadaki has included only four carefully selected specimens of prose all of which are polished-and make sense.

In New World of Space Le Corbusier teases around with the war years, a period during which his activities and attitude were subjects of intense interest and speculation. Naturally, it would be too much to hope for a statement of faith. There isn't any. In fact, the chapter entitled "Guerre!" devotes ten lines to the plight of humanity, the rest to the usual abstract cerebrations. Its final sentence holds the key: "The *initiated* is the stronger man who will one day explain." (Italics mine)

By comparison, Mr. Papadaki's book may seem unlyrical but it is an extremely sane and authoritative volume. Rather than trying to correlate Le Corbusier's work, it divides it into four phases, architecture, town planning, painting and writing. These sections are accompanied by some good introductory words by Joseph Hudnut, Dr. S. Giedeon, J. L. Sert and James Thrall Soby. It is the better designed, better produced and less partisan of the two—with or without the magic touch of the master. Neither, for a wonder, include any of the shaky line sketches that usually go along with an *opus Corbu*, to the reader's continuing distraction.

Well, these are two more books to add to your collection. They are, broadly speaking, above par and probably should be acquired to complete the picture if nothing else. Both have, added as a sort of consolation prize, Corbu's "Modulor," or scale of measurement based on human proportions. It may revolutionize the metric and all other systems but if it gives the reader that I've-been-here-before feeling, look to antiquity.

Somehow this splurge of organization, summation and correlation has about it a note of finality. This though, reason tells us, is not probable.

There's just one thing left that bothers this reviewer: Could Macmillan's left hand have known what Hitchcock's right was doing?—M.S.

Concerning Town Planning. By Le Corbusier. The Architectural Press, London, England. 127 pp. Illustrated. $8\frac{3}{4} \times 5\frac{1}{4}$. 10/6.

Nor are the English exempt from the onslaught of Le Corbusier in prose. First editions, second editions translations and reprints continue to pour into the reviewer's office at short intervals. This last, originally published in Paris in 1946 under the title Propos d'Urbanisme, is heralded by the English publisher as the Master's most important postwar book. Individual problems excepted, it is difficult to find anything in the text that does not appear in every other Corbu manuscript. As usual we begin and end with the solar day, the "metronome of human activities." As usual there are the indefinite laws of "sun, space, verdure" labeled 1, 2, 3. As usual Le Corbusier is enraged over human conduct: "Men are fools (the dictionary says: autonomous, wise, reflective, reasoning feeling); but men are not wise, reflective or feeling, for they remember nothing, feel nothing, see nothing. . . ." As usual he waxes eloquent, confident and condescending over the physical aspects of city planning, tosses aside the only question on ways and means with an ambiguous: "FINANCE? To see that the house is without walls and without a roof, its foundation shattered. To take off one's jacket, roll up one's sleeve and get started. 'Let the farmer farm, the bricklayer lay bricks, and the manufacturer manufacture.' One eats to live; one does not live to eat. Translate into the language of finance. . . ."

Clive Entwhistle, the author's translator for this particular bit of invective, claims that Le Corbusier is not a man but an ideal. Architecturally speaking, this is most certainly so but in his writing the incessant repetition of such glorious simplifications is as useless as it is monotonous and, except for first rung disciples, pretty unconvincing. Le Corbusier, however, is but one of several superior minds of our day who can never (Continued on page 172)

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seem to breach the gap between reality and Utopia to the satisfaction of the everyday man on whom they must depend for the dirty work. *Concerning Town Planning* deals as specifically as can be expected with the problems of European reconstruction. It is, of course, nothing but *La Ville Radieuse* turning up with its hair dyed. Scarcely anyone would have expected anything else, so why go on about it? The sketches are equally indistinguishable and cannot help but recall the remark of one critic; that they are nothing short of "insulting." May we suggest a few pointers by Ivy Lee.—M.S.

How to Draw Churches and Cathedrais. J. Frederick Adams. The Studio Publications, London and New York. 63 pp. $5\frac{1}{4} \times 6\frac{3}{4}$. Illustrated. \$1.00.

The author of this interesting small book presents his information informally as a conversation with the reader. There are short discussions of drawing materials—the kinds of pencils and paper to use, and the methods of using them to achieve best results. Concise but clear instructions are given in the handling of perspective, and light and shade. Reproductions of many excellent drawings by the author portray cathedrals, country churches, and enlargements of details, all of which serve not only as illustrations, but as useful guides for the drawing student. The work will be valuable to beginners in art and architecture, and perhaps to vacationists. The churches described are all in England.—M.T.

Introduction to Cartooning. By Richard Taylor. Watson-Guptill Publications, Inc., 345 Hudson Street, New York, N. Y. 159 pp. Illustrated. $10\frac{1}{4} \times 7\frac{1}{2}$. \$5.

Best known for his sophisticated cartoons which appear regularly in The New Yorker, Mr. Taylor is also a painter of some repute and is represented in New York's Museum of Modern Art, the Boston Museum of Fine Art, the Albright Gallery in Buffalo, Kansas' Wichita Museum, and many private collections. This more sober side of his art implies that the author's technique goes a little deeper than the vocabulary of the two dimensional comic strip. And so it does. This book offers a sound and informative basis for life drawing as well as for humorous illustration. It does not purport to be a "course in cartooning," contains no series of lessons or prescribed exercises, but rather assumes the function of general guide and presupposes that the reader who attempts to follow through is equipped with average intelligence, considerable talent, an insatiable love for drawing itself and the great imponderable, humor.

In Mr. Taylor's eyes the qualifications for a first class cartoonist are pretty stringent and he does his best to discourage all but the most promising. He does not believe that anyone can be successful by taking a course in cartooning anymore than he can emerge a second da Vinci merely by attending art school. Most significant in the selection of promising student material is the presence or absence of humor—something one simply has or has not. Unfortunately, nearly everyone fancies himself a wit, an assumption that is apparently derived from the fact that once in a while all human beings laugh. Cartooning, like the stage, wisely if cruelly shows up the quality and refinement of humor long before the technique of the calling is perfected. Nevertheless, even an embryonic sense of humor can be groomed and whetted by cultivation.

The author makes a few simple but highly pertinent points about cartooning, hinging a chapter on each. First is the (Continued on page 174)

plant an idea in the *right* mind... and you influence many minds



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assumption that the basis of humorous art—or drawing of any sort, for that matter—is construction. To this, Mr. Taylor devotes the larger part of his book, concentrating on human form which is more important to the cartoonist than to any other artist. He finds that the simplest method for learning to draw Man, (and one he acknowledges to be very ancient), is the old art school system of classical proportions; first conceiving the figure as a sort of wooden doll minus all features, muscles and other details. Following, are chapters which deal with various aspects of detail—action and expression, composition, humor, technique, and perspective, the last of which is dealt with very competently if briefly and unpretentiously. Included in Mr. Taylor's compact treatise are short chapters on marketing and equipment, some invaluable miscellaneous "tips" and a list of suggested reading.

Some FORUM readers may wonder why so much attention has been given to a book on cartooning in a magazine of building. The answer: competent and successful architects all over the world are constantly worrying and fretting about the importance of presentation. Many are bitter about the appeal of a slick, attractive sketch or perspective. Mr. Taylor's advice on style and technique could do a lot toward enlivening architectural presentation in general. His figures, stripped of the Taylor hallmark, would be a vast improvement over the little lumps of supposed humanity that adorn so many renderings. Furthermore, the importance of lively illustration grows steadily more obvious in magazines and house books. This is probably best exemplified in Elizabeth Mock's, So You Want to Build a House which employs the talent of the incomparable Robert Osborn. Through cartooning, charts also take a new lease on the reader's interest. These are fields directly connected with the practice of architecture and it is safe to assume that Richard Taylor's book will prove valuable to a number of the profession .- M.S.

CORNWALL. By Peggy Pollard. Paul Elek Publishers. 47 pp. Illustrated. 91/4 x 71/4. 9/6 net.

Miss Pollard's book on Cornwall is one of a series being produced by a group of distinguished writers and illustrators under the group title *Vision of England*.

Cornwall is by no means a guide-book nor is it an architectural study. Although the author deals largely with Cornish history, its old wives' tales, its harbors and chapels, it would be wrong to suggest that she dotes on a lifeless past or that she would like to embalm its traditions for the tourists. She would not. Her interest in Cornwall is alive and looks to the future. The old industries of copper and tin mining and fishing are, unfortunately, almost extinct and to her anxiety, Cornwall depends for its wealth on the tourist traffic. Why shouldn't Cornwall have a cultural future? Why can't there be a plan to promote the mines and the pilchard fisheries? Why can't there be water and electricity for the farms and a good water supply for all Cornwall? Coastal scenery should be preserved by the formation of national parks and in this connection the author relates vividly the pre-war struggles of the Council for the Preservation of Rural England with the jerry-built villa and its post-war struggles with Governmentinstalled aerodromes. She praises Lord Clifden for the part he has played in reforesting large areas of devastated woodland. She wishes that new building in Cornwall should harmonize with its surroundings: "the gray and white, the simple shapes . . . without imitation half-timber work, stained glass, curly red finials and rusticated concrete blocks."

Although Miss Pollard is a lover of old stories she gives (Continued on page 178)
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REVIEWS

only a sidelong glance to the Arthurian legends because all these aspects of Cornwall have been discussed before: she assumes in her opening sentence, "Everybody knows everything about Cornwall already." Therefore we are given amusing tales about St. Endelienta and St. Menefreda—with the author's comment, "I do not see why we cannot have funny saints: laughter . . . is the frequent complement of love;" recipes for scald cream and elderflower champagne; a great deal of useful information on the powers of black witchcraft versus white; on the Small People who have lived in Cornwall for thousands of years, and on goats.

We are told that the series is to be intimate and discursive in style rather than formally descriptive and Miss Pollard's contribution has most successfully fallen in with the plan. Her style is relaxed and conversational, her paragraphs short and, under no compulsion to be logical, she constantly introduces amusing anecdotes and local legends with a happygo-lucky disregard for their immediate relevance.

Accompanying Miss Pollard's chapters are 15 pages of charming photographs, several sketches and watercolors by Sven Berlin and two maps, one dated 1642, the other, contemporary. M.S.

SCHWEIZER HOLZHÄUSER AUS DEN JAHREN 1920-1940. By Paul Artaria. Wepf & Co., Verlag Basel, Switzerland. 121 pp. Illustrated. 63/4 x 91/4. Sw. Fr. 10.

This is an exceptionally good pictorial presentation of Swiss residential building-single family dwellings-over a period of 20 years. Aside from a short introduction in German showing the regional architectural antecedents of the country no text is included, so it is not necessary to be a linguist in order to appreciate the book. All photographs are accompanied by cross-sections and plans which, of course, have German legends but are easily figured out. The overall architectural standard is high and quickly dispels the impression of austerity that many people connect with Swiss houses. As might be expected, a national dearth of sanitary facilities is revealed and what few fixtures there are seem quaintly arranged according to American standards. This, however, scarcely requires comment since most people realize that Europeans are not ready to buy the glory and supremacy of the American bathroom. No city houses are included but the majority of examples shown seem to be planned for yearround living. M.S.

CONTEMPORARY ARCHITECTURE IN BRASIL. Published by Organizado Pela Revista Ante-Projeto, Rio de Janeiro, Brazil, 143 pp. Illustrated. 13 x 91/2. Cr \$200.

Even though, architecturally speaking, Brazil is one of the world's most alive and progressive countries, until 1945 no professional magazines were published there. Native architects were forced to rely solely on foreign books and periodicals for news of work in their own country. Three years ago Ante-Projeto, a magazine still unfamiliar in the U. S., opened its offices in Rio de Janeiro. Contemporary Architecture in Brazil is a survey in book form of the native architectural seene since 1940, put out by the same organization. It covers residential, commercial, industrial and institutional buildings. About half are represented by line drawings alone, the rest photographically illustrated. In view of recent American and European publications on the same subject it hardly seems possible that the editors can expect this book to have a wide international market. It is, nevertheless, printed in three languages. Reproductions are definitely on the poor side with (Continued on page 182)

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extremely fuzzy halftones. The text is brief and, in the majority of instances, inadequate, since the book is not exclusively a picture story. Most of the important work has been seen elsewhere, recently in FORUM'S Brazilian issue (Nov., 1941). An amusing sidelight is the fact that the translator of the English section was apparently left entirely to his own devices with only the sketchiest knowledge of English. An example: "The center, destined to small salaries earning people, is situated within the forest, but only a few minutes distant of the town.

"Rooms and restaurant are big enough for sheltering the Sunday visitors . . . stones and wood of the local ground have been profited. The three planes, each one meeting the garden at a different elevation, incorporate the building to the uneven ground . . . The construction was attended by the Engineering Division of the Reassurances Institute of Brazil."



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EXHIBITS



Eero Saarinen chair, Florence Knoll stool

KNOLL FURNITURE

"Summertime, when the living is easy" might be the theme inspiring the newly redecorated showrooms of Knoll Associates, Inc. at 601 Madison Avenue. Not that the furniture shown there is outdoor summer furniture—none of it is. But one's impression of the display room, with its light, airy, gay colors and fabrics and furniture, is one of summer skies and floating clouds, and open woods and fields. In this atmosphere one can relax; and in this furniture one can relax, body as well as soul.

Easy relaxation was the idea Architect Eero Saarinen had in mind when he designed the *pièce de resistance* of the new Knoll furniture group. It is a chair of molded plastic, padded with foam rubber upholstered in cotton, and retailing at about \$193.50 in muslin (see cut above). "People sit differently today than in the Victorian era," says Saarinen. "They want to sit much lower, relax their bodies more, and rest their heads." Whether or not the stresses and strains of Twentieth Century living have driven us to a more uterine position when we sit, the chair *is* comfortable. And, off the record, it has been dubbed "The Womb."

Another architect-designed piece is the daybed by Richard Stein of Architects Associated. This is adjustable for two uses: for night, when the mattress unit can be shifted from a slightly tilted position to a flat one, and the banquette back dropped down; and day, when pressure on a foot pedal below moves the bed again to the slightly slanted, up-back, livingroom position. A plywood base has hardwood stretchers and mattress frame, and the mattress snaps in and out of the frame for bedding removal. Price of this piece in muslin is \$202.50 (see cut page 186). (Continued on page 186)



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Ferrari Hardoy chair

CONTRACT BO

<text>

Richard Stein daybed

DS

Ferrari Hardoy's hammocklike chair (see cut), which appeared in a Museum of Modern Art show a few years back, reappears, for the first time in U. S. production. The canvas sling-back comes in a variety of colors, and is hung on a plain white or black metal frame.

Florence Knoll's newest piece is a more conventional sofa, with movable seat and back cushions, of quite simple design



Florence Knoll sofa, Saarinen chair

(see cut above). It is 7 ft. 6 in., costs \$348 in muslin, but may be produced later in somewhat smaller size and simpler materials for sale to stores. George Nakashima's extension table with adjustable legs as well as top (see cut below) and his modern variation of the Windsor chair may also go into later less expensive production.

In addition to the new furniture, there is now a display of Knoll's line of textiles. Among the prints is a design by famous Swedish architect Sven Markelius.—E.B.

George Nakashima table, André Dupres chairs



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Tombstones

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Q-Floors offer the architect a means of meeting increased, and still increasing, mechanical demands within a building.

A facade can be soon outmoded. But if every electrical demand can be satisfied promptly, the years can not obsolete the building as a working mechanism. Q-Floors are steel. The cells are crossed over with headers which carry the wires of every kind of electrical service.

An electrical outlet can be established on any six-inch area of Q-Floor. No need to locate outlets, or even partitions, until tenants are in. For an outlet, an electrician drills a small hole, pulls the wires and installs the fitting ... all done in a matter of minutes without fuss, muss, or trenches.

Note the composite drawing. Steel Q-Floor is shown with suspended ceiling and a condensed visualization of mechanical equipment (no preset inserts) needed in a modern building. For such a job, a solid, monolithic floor is as active as a tombstone.

Aside from the electrical availability, Q-Floor has the value of reducing construction time 20 to 30%. It comes pre-cut and eliminates much of the unpredictable factors of field construction. This time-saving is money-saving for your client. Also, you can estimate an earlier finish datewhich is to say, an earlier revenue date for your client.

As for the delivery of steel—remember, you must allow time for demolition and excavation. By then the steel will be ready.

The price of Q-Floors is right in line—less than the carpet that covers them. Think of a floor as the source of flexibility for the whole building. It has been specified for the largest postwar buildings in this country and the British Empire, because it keeps a building modern regardless of the passing years. See Q-Floor fittings at any General Electric construction materials distributor's.

H. H. ROBERTSON COMPANY

2403 Farmers Bank Building Pittsburgh 22, Pennsylvania



Offices in 50 Principal Cities World-Wide Building Service



New building addition to Country Life Press, Garden City,

N. Y., containing 110,000 sq ft of floor space with electrical raceways always quickly and conveniently available.

FOR A LIFETIME

Q-Floor in place on first floor. Notice large number of cellseveryone available for wiring.

PLANNED

CONSTRUCTION DATA

General Contractor:.. George A. Fuller Company Consulting Engineer:Clyde R. Place Electrical Engineer: . . . Naumer Electric Company



Country Life Press, Garden City, New York, needed a wiring system that would permit fast relocation of electric equipment-a wiring system that would be readily adaptable to changes in circuits and outlets with a minimum of expense. When they planned this new 110,000 sq-ft plant addition, they could determine initially needed electrical and signal outlets. However, it was practically impossible to estimate future demands. To meet these, Country Life included Robertson Q-Floors with General Electric Q-Floor Wiring, to give them the electrical flexibility they needed.

Buildings equipped with General Electric Q-Floor Wiring enjoy a decided advantage. At any time during the life of the building, circuits can be removed or new outlets can be installed on the floor surface where they are needed, when they are needed, in a few minutes. Changes can be made easily and quickly, without digging trenches, and without interrupting occupants' activities.

By means of simple fittings, the entire Q-Floor becomes part of the electrical and signal distribution system. Since the cells are on 6-inch centers, outlets can be installed every six inches. To add a new outlet, it is necessary only to tap through the floor into the Q-Floor cell and install the floor outlet.

Want more information on General Electric Q-Floor Wiring? Write on your letterhead for a free copy of the Q-Floor Wiring Data Manual-address Section C7-64, General Electric Company, Bridgeport 2, Connecticut.

Q-Floor is manufactured only by the H. H. Robertson Company, Pittsburgh, Pa. Samples can be seen at any General Electric Construction Materials office or Robertson District Office.

