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Foreword and Dedication

Evolution of the Usonian House

Dwelling on Lakeshore Near Madison, Wisconsin

Usonian House for the North, Racine, Wisconsin

Usonian Hillside House Near Cedar Rapids, Iowa

House on Edge of Forest Near Lansing, Michigan

Solar Hemicycle in Countryside, Madison, Wisconsin

Berm-Type Hemicycle Near Akron, Ohio

Music Studio and Dwelling Near Detroit, Michigan

Usonian Dwelling at Quasqueton, Iowa

Hillside House in East St. Louis, Illinois

Seven Usonian Houses Near Lansing, Michigan

Housing Project Near Pittsfield, Massachusetts

Berm Houses for Cooperative Development, Detroit, Michigan

Two Cloverleaf Subdivisions Near Kalamazoo, Michigan

Health Resort on Mountain Desert Near Phoenix, Arizona

Plan of Architect’s Workplace in Arizona Desert

House for Northern Climate Near Chippewa Falls, Wisconsin

Dwelling on Pacific Ocean Cliff Near San Francisco

Reinforced Concrete House Near Phoenix, Arizona

House Group on High Hill Near Reading, Connecticut

Ranch Group Near Yemassee, South Carolina

Adobe Dwelling in Desert Sand, El Paso, Texas

Dwelling on Ocean Front Near Carmel, California

House in High Hills of Santa Monica, California

Sports Club on Crest of Hollywood Hills

Laundry and Cleaning Establishment, Milwaukee, Wisconsin

Reinforced Concrete Bridge Over Wisconsin River

Laboratory Tower in Cantilever Construction, Racine, Wisconsin

Mortuary on Bluff Opposite U. S. Mint, San Francisco

Unitarian Church in the Country Near Madison, Wisconsin

Department Store at Ameshabad, India

Hotel Tower, Floors Cantilevered from Central Shaft, Dallas

Campus for Florida Southern College, Lakeland, Florida

Art Museum Designed as a Continuous Ramp, New York City

Administration Building Built in 1937, Racine, Wisconsin

Prairie House on Lowlands of Desplaines River, Illinois

Five Usonian Houses Built in Middlewest and East

Brick and Plywood House at Bloomfield Hills, Michigan

“Snowflake,” a Country House Built at Plymouth, Michigan

Redwood Desert Dwelling Near Phoenix, Arizona

House Cantilevered Over Steep Bank, Hollywood, California

Selected Photographs of Architect’s Camp in Arizona Desert

In addition the following regular features are included: News, 9; Letters, 18; Forum, 54; Announcements, 56; Reviews, 160; Building Reporter, 184; Technical Literature, 208.
DISPLACED PERSONS

IN A STRANGE NEW LAND they stood—these displaced persons. Silent men with grim tasks ahead worked purposefully and with little thought of the fatigue that racked their weary bodies. They were building a new community—their community.

Women, hollow-eyed, their white drawn faces mirroring pain, went about setting their humble homes in order. On every side was hunger, privation—the plight of desperate people—"A picture of Europe, 1948?" ... you ask.

No—a picture of America, 1620.

For here, 101 displaced Pilgrims—men, women and children of the new America—freedom-loving people all, were beginning a new way of life. They were meeting critical shortages, and overcoming them—shortages of all the things that make for decent living—food, clothing, shelter ... shortages that relatively were the greatest our nation has ever known.

There was a 100% shortage of almost everything on that day, 328 years ago, when their storm-battered ship nosed into the quieter waters of rock-studded coastal bays. Yes, a shortage of everything except COURAGE—a belief in the dignity of man—a passionate desire on the part of each to live as he liked.

Perhaps it was the strong driving force of the urge to be free men that enabled them to solve the critical shortages of their day. For you see, no one could pass a law providing new homes or schools ... nor were there any homes here ready for them to occupy.

So, with bare hands and primitive tools, they individually dug from the earth and cut from the forests their own homes and schools. Ceaselessly and endlessly they worked at their simple tasks, struggling for necessities ... looking ahead, not behind ... building a heritage for millions of Americans to come.

Are we less courageous than they? Is war-scarred Europe more destitute than they were? Is there less hope in our time than theirs? Are our shortages more acute than 100%?

There is a simple answer to those questions and to the problem they pose. It is a WORD. A short word, without glamour, but a virile word of dynamic force ... a word, that in its simplicity, might be overlooked, but a word so powerful as to be virtually magic.

It isn't a new word to Ceco thinking, for in January 1947 we said this word was the key to better times—to security for all.

May we say it again?

It is W-O-R-K—a four-letter word for continuing prosperity, for preserving freedom in America and for providing hope throughout the world. As we said before, everyone must work more ... produce more—management and labor.

Suppose we look at the simple mathematics of the problem. There just aren't enough homes, schools, hospitals, roads, to satisfy the needs of all—not enough steel, automobiles, freight cars, food ... for America and the rest of the world. How can more of these scarce things be made available sooner, and at LOWER PRICES?

We, like you, have heard many so-called cure-alls. Some say too many have too much money ... they bid against each other for scarce things and thus keep prices ever moving upward, so taxes must be raised, not lowered—must be kept high to draw off excess money. Credit must be curtailed so buying will be slowed down. Or prices must be regulated and goods rationed.

Others say don't buy unless your needs are desperate, quit eating certain foods certain days, don't build now ... don't ... don't ... don't ... verboten. It all has a familiar ring somehow.

It's a creed of hopelessness—of negation.

Let's hear a new voice in America, raised high in a mighty crescendo, drowning out those voices of fear. Yes, a new voice of hope, which will say in clear unmistakable tones of triumph ... "Let's DO something ... yes, let's trade DO for DON'T."

We of Ceco believe the American way to solve the problem of shortages and high prices is one of action ... one of doing ... of making more things, not buying less of what we have, of increasing prosperity ... not dividing misery. And prosperity comes from making a lot for all ... not dividing a little with all.
Look at it this way. There are some 60,000,000 adults—men and women—employed in the nation today, making things for the more than 140,000,000 Americans and the many, many millions in all the other countries of the world. Now we can’t increase our 60,000,000 employed to any great degree very fast. They just about represent today’s manpower capacity—but, if everyone of those 60,000,000 . . . executives . . . managers . . . labor . . . white collar people, ALL of America’s working force, produced more individually, things would become more plentiful and prices would be reduced.

It’s basically that simple.

Yes . . . we 60,000,000 Americans must work more, produce more, instead of less, and that goes for EUROPE and EVERY OTHER PART of the world. Everywhere we must increase man-hour output . . . bricklayers must lay more bricks, architects create more buildings, miners dig more coal, farmers raise more produce, stenographers write more letters, managers do more managing . . . and this must go clear back through the entire economy from raw materials to manufactured products.

Then, and only then, will scarce things be plentiful . . . will money stop bidding up prices . . . will inflation be halted and a sound basis be established for the security of all, both labor and capital.

Given a freer rein this past year, the building industry made real progress in cutting down building shortages. For example, twice as many homes were completed in 1947, as compared to 1946 . . . plant expansion is getting closer to demand. Ceco salutes construction men for the job they are doing.

We like to feel that in some measure we have been helpful in this progress. Here are some of the things we have done to help the building industry in 1947.

Our production in 1947 nearly absorbed manufacturing capacity, which was doubled in 1946 • New fabricating plants were erected in Hillside, New Jersey and Houston, Texas • Personnel in plants, offices and sales force increased more than 50% • More than 100 improvements were effected in our products • More than one-third of our new products developed since the war were put in production.

But what about the future?

Today, as was true a year ago, the building industry faces an imposing demand for all types of construction. People want more homes, schools, roads, and will get them if an unhampered building industry is permitted to provide them . . . could get them at lower prices, too, if ALL would WORK to produce MORE, not less.

We of Ceco believe in America’s future, in its ability to meet the challenge of world leadership—for after all, a way of life that has given Americans more of the good things of earth than any other people anywhere doesn’t have to be proven . . . it is proven . . . it is working.

As for the building industry, Ceco has confidence we can count on our architects, engineers, contractors, builders and industry labor, to provide the structural needs of our nation. To this end the industry—America—can count on Ceco.

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"SPACE-SAVER PACKAGE"
BUILDING MONTH. Last month as a record snowfall rapidly reduced metropolitan New York to the level of a snowbound village, the already substantial saga of wayward buses, ferryboats, etc. was enlarged by a wayward railroad train. The train, which all aboard believed bound for Fort Washington, took a wrong turn and carried everybody rapidly out to Jamaica instead. As the New Year opened with both employment and the price index at a record level, the Building industry—and the nation—felt something like the passengers on the wayward railroad train: peering anxiously through the blinding snow, they continued to try, without any success, to make out familiar landmarks as they were carried inexorably and at top speed to a destination none of them had anticipated.

The question for everybody was still the same: Can we stay where we've got to so rapidly—or will we have to turn around and go down hill again? The month's most cheerful answer came from a Twentieth Century fund economist, who pleased everybody by announcing that we are all probably on the upgrade to stay. This sanguine economist, W. S. Woytinsky, thinks the postwar boom is being painlessly liquidated right now. He finds purchasing power and savings more evenly distributed than after World War I, says future production may rise beyond anything yet seen.

In Washington, it was clearer than ever that nobody wanted to be responsible for pulling the anti-inflation switch, if indeed, this switch could now be found at all. But the thickening confusion on just where—if anywhere—the strategic switch was to be found last month nearly threw housebuilding off the road entirely. With interest rates firming and mortgages once more looking for takers, Congress uneasily listened to the several authorities who urged braking FHA's Title VI mortgage insuring authority to a dead stop. Fortunately for the housebuilding business, Congress was finally persuaded that this was the wrong switch to pull. But the discussion that accompanied lifting the Title VI insurance ceiling by another $750 million showed what is likely to happen when the legislation creating this government insuring authority expires in March. Renewal of Title VI will precipitate the whole question of whether high percentage loans, made directly to builders, are pushing house prices to dangerous levels. Insiders said that Congressional leaders were last month convinced of the merit of the direct-to-builder feature of Title VI loans (see below) and will extend this legislation next spring but reduce maximum loan percentage (now 90 per cent on a $9,000 house) as an attempt to curb prices.

Elsewhere in Congress, the Joint Housing Committee was winding up its investigation of what else might be done to pull house prices down—and to get more houses started. Representative Ralph Gamble, in a progress report last month, expressed confidence that supply of soil pipe, nails, gypsum products would be adequate for increased housebuilding over the next year. Price and supply outlook for heating, and plumbing supplies and for lumber is, however, less reassuring. Inquired Representative Gamble: "Why has the wholesale price index of lumber risen to 285.7 since 1939 (1939-93.2), whereas the price index of all building materials has risen to only 183.3 (1939-90.5)? It may be necessary to examine our entire lumber export checking machinery. It may be desirable to look further into the profits of lumber manufacturers and also to establish to the Committee's satisfaction that a retailer's service is necessary to mass construction of housing, particularly where some manufacturers own or control their retail outlets."

Although housebuilders themselves would welcome this and any other devices to reduce—or at least to stabilize—the price of their product, they could not help but feel the comfortable glow of accomplishment—and of even greater expectations—as they looked back on the busiest fall building season on record. The seasonal fall-off had not hit until November, and the November tally of 82,000 new starts and 86,000 finished houses had not even remotely been approached in any other fall month since building activities were chronicled. Another favorable sign: rental housebuilding (although some big investors seemed to be stumbling, see page 14) was increasing, accounting for 15 per cent of all nonfarm housing started in October as compared with 11 per cent last January.

Government experts forecast a 30 per cent increase in public works this year. Most communities had waited as long as they could for needed schools and hospitals. And 1948 would be only the beginning of a building job that will last for many years to come. Sample: a federal tally of the war baby boom discovered that there will be three times as many children in primary school by 1955 as there were in the 1920's. Thoughtful educators believe this will mean, not only a lot of school building, but a new design approach: more flexible buildings, adaptable to various uses and ages. All in all, the way ahead for Building looked clearer than it had for many a year. In spite of many uncertainties and some undoubtedly dangerous curves ahead—no body thought we would have to dump down hill again.

WASHINGTON

PROBLEM IN INFLATION

Congress decides not to throttle financing of big housebuilding.

FHA's Title VI, the instrument by means of which more than one-third of all current housebuilding is financed, was very nearly caught in the anti-inflation drive of the special Congressional session. But, with some timely prompting from the American
Title VI was more inflationary than were masters of the intricate machinery of inflationary, after all.

They had heard such authorities as Federal Reserve Board's Marriner Eccles and Edward F. Brown, board chairman of Chicago's First National Bank, decry government-backed mortgage loans. Said Brown: "They are in excess of the cost of the property mortgaged, and can only result in loss to the buyer and to the government."

Title VI critics had one legitimate gripe. As every housebuilder knows, Title VI differs from regular Title II mortgage financing in its recognition of "reasonable current costs"—considerably higher than the "long-term stabilized values" that are the basis of Title II mortgage appraisals.

But it also differs in a far more important respect. Title VI is the first step toward consumer financing. Under Title VI, the housebuilder becomes the mortgagee. He can take out the papers for a hundred mortgages at a time—which means that he can start 100 houses at a time. Under the old Title II plan, the housebuilder must sign up a customer for each house before he can get the financing to start building. To throw out Title VI would mean throwing out one of the few steps toward large-scale production yet taken by the laggard housebuilding industry.

Once this had been explained by housing bosses Foley and Richards (see below), Congress quickly agreed to lift the Title VI insurance authorization by another $750 million. But only $250 million will be immediately available. The President will have to say when it is time to dip into the remaining authorization of $500 million. FHA officials say there is not much doubt that this will be very soon.

FOLEY

Foley team lines up in Washington housing jobs, with only one vacant.

In its busy special session, Congress found time to approve the President's choice of the two chief housing bosses. Confirmed were Raymond M. Foley as Administrator of the over-all Housing and Home Finance Agency, and Franklin D. Richards as Commissioner of the Federal Housing Administration.

Appointed by the President (but not yet confirmed by the Senate) was William K. Divers, to replace veteran John H. Fahey as chairman of the Home Loan Bank Board. Divers had been Foley's chief assistant in the Housing and Home Finance Agency. His appointment means that housing boss Foley will have the lieutenants of his choice in both key agencies (Richards was Foley's right-hand man when the housing boss was FHA Commissioner) and that the housing agencies will be "coordinated" in fact as well as on paper.

The President also reappointed John Alton Adams to the three-man Home Loan Bank Board. Conspicuously not reappointed was Nathaniel Dyke, Jr.—Fahey's heir apparent. Insiders said that Dyke was a side-line victim of the attack savings and loan associations had made on Fahey's policies; Fahey had presented Dyke's attempts at appeasement.

Tighe E. Woods was re-appointed as Housing Expediter, but there was not much left of his job. In the New Year, the remaining government building restriction on amusement and recreation structures will be dropped, the guaranteed market and premium payment programs will be abandoned—only the veterans' preference requirement on new housebuilding will stick.

Housing job not yet filled: Commissioner of the Public Housing Administration. Everybody in Washington expected this to go to John Dobbs, head of the Housing and Home Finance Agency's New England office. Meanwhile, Assistant Commissioner John Egan was named Acting Commissioner.

RICHARDS

MARKET

COST-OF-LIVING

It varies among the cities mostly because of housing, BLS says.

Housing, as the National Association of Manufacturers found out last month (see page 11), is one commodity that an age of mass production has conspicuously failed to produce on a standardized and nationwide basis. The extent to which housing is a uniquely local product was illustrated in the City Worker's Family Budget, released by the Bureau of Labor Statistics.

The Bureau figured out how much money a family of four must spend in 34 cities to buy needed goods and services. The purpose of the study: to see how price rises had affected the family budget in the period between March 1946 and June 1947.

In the course of its research, the Bureau was surprised to discover how widely family expenditure for housing varied from city to city. (Since the Bureau lacked enough information about the monthly cost of home ownership, it figured what the worker's family would have to pay to rent an adequate dwelling in the various cities.) Housing expenditure, in fact, seems to be the main reason why the cost-of-living varies from city to city.

Adequate food for a family of four costs almost as much in Kansas City, one of the lowest cost-of-living cities, as in Washington, D.C., the highest cost city. The cost of clothing varies more—but in direct relation to climate. A family in Minneapolis, the coldest city on the Bureau's list, would need to spend almost $64 more a year for adequate clothing than a family in Jacksonville, the warmest city. But the cost of adequate housing varies most of all.

In June, 1947 the annual cost of adequate housing and home maintenance for a family of four amounted to $868 a year in Washington and to only $598 in Kansas City.

Said the Bureau: "The cost of housing is distinctly less in the smaller cities throughout the country." But exceptions—such as Richmond, Va., near the top of the high cost list—illustrated what every real estate man knows: cost of housing also varies in relation to the amount of housing available on a local basis.

The seven highest housing cost cities, according to the Bureau's index: Washington, 100; Chicago, 91; New York, 90; Richmond, Milwaukee, Mobile, Birmingham—all 89.

The five lowest housing cost cities: New Orleans, 65; Kansas City, 70; Houston, 73; Los Angeles, 75; Scranton, 76.

MATERIAL

NAILS

Beauty parlors and delicatessens have them—or try Puerto Rico.

Kegs of nails were stowed under delicatessen counters, stacked up in beauty parlors, standing on the coops in poultry markets. They seemed to be everywhere, in fact, but in the builders' supply stores. Nail shortage was unquestionably the sorest spot in Building: so sore that one subpoena could do to stamp out the speculators who are raking in cash through loopholes in the nail distribution system. In return, representatives of the companies producing 90 per cent of the nation's nails shook hands on a four-point program:

- Stepped up production—with plants to go on a 24-hour basis if necessary.
- Increased production by non-integrated plants—Independents not producing their own steel to be allocated more steel rod.
- Better policing by the industry to locate and close up loopholes to the gray market.
- Concentration on production of nails of housing size.
MORE INSURANCE COMPANY HOUSING FOR NEW YORK CITY

This apartment development to house 600 families is planned by the New York Life Insurance Co. for Manhattan's upper East Side. Plans call for a single 18-story building, set well back from the street. A 1,400-car garage will be built on the adjoining block. Architects: Mayer & Whittlesey with Skidmore, Owings & Merrill.

Solving three pressing municipal problems at one whack, New York City condemned the land for this insurance company project. The public purposes served are 1) slum clearance housing; 2) a public parking garage (only 300 stalls will be reserved for apartment tenants); 3) widening of three cross-town streets (see diagram at left). Garage will be partly underground. Drawing above shows how its roof will be landscaped as a recreational area. The project is a good example of how public aid in land acquisition can stimulate large-scale urban redevelopment and coordinate it with other city needs.

Houses

Nam View

We can get low-cost houses by opening door to industry competition.

Adding its impressive weight to the already substantial ranks of those contending with the Housing Problem, the National Association of Manufacturers has come up with one of the most cogent and factual reports yet seen. More than a year ago NAM set up a housing committee composed of leading manufacturers in the field, appointed National Gypsum Co. president Melvin H. Baker its chairman, and tapped two experts—Forum consultant Miles Coleen and extrust-buster Corwin D. Edwards—to help out. Last month NAM offered the findings of these high-powered and strategically placed investigators, in 32 closely printed pages.

As to what's the matter in housebuilding, NAM found little that would make news to Building men. The trouble, said NAM as many had said before, is that housebuilding is a small-scale, localized operation, bypassed by the techniques of mass production. The reason, said NAM as many had said before, is that no one factor, big enough and powerful enough to control the housebuilding operation, had emerged to create price and product competition by fighting down entrenched restrictions.

The report put this rather delicately: "The number of persons whose interests are actually competitive is ordinarily quite small in even a relatively large city. It is rare for any one party to assume, from the standpoint of the ultimate consumer, full responsibility for the proper erection of a house in the sense that a single concern is responsible for making an automobile. As a consequence, no single activity has a very large effect on the final cost of the completed structure, and since the total cost is not affected appreciably by any one price policy, it is reasonable for each group to think that there is a fixed amount of work to be done in supplying a fixed demand for houses, and that high prices and practices which raise the charges for that work must necessarily be profitable. Because of its nature, the construction industry thus comes to be based on relatively small volume with activities tending to be entirely upon a segregated local basis and some resultant practices designed to exclude outsiders and to eliminate competition among established concerns."

But NAM, unlike many of the investigators who have reported before, did not stop with a what's-the-matter list. NAM also offered some outspoken suggestions on what to do about it:

• Outlaw labor restraints on competition, the jurisdictional strike and the closed shop.
• Repeal local laws providing preference for local contractors or locally made build-

(Continued on page 12)
ing materials. "The only purpose of this kind of law is to serve as the equivalent of a local protective tariff."

> Repeal contractors' licensing laws. "Intended to reserve the market for a local group ... Where necessary building codes and systems of building inspection can replace licensing systems."

> Hold workingmen license requirements to a minimum. "Such requirements when perverted become devices to limit the number of men entering a trade."

> Develop model codes which can be generally adopted. "Codes are restrictive through their diversity for they are so numerous that even if each individually were satisfactory, the diversity of requirements from one town to another creates obstacles to the mass production of uniform types of building material for a national market and to development of centralized prefabrication of portions of structures."

> Write performance instead of specifications codes.

> Develop authoritative standards of performance. "This might be undertaken by the National Bureau of Standards, Standards of safety and health as distinct from engineering might be handled through the U. S. Public Health Service."

> Develop standardized testing of building materials. "The American Society for Testing Materials might, having determined the accepted standards, permit private and institutional laboratories to actually conduct the specific tests in accordance with uniform procedures subject to inspection and certification. This would make the results universally acceptable, for a certificate of approval thus issued by any one certified laboratory would be good anywhere."

> Simplify code amendment procedure.

> Pass state legislation establishing a state authority empowered to review and modify local codes.

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**DESIGN**

**PAINTERS AND ARCHITECTS**

**Lighting equipment manufacturer assembles prize collection of modern art.**

The Miller Co. of Meriden, Conn., which knows which side of the pitched roof argument most of its lighting fixtures are found under, has launched a public relations gesture ambitious enough to make its competitors seem very dim bulbs indeed. The firm's $250,000 gesture involves a prize collection of the biggest luminaries in modern art. Miller's intention: to show the footprints the contemporary artists have left across the face of contemporary architectural design. Miller's sensible public relations lynch: to make friends among the vanguard of the architectural profession who specify lighting equipment for the top of the market.

Late last month Connecticut socialites gathered at the Hartford Athenaeum, filed attentively past some 40 canvases and sculptures, heard critic Henry ‘Russell-Hitchcock tell how the cubists, the abstractionists, the non-objectivists, etc., had all had a hand in what they might someday find themselves calling home. The Hartford opening started a two-year swing around the country for the Miller collection. Next stop: the architecturally minded Walker Art Center of Minneapolis.

The Miller collection, started in 1942 under the skilled eye of Emily Tremaine, wife of Miller president Burton Tremaine, Jr., is solidly based on Picasso, Mondrian, Braque, Leger, van Doesburgh, Klee, Miro, etc. But, since the Tremaines happily believe that U. S. designers can find new inspiration in newer work, it also includes such men as Jose de Rivera, Stuart Davis, I. Rice Pereira, Carlos Merida.

While in process, the collection hung on the walls of the Meriden plant, where, according to company officials, it set off all sorts of creative activity. President Tremaine, for example, got so attached to the de Rivera metal sculpture in his office (see cut) that he has been using it as a company trademark. But the fact that the sculpture also resembles an important part of a new Miller oil burner is mere coincidence, company engineers say.

Hitchcock has prepared a catalog of the collection, to be published in January, which traces the influence of contemporary art on contemporary architecture. Whether it will also canvas the reverse of this proposition, Hitchcock did not say.

**HOMES FOR THE AGED**

**New British bill spotlights planning requirements for old people.**

More than 6 per cent of us are over 60 and living alone; another 6 per cent are aged and lonely couples. For the housing needs of this 12 per cent, America has long failed to provide. Unlike many a European nation, the U. S. has depended either upon private purse or private pity to provide institutions—or else has simply looked the other way.

Not so Laborite Britain. Speaking in 1945, in the early, excited days of the Attlee Government, Aneurin Bevan, Labor's...
fiery Minister of Health (responsible for housing) hoped that "the old people will not be asked to live in colonies of their own—after all, they do not want to look out of their windows on endless processions of the funerals of their friends; they also want to look at processions of perambulators . . ." Translating his hopes into action, Minister Bevan, two years later, presented to Commons the National Assistance Bill, which will become law next June. Its purpose: To provide housing for old people. Its chances of immediate success in impoverished Britain: Somewhat slim.

But, impoverished or not, Britain's planners, long determined to take care of the cradle as well as the grave, were buckling down to taking care of what lies in between. They had read venerable Seebohm Rowntree's report on "Old People" to rediscover what they had known for some time: that special problems exist in Old Age housing and that, in all decency and humanity, it was high time that they be tackled. Few changes had been wrought since Queen Elizabeth's Poor Relief Act 350 years ago—which instituted the big, miserable "Poor-houses." Protested Bevan: "Bigness is the enemy of humanity." Homes for old people, thought Bevan, should house not more than 20 or 30. They should not be set aside from communities, like leper colonies, but form a part of every neighborhood. To achieve all this, Bevan's National Assistance Bill called upon Local Authorities "to provide residential accommodation for persons who, by reasons of age . . . are in need . . . ."

Thus faced with the reality of Old Age Housing, British designers and architects got busy working out new design standards to fit the needs of old people. Obvious requirements: short stairs, balconies in the sun, double rooms to avoid loneliness. Less obvious needs: non-slippery bath tubs, closets within easy reach, clubrooms, dormitories for the infirm, bell systems to summon help, communal kitchens (plus small, minimum kitchenettes, enough to warm up some milk)—in fact all the things which, Bevan said, "well-to-do people have been accustomed to in residential hotels." The Tories, never a Party known for its reckless youth, offered no serious resistance.

Enumerating these delightfully human touches in Laborite planning, house Charles Abrams last month sternly warned the U. S. that, in this respect, "America is among the most backward nations in the world." Many another nation, notably, of course, clean-living Denmark and Sweden, has long pointed the way toward decent homes for old people. With at least half of American science working hard to prolong life, the U. S. would be getting a good deal older. Cried Abrams: "Let us launch this campaign for the emancipation of the elderly. Let us write for them a new Bill of Rights . . ." If scarcity-ridden England could tackle the problem, the U. S. should find it a cinch.

MARSHALL FIELD ROOMS
Robsjohn-Gibbings furniture is shown in Chicago department store house.

Marshall Field, pace-setter for home-makers in the Midwest, has turned its impressive back on Chippendale in favor of the rather lavish contemporary pieces designed by T. H. Robsjohn-Gibbings. The Field store gave Gibbings furniture a handsome setting in its model house, suggesting interiors of some elegance and formality. Chicago shoppers were likely to find the Gibbings furniture more distinguished by good looks than by any new design notions.
EQUITY HOUSING: Banks find yesterday's golden opportunity turning into today's expensive headache as only job of equity housing: "In spite of the sweet to the social reformer as to the overache. Unlike many another housing nostrum, equity housing seemed to taste as sweet to the social reformer as to the over-stuffed fiduciary agent. It promised size, solidity and long-range planning in a field bedeviled by pint-sized operations, speculation, and a general obsession with a quick turnover. For the big investors of the little man's money, it also promised a long-term return of up to 6 per cent—as compared with earnings of 2 ½ per cent on government bonds or 4 per cent on FHA mortgages.

As the life insurance companies moved briskly into direct housing investment to general applause, the rich (asset $10.6 billion) savings banks of New York State eyed their nimble competitors longingly. By 1945, when the savings banks succeeded in getting their go-ahead from the state legislature, the rosy glow of equity housing was already somewhat overcast by rising construction costs, labor troubles and the anti-discrimination issue. By last month, the record of the hopeful savings banks in this hopeful field had made at least one thing plain: more than a little work and some good intentions is required for equity housing.

Seven Stalled. The banks could point to one project completed, one underway; seven projects, for which land had been acquired, were stalled. Some of the banks, wondering why in the world equity housing had ever seemed like a good idea, were beginning to look for the nearest exit. One banking group had burned its fingers on a cost-plus construction contract; another had run smack up against a New York City ultimatum to start building. All were finding out the hard way that a board of directors is no substitute for a boss.

Last month, as the city's effort to get the banks to start work on their long-delayed Brooklyn project, Concord Village, spotlighted the bankers' troubles, sharp-tongued Park Commissioner Robert Moses summed up what was the matter: "The banks simply do not like equity housing. It involves not only some risk, but some work. It is much easier to buy government securities and file them away."

Dime Savings Bank president George C. Johnson's reply had a familiar ring: "It would be a sorry day for 7,000,000 depositors in the savings banks if their responsible officers were to delegate their duties to safely invest the banks' funds to Mr. Moses." The rest of Johnson's defense was not encouraging to those who hope the banks will find a way to get on with their job of equity housing: "In spite of the bombast and buncombe, the savings banks are, as usual, accomplishing the lion's share of relieving the housing shortage by making thousands of loans to legitimate, experienced builders who are fast overcoming this shortsightedness. Three years ago, a substantial number of builders in the New York area, who have accused the savings banks of boosting everybody's construction costs by their inability to supervise labor and their competitive materials buying, said a jubilant amen. Fearful of the competition of the giant housing investors, the housebuilders now hoped for a better break on mortgage money.

Doubtful Aid. The row over Concord Village illustrated every aspect of the problem in a rather exaggerated form. In the first place, it demonstrated that the equity housing who accepts even the slightest form of public aid must be ready to take the consequences.

Intended to be a slum clearance job, Concord Village is linked with the proposed Downtown Brooklyn Civic Center, nucleus of what New York hopes will be its first completely rebuilt area. The Concord Village site had been acquired by the city under excess condemnation; it had been re-sold at auction with the proviso that the successful bidder must put up a "park-like" housing development of between 2,800 and 3,800 rooms with buildings not more than 14 stories tall. Acquiring the land as high-bidder, the banking group also acquired a possible penalty: failure to complete the project would mean re-sale of the land—with the banks liable for any cash deficiency.

Long before the deed was stamped, the banks found that almost every civic and housing group in New York had something to say about the Concord Village site—and most of it was no compliment to banking per se. Situated between the Brooklyn and Manhattan Bridges, the site was rather generally held to be surrounded by traffic hazards and unsafe for children. But it was incontestably centrally located, and the New York City Planning Commission gave the nod.

Bids Rise. Then the banks hustled out to get bids. Their own figures had persuaded them that this 968-unit development would cost about $6 million. The few bids they were able to entice convinced them that the figure would be nearer $10 million.

This meant that the bankers would be obliged to go to the State Banking Board, hat in hand. The board's regulations (issued three years ago) had set maximum rent permitted bank housing investors at $25 per room. Current cost estimates on Concord Village, the bankers said, meant that a rent boost of at least $10 per room would be required.

Although powerful Commissioner Moses was smoothing the way, although the bank-
two projects get started

they would have to hike rents to above $30 a room. But Parkway is already full of UN tenants at $25 a room, all happily holding three-year leases and two-year renewal options.

Much to their surprise, the bankers got a firm, acceptable bid for University Gardens, a 184-unit development to house University of Rochester faculty. Construction is underway.

Attractive bids have not, however, shown up for the three other “garden” developments: Waverly Homes, 750 units, Westchester County; Beacon Apartments, 50 units, Beacon, N.Y.; Niskayuna Gardens, 108 units, near Schenectady, N.Y.

Tight Reins. When the New York State legislature passed the law permitting savings banks to form corporations to build and own housing projects in 1945, bank deposits were piling and mortgage portfolios shriveling. The law opened a door to housing investment with these limitations: 1) no bank could invest in housing more than 5 per cent of assets or 50 per cent of surplus; 2) all activities were to be supervised by the State Banking Board.

The board immediately showed its intention of keeping a white-knuckled grip on the reins. Its regulations 1) set maximum

(Continued on page 16)
rents at $20 to $25 per room according to community size; 2) set the maximum number of apartments per project at 50 to 200, according to community size; 3) diluted the risk by requiring at least three banks to invest in each housing corporation, but also diluted control by barring any one bank from controlling more than 40 percent of the stock; 4) limited the amount each bank could invest in a single project to 25 percent of assets or 10 percent of surplus; 5) imposed a 40-year ceiling on amortization.

**Twenty Bosses.** The banks had a ready-made headquarters for their housing operations—the Savings Bank Trust Company, set up in 1933 to provide a central pool of funds for hard-pressed members. Since then, on the Yankee axiom that it's smart to do business with yourself, SBTC had sprouted into a general factotum: depository, correspondent, confidant, information center, research bureau. A housing agency was tacked on to SBTC's many roles and Richard J. Olds, experienced in savings bank real estate departments, was named as head. A sub-bureau to advise on equity housing outside New York City was set up under Paul T. O'Keeffe.

Although the banks blamed most of their troubles on rising construction costs, their critics said that a large part of the trouble lay in the mechanics of their housing operations. There were just too many banking fingers in each housing pie. Decisions on Concord Village, for example, have to be made by 20 banks. Snorted Commissioner Moses: "When you multiply the number of banks involved by the number of trustees of each, it becomes grotesque. Nobody can work with that kind of group, especially as most of them don't know anything about housing."

Some thought the banking colossi (31 state banks have assets of $100 million or more) ought to reduce the confusion by going into housing singly. But SBTC's president, August Ihlefeld, readily admitting that one-bank control of project development is more efficient than the conference table method, doubted that any of the big New York banks would be interested in a lone-wolf role under present conditions. "Even for the big boys, it's too risky. A project in the metropolitan area has to create its own community, hence, has to be king-size."

**Massachusetts Tries.** The experience of savings banks in New York State has done nothing to convince their colleagues in the 16 other saving bank states that equity housing is an alluring opportunity. Massachusetts is the only other state to give savings banks a legal go-ahead on housing. Passed last year, the Massachusetts law has started only one project: a low-rent development for veterans being built in Worcester with a little help from the city and FHA mortgage insurance. Nothing else is in the works, and the banks are seeking the help of five-year tax exemption on improvements.

In New York, the bankers, their feet on their desks and their blue prints gathering dust, admitted helplessly that they had no formula for reviving their housing program. They shuddered at current construction costs, but they feared a falling cost trend even more. If construction cost should fall sharply in the future, projects built now would face heavy going in later years as cheaper, newer apartments spring up. As long-term investors, the bankers stressed, they are more vulnerable than the builder who turns his money over quickly.

While the bankers bided their time on housing, they were busy studying other markets. For in the last analysis, the strength of the bank's housing effort depends on what kind of bargains they find on mortgage and corporate bond counters, the traditional items on their shopping list. Interest rates were beginning to lift somewhat. Over the past few months, long-term government bond yields had gone from 2.18 to 2.34 percent. High-grade corporate liens were up to 2.7 per cent compared to 2.4 per cent last year. There was still mortgage money available in the 3.5 to 4 per cent range—but there were rumors of widespread advances of up to 75 points.

For the New York families desperately in need of housing, the picture was not an encouraging one. If the around $520 million housing purse held by the banks could not produce housing, what could? As the banks last month asked themselves whether they needed housing, it was still painfully clear that housing needed the banks.

**POLITICS**

**HOT COLLARS**

**Dewey and Stassen exchange roundabout punches on housing.**

Whatever Harold E. Stassen hoped to accomplish with his fairly unique housing program, he was at least raising steam under other prominent Republican colleagues. One of them belonged to Governor Dewey of New York.

Governor Dewey's concern, naturally shared by his State Commissioner of Housing, Herman T. Stichman, was not hard to understand. Mr. Stassen's views on housing, plainly set down in Where I Stand, are bounded on the left by: "I specifically propose that the Federal Government use a billion dollars a year for... a major large-scale (home) construction effort." On the right by: "But the important thing is for the government men to disappear on the proper cue."

The proper cue, Stassen believes, is the completion of the building, at which point it should be sold to private capital—at a loss to the federal government, if necessary. This determination to keep the federal government out of the role of landlord means—and Stassen says he wants it to mean—that new government-built housing would not be intended for the nation's poor. Get enough housing built, he says, then let citizens occupy it according to their means, and existing housing will thus be emptied for the normal relief channels. Another observation: "I state flatly that if existing houses were effectively used, there would not be a housing emergency."

As Dewey's housing spokesman, Stichman savagely attacks these views. "Nationalization or socialization of all housing" is one sure result of such tactics, he insists, since builders would no longer be able to work profitably for anyone but the federal government. This is "not the philosophy of the Republican Party."

Cooler observers pointed out that Stassen's plan represents a nice compromise between the divergent opinions of the delegates whose votes he hopes to line up by convention time. For example: Stassen's campaign for delegates in the pivotal state, Wisconsin, is lead by Senator Joseph R. McCarthy, chummy with the real estate bloc in Washington and riding the headlines with his own housing investigation (see p. 9). On the whole, Stassen's position on housing did nothing to change his status in the party as a rash young man with safe old ideas.

But Governor Dewey's lofty wall of confident tolerance might be showing small seams, if Commissioner Stichman's recent speeches are a measure. Stichman has been concentrating heavily on an unnamed "man who has occupied high public office in one of the states and now seeks higher office." (When an AP man asked Stichman if he meant S.T.A.S.S.-E.N after the commissioner's address at the 9th Assembly District Republican Club in New York, Stichman rumbled, "Use your own judgment.")

Meanwhile, Governor Dewey made no rash statements on housing.
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These are just a few highlights of "CCC" . . . what it means to you in terms of a superior window shade that’s easy to care for, serves you long and economically. There are many Columbia grades. Perhaps yours is Columbia Pyroxylin, actually scrubbable for low maintenance, good looks. Or VELLMO, an ideal lightproof shade. Whatever your needs, there’s the right Columbia shade! Ask us for name of the nearest dealer.

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Three Johns-Manville materials, described at right, are the basis of this revolutionary development. The asbestos Transite Walls are movable, 100% salvageable. The Acoustical Ceiling Units are demountable... can readily be taken down and relocated as desired. And the Asphalt Tile Floors consist of small units which permit easy extension of the floor to meet changing conditions.

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Norge products, distributed worldwide, are typical examples of the values made possible by the American system of free enterprise.
I would like to clarify my statements. The majority of published interiors either show furniture that is upwards of 20 years old (but not antique) and hardly in keeping with the building housing it, or furniture so devoid of warmth and life that it is functional to the extreme.

I feel that the furniture which is out of date could be inexpensively restyled with proper color and pattern, and the new things could have a less boxy look with better accessories and some sort of simple pattern to offer cheerful relief.

Apropos your note, my accusing finger is as strong on overly lush interiors as it is on the lifeless ones.

FRED SHERALLO
Career Builders
New York, N. Y.

VESTED GRATITUDE
Forum:
This subscriber has noted your reference to Messrs. Nelson and Cortright (FORUM, Oct., '47) and just wonders what you think there is to be gained by such "wise cracking." After all, I think that these two gentlemen have done more for the 40,000 Realtors and more for the advertisers in your magazine, than have you.

E. A. BUTLER
Summit, N. J.

We regret that reader Butler thought we were wise-cracking. We have never been more serious than in our opinion (apparently shared by a number of real estate men) that what Messrs. Nelson and Cortright may be able to do for 40,000 realtors is considerably less important than what the Building industry does for 130,000,000 Americans.—Eb.

BUILDERS VS. DEALERS
Forum:
When Mr. Levitt classifies electrical wholesalers and dealers with Mr. Petrillo (FORUM, Oct., '47) my blood pressure is in danger. No one should criticize Mr. Levitt or any large builder for wanting to buy his appliances and other materials at the lowest possible cost. And I will venture the statement that he probably bought those 3,000 automatic washing machines at no more than 5 per cent above the factory franchised distributors' regular cost. In fact, I suspect the difference may have been even less. Over a long period of years we have observed similar transactions where, regard less of whether billed by a franchised dealer or a franchised distributor, the margin of profit on an order of that size was pathetically small. . . .

By now, Mr. Levitt and thousands of others ask in all sincerity: "Why, if I am able to place an order for 3,000 automatic washers, and am willing to install and service those washers, shouldn't I be eligible for appointment as the manufacturers' distributor, and buy at the same price he does?"

Has Mr. Levitt labored through the years to convince dealers and public that this complicated gadget known as an automatic washer, is really dependable and will do a better job? . . . Now that Mr. & Mrs. Public want it, and its' inclusion in a new home makes that home more saleable, Mr. Levitt and other large builders are eager to become distributors . . . But were it not for the franchised dealers and distributors, there would not today be the relatively low factory production costs brought about by volume of sales. . . .

Large builders of houses have been prone to move with the tide. Suppose they became direct factory distributors on the basis of ability to purchase 3,000 units in a year, and along comes a depression or war. Their tendency is to move or to shift to construction of some other type. At any rate, the manufacturer must depend on his distributors and dealers to be there always to supply service, and even more important, to maintain and increase consumer demand, come depression, war, or boom.

Would Mr. Levitt, I wonder, care to swap net profits with some distributor or dealer, (in his same volume class) whom he classifies with Petrillo?—H. M. LONG
L & K Electric Co.
Binghamton, N. Y.

Mr. Levitt suggests that if General Motors bought every component part going into the manufacture of an automobile through the same turgid channels that builders go through, he would be interested in hearing Mr. Long's comment after paying $3,500 or so for a Chevrolet. FORUM feels that the complaints of dealer Long and builder Levitt are both justified, both indicate the same thing i.e. the need to overhaul an increasingly unwieldy and unprofitable distribution system.—Eb.

CLIENT EDUCATION
Forum:
Relaxing this evening with a stack of FORM's at my left side, a glass of sustenance by my right side and an easy chair under my—, I was proceeding to catch up on products, practice, architecture, etc., and tear things to pieces with which to fatten my files. . . .

(Continued on page 20)
TWO uses for the cost of one. Sheathing PLUS insulation. This is the smart, progressive, economical way of planning better construction. Results in more satisfied clients. Specify double-duty INSULITE.
... The war interrupted my usually efficient methods and the FORUMs piled high but now, in the Feb. '46 issue I find a letter so caustic and dripping with venom, that I had goose bumps when I finished. It was by Helen D. Ince and deplored the fact that as a non-professional she could not subscribe to the Forum. However, the thing which really startled me was the comment by ye Ed. If true, it fits one piece to the jigsaw of the general attitude of doubt most clients have toward houses designed for the living of today and tomorrow.

Why is FORUM circulation limited to those who create for Others? The Others, the potential home builders, most of whom would take full advantage of new methods, etc., if they could but travel and visit the advanced architecture which exists —why should they be denied the opportunity to do so through the pages of this, Our Forum?

The more educated an individual is, the broader the viewpoint: the mind is open to guided suggestion and there is less of the “I don't like spinach because Joe said it's bad.” Give them a chance to taste it, let them savor all the tints and shades—let's devote more time to teaching!

The architectural profession does itself no good by retiring to the Inner Sanctum and wailing about the lack of public appreciation of its really fine efforts; and when I refer to the profession I definitely include all publications presenting good architecture.

How can we educate without providing the text? The more legitimate the information furnished the consumer, the more rapid will be our progress.

A. Bennett Brown

Baltimore, Md.

FORUM agrees with Reader Brown, but points out that the work of many top-rank architects is now featured in consumer magazines. It is a hard business fact that advertisers in professional journals pay for professional circulation.

—Ed.

WHAT IS A ROOM?

Forum:

I have read with interest the excellent review of FHA Title 6 (FORUM, Aug. '47). While not wishing to detract from a clear and succinct presentation of this complicated administrative law, I venture to point out that Forum has failed to include its basic system of evaluation. On this system hinges the entire administration of the law.

As you have explained correctly, the law states that the loan insured by the government shall not exceed so much a room, but you do not then explain the next logical step: namely, what constitutes a room.

(Continued on page 24)
A new achievement in Planned store lighting... the Westinghouse Merchandiser

Now, in one attractive luminaire, you have the basis for a complete, modern, planned lighting system for any type of store.

The MERCHANDISER combines the best qualities of fluorescent for general illumination with incandescent for highlighting of featured merchandise. Through various combinations of fluorescent sections, spotlight elements and decorative end caps, you can obtain a wide variety of planned lighting effects in sales areas.

Get all the facts on the MERCHANDISER before planning store modernization or new construction jobs. Ask your nearest Westinghouse office or distributor for a copy of Folder B-3788. Or write Westinghouse Electric Corporation, P.O. Box 868, Pittsburgh 30, Pa.

Fluorescent section; uses either four 40-watt or two 100-watt fluorescent lamps. May be used singly or for continuous mounting.

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EXTERIOR VIEW OF WIND-O-BRIK
Both the one and two-unit Wind-O-Briks are constructed of cast aluminum... with channels or louvre pilots and body cast as one piece for added rigidity. The front frame is held securely in place by nickel screws, and may be easily and quickly removed for cleaning or inspection. Louvres are constructed of top-quality gloss and are designed to harmonize with standard gloss block. Corrugations are designed to provide maximum mortar adherence.

INTERIOR VIEW OF WIND-O-BRIK
Inside louvres or vanes are made of thick, durable glass... perfectly balanced and arranged to provide complete ventilation, up and down or left and right with just the flick of finger. The rear frame is also securely fastened with nickel screws and may be readily detached for cleaning. An all weather resistant fine mesh screen is located in the body of the unit to retard snow, rain, dust and dirt particles, or annoying insects.
Here's How American KITCHENS Dealers Can Help Your Planning and SELL Your Plan!

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At last your clients can know exactly how the kitchens you plan will look when completed! They can see their future kitchens—in miniature—on the marvelous Plan-A-Kit at any American Kitchens' Dealer's.

Think what this means to you. No longer need you attempt to "interpret" a blueprint of the kitchen to your client. Simply take your client and your plan to the nearest American Kitchens Dealer. He'll do the rest. He'll set up the miniature kitchen, complete, with every cabinet right in place! And your client will quickly see how your plan means real beauty and greater utility in the most lived-in room in the home!

Get acquainted with the wonderful Plan-A-Kit now. See it, use it, at the American Kitchens Display at the Builders' Show... or visit our permanent display space—Room 1476, Merchandise Mart, Chicago.

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- The cards are stacked in your favor when you use Reynolds Aluminum for duct work. It's a better deal for you for several reasons, here's why. You get three times more metal, pound for pound, when you buy Reynolds Aluminum instead of conventional material. And look at these other advantages which are bringing about the biggest change in the sheet metal working business in years... a change to Reynolds.

Because aluminum is lighter jobs go in faster. It's easy to fabricate and erect, which means less labor per job with this modern metal. Your present equipment, Pittsburgh Lock Seam machines, shears and riveting equipment handles this lighter, more workable metal with less wear. Customers are happy with the long, trouble-free service - no rusting out, quieter and more efficient heating.

Don't wait for old-fashioned metals that only seem to cost less. Look to Reynolds Aluminum to help you bid a better job at better profit. Structural angles and aluminum rivets are available. Deliveries from near-by local jobber's stock, or write Reynolds Metals Company, 2528 South Third Street, Louisville 1, Kentucky.


This is important, for FHA by no means holds the ordinary concept of a room. Herein lies one of the primary weaknesses of Title 6 in adapting itself to the country's housing needs.

What constitutes a room in the government mind is set forth in the official room count formula... It requires no great study to realize that this formula is both highly arbitrary and restrictive; that a full 90 per cent insured loan can be obtained only on very special types of architectural planning. Insurance companies and other private lending institutions using similar methods of evaluation would do only a fraction of their normal business. The result of this rigid system is that commitments are made by the government ranging from 50 per cent to 100 per cent on different types of construction of the same economic value. In other words, full value is received only on a few limited and set types of planning. Others not agreeing with the formula are penalized to the point of making the secondary financing impractical.

ROBERT M. SNYDER
Clearwater, Fla.

OVER-THE-COUNTER PLANS
Forum:
I have been reading, with considerable interest the correspondence concerning "Home Planners, Inc.,” and recently had the opportunity to see a letter addressed to C. Godfrey Poggi and signed by Joseph C. Hazen, Jr., Associate Editor. For your information I would like to quote a portion of the letter:

"But The FORUM also believes that the addition of a 5-15 per cent architectural fee to the cost of each small house will not produce the desired result. Until a better solution is devised, service offered by Home Planners, Inc., including completed working drawings for well designed homes at $5 per set, has much to commend it."

Advocating such a policy is bad enough, but to make such a brazen statement would lead one to believe there has been a sudden and definite change in the policy of The Forum - one that should receive the attention of those who hope for better construction and design generally..."

LAUREN V. POHLMAN, A.I.A.
Elizabethtown, N. J.

Forum:
... It is difficult to comprehend how anyone connected in any respect with the profession of Architecture, much less anyone dependent upon the good will of that profession, could condone the sale or use of "stock" or "over-the-counter" plans.

(Continued on page 28.)
THERE'S

NEW

Beauty
Efficiency
Economy

in Leader

NEW HORIZON Fixtures
for use with Slimline tubes

New Horizon fluorescent fixtures offer new beauty and new advantages to the architect and designer of lighting installations. Since these new units are thinner in proportion to their length, they create new opportunities for modern styling and higher lighting efficiency, with low maintenance costs and versatility of surface brightness.

Leader NHC-480. America's newest and most beautiful commercial lighting fixture. Designed for four F96-T-8 Slimline eight-foot lamps. Constructed for ceiling or stem suspension mounting. Ideal for use as single units or continuous run installations.

Leaders NH-480. The ultimate in industrial lighting. Constructed to use four F96-T-8 Slimline eight-foot lamps.

Leader NHS Strip Light industrial fixtures available in one lamp (NHS-180); two lamp (NHS-280) and three lamp (NHS-380). Can be furnished with or without reflectors.

Leader NHO Open type fixtures, especially designed for mass lighting of large commercial establishments. Available in two lamp (NHO-280), three lamp (NHO-380) and four lamp (NHO-480).

Only the best electrical wholesalers and contractors distribute and install Leader Fixtures.

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Design your building for all the individuality you wish. You still can benefit—in time saving and in money saving—from standardization in almost every step of building enclosure.

Fenestra—America’s oldest and largest steel window manufacturer—has put its steel fabricating experience to work on additional lines. The result—a co-ordinated group of steel building products designed to meet today’s needs for faster installation and its consequent economies.

For example: Interlocking metal panels that serve as joist, bridging and subflooring. Steel windows of many types in sizes that co-ordinate with dimensions commonly used in modular construction. Steel doors that come to the site with frames and hardware—ready to install. Less cutting—less fitting—less delay.

We’re prepared to give you the facts on these products... to help you study them in relation to your basic plans and needs. A word from you will bring the help of people well-experienced in the building field. Write or call Detroit Steel Products Company, Dept. AF-1, 2251 East Grand Blvd., Detroit 11, Michigan.

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Fenestra STANDARDIZED BUILDING PRODUCTS

STEEL WINDOWS—
for schools, hospitals, offices, factories, homes—any building. Wide choice of types, sizes and ventilations. Fine appearance, rugged construction, easy operation and economy.

METAL PANELS—
for floors, walls, roofs, ceilings and partitions. Suitable for almost any kind of building. Flat surfaces are ideal for paint, plaster, plywood, linoleum or other material of your choice.

DOORS—
real timesavers. Complete with pre-fitted or attached hardware; some with pre-fitted frame. Designed for easy operation. Swing, slide and overhead types available.
A one-shot testimony, except—the largest office building in New England, the largest postwar banking building in the whole British Empire, the largest all-metal commercial building group in the world—all are to have Q-Floors!

Q-Floors are steel and require a minimum of time to erect. Therefore, their cost can be accurately known in advance. They speed up construction to reduce 20 to 30% off building time. They are dry, noncombustible, clean and free from forms and shoring.

Q-Floors save architects an enormous amount of drafting room work. Outlets and partitions need not be definitely located until the building is occupied. Every six-inch area of Q-Floor can be tapped for electricity. The steel cells are crossed over by headers carrying telephone, power and other electrical services. An outlet can be established anywhere at any time in a matter of minutes. Any number of outlets can be added at any time. An electrician merely drills a small hole, fishes the wires from the panel box and installs the outlet without muss or trenches.

See Q-Floor fittings at any General Electric construction materials distributor's. For complete details and literature, please write:

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**LETTERS**

Being suburban architects, our practice consists largely of the design of homes, and we are firmly of the opinion that the design of every home, no matter how small, whether for private client or for operative builder, is an individual problem; its solution dependent upon terrain, local codes, and other factors which require a personal survey by an architect conversant with these factors and problems.

We are not concerned with the actual encroachment of stock plans on our practice, because most users of stock plans have no understanding of the value of an architect's services, but we are concerned in that we believe impersonal, over-the-counter plans at any price cheapen the profession in the eyes of the general public.

E. M. Galloway, A.I.A.
W. C. Henry, A.I.A.
Westfield, N. J.

Forum:
I must continue to disagree with you on the propriety of your seeming endorsement of the sale of commercial plans for small houses.

It may be true that a majority of them throughout the country are not architect-designed, but so far as New Jersey is concerned this situation is being rapidly overcome, largely because people have awakened to the fact that such plans do not produce proper results—in short are an abomination and a snare.

In my humble opinion you are again wrong in your premise when you say that "Tailor-made houses built under individual contracts are too expensive for the average family." This has not been the case in New Jersey except in rare instances. Wise planning on the part of the suburban architect and supervises the small house at a 6 per cent rate, not the 15 per cent you mention. Surely the architect is entitled to the small sum of 6 cents on the dollar (within which is included his overhead) when compared with the builders profit of 10 per cent, plus 5 per cent for overhead, not to say anything of the mechanic who charges $20 per day. There may be some exceptions, but I don't know of any suburban architect solely planning small houses who is able to make a clear profit of $20 per day. Besides the employment of an architect for the planning and supervision of any project has, time and time again, proved to be the best investment an owner can make. So why pick on the architect?

Generally speaking I think that all architects look to all architectural publications.
SUPERLATIVE QUALITY

PENBERTHY INJECTOR COMPANY
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PUT TELEPHONE RACEWAYS IN YOUR SMALL HOME PLANS

Buyers of small homes as well as larger ones are quick to notice and appreciate any features which add charm and convenience. Telephone raceways are important because they provide a channel within walls for telephone wires, avoiding the need to run exposed wires on attractive walls and woodwork.

It is easy and costs little extra to install a raceway during construction. A few sections of pipe or electrical conduit will provide an entrance for telephone wires and passage within walls to convenient telephone outlet locations.

Your Bell Telephone Company will be glad to co-operate with you in planning telephone raceway systems. Just call your Telephone Business Office and ask for "Architects and Builders Service."

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Here’s a basement planned for year-round picnics. And the smartly styled SEVEN Ancoflame Oil Heating Unit makes home heating practically a picnic, too. This efficient, automatic boiler-burner unit is designed for small to medium sized homes, and includes a host of engineering features for greater comfort and convenience.

Center of interest in this bathroom is the NEO-ANGLE Bath. Only about four feet square, the Neo-Angle is roomier than most baths, yet allows ample storage space without reducing bathroom floor area. The COMPANION Lavatory and MASTER ONE-PIECE Water Closet complete the ensemble. All three fixtures available in white and choice of many colors.

- American-Standard is first in heating equipment and plumbing fixtures. First in quality . . . First in styling . . . First in performance. That’s why more American homes have heating and plumbing by American-Standard than by any other single company.

Yes, think of American-Standard first and be sure of getting products that are just right for your requirements. The complete line covers heating equipment and plumbing fixtures for every type of installation. For full information, contact your Heating and Plumbing Contractor. American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pennsylvania.

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LOOK FOR THIS MARK OF MERIT—it identifies the world’s largest line of Heating and Plumbing Products for every use . . . including Boilers, Warm Air Furnaces, Winter Air Conditioners, for all fuels—Water Heaters—Radiators, Convector, Enclosures—Gas and Oil Burners—Heating Accessories—Bathubs, Water Closets, Lavatories, Kitchen Sinks, Laundry Trays, Brass Trim—and specialized products for Hospitals, Hotels, Schools, Ships and Railroads.
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SEAPORCEL—the-beautifier is also Seaporcel—the-sales-maker. Not only for your clientele, but for you.

What more natural prospect-question than "Who did that job?" And what more natural self-promise than "That's for me, too"?

See how Seaporcel* becomes the background of perfection for letters of distinction in the front portrayed here. See how Seaporcel, in turquoise terra cotta, blends daringly, dramatically, adroitly, with white metal, Kasota stone—yes, even wood, utilized in the upright fins as shown in the above photo.

With unlimited color range, from delicate pastels to jet black... with numerous finishes, including gloss, semi-matte, terra cotta, granite and limestone... Seaporcel offers you a material at once versatile, economical, and enduring. For Seaporcel is porcelain enamel de luxe—not painted, but fused to steel for lasting newness.

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WRITE TODAY for bulletins, showing applications and current jobs. Inquiries from interested agents invited; there are a few areas in which Seaporcel Porcelain Metals, Inc., desires representation.

SEAPORCEL PORCELAIN METALS, INC.
Formerly Porcelain Metals, Inc.
28-24 3orden Ave., Long Island City 1, N.Y.

SEaporcel* (Bog, U.S. Pat. Off.) is a porcelain enamel fused into its metal base at 1200 degrees F.

* Since each stairway could be clearly labeled at the ground floor exit, only an extremely rattled fireman would go up the wrong flight. —Ed.

(Continued on page 36)
Wax-Fortified* Interior Finishes — distinguished products of S. C. Johnson & Son, Inc., research

A remarkable triumph of the Johnson’s Wax laboratories are these unique, patented Wax-Fortified Interior Finishes...which for the first time make possible a paint with the advantages of wax...wax smoothness, wax luster, wax protection, wax dirt-resistance and wax cleanability. They are available in a wide range of colors in gloss, semi-gloss, and eggshell-flat finishes.

Problems of washability and restorability of interior surfaces are effectively solved by Johnson’s Wax-Fortified Interior Finishes. Higher maintenance efficiency at lower cost is the result. Wax-Fortified Paint is easy to apply, gives broad coverage, and has high hiding power.

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aluminum luggage that gives strength and beauty... aluminum appliances that can't rust or corrode... aluminum furniture that moves with a touch

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More and better aluminum products — today...with

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Actually, a large department store could be opened today which features nothing but aluminum products.

For all the products pictured above — plus hundreds more — are being made right now, offering more economy, more convenience, more beauty.

Recognizing this, millions of people are demanding aluminum products, whether it be for building materials, household appliances, house trailers, garden tools, or what have you.

You, too, can demand—and get—these products. They're now being made in ever greater quantity because Permanente Metals, led by Henry J. Kaiser, is rushing to manufacturers the light, bright, lasting metal that makes them possible.

In just a single year of operation, Permanente Metals' huge processing plants produced 175 million pounds of plate, sheet, and strip aluminum, far more than the entire industry produced in its most productive year before the war!

That's why there are more and better aluminum products... today... with Kaiser Aluminum!

More than 600 products are now being made of Kaiser Aluminum.

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For a sample of the kind of action that brought us so far so fast, call any Permanente Products' office... and put us to work for you!

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Permanente Products Company

Consumers Service Division, 1924 Broadway, Oakland 12, California

The Architectural FORUM January 1948
DESIGNERS of Hancock Village—being built in Brookline, West Roxbury, Massachusetts—have provided the newest conveniences for future tenants of the mammoth 789-unit project. One of the most modern comfort features is Honeywell Personalized Heating Control.

A Honeywell thermostat in every apartment enables each tenant to select whatever temperature he desires for comfort. Wasteful over-heating is checked and fuel consumption reduced. Moreover, the 253 gas-fired boilers of the radiant hot-water panel heating plant are equipped with compensated control which varies water temperatures in the system according to outside weather conditions. These features mean true heating economy plus satisfied tenants.

And you can offer this same efficient heating control to owners and managers of existing rental properties. Explain to them how buildings already P.H.C.-equipped have reduced fuel consumption at an average rate of 20%. Meanwhile, just mail the coupon for complete information about Personalized Heating Control—the improvement that is fast becoming a "must" for every modern apartment building.

MINNEAPOLIS-HONEYWELL REGULATOR COMPANY
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Please send information about M-H Personalized Heating Control for:

Existing Buildings

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Street Address

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Architect

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35
Three problems solved

When you specify "Pyrofax" gas you solve three important appliance problems for homes beyond the gas mains. Your clients will enjoy the city conveniences of a Magic Chef range, a silent Servel refrigerator, and an automatic water heater—all operated by this economical and dependable gas.

"Pyrofax" gas gives instantaneous heat. The automatic above-ground system provides uninterrupted service. For complete information, see our catalog in Sweet’s File, or write to "Pyrofax" Gas Division, Dept. A-2, Carbide and Carbon Chemicals Corporation, 30 East 42nd Street, New York 17, N. Y.

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SUPERIOR BOTTLED GAS SERVICE

Product of a Unit of Union Carbide and Carbon Corporation.

the Hearst Apartments at 86th Street and Riverside Drive in 1938, replacing a stair of

FIRE TOWER by Designer Ward provides exit doors visible from any point in the corridors.

the Winecoff type and not only providing the required additional stair but a truly fire-safe exit facility.

JAMES R. WARD, Designer and Volunteer Fireman

Stamford, Conn.

REPORTS ON GERMANY

Forum:

The letter by your reporter Peter Blake, (Forum, Sept. '47) concerning the building situation in Germany is misleading.

In the first place, Kassel was 82 per cent destroyed, Nuremberg, 75 per cent, and neither the 96.7 per cent which the letter reports, See An Introduction to Germany, written by Headquarters, U. S. Forces, European Theater, published by the Theater Adjutant General. Further, this damage was not all sustained by a couple of air raids, as implied, but includes damage from minor air raids, artillery shelling, dynamiting by the Germans, etc.

In the second place, the description of the German construction worker is non-representative, in that the exception has been cited and no mention has been made of the true status of the average worker. The most exceptional conditions are those of Kassel. It was the most severely damaged and has by far the worst reconstruction record. Kassel is a poor choice for the basis of an over-all description.

Admittedly, construction is slow and agonizing. Little machinery is available. Most land owners refrain from clearing their land. The rubble of brick and concrete is used for the manufacture of Baustoffe aus Trämmern, a poor brick material, and most owners seem to be awaiting an increase in value of their particular pile of rubble. Production is slow, but most cities are working at rebuilding and cleaning.

The German construction worker also works slowly, a result of postwar depression of morale, a lowered calorie consumption.

(Continued on page 40)
THIS
Frank Adam
INSTALLATION

SOLVED MANY POWER PROBLEMS

Behind the attractive appearance of this new ® Shutlbrak Switchboard is a host of features which added greatly to the safety, efficiency and operation of one company. It provided, for instance, a more compact unit with greater electrical capacity... greater operating efficiency with less maintenance... easier, faster and more positive switching with new heavy-duty ® Shutlbrak Switches... safe operation with dead front, safety-type enclosure... safer maintenance with fuses concealed behind doors that open only when switch is in "off" position... greater simplicity of maintenance due to accessibility and design... more efficient power transmission with High Efficiency Feeder ® Busduct carrying current from transformer station to switchboard with a minimum of voltage loss... and greater flexibility by providing for future additions when the need arises.

You'll solve these and many more power problems by including the ® Shutlbrak Switchboard in your new electrical system. This heavy-duty, safety-type switchboard with quick make and break switches fitted with ® Kamklamp (pressure type) Fuseholders is available in a full range of capacities: 30 to 1200 amps., 250 volts, AC or DC; and 600 volts AC, 2, 3 and 4 poles. Consult your nearest ® Representative for details.
These five detail drawings were prepared by the Revere Research Laboratories to illustrate some of the approved methods of covering the top of parapet walls with copper coping covers. They are typical examples of the work Revere is doing to help you provide the finest sheet copper construction.

Revere's continuous research program, covering every phase of sheet copper construction, has developed important new facts that enable you to design or install copper flashing, roofs and gutter linings that give extra years of service. Much of these data have been compiled into a 96-page booklet that has been widely distributed to architects and sheet metal contractors. In all probability, there is a copy in your office files.

Look first to this Revere manual whenever you are faced with a problem concerning the design or installation of copper. If you do not find the answer there, the Revere Technical Advisory Service will be glad to help you. The chances are that they have already had experience in solving a similar problem. In any case, they’ll do their best to help solve yours.

Revere materials are available from leading distributors in all parts of the country.

"Research Solves Problems of Stress Failures in Sheet Copper Construction."

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Ever see a switchboard
that’s a quick-change artist?

Sooner or later, nearly every electrical distribution system needs a change.
A new circuit will be needed, or an old one may have to be replaced. Such changes used to be costly . . . but not nowadays. BullDog got a grip on the problem with the compact-type Vacu-Break Switchboard, a real artist for quick changes.

Ample provision for future needs is possible with BullDog Vacu-Break Switchboards. These modern distribution control centers offer standardized switch units that are interchangeable and convertible. They can be added or removed easily, either individually or in groups.

But flexibility isn’t all the story. Here, too, is the valuable BullDog Vacu-Break principle of switching. Smothers arcs instantly and safely, before burning and pitting of contacts can occur.

Vacu-Break Switchboards also star in efficiency with BullDog’s self-aligning Clammatic Contacts . . . providing contacts tight as a bolted connection to assure high conductivity, low heat losses, longer life, and less maintenance.

Quick, positive action
“Quick make” and “quick-break” operating mechanism (with positive ON and OFF indication) add another point for Vacu-Break Switchboards. They’re horsepower rated, and can be used as operating switches as well as disconnect switches.

A switchboard superior in appearance, compactness, and efficiency to any installation of ganged individual safety switches mounted and connected on makeshift racks.

BullDog’s Field Engineers welcome the chance to sit in on planning stages of a building project. Their knowledge of electrical distribution layout can mean savings in installation and maintenance costs, as well as highest efficiency and reliability in actual operation. Why not take advantage of this pre-building service?

BULLDOG ELECTRIC PRODUCTS COMPANY
DETROIT 32, MICHIGAN • FIELD OFFICES IN ALL PRINCIPAL CITIES
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HEADQUARTERS FOR ELECTRICAL DISTRIBUTION
4Q The Architectural FORUM January 1948

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3. No Cold Drafts Along Floors

4. No Overheated Air Same Code Cool in Summer

Costs Are Competitive

No Unsightly Radiators or Registers

When a radiant heating installation has coils that are properly located, correctly dimensioned, adequately controlled, and operated at the right temperature, then ... and only then ... do you get real radiant heating.

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Crittall offers immediate shipment on Medrae electrical radiant heating panels, 36" x 24", rated at 600 watts. These "packaged sun-warmth" panels are ideal for auxiliary heating. Installation is quick and easy; just plug in.

See CRITTALL for real radiant heating

Crittall pioneered and developed the science of radiant heating ... has 40 years of world-wide experience in design and installation. Serves you in the U. S. A. and Canada through your architect and consulting engineer.

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Alberene stone’s highly-toothed surface is always safe — wet or dry.

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Slip-proof, but never excessively so, Alberene stone treads retard your feet, but never bring them to a dead stop.

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Dollar for dollar, Alberene gives you higher abrasion resistance than other stone. It’s pit-proof, too.

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Alberene stone’s fine, finished appearance ... its neutral blue-gray color ... harmonizes with any wall treatment.

For full data about the many advantages of Alberene tread stock, write —

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(Continued on page 44)
Demand is solid and growing, in a multiple market...farm, commercial, industrial and residential. The building industry and the public know the advantages of rust-proof, fire-proof, rot-proof aluminum. They have tested and proved its exceptional insulation value...how its 95% radiant heat reflectivity takes off the summer sun load, cuts winter fuel bills. And with growing sales, the easier handling of lightweight aluminum increases profits. Look into the complete line! See Sweets or write for literature.

Reynolds Metals Company, Building Products Div., Louisville 1, Ky.
Avodire Marlite Genuine Wood Veneers and Marsh Mouldings create an office interior of distinction.

Sparkling, sanitary washrooms are important! Easy-to-clean Marlite is the answer.

Primo Vera Marlite Genuine Wood Veneer provides a background of quiet warmth and dignity in this doctor's reception room.

Interiors of sparkling, colorful beauty, or warm, restrained dignity ... you can create either with Marlite plastic-finished wall and ceiling panels. For new construction or modernization, include Marlite in your specifications and plans on beautiful, serviceable interiors in offices, lounges, lobbies and washrooms.
No. 424-B BENEKE PLASTIX
SEAT for regular rim bowl.
One piece solid plastic. Has
cushioned check hinge.
For Every Application
"STREAMAIRE" CONVECTORS
by YOUNG

- An increasing number of architects and contractors are specifying "Streamaire" Convectors because they give extras that spell heating satisfaction. "Streamaire" Units are highly efficient and truly economical. They respond instantly to modern thermostatic controls... are engineered to circulate warm air by controlled convection, to level off temperature peaks by natural radiation. "Streamaire" Convectors are easy to specify, easy to install because they're standarized in four types, packaged individually to prevent damage. To aid identification, cartons are marked with model number and size. "Streamaire" Cabinets enhance the beauty of modern interiors. Fronts are removable for cleaning. Write today.

Free Standing, Wall Hung, Type C, no wall recesses required. Wall Hung, Type W, easy to clean, no blocking of air.

- Resettlement of refugees.
- Reconstruction of utilities and industries in accordance with the Military Government.
- Repair and maintenance of existing buildings, neglected during the last ten years.

Secondly, I think forceful mention should be made of reasons why practically none of the obvious program has been started.

The following are a few of the basic steps which only partly concern the building industry, and which must be undertaken before the above mentioned program can be properly begun:

a. There is no coordination of administration and only promise of a vague political future.

b. There is no proof that the Germans can carry their own responsibilities since for nearly a generation their steps have been rigidly controlled.

c. There are no expropriation laws of real estate, necessary for City planning.

d. There are no laws to settle mortgages on property which no longer exists. Interest must still be paid on a house even though it is a pile of rubble. At the same time the rubble belongs to the State and cannot be removed by the owner for rebuilding.

e. There are no studies on the correct sizes of the rebuilt cities. This is important since the life pyramid is now at the top, with 100 per cent more deaths than births and a 25 per cent surplus of females.

f. There have been no surveys as to the industries and trades by which the inhabitants will support themselves.

g. There have been no decisions as to whether reconstruction should be along old street layouts, whether old quarters should be abandoned, or whether building should be in new decentralized sections. One fact which might influence this decision is that existing street utilities constitute 3 per cent and foundations 15 per cent of the total value of the building.

h. Lastly, there have been no decisions on either emergency or permanent housing.

Coal is a vital necessity for the production of building supplies. Since the production of this key material is not at prewar level and is used mostly for reparations, nothing has been accomplished. The few existing stocks of building materials are kept under priority. The main source of material is the rubble since it has to be removed anyway and its use saves coal. If this rubble is going to be used efficiently, the production, digging, transportation to

(Continued on page 48)
It IS an Amazing Discovery!

Hot Water "Packaged-in-Glass"

YOUR OWN CLIENTS... and your prospective clients... are continually discovering that they can now have automatic hot water that’s pure and clean!

NO RUSTING! NO CORRODING! A Permaglas Water Heater has a tank of glass-fused-to-steel. It CANNOT rust or corrode under any local water condition.

There are other important features in the Permaglas Water Heater... but this one alone makes it the best water heater you can specify for the completely satisfactory house.

You’ll find the “Permaglas” story in the home-service magazines that all home-planners read and study—and in the great national weeklies that reach so many hundreds of people in your own community.

As an architect, you will want all there is to know about “Permaglas.” Use the coupon below and let us send facts and specifications—today!
YES — delivery of Roddiscraft Flush Veneer Doors actually begins at your door. The pattern for delivery is laid down on the architect's board, because delivery largely depends on the specification of stock sizes by the architect.

Concentration on stock sizes permits us to get maximum production from men and materials. It means more doors for everyone — On the other hand, odd sizes and special details are a serious brake on door output.

Plan for stock sizes when you draw your plans. Then we can plan to meet your needs with warehouse stocks ready for delivery when and where you want them.

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WITH LESS DEAD WEIGHT

These 1,000 M.C.M. Insulated Cables are dead-ended to a single steel plate, because their conductors are Alcoa E.C.* Aluminum—which, in large sizes, weigh less than half the weight of identical copper conductors. Still another reason why aluminum wire and cable can be installed faster!

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*E.C.: Electrical Conductor Aluminum

NO PROBLEMS of conductivity
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FOR ELECTRIC WIRE AND CABLE
Why Do It The HARD WAY?

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GRAND RAPIDS
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1. **RECOGNIZED PUBLIC ACCEPTANCE**
   - Completely invisible...known quality leadership...backed by nation-wide advertising, it's easier to sell.

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the factory, manufacture of new material and return to the original site must all be timed in a non-stop production cycle.

Special Trains for carrying rubble form a network across almost every German city.

Rubble and Mortar is mixed and set in prefabricated forms for use in new building.

The German nation itself will be unable to finance reconstruction as long as the cigarette is a symbol of value and taxes are sky-high. An average laborer gets 35 marks a week. At this rate, it is better for him to lavish all his time upon the care of one chicken since he can barter 2 fresh eggs a week for a package of cigarettes having a value of 125 marks, thus avoiding payment of taxes. The only source for all buying is the black market. Prices range from 5 marks for a package of matches to 2,000 marks for a pair of shoes, 8,000 marks for a suit, 500 marks for a pound of coffee, etc. The wage of 35 marks a week is not apt to encourage honest labor at these prices. As a result, all Germans are living on their substance. Each day they stand in long lines in front of exchange stores to barter their bric-a-brac for supplementary food necessary to keep alive.

As for the destruction, it is impossible to visualize a devastation so complete without actually seeing it. The lowest estimate of the amounts throughout the country is 400 million cubic meters of rubble. . . .

The average living space per person before 1938 was approximately 30 square meters. At present, if this standard were reduced to a minimum of 8 square meters, the reconstruction time for basic housing and utilities, using all available German labor, material sources, and machinery, would be between 25 and 30 years.

FERDINAND KRAMER

New York, N. Y.
This is the tenth anniversary of a revolution in heating.

In 1937, Frank Lloyd Wright, the famous architect, designed a new building for Johnson Wax. He included a new-fangled method of heating, in which coils of pipe, carrying the heating medium, were embedded in the concrete floor. The heating contractors, Westerlin and Campbell, recommended wrought iron for the coils.

Byers Wrought Iron pipe was used...and in line with its policy of informing designers and engineers of new developments, A. M. Byers Company ran an advertisement on the subject as the building neared completion. You may have seen it...but certainly would never have dreamed of how far-reaching its effects would be.

A flood of inquiries came from technical men, interested in the new method of heating. From this beginning in 1937 the Byers organization collected all available data, developed additional information, and put the result between covers in the first complete, authoritative bulletin on radiant heating. This—and succeeding editions, in which additional facts and findings were included—has been accepted as the "Bible" of radiant heating by thousands of architects, engineers, and heating contractors. In succeeding years, Byers engineers worked with hundreds of designers on specific projects, continued to gather data, and today have accumulated more complete and practical information on the subject than can be found anywhere else on the globe.

This "experience pool" covers information on the use of radiant heating in almost every type of structure: homes, churches, schools, hospitals, railroad stations, hangars, garages, brooder houses, theaters, telephone exchanges, laboratories, dog kennels...the list is far too long to itemize. This wealth of data provides practical answers to almost every question that can arise in connection with radiant heating...and it is available to all architects, engineers, and heating contractors interested in applying this modern method of heating.

It is significant that with thousands of installations already made, over 90% of those of which Byers has record have used Byers Wrought Iron pipe. Byers Wrought Iron pipe offers the exact combination of qualities and properties needed for radiant heating: ease of fabrication; high heat emission; almost identical thermal expansion characteristics with concrete; and proved resistance to corrosion. For a "progress report" on this ten years of radiant heating progress, ask for the booklet, "What we have learned from 1000 radiant heating installations."

When does a man start slipping?

The moment comes to every man.

The moment when he realizes that he isn’t the man he used to be . . .

That the days of his peak earning power are over . . .

That some day not so very far away some younger man will step into his shoes.

When does this time come?

It varies with many things.

But of one thing you can be sure. It will come to you as surely as green apples get ripe—and fall off the tree.

Is this something to worry about? Well, yes. But . . . constructively. For that kind of worrying can lead you to save money systematically.

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So why not take this one step now that will make your future so much brighter?

Get on the Payroll Savings Plan—or the Bond-A-Month Plan—today.

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MAY HAVE THE ANSWERS

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comfort and satisfying economy...with any fuel
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There's one sure answer to the indoor comfort problem...no matter what size house is to be built, no matter what fuel or type of heating your client prefers. That answer is Mueller Climatrol! There's a size and type for every home, each designed for top efficiency and economy with the preferred fuel—gas, oil, or coal. Mueller also offers a complete line of fittings, and auxiliary equipment for year-round air-conditioning.

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Brikcrete prices are low because it is locally manufactured by a chain of plants. Eliminates the two big costs of freight and distribution. Write for brochure BB and name of nearest plant.

Good manufacturing territories are open. If interested, ask for Brikcrete Book No. 2.

BRIKCRETE ASSOCIATES, INC.
4681 S. Division Avenue
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*8" units for exterior walls. Extra for 4" partition walls, $1.26.00. Prices are national average, subject to slight change according to locality.

Anybody who has had the unforgettable—and very nearly incomunicable—experience of living for a while in one of Frank Lloyd Wright's masterpieces (as several members of the Forum staff did during the preparation of this issue) is likely to have acquired a recurrent dream. It runs like this: In the year 2048 the builders of a decentralized U. S. will turn to the buried archives of a place called Taliesin near Spring Green, Wis, and dig up the plans for homes, theaters, art galleries, garden restaurants, whole cities. And then Frank Lloyd Wright's great spatial visions will finally become a living environment for millions of Americans.

For a magazine conspicuously devoted to the notion that every age must create its own building pattern, this may seem like reaction. But we will dodge the brickbats by immediately pointing out what we believe equally: that Frank Lloyd Wright is designing (and this is much more our tragedy than his) not for life as it is in our own perilous time, but for life as it can be—and someday will be.

Creative personalities are frequently ahead of their time, but the artist whose medium is structure faces special limitations. In the first place, his work is not reproducible or transportable: it cannot be run off on rotary presses for millions of readers; it cannot be shipped around to art galleries. Merely to see such an artist's work, its audience must seek it out; they must, for example, undertake a pilgrimage to the Falling Water House or the Johnson Wax Building or one of the Taliesins.

But an architectural experience is much more than seeing. Architecture is perhaps the most powerful and pervasive of the arts, but the building has to be actually used before the emotional experience it involves can really happen to anybody. Thus about the only chance the U. S. public in any quantity will have to experience a Wright building is the Guggenheim Museum, a project now indefinitely deferred by uncertain building costs. It is to be hoped that the project's sponsor, distinguished by a long record of public service, may decide to absorb some of this current cost as one more public service, so that Wright's masterpiece can happen while the sponsor, the architect, and all the rest of us all still here to enjoy it.

We like to think that the next best thing to building Wright is publishing him and proudly present this issue completely devoted to his new work, on the anniversary of our original Frank Lloyd Wright issue of 1938. Like the first one, this issue was completely designed and written by him; the plans and sketches appear as they were drawn by the 50 young men who now compose the Taliesin Fellowship.

Taliesin is very busy now; once more apprentices are there from all over the world—Sheng Pao from China, Salah Zeitoon from Egypt, Rana Mansinhji Mahabat Sinhji from India, Gershon Kohn from Palestine, to name only a few. It was pleasant to see again top hands Jack Howe, Wes Peters and Gene Masselink, whom we met way back in 1938.

They're using jeeps in the farm work now, but otherwise things haven't changed much. Everybody still gets up for breakfast at six; everybody washes his own dishes and takes turns cooking. There is still a movie in the theater on Saturdays, dinner and music in the Wright living room on Sundays, lots of good talk every day when the drafting room knocks off for tea at 4:30.

All the work in this issue was done in the great Taliesin drafting room, where the Fellows come in from the snowy hills and their current job of re-shingling the barn to turn out the drawings. Here the silvery-haired Master sits at his own drafting table, in front of the roaring wall-size fireplace, deciding on the winter pasture for the Guernsey herd, and all the while turning his enormous dreams of life for Free Men into the reality of structure—his force and vitality undiminished at 76, his confidence that Americans will yet find a way to come into their inheritance unwavering.
Schmidt, Garden & Erikson design a factory

Mesker Steel Windows

"Fulfilling all demands for adequate daylighting and ventilation, steel windows additionally offer a satisfyingly simple decorative treatment for modern industrial plants."

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THE AIR YOU BREATHE SHOULD BE AS PURE AS THE WATER YOU DRINK

Locate fan on any outside wall

There is no one place where a kitchen ventilator must be located—place it above the range, over or in the window, through, beside or above the cabinets. Because the fan sets up an air flow to and through the kitchen, it can be located on any outside wall in the kitchen. Forget about expensive, noisy, grease-catching ducts for special positioning—use the simple, economical, quiet ILG wall or window models which have proven themselves in thousands of installations during the past thirty years. Call nearby Branch Office (consult classified directory) or send coupon for complete explanation and latest Catalog No. 146.

AN INSTITUTE OF PROFESSIONAL TOWN PLANNERS has been formed in Canada to promote the science of city and community planning. Officers in the new group are: Tracy LeMay, President; John Kitchen, Vice President; and E. G. Faludi, Secretary-Treasurer. Its headquarters are at 24 Bloor Street East, Toronto.

Hermann Field, AIA has been appointed Director of Building Plans for Cleveland College, a post in which he will develop an overall plan for a new downtown college center. Mr. Field will also serve as a member of the architectural faculty of Western Reserve School of Architecture.

Maggio & Quick, architects and engineers, (formerly P. M. O'Meara Associates) will continue their practice of ecclesiastical and institutional design at offices in Minneapolis, Detroit, Cincinnati and St. Louis.

BUILDING PREVIEWS

Fels Research Institute Laboratory for the Study of Human Development is now under construction at Antioch College, Ohio. The brick-faced, steel and concrete building will house the widely varying testing activities required in the Institute's continuing study of a group of people from conception to maturity, including study of their family and school environment. The 80 rooms in the laboratory will provide biochemical, psychological, physiological and genetic laboratories, an observation nursery-school wing and X-ray, dental and medical examining rooms. High and low temperature rooms will be used to test individual resistance to extreme environments. Louis Magaziner, Philadelphia architect, designed the building; Charles Leopold acted as mechanical engineer; Max Mercer, supervising architect. Wermuch, Inc. are builders.

The New $2,000,000 Spalding Plant at Williamsport, Mass. effected such savings by its coordination of the company's separate manufacturing facilities, that even today's high costs were underwritten. In one operation alone at least ten handlings of lumber were eliminated. Office space and cafeteria are provided on the second floor for the company's 300 employees. Adjacent to the main building is a laboratory for material research. Lathrop Douglass, architect, and Guy Panero, engineer, designed the building which will be completed in the Spring.

A New Elementary School at Atascadero, Calif., will incorporate a number of good design features. The classrooms, all on ground level, have direct access to individual play areas on the south side of the building. A wide overhang covers part of this space for protected play and also obviates building heat in late spring and early fall. Room lighting is bilateral, but predominantly from the north with semi-direct artificial lighting for dark days. The Latisteel method of construction, used by designers Daniel, Mann & Johnson, provides modular wall panels of light steel with concrete fill—a method which met requirements for safe, economical and rapid structure.

(Continued on page 58)
In choosing Crane, you know that many things confirm your choice.

- **Crane is correct**... correct in styling to complement good room design. Crane offers a right style for every taste—a right price for every building budget.

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- **Crane is preferred**... year after year, nation-wide surveys prove that Crane is far and away the best known name in plumbing.

The uncompromising quality of Crane Sinks extends to Crane bathoom and laundry fixtures, too—and to a full line of heating equipment for any system and any fuel. All are represented in the Sweet’s Builders’ File. Of course, it is still true that certain fixtures are more available than others—check your requirements with your Crane Branch.
From a New, Single, Modern HEATING UNIT

Supplies all household needs for hot water and heating

FROM a single Janitrol unit you get three separate supplies of hot water at the right temperatures . . . one for efficient, automatic home heating . . . one for automatic dishwashing and laundry appliances . . . one for bath, shower and lavatory.

This complete Janitrol system, gas or oil fired, is so compact and highly efficient, it can be installed in any convenient place in the basement . . . the first floor, in a closet, utility room or adjoining garage . . . even in the attic.

Comfort Heating: The Janitrol hot water system is a complete factory tested package. When used with modern convector radiators, the temperature of each room can be individually controlled. Hundreds of radiant panel heating installations in ceilings and floors have also been made, utilizing Janitrol’s advanced design for low cost of installation and proved performance.

YOUR OPPORTUNITY TO REDUCE BUILDING COSTS—This new Janitrol heating and hot water system offers you a wonderful opportunity to reduce building costs . . . by giving your clients what they need with extra advantages . . . giving them modern house heating and a hot water heater in one efficient unit, complete, ready for quick, economical installation.

Write today for complete specification data and information on typical installations.

The Architectural FORUM January 1948
Floor-to-ceiling areas of plate glass or Thermopane let people see into the store. Built-in cases spotlight small items. American Home Appliance Co. in San Francisco. Architects: Igaz & De Martini.

ATTRACTIVE

...in more ways than one!

Store owners want more than fine appearance alone... they want stores that fulfill the second meaning of attractiveness—having the power to attract business.

The Visual Front has won wide acclaim for this purpose. It makes the entire store a "walk-in showcase". It calls attention to the merchandise the owner wants to sell. It is truly functional architecture.

Colorful Vitrolite* glass facing on solid areas attracts attention. Large areas of plate glass reveal the store interior. Where window condensation is a problem, Thermopane* should be specified. Tufflex* tempered plate glass doors extend a cordial welcome... are now readily available. Because it's all glass, a Visual Front can be kept new looking by cleaning with water and a squeegee. Your L.O-F Glass Distributor has prices and data on all glass products for storefronts.

You'll find our Visual Fronts book helpful in suggesting ideas and color combinations. It contains many designs by leading architects. For your copy, write to Libbey-Owens-Ford Glass Company, 4418 Nicholas Building, Toledo 3, Ohio.

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$250 scholarship. Further information about the contest may be obtained from the James F. Lincoln Arc Welding Foundation at Cleveland, Ohio.

THE JAMES HARRISON STEEDMAN MEMORIAL FELLOWSHIP in Architecture, to be awarded this spring under the auspices of Washington University, Mo., offers $3,000 for a year's travel and study abroad. Requirements for candidates are: 21-31 years of age; an architectural degree from an accredited college; one year of practical office work; American citizenship; good moral character; at least one year's residence in St. Louis. Application blanks must be in the hands of the Chairman of the Department of Architecture, Washington University, St. Louis, Mo., not later than January 31st.

NEW OFFICES
GEORGE NELSON, AIA announces the opening of offices for the practice of architecture and industrial design at 343 Lexington Ave., New York, N. Y.

CLARENCE SMITH II, architect and engineer, has resumed his private practice in offices at 1000 Peachtree St., NE, Atlanta, Ga.

RICHARD HANSEN will practice architecture and community planning at 1201 E. 63d St., Kansas City, Mo.

LEON HYZEN has opened his office as consultant in architecture, store planning and industrial design at 53 W. Burton Place, Chicago, Ill.

F. ALBERT HUNT, architect, announces the opening of his office at 4 Purdy Ave., Rye, N. Y.

ARCHITECTURAL MODEL BUILDERS, Frankfort, Ill., offer services in field of three-dimensional displays—exteriors, floor layouts, dioramas, etc. (Continued on page 64)

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Hendrick Grille
in linen closet door

In the Futura House, Portchester, N. Y., the architect used Hendrick Grilles (without glass) in doors of linen closets to permit full circulation of air to prevent mildew. Note attractive decorative effect.

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HENDRICK
Manufacturing Company
35 DUNDAFF STREET, CARBONDALE, PA.
Sales Offices in Principal Cities
How G-E lamps make merchandise
easier to see ...
easier to buy!

This specialty shop exhibit at the General Electric Lighting Institute, Nela Park, Cleveland, shows dynamically how the "3 A's of Store Lighting" may be applied to move merchandise.

1. **Attraction** is achieved by emphasis lighting with G-E fluorescent lamps in floor and wall case displays. Accents and highlights are superposed with reflector and projector spot lamps mounted in recessed fixtures.

2. **Appraisal** illumination, using both fluorescent and filament lamps, may be set from 30 to 120 footcandles, providing correct conditions for quick, accurate buying decisions.

3. **Atmosphere** lighting combines blue, gold, pink, daylight and 4500° white fluorescent lamps housed in the wall case tops. Perimeter lighting creates feeling of spaciousness.

For the latest in lighting ideas, tools and techniques, architects are invited to visit the G-E Lighting Institute. Make arrangements through your nearby G-E Lamp district office.

For successful lighting, always specify **G-E Lamps** ... constantly improved by G-E research to **STAY BRIGHTER LONGER**

**G-E LAMPS**

**GENERAL ELECTRIC**
announcing

the first

threadless

malleable iron
fitting
A giant step forward of major importance to every architect, engineer and piping contractor...

Now, for the first time, you can join iron pipe without threads or welding—and have a "one-piece" system as strong as the pipe itself — by using FLAGG-FLOW Threadless Malleable Fittings.

These basically new and better fittings are precision-machined for brazing to standard black steel or wrought iron pipe. Simply CLEAN-FLUX-HEAT and the silver-brazing alloy flows by capillary action to form a seamless, permanently bonded joint.

QUALITY FEATURES AT MINIMUM COST

But beyond this simplicity of fabrication you gain important advantages never before available. FLAGG-FLOW means free-flow through smooth, unbroken, pocketless channels that are, in effect, continuations of the pipe itself. Thus FLAGG-FLOW gives to iron pipe the streamlined, low-friction loss advantages of copper tubing or welding — at substantially lower cost.

In fact, you get qualities previously found only in the costliest piping installations at a cost no higher than for threaded jobs.

MAKES TOUGH PIPING JOBS EASY

Moreover, FLAGG-FLOW gives you complete freedom in layout. No longer need you worry about tight, inaccessible spaces — or making rights and lefts come together — or forcing fittings to face properly by wrenching them into position. FLAGG-FLOW will fit wherever pipe will go, giving you tubing flexibility with piping strength — easily, permanently, cheaply.

EVERY FITTING AIR-TESTED

This is THE FIRST AIR-TESTED, 150-POUND MALLEABLE FITTING EVER TO BE SOLD FROM STOCK. Every FLAGG-FLOW Threadless Malleable Fitting is air-tested under water. Truly, FLAGG-FLOW introduces a new era in piping. And it is not surprising that the originator of the threaded malleable fitting in America should be the first to produce the threadless malleable fitting — for the name Stanley G. Flagg has been associated with leadership in the quality fitting field for nearly 100 years.

The whole story, with engineering and installation data of value, is yours for the asking. Write today for your copy of the new descriptive catalog.

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1421 Chestnut Street, Philadelphia 2, Pa.
CHANGES OF ADDRESS

WILFRED KEEL, AIA announces the removal of his office to 843 Peachtree St., NE., Atlanta, Ga.

MARTIN BECK, AIA is now located at 10 Nassau St., Princeton, N. J.

ROY SCHOENBROD & ASSOCIATES, architects and engineers, have moved their offices to 1253 N. LaSalle St., Chicago, Ill.

HAROLD PERRY, architect, announces that his office is now located at 1 Main St., N. J.

JOHN CAPONE, AIA is continuing practice at 505-7 Orange St., Newark 7, N. J.

MILLS CONSTRUCTION Co. has moved to the Financial Center Bldg., 405 Montgomery St., San Francisco, Calif.

CHAUNCEY RILEY, architect, has moved to 52 W. 46th St., New York, N. Y.

MILLS & PETTICORD and ASSOCIATES, architects and engineers, are now in offices in the Riggs National Bank Bldg., 14th St. & Park Road, NW, Washington, D. C.

LEOPOLD HAUF, JR., architect, has changed his address to 101 Walsh Road, Lansdowne, Pa.

CLARENCE PETTERSON and WENDELL SPACKMAN, architects, announce the removal of their offices to 45 Second St., San Francisco, Calif.

NATHANIEL SALK, consulting engineer, announces the moving of his offices to 122 E. 42d St., New York, N. Y.

MARTIN SCHNUR, industrial designer, has moved his offices to 9 Warren St., Newark, N. J.
GENERAL ELECTRIC HOME BUREAU offers years of practical experience and a coordinated technical and sales service in helping architects and builders achieve better homes and bigger profits.
Yes...there's more to kitchen and laundry planning than just allotting space for appliances.

All General Electric kitchens are designed around the "work center" idea—a Refrigerator Center, a Range Center, and a Sink Center. But every home is different, has a different space and shape allotted to the kitchen, and requires a different solution.

The plans on this page show the General Electric Home Bureau's suggestions for revising two average kitchens, using the same floor area and the same appliances.

A few relatively simple changes in the cut-up plan at the left result in the efficient, attractive U-shaped kitchen on the right. The door has been moved and the small pantry for the refrigerator has been eliminated. A built-in planning desk and buffet is provided, with a pass door opening into the dining room for service purposes. The dining-room side has storage space for china, linen, etc.

Inefficient use of space is shown in the plan at the left. By moving the door leading to the hall only a foot, an attractive, step-saving L-shaped kitchen with space for a breakfast nook is provided. The electric range makes it possible to eliminate the flue, giving still more work surfaces.
How one kitchen can be fashioned in four ways with no change in equipment or space.

Once the kitchen plan—the location of appliances and cabinets, of doors and windows—has been decided upon, then it's time to give the kitchen its "character."

Kitchens should be designed not only for efficiency, but for charm. Because it is one of the most-used rooms in any home, the kitchen should also be one of the most cheerful, most livable rooms in the home.

The pictures on this page show how one basic kitchen plan can take on four different—yet equally charming—characters.
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The Standard Laundry includes wringer washer, automatic tumbler clothes dryer, and rotary ironer - arranged to avoid all unnecessary handling and lifting of clothes.

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A Kitchen-Laundry combination. Where space for a separate laundry is not available, two-in-one plans like this are still far better than the old-fashioned basement laundry. The General Electric Home Bureau can help you plan a combination like this.
After all, the goal of every builder is to win more satisfied customers and that, to a builder, means satisfied owners in every one of his homes.

One of the best ways to win satisfied owners is to impress them with the adequacy and the quality of the wiring and the wiring devices. Your customers see and use these daily. Silent switches ... weatherproof outlets ... and plenty of convenience outlets in every room will fairly shout, “Quality!” for the entire home.

General Electric has a complete line of wiring devices, including many for special uses, such as silent switches for bedrooms, clock outlets with hangers for electric clocks, and weatherproof switches for use outdoors.

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So, when you’re sending us your kitchen and laundry plans, why not let us look over your wiring plan, too? There’s no charge and no obligation on your part, and we may be able to suggest some important improvements.

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The General Electric Company organized the Home Bureau to meet the constantly increasing demand for technical help in planning truly up-to-date homes.

Today, professional planners and builders will find that the Home Bureau offers a fully coordinated technical and sales service ... insuring proper arrangement, installation, and use of electrical appliances. Here's how it works:

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Before you build, make sure that your kitchens and laundries are right!

When your plans are sent to the Home Bureau, a skilled staff of experts checks every detail, and suggests improvements, if needed.

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This helpful service is free to the professional builder and planner, through General Electric distributors (listed herein).

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It doesn't cost you a dollar more, Mr. Builder, to put in G-E All-Electric kitchens and laundries, because you are buying for resale. In fact, you make an extra profit on every bit of equipment sold.

**And the BUYER profits, too!**

The owners of your new homes will require this electric equipment in any home they buy ... but when they buy from you, they buy their appliances in a package, already installed and ready to use.

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The General Electric Home Bureau does not originate or sell house plans. However, at your request, the Home Bureau will have its skilled staff of experts review your plans and offer suggestions for their improvement. Many architects have found this Home Planning Consultant Service helpful in designing up-to-date homes.

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Here's how the Home Bureau changed one old-fashioned kitchen into an up-to-date, efficient, all-electric kitchen.

This kitchen can be found in thousands of homes today. It is old-fashioned and inefficient. The refrigerator and the range are well placed in relation to the sink, but the room lacks proper work surfaces, adequate storage space and lighting at important work centers.

The remodeled kitchen can hardly be recognized as the same room ... but actually, few design changes have been made. Modern equipment has replaced obsolete equipment; the room has been made bright and cheerful; and lighting has been provided at all work centers.

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Everything Electrical for Every Home You Build

24-207
TO HOWARD

FRANK LLOYD WRIGHT

Just as the Forum of January 1943 was yours so this issue of January 1948 is yours.

We were working on it together when I last saw you a day before you left and whatever
this number of your magazine may need is here dedicated to you. You know no Goddard
in your house, nor are we ever likely to expect you. We wish we had more of you
in our work as didides with the sympathetic and grasping vision of the man greatest spirit.

Architecture will not lose you. While fashioning a magazine for "truth" in everything
you greatly served the standards of Freedom and Truth. For a newly profession
possessed or much of yours we see but seldom coupled with the fine discrimination you
read. On the page this work and the need of your eyes and wit upon your tongue shall miss you but
resembling forgetfulness. The end is not yet. You made the Forum a great cause held true to its cause
as you steered your change between the gods to disprove and take pride toward a cause

Your help in the Forum we see and on its pages in your eyes and wit upon your tongue shall miss you but
proving that it is as surely love. To them you were then and now the Forum tells.

November 13th, 1947

Frank Lloyd Wright
To build to suit some individual taste is an enforcement of the principle of vitality in Art.
Art is not fully appreciated unless it is true to contemporaneous Life.
Not that we should ignore the claims of posterity, but we should seek to enjoy and enrich the present more.
Nor should we disregard the creations of the Past but we should try to digest and assimilate them into our consciousness.
Slavish conformity to traditions and formulas fetters the expression of individuality and so of vitality in Architecture. We can only weep over those senseless imitations of European buildings which one beholds in progressive foreign nations. We marvel why Architecture should be so devoid of originality, so repetitious with repetitious obsolete styles. Perhaps we are now passing through an age of the Democratization of Art, while awaiting the rise of some princely master who shall establish a new dynasty.
—Okakura Kakuzo, The Book of Tea, 1925

Would that we loved the ancients enough so that we might copy them less!
To a Japanese accustomed to simplicity of ornamentation and frequent changes of decorating method, a Western interior permanently filled with pictures, sculpture and bric a brac gives the impression of vulgarity.
Who can exist day after day in the midst of such confusion of color and form as is seen in the homes of America?
In the tea-room the fear of repetition is a constant presence. In Western houses we are continually confronted with what appears to us useless reiteration.
Simplicity and freedom from such vulgarity make a sanctuary from the vexations of the outer world.
In these days when industrialism is making true refinement more and more difficult the world over do we not need a true Architecture more than ever?
The masterpiece is a symphony played on our finest feelings. The sympathetic communion of minds is true art appreciation. Mind speaks to Mind.
Our mind is the canvas on which the artists lay their designs. The Masterpiece is of ourselves as we are of the Masterpiece. Do not praise the masters but praise yourself for liking what the masters would have you like.
We go hungry solely because of lack of appreciation. The more human the appeal the deeper is the response. The nearer science the further from humanity. We clarify too much and enjoy too little. The sacrifice of the esthetic to the so-called scientific has been the bane of art exhibitions.
Contemporary art cannot be ignored in any vital scheme of life. The Art of today is the art that really belongs to us: it is our own reflection. In our self-centered century what inspiration do we offer?
The Past may well look with pity at the spiritual poverty of our civilization, the future will laugh at the barrenness of our Art.
The USonian House began to be a democratic dwelling on the Oak Park prairie so many years ago that it takes an effort to think back to that time. It began as a campaign against the senseless complications most domestic life met at that period when a respectable house was a series of compartments within boxes.

Every house consisted of a basement, numerous compartments for nearly every activity imaginable in connection with domesticity, and an attic usually graced with dormers or ruffles of some kind. We got rid of the attic first and began throwing out compartments. Finally after a general struggle we abolished the basement.

In those days the "guillotine" window was the "practical" window. We lost a number of clients who came to say that they would "take everything except those swinging windows." That feeling gradually disappeared and we planned houses there on the prairie with big living rooms and commodious fireplaces, all eventually turning toward the great single room, dining room, and work space—in other words, the open plan that we now call Usonian.

In those early days when nearly everybody who wanted to build a house asked what "Style" our houses were, it would have simplified matters greatly if we could have said "this is the Usonian Style." But the name came much later from the great originator of the modern realistic novel, Samuel Butler. In the work he called "Erewhon," he pitied us for having no real name for ourselves. He suggested the word Usonian as embodying the real meaning of the word union—the States United—and as having also desirable euphony. The name is for us, I suppose, an eclecticism. But nevertheless one that seems to serve excellently will in place of nothing at all.

In these houses we had reached a great simplicity. To know how great, we need only to compare them with the houses of the period in which the work was done. I think the houses of that period used to be called "General Grant Gothic." There were much worse names.

Today the Usonian house has a simple concrete mat, as we call it, laid upon 5 or 6 in. of broken stone ballast with no foundations other than shallow trenches dug to drain, then filled with broken stone. The walls rise directly on this stone ballast of the foundation belt.

Then came the matter of how the walls should rise. It seemed that laminated wood, three thicknesses with paper-insulation between them, would be most economical (wood not at that time being a precious material), as well as practically fireproof and verminproof. An inner layer of insulation any thickness could be inserted within the two layers of wood at no great expense. We planned the outer walls and interior partitions together as the support of the roof.

Then came the matter of the roof itself. There are three types we have made available in Usonian houses: the flat roof projecting over the outside walls to afford general protection to the wood, and where passing above windows often becoming trellises carrying vines. The low-pitched gable or visible roof, where some slightly kind of material could be used for covering the roof surface, a slightly more expensive type. The hipped roof, a still more expensive type, but extremely becoming to either flat or hilly country, and permitting rooms to be carried up into the roof space with a very fine interior result.

Floor heating is characteristic of all these houses, of which we have some 65 in about 28 of our states. This type heat is referred to here as gravity heat, that is to say, the kind of heat rising naturally from the floor slab itself.

We can never make the living room big enough, the fireplace important enough, or the sense of relationship between exterior, interior and environment close enough, or get enough of these good things I've just mentioned. A Usonian house is always hungry for ground, lives by it, becoming an integral feature of it.

It has been said of these individual houses that the individuality of the owner has been sacrificed to that of the architect. But if you will examine the small sequence here, the variety of which has been kept no matter how many of them are built, you will see that each man's house is his home. There is but one house like it and that house is his. His own devices, tastes, limitations are present in each instance, intelligently interpreted for him as an individual.

In the ten examples of Usonian houses selected from some 60 or 70 and presented for consideration, you may judge of these things for yourself.
THIS moderate-cost Usonian was planned for the lakeshore. Its large living room has the lantern for cross sunlight that characterizes many of these dwellings. Corner features of brick take care of the utilities; otherwise the house is of wood except for pre-cast concrete tile floors. The sash are wood also.
This house for the Northern woods has a roof to carry snow and the decoration of icicles in winter. The high ceiling of the living room slopes under the roof. Broad boards are used for outside and inside walls and for ceilings. Concrete pre-cast tile floors. Brick chimneys and stabilizing wall masses. Gravity heat.
THIS is a Usonian type for a moderately steep hillside. Entrance is on the upper level with descent to the two-story living room, glass-walled on two sides. Bedrooms are on the upper level and project into the living room space terminating in a balcony overlooking the room. Brick terrace walls and chimney and red tile roof.
This Usonian type is closed toward the highway, open toward the bordering wood. The house is placed on a horizontal flat green field and is partly in the wood. It has the quiet domestic aspect shared by most Usonians. Gravity heat.
The second house for Herbert Jacobs is a berm-type dwelling similar to the one on a farm near Middleton, Wis. It is a hilltop site, excavation of the sunken cycle in front of the southern hilltop facing the South furnace, the building to the North. The sunken cycle partly protects exposed glass surfaces from winds and air. A glass-enclosed space in which children will play. Bedooms are on mezzanine overlooking the living room.
This is an extension of the Usonian solar-hemicycle similar to the Jacobs House, No. 2. It is a type we are building at moderate cost on several exposed and steeply inclined sites in different States. It is suitable for southern exposures in temperate zones where native building materials are still available. Native stone, wall-masses and chimneys. Concrete pre-cast floor slabs.
THE butterfly roof I suggested to Frankfurt, Germany in a brochure published in Frankfurt in 1913 is here adapted to a combination music-studio and cottage living room. The cantilevered roof shelters both—tall windows opening to a garden so terraced that comfortable seating may be had using the studio and living room as a stage. The two rooms may be thrown together by means of a sliding partition.
THIS masonry-type Usonian glass house has concrete slab roofs with turned up eaves. No wood is used in the construction, exterior or interior. Partitions are of solid plaster, doors and sash are metal, floors usual precast tile. Gravity heat.
DWELLING for Dr. Bell is a type useful where wooded slopes form the site. Entrance is on the upper level, with bedrooms and stair down to toll living room placed on the lower level, together with dining room and work space. The upper bedroom floor projects into the living room, eventuating there as a balcony. North wall is closed, south and east exposures are chiefly glass. The living room floor extends as outside terrace.
This project for seven Usonian dwellings for seven teachers employed at Michigan State College was designed for a 40 acre tract near Lansing. The construction (Usonian standard by that time) of laminated walls and partitions, concrete mat and gravity heat was repudiated by the U. S. Government. No loan could be secured therefore and the project had to be abandoned. One of the houses (the Goetsch Winckler) was nevertheless built at Okemos nearby. And many others have been built in some 29 different states since, embodying precisely the same construction as then proposed and with perfect satisfaction to all concerned. Government expert opinion reported "the walls will not support the roof; floor-heating is impractical; the unusual design makes subsequent sales a hazard."
A long distance call, from housing administrator Clark Foreman in Washington, said: "I don't see your name anywhere on our roster. Why don't you contribute something?"

"I'd like to," I said, "but I've never been asked."

"Well, I guess I understand that oversight but I think we ought to end it. Will you do a project for us?" I said I would.

Finally, 100 houses in Pittsfield, Mass. were told off to me and after I visited the site, I went to work. When the plans were nearly finished, a telegram came telling me to stop. It seems Mr. Foreman had been superseded by another. But since the project was nearly completed, I was authorized to finish it.

In Washington all were quite generally delighted with it. Some doubts as to detail had to be resolved. But sometime later word reached me that the local architects of Massachusetts had taken the matter up with their Congressmen and that only local architects as provided for in a statute covering the matter would be allowed to handle the project.

Although the government offered to buy what I had done, I declined to sell it because I would have no positive control over execution. And so this project is still one of the best shots in our locker. In this scheme, standardization is no barrier to the quality of infinite variety to be observed in nature.

No entrance to any dwelling in the group is beside any other entrance to another dwelling. So far as any individual can know, the entire group is his home. He is entirely unaware of the activities of his neighbors. There is no looking from front windows to backyards: all the private functions of family life are here independent of those of any other family. Playgrounds for the children, called sundecks, are small roof gardens placed where the mother of the family has direct supervision over hers.

Family processes are conveniently centralized on the mezzanine next the master bedroom and bath, where the mistress of the house can turn a pancake with one hand while chucking the baby into a bath with the other, father meantime sitting at his dinner, lord of it all, daughter meantime having the privacy of the front room below for the entertainment of her friends.
This low cost scheme for group housing might profitably be used to solve many present building problems.

This berm-type project was begun with the assumption that the work upon the buildings would be done by the Detroit auto workers who intended to live there. It was mainly a drainage and landscape problem. But the times were such that the group could never get together with much effect on progress. The affair languished for a year and died. But the nature of the scheme is apropos to so much of the building problem in our country today that it is on record here for what it may be worth.
GENERAL GROUND PLAN FOR COOPERATIVE BUILDING. TWO CLOVERLEAF SUBDIVISIONS NEAR KALAMAZOO APRIL 1947

PARKWYN - VILLAGE
FRANK LLOYD WRIGHT ARCHITECT

THESE subdivisions are in line with that proposed for the unexecuted Pittsfield, Mass., housing scheme. The center of each disk of ground is located by survey and diameter given, any house owner can tell where his lot limits are. No lot touches another wherever the scheme is perfect. All interspaces are to be planted to some native shrub like barberry or sumach, throwing a network of color in patterns over the entire tract.
sunlight when twilight or moonlight was preferable. Project fundamental errors in this essay low to the emphasis placed on power in residence bringing up the rear. It would seem from the overall garden, the work is sufficiently obvious. The root in this instance becomes the main, is included here for your entertainment. The essence of her, but what we did for her, on the spur of that moment, all mixed up where that affair was concerned. We lost sight of her, and who we did for her, on the spur of that moment, all mixed up. A desert so inspiring in point of opportunities recognizing the high purpose of doing something for her clientele in the form of private residence, with female recreation. Elizabeth Arden made an excursion to California with April
TALIESIN West is another one of those ventures in the general direction of the unknown in which this architect has so often indulged. It was clearly undesirable (even impracticable) for the Taliesin Fellowship to live indoors for half a year because its members are devoted chiefly to building, farming and the preparation and eating of good fresh food—mostly an outdoor affair. And having once made the acquaintance of Arizona by way of the Arizona Biltmore and work for Dr. Chandler, we, compelled to take a step toward winter quarters, naturally gravitated in that direction.

There is probably more instruction concerning construction in the desert ways of plant life than in any books ever written. Also, there is salutary effect upon the human imagination in transferring our design activities from one place where all is pastoral and in domestic scale to a place such as we chose there on the Maricopa Mesa near the ranges of McDowell Peak.

The camp structure was almost entirely made by the apprentices themselves. Probably $10,000 would represent the cost of all required outside their efforts as directed by myself. The Arizona camp presents a bold experiment in the use of textiles for overhead. If ever a suitable fabric could be found for comparatively permanent use in construction such as we have adapted here, a pressing building problem could be easily solved for many purposes beside residence. Available to us at the time, however, was only a heavy canvas, which we find good for only about three years under the extreme desert heat which takes the “filling” out of the canvas in time and lets water through. So our overhead, while translucent and attractive beyond expression and serving as interior lighting, still is subject to renewal every three years. However, the permanent walls and framing itself make this a not-too-great hazard. The illustrations in the photograph section following speak for themselves.
This house is entirely of native stone found in the countryside of Northern Wisconsin. It is the usual Usonian in plan but constructed with interior-insulated stone walls showing the same inside as outside. A semi-detached stable is a feature necessary to such houses in the country.
This ocean front house at San Francisco is planned for a cliff site dropping sheer about 110 ft. from lot level to tide water. The structure is earthquakeproof, built of reinforcing steel and concrete. Concrete top slabs, throughout, are waterproofed and covered with 16 in. of top soil, planted to grass, flowers, and shrubs. A house to the ocean, a garden to the neighbors.
THIS romantic dwelling in southern climate is for a young Phoenix doctor and his family in the Arizona desert. Water, always a grateful circumstance in the desert, is here part-feature of the house. There are views of Camelback Mountain to the rear. The house is surrounded by orange orchards. It is a good-time family place of concrete. Other features characteristic of Usonian houses including gravity heat are incorporated.
This stone pergola standing on the crest of a ridge in Connecticut has been widely misunderstood and chiefly on account of its apparent aimlessness lying at rest. It may possibly be something of this sort, spreading over the entire hilltop, but it is not a solution. The various units comprising the group are of concrete through the various levels cut off from the pergolas by glass windows. The bedrooms are skylighted. The whole design is a kind of shelter from the wind.
THE Burlinghams have a place near El Paso piled with sweeping sands, continually drifting in swirling lines that suggest waves of the sea. This is a design for a pottery house, that is to say, adobe. As contemplated here, the walls are molded accordingly. The general plan is a patio surrounded and protected by house and walls overlooking an immense valley.
"THE WAVE" is a suggestion to the Holdorns for an appropriate, luxurious, steel-and-masonry shelter on a completely exposed ocean front where heavy surf breaks high over great rocks piled on the shore. The steel fenestration opening only beneath on account of wind, the sunken garden (excavated earth transferred to the top of the house for insulation) and the terrace for recreation are its main features. The public road along the sea was a drawback hard to overcome. This plan is in sketch form only.
"EAGLE FEATHER" is Arch Oboler's dream of an eagle's nest on a mountain top with superb views of surrounding valleys and not too far distant Pacific Ocean. The plan provides well protected living quarters in a much exposed high place but in a mild climate. Materials are broad-board redwood, native stone, broad-board overhead and wide-plank floors.
SPORTS CLUB IS PART OF HOTEL DEVELOPMENT FOR HUNTINGTON HARTFORD ON 130 ACRE TRACT IN HOLLYWOOD HILLS

HUNTINGTON Hartford's sports club is the recreation unit of the otherwise complete hotel in the canyon below. The structure, a natural for prestressed steel and concrete, terminates a high range in the Hollywood hills. In design and construction it is an example of earthquakeproof cantilever construction. The central supporting unit is a heavily built stone-faced reinforced concrete shaft. Like the trunk of a tree with a taproot, it stands firmly rooted at the end of the high ridge above the hotel.

Springing from this central shaft, the trefoil of cantilevered shallow bowls of vertical concrete balance each other: a cantilevered tripod carrying three clubroom glass enclosures, capped by shallow glass domes constructed of stainless steel tube-rings and glass tubing. The service portion of these lies in the central shaft as do the main accommodations for club members and guests. The match-court and swimming pool are also cantilevered from supporting stone bastions and so related to the upper clubroom spaces that activities on either are plainly visible from the terraces forming the edges of the shallow concrete bowls in which the clubrooms rest. A fourth bowl, dome-capped, is reached by the main elevator and provides a sunbathing terrace overlooking the surrounding country.

All is mainly in sunlight and, in structure as in effect, is an economic use of the materials of which it is built. The construction would have the same chance in a tremblor as a tree with a taproot. The dramatic character of the edifice is achieved at no sacrifice of either economy or good sense but actually makes a good-time place natural to environment and purpose.

Work in plan stage.
THIS "Drive-in" laundry for Benjamin Adelman & Son, planned to be built in Milwaukee, Wis., was an attempt to put a novel idea in the laundry business into the perfect shape, ideal for its purpose. The establishment comprises complete steam-laundry with arrangements for collection and delivery of the wash and for the wash storage. The executive offices are near the main entrance where the packaging is done. The dry-cleaning establishment surrounds a central vent-shaft standing in the parking space provided for drive-in patrons. All stands upon a busy thoroughfare in Milwaukee where much traffic passes every moment of the day. The building has been planned as a great open center, with a plenum-chamber overhead, filled with warm air in winter, cool air in summer, the air drawn into the workrooms themselves by the suction of the basement exhaust to which the boiler room is connected.

Rest room and toilet accommodation, dining room and service accommodations are in the mezzanine, above the private offices of Mr. Adelman and his son. The drive-in feature has been amply provided for by sheltered approaches to delivery room.
WITHOUT success our Foundation made an attempt to change the routing and the design and placing of the Wisconsin Highway Commission’s projected bridge over the Wisconsin River near Spring Green and Taliesin. The citizens most affected by the bridge rallied 600 strong to our support. But other towns—the nearest 17 miles away—regarded this scheme as favorable to Spring Green at their expense (a long-range civic jealousy!) and the proposition was defeated by a bureaucracy previously established.

We prepared a standardized unit system cantilever bridge, staunch and easy to repeat any number of times anywhere—either independent of shop fabrication or employing it.

The type is called the Butterfly because the wingspread of the spans concentrates the load upon a deep central girder economical up to spans of 200 ft. The low sweeping arches become an asset to any landscape; whereas the commercialized high steel-truss main-bridges of the Highway Commission are about as becoming to the landscape as the poles and wires of utility companies—an outrageous imposition pardonable only in a pioneering era. Where civilization has succeeded we have a right to more enlightened consideration.
THE S. C. Johnson Company's new research-laboratory is a natural extension of the original administration building. In effect, it is a tall (14 stories) ventilating shaft, surrounding which all research activities of the laboratory have direct, all-around access.

The endless duct ramifications unavoidable in a building spread over the ground are here avoided, and the segregation of various departments is effected vertically instead of horizontally with the great advantage of light on four sides of each department. Communication between departments is also shortened and direct. Heating, ventilating and the appurtenance systems usually running into miles of complex piping and connections are here standardized vertically with direct take-offs from all supply systems to 14 operating floors.

The structure again is a trunk with a taproot, carrying lateral floor-slabs like branches, the glass shell hanging firm from each alternate floor slab. This glass envelope, like that of the original administration building, is formed of tubes outside but with a plate-glass wall inside, movable for cleaning purposes. The exterior of the building is provided with live steam outlets so the glass walls may be easily kept bright and clean.

Each story projects over the one below enough to form a drip which helps keep the glass clean and provides additional space on the best floors of all: those going up in the air.

Every appropriate appurtenance known to science has been sought in this building by Herbert F. Johnson, the originator and owner of the project.

It may be truly said in every sense in scheme and structure that here is an organic building. Construction is proceeding.
Gravitational heat combined with thorough air conditioning. Original building 1936. Laboratory 1944.
This series of small chapels (seating 75 to 100 people), each chapel with its own garden (all gardens in a garden) stands elevated upon the mass of shale now composing the unique site. The plan of the whole was an attempt to take some of the curse off the customary undertaker's official proceeding. I didn't expect to make even the funeral of one's enemies exactly cheerful, but I did think I could give the obsequies some beauty without destroying their integrity. Here five simultaneous funerals may be so conducted that one is not too aware of another. All preparation and disposal of the deceased is from down below in chambers independent of the ceremonial arrangements for special mourners. The place of mourning for the families called the "slumber room" caused most trouble, as the chief mourners do not care to be seen, though they do want to see. And, inasmuch as for some time before the funeral the deceased must lie in a private room at their convenience as mourners, the processes of one funeral immediately following another, the proper allocation of this space became a major problem. Here the synthesis is fairly complete and the business of the undertaker's funeral arrangements, choice of caskets, flowers, etc., is located in an independent building at the entrance to the chapel yard.

The practice of following the hearse through city streets to the burying ground after services has been dropped. The period of mourning has been somewhat shortened and a colorful, happy environment abundant with music, dignified, sound-proofed, well-lit space and reasonable segregation for each occasion has been provided. Every possible convenience designed to make the place helpful to the bereaved is here incorporated. The emphasis is here laid not on Death but on Life, In plan stage.

(Note: Nicholas P. Daphne called me after midnight a year or so ago to say that because he had bought the finest lot in San Francisco he wanted the best architect in the world to build a mortuary on it. Nick asked me if I had ever built one. I said no, and I thought that was my very best qualification for doing one. So he gave me the job. Of course I had to "research" a good deal and that nearly got me down. I would come back home, now and then, wondering if I felt as well as I should. But Nick had a way of referring to the deceased, always, as "the merchandise," and that would cheer me up. I pulled through...
SITUATED ON ISOLATED BLUFF OPPOSITE U.S. MINT. THE SITE NOW A HIGH MASS OF SHALE. STREETS ON FOUR SIDES.
DECENTRALIZATION. UNITARIAN CHURCH IN THE COUNTRY ON SPACIOUS GROUNDS NEAR MADISON, WISCONSIN APRIL 1941
THE Unitarian church in Madison, Wis. is a step the Unitarians have taken toward Decentralization. At first intending to build upon a city lot in Madison, they decided to move into the countryside nearby and build a church in the country where going to meeting on Sunday would be an event with charm comparable to, say, a morning at the country club, with the difference that here they would enjoy an atmosphere dignified and inspiring.

The structure is unitarian in character, trusting to a sense of the altogether as more beautiful than the aggregation of steeple, meeting house and parsonage could ever be. In this design, the social activities of the members of the congregation are served by the Church Auditorium itself.

In the front of the Auditorium, beautiful views of distant Lake Mendota frame the pulpit on either side. The preacher and the choir are at this apex of the main triangle. The whole triangle is the center of the plan, and the apex of the triangle is a stone mass of perforated pattern. The perforations are closed by colored glass making the mass resemble the rose window of an antique church. Otherwise, it is the mass of the structure that is depended upon to give the impression of aspiration usually left to the steeple. The walls are to be made of native stone, the interior framing wood, and the roofs copper. Construction to proceed next Spring.
This small department store in India for the Sarabhai family, proprietors of Calico Mills, is a simple and direct solution of their individual merchandising problem. Concession to the character of the climate is found in the carrying of all floors independent of direct contact on the outer wall shell, the shell itself being a perforated screen allowing inlet and exit of air on all floors. Top floors are for rest and private dining rooms. A very tall, two-story show-window permits the display of the printed calico fabrics which the mills produce. The construction is reinforced concrete block, earthquakeproof and fireproof.
This is a design for an urban hotel without interior corridors, regular windows on the street, or stores below to add to congestion and deprive the hotel of its best asset: the comfort and entertainment of its guests. It is somewhat less commercial than has become standardized in our states by chain systems exploiting guests for profit. The building is planned to be built at Dallas, Texas for Rogers Lacy, an oil capitalist. The structure is as completely organic as we can make it, weighing about one-tenth what skyscrapers of the Rockefeller Center type weigh, stabilized at this great height by a great single feature lacking in most similar buildings. This is the impressive mass of an adequate air-conditioning intake and exhaust, to which all parts of the great hotel have direct access. All supports are set back from the property lines to allow clear glass surface all around the street frontage, the entire ground floor being transparent from side to side of the entire ground area. Because the building is in the form of an open court, the center of this space will be in bright light and become a large water basin over the service features below. Various parts of the lower stories and mezzanine protrude as pergolas into this central court. From one corner of the interior court the tall shaft rises, placed to cast no shadow on the court. In plan the life of the hotel is in the patio. By this simple means, its to-and-fro, ordinarily humdrum, is here dramatized and made interesting in spite of itself. The features required by the best cosmopolitan life are all here simplified and expanded. The building is not only fireproof but so are the furnishings. There is a bathroom belt running around the building on each floor, ceilings dropped to carry piping and air conditioning, each belt connected to the giant vent shaft enabling the whole interior space to breathe freely. Should any guest prefer to turn from the dazzling beauty of this interior to view the street, the view is available by openings provided for that purpose. The plans make all this more or less evident. If our cities are to continue habitable, something like this turning inward, over ample parking facilities, all avoiding competition with surrounding mercantile establishments, introducing an element of repose and real harmony into building, is absolutely necessary. Construction is awaiting favorable building conditions.
UNLIKE MOST COMMERCIAL HOTELS, "ROGERS LACY" IS PLANNED CHIEFLY FOR COMFORT AND ENTERTAINMENT OF
BUILDINGS ARE BEING ADDED GRADUALLY AS MEANS BECOME AVAILABLE. GENERAL PLAN MADE IN SEPTEMBER 1936.
ADMINISTRATION BUILDING AND WATERDOME ARE UNDER CONSTRUCTION. COVERED ESPLANADE LEADS TO PROJECT...
THIS brief selection of views necessarily omits many of the characteristic features of the constructions herein illustrated. Moreover, photographs of buildings are inevitably unsatisfactory because the third dimension — "depth" — cannot be reached by the camera. Upon seeing the buildings, after having seen the photographs, invariably comes the expression: "Why, we didn't know it was like this." The photograph leaves the essential reality still to be grasped. Horizontal planes are those best revealing space relationships, and they defy photography. These particular buildings are all more truly imagined from drawings than from the short-hand of the camera-eye. So this "photographic section" is an addenda at random—to be read between the lines.
At the top of this page is a glimpse of the esplanade which connects all buildings, enabling one to walk to and from each in shade or protected from rain. Below is a view of the library; at bottom a close-up of the stack-room. Opposite, are shown the exterior and interior of the library reading-room built of double-block walls. All walls and structural members are reinforced cast-concrete. Roofs, eventuating into trellises, are too new to be vine-covered as intended. Color of the buildings inside, as out, is a warm tone—lighter on the plain surfaces. Roofing edges down over the eaves are in verdigris bands of copper detailed to drip, so that no gutters are needed. Acoustics are especially fine. The buildings do not crowd each other as might be inferred from the paging here, but each has its own stretch of esplanade and intervening trees. The library is similar to the chapel in construction but the chapel is more airy and "Floridian" in character, with a poise that speaks the spirit in the letter. Concrete wall-perforations are filled with cut-glass jewels. Flower-tower sifts sunlight into the auditorium, seating 1000 persons in out-door light.
The Solomon R. Guggenheim Foundation will stand on the block bounded by Fifth Avenue, 89th Street, New York City. As a project the design has fated usual to an idea, since time began. Regarded from fright to enthusiastic approval, to be taken by the uninitiated seems to be the solid continuous floor surface, winding about space, beginning on the second floor and extending the great dome at the top above that central within this central space is where the majesty and atmosphere of this building can best be whole is primarily an interior one. From it the ramp itself expands skyward in a flood of sunlight, the grand ramp from the interior as well as of bright daylight from the exterior.

That people looking at pictures on this unstatic wall-space will be aware of any positive arrangement of the pictures or in their own viewing them, is erroneous. As a whole interior is so gently proportioned that one is of complete repose similar to a still wave, never breaking, never offering resist to vision. It is this extraordinary quality of the known only in movement that characterizes making it a more sentient and spiritual expression by way of building materials and processes than has yet been achieved. Possibly it is the simple commonsense of the idea that confounds its critics. The construction of the great ramp, like that of a sea-shell, is clear of interior supports of any kind, the fibrous floors being carried throughout from the outer walls. The glass dome, covering the interior space and protecting it from excessive heat, is double, the space between heated in winter, cooled in summer. The dome is translucent rather than transparent.

The simple arrangement for handling pictures is not only labor-saving, but picture-saving as well. No gloss will be required upon them because of the complete air conditioning of the building interior, a proper degree of humidification being maintained the year round, and all entrances and exits guarded by dust-collecting vestibules. Nor will pictures require more than a negative frame because of the nature of the lighting. Entering into the spirit of this interior, you will discover the best possible atmosphere in which to show fine paintings or listen to music. It is this atmosphere that seems to me most lacking in our art galleries, museums, music halls and theaters. Since the first studies of the Museum were published, additional ground has been purchased and the building changed not so much in constitution as in proportion: an annex extending to 88th Street, and 30 feet on Fifth Avenue added. At present the Solomon R. Guggenheim collection is being moved into temporary quarters as designed by the curator. Construction of the building is awaiting favorable building conditions.
GLASS tubing, closing the interior walls of the Museum, is similar to the Johnson office-building at Racine, where the dome is constructed of two thick, spaced 5 in. apart with air conditioning. Striated bands of tubing lighting are constructed likewise. The effect is but translucent; not transparent.
DENDRIFORM COLUMNS OF JOHNSON BUILDING. DETAILS ABOVE; GENERAL VIEW BELOW. CEILING AND COLUMN ARE ONE
LECTURE ROOM USED AS CINEMA OR DINING ROOM. BELOW, GENERAL EFFECT OF BRICKWORK AND TUBING LAID SIMILARLY.
This prairie house for the Lloyd Lewis' is located on the low lands of the Des Plaines river. It seemed desirable to lift the living rooms of the house a low story-height above the ground level. The view down the river is thus enhanced and the humidity of the region rendered less objectionable. The river flows alongside the house and a garden extends beside the river from the Entrance Loggia. A screened-in porch extends the spacious-living room into a wide balcony overhanging and sheltering the entrance Loggia. Floor heated.
VIEWS OF LIVING ROOM AND DINING-ALCOVE. CYPRESS BOARD CEILINGS AND FURNITURE. ROSE COLORED COMMON-BRICK
THREE USONIANS: ROSENBAUM'S IN ALABAMA, POPE'S IN WASHINGTON D.C., GOETSL-WINCKLER'S AT OKEMOS, MICHIGAN.
Theodore Baird's at Amherst, Massachusetts. Herbert Jacobs' at Madison, Wis.
THIS brick and cypress plywood house at Bloomfield Hills, Michigan for Mr. and Mrs. Gregor Affleck, is another "up off the ground house" in a dense wood. It is nevertheless floor-heated and top-lighted. The plan is characteristic Usonian: one commodious room for general living purposes with bed-room privacy in an extended wing. In this case additional accommodation occurs in the ground floor basement.
HOUSE SEEN THROUGH SURROUNDING WOODS. GARDEN EXTENDS BENEATH L.R. AND IS SEEN FROM IT THROUGH OPEN WELL
“SNOWFLAKE” AT PLYMOUTH, MICHIGAN: FIREPLACE, DINING-ALCOVE WINDOWS. (BELOW) SUNLESS EXTERIOR WINTER VIEW.
"SNOWFLAKE" is the name of the country home designed for Mr. and Mrs. Carl Wall at Plymouth, Michigan. One of the more elaborate Usonians, this dwelling like the Paul Hanna House at Palo Alto, California, is based upon a hexagonal unit throughout. The "hex," being more human than the rectangle, affords easier circulation and nestles more readily into its environment. The house is the usual three-ply board-wall and brick-wall type. The interesting adjacent lodge and country-stable are not included here owing to lack of space. Concrete floors are heated.
THREE VIEWS OF REDWOOD DESERT-DWELLING NEAR PHOENIX, ARIZONA BUILT FOR THE PAUSON SISTERS OF SAN FRANCISCO

This single redwood-board wall house was erected in the Arizona desert. An attempt at super-economy was given stability by heavy masses of desert-stone cast in wooden forms. The Pausons did well by their house, furnishing it and living in it with charm. Unfortunately, renting it for a season, the house was burned to the ground. It is now about to be rebuilt.
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CHURCH AT ASSY

Located in Haute Savoie, a French department forming the south shore of Lake Geneva, this recently completed church nestles in a hollow in the mountains at an altitude of 2,000 meters. It was built under the direction of a Dominican Father who had the taste, courage and presumably the means to marshall the talents of some of France's leading artists for its design and execution. In keeping with its rugged and majestic surroundings, architects Novarina and Mallot evolved a bold modernization of the traditional style of the region. The result is a striking edifice which retains a certain rustic warmth through the use of rough wood and strong color. The main portico has exposed framing on the under side and the whole facade behind the columns is occupied by Fernand Leger's symbolic mural. Stained glass windows were executed by the painters Bazaine, Derain and Roualt. One of the latter's works is shown at left. The interior has a huge painting by Bonnard which was especially commissioned for this church and represents the last completed work by this artist before his recent death. The tabernacle is the work of Braque while the Stations of the Cross are depicted in tapestries by Lurcat.

The closest counterpart of such close collaboration among top flight artists in an ecclesiastical building is, of course, the church at Pampula, Brazil. The church at Assy, however, is the first outstanding European example and one which it is hoped will establish a precedent.  

(Continued on page 164)
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BOOKS


Originally published in 1938 and aimed at the English layman, the undiminsihing value of this book and its still timely relevance to American as well as British suburbiana puts a birthday celebration in order. Mr. Lancaster has written a wise and comic book. It is delightful and stimulating to find him so smoothly projecting the Horatian principle that a work of art should entertain as well as instruct. Moreover, it is essential that architects, as well as lesser mortals should occasionally indulge their sense of humor.

In his light-hearted fashion, Mr. Lancaster has something serious to say. He attempts "to induce an attitude towards architectural fashions of the day emerge a genuine modern architecture that need fear no comparison with the great styles of the past."—I.A.K.


It has been a long time since the appearance of a scholarly and authoritative book on the broad aspect of American interior design and furniture. Admittedly, publication of such a book as Mr. Franklin's admirable photographs of Colonial Williamsburg have contributed importantly in the traditional field, but they have, for the most part, dealt with isolated periods of our history. Books dealing with later and more general subject matter seem, on the other hand, amateurish and definitely commercial alongside Mr. Rogers opus. His is a study and a history with only one short chapter devoted to the aftermath of the industrial revolution. This will undoubtedly scare off a good many sworn modernists and, wrongly so, since the value of American Interior Design lies as much in its evaluation of relative significance through the years as in its objective analysis. Being no partisan, the author outlines, in a crisp, clean and scholarly manner, the important legacies for which England must thank the Greek, Roman and Byzantine worlds, and traces the history of English architecture from Early English to the present day, with emphasis on contemporary houses, (22 of the 4 "chapters" are on the nineteenth and twentieth centuries) Mr. Lancaster's discrimination, his restrained tastes and his strong grasp of the practical blend into 80 pages of impersonal, and reverence—place reverence is due. Companions to his prose are the author's simple, microscopically clear drawings, one for each period described. These drawings, represent no specific structure—"no reference is intended to any actual building living or dead"—but convey the important architectural fashions of the day. They are adorned with small human caricatures: a chubby monk complete with mop and bucket; a curate and a school-mistress, respectful before ruins; a burly Tudor mounting his horse; an organ-grinder with his monkey.

All this and much more is to be found in the pages of Mr. Lancaster's charming and informative book. Though delving mass-produced Stockbroker's Tudor and Banker's Georgian, he closes with the hope that from the bare, functional, cubistic style, not yet completely successful, "will one day emerge a genuine modern architecture that need fear no comparison with the great styles of the past."—I.A.K.

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architecture less reverent and of greater awareness" in the private citizen. The universal awe and ignorance he blamed chiefly on Mr. Ruskin, whose windy confusion of metaphysics and architecture frightened the populace away. This charge is perhaps, a little unfair, as Ruskin, surrounded by rapid industrialization and the consequent uglification of England's landscape, wished to make plain that taste reveals character and that a city's history is commemorated by her architecture—a sincere and valuable contribution, however responsible he may be for the unfortunate Victorian preoccupation with things Gothic.

The author outlines, in a crisp, clean and scholarly manner, the important legacies for which England must thank the Greek, Roman and Byzantine worlds, and traces the history of English architecture from Early English to the present day, with emphasis on contemporary houses, (22 of the 4 "chapters" are on the nineteenth and twentieth centuries) Mr. Lancaster's discrimination, his restrained tastes and his strong grasp of the practical blend into 80 pages of impersonal, and reverence—place reverence is due. Companions to his prose are the author's simple, microscopically clear drawings, one for each period described. These drawings, represent no specific structure—"no reference is intended to any actual building living or dead"—but convey the important architectural fashions of the day. They are adorned with small human caricatures: a chubby monk complete with mop and bucket; a curate and a school-mistress, respectful before ruins; a burly Tudor mounting his horse; an organ-grinder with his monkey.

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The illustrations of contemporary design, which are limited in number but carefully and well chosen, indicate that if Mr. Rogers leans at all to one school, it is that of the revival of the handicrafts and, heaven knows, he is not alone in this feeling among moderns or traditionalists. He claims that: "As to economics and the handicrafts, we are beginning to realize that, within human scale and for certain ends, the machine can only defeat itself and become the most costly method of production in both the long and the short run. There is no necessity for us to restrict ourselves to the limitations of the machine, though we must, of course, use it within its limits to maximum capacity and the point of diminishing returns. The most efficient tool is not always the most complex or the most quantitively productive. We are now learning the lesson that man is not to be fed by quantity production alone. Demand for work produced with a minimum of mechanical aid is on the increase." It is scarcely necessary to point out that the author’s sense of social responsibility is not costing him an sleep. But so far as the upper income bracket goes there is a good deal of truth in what he says. His book is in itself an opulent affair reminiscent of private publications of the Twenties. Productionwise it is a beautiful job. Supplemented by a complete and useful glossary as well as some biographical notes, it is just the thing for anyone seeking a sane and thorough account of the American evolution in the home arts.—M.S.

THE LAST LATH. By Alan Dunn. F. W. Dodge Corporation
119 W. 40th Street, New York 18, N. Y. $2.50.
Architects have always been noted for their high talk. But the great architectural jargon which a generation ago was largely emotional—grand entrances, perfectly swell fenestra-
tions, great huge cornices—has turned and twisted into an intense intellectual language in recent years—a language of organic syntheses, articulations, buffer zones, and flow lines. Architects are no longer, in the popular mind, artistic gentle-
men who stroll in moonlight gardens with lady clients, or ladies of clients. They are frenzied men snatching the great tortoise-shell claws of heavy spectacles from their temple-
and stabbing the air before them as they struggle to describe with mere words the taut mainspring of a machine for living. Where once it was a romanticized profession, architecture is now semanticized.

"Exactly! Where you want mutative continuity and design correla-
tion, I want a closet!

The best cartoons in Alan Dunn’s new book, “The Last Lath,” an Architectural Record book, are very funny presenta-
tions of phrases which have become architects’ glibnesses. Clients militantly demand doors through beautiful wall masses, sit meekly shivering in an outdoor living area, gossip about what happened in a neighbor’s all-purpose room. Even some of the captionless drawings are essentially satirization of verbal design. Dunn’s pen strokes are as fluent and erratic as some of the architects he joshes, and never fail to make his ideas funnier—W. McQ.

RECONSTRUCTION AND THE HOME. By Howard Robert-
Fourth Ave., New York. $3.00.

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169
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includes recognition that invention and creative experiment are useful; but it prescribes a period of testing, during which the new thought is exported abroad for trial; and after full development there (or rejection as the case may be) it is reabsorbed, gradually re-naturalized and finally accepted as a phase of evolution.

Howard Robertson’s new book, “Reconstruction and the Home,” is a guide to the English who are constructing and reconstructing their homes. Mr. Robertson discusses houses and flats in chapters ranging from “Heat and Light” to “The Design of Accessories.” As the leading quotation—from his section “The Building”—indicates, he does not expect the new homes of England to be of very advanced design, with the least assertive generally the most widely approved. Some, but not all of his illustrations (see photo) demonstrate this. A good deal of Mr. Robertson’s caution stems from realistic appraisals of government control and material availabilities, as in the case of bathrooms:

“The good bathroom, the kind we would covet, is likely to remain something of a mirage. It exists, but we can see it rather than approach it. We will all probably have to make do. Not because the perfect bathroom cannot materialize, but because we will not have the money to encourage it to be produced.” — W.M.Q.

**AMERICAN SCULPTORS SERIES.** Wheeler Williams, 1; Paul Manship, 2; Anna Hyatt Huntington, 3; Daniel Chester French, 4. W. W. Norton & Co., Inc., N. Y. Under the auspices of The National Sculpture Society. $1.50.

In this new series of inexpensive photographic chapbooks on the work of leading American sculptors, No. 1 in the series is the most recent sculptor (Wheeler Williams) and the succeeding books work historically backwards, with Paul Manship as No. 2, Anna Hyatt Huntington as 3, Daniel Chester French as 4. Just what will the publishers do when voracious readers of these handsome little picture albums will ask for examples of some of our younger modern sculptors (such as Noguchi, Heald, Robus, Smith et al)? Our only hope is that if they commence a new series with Roman numerals, they let the Roman influence go no further.

Whatever one’s tastes in sculpture (and there is and has been in this country a tremendous variety to choose from), one can agree with Paul Manship that “the credo of an artist is the result of his education and environment.” Sculptural education has its complications in this broad land of ours, due to the difficulties of shipping sculpture around for exhibitions. All the more reason, then, for having photographs of work in easily accessible form.

There is very little text in these booklets—only a brief

(Continued on page 176)
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REVIEWS

Daniel Chester French

Most of each book consists of photographic reproductions (not too clear), and for each there is a brief caption of identification. A student of sculpture would not learn much technique from these pictures, but they give interesting-historical impressions as surveys of work done and popularly acclaimed. Indeed, we trust that neither architects nor students will study this material too assiduously. It has a place in any record of our past but (we hope) not too much importance for our sculptural future. As a matter of fact, it is unlikely that the careers of these particular representatives of leading (or successful) American sculptors is apt to be repeated. For, as the short biography of Daniel Chester French in No. 4 points out: "... His background was... one of accomplishment, of hard work, of brains, of educated and cultivated minds. But nowhere in it had there ever appeared the slightest blossoming of artistic talent. Therefore it was a complete surprise to his family, and probably to himself, when the youth of nineteen, who hated school, who showed no inclination to go to college, decided out of so clear a sky to become a sculptor... He learned by doing."—E.B.


This little book is at once a fascinating and terrifying addition to what must be an almost non-existent class of literature— that dealing with life and building conditions in Colonial West Africa. It is fascinating because it demonstrates the applicability of contemporary town planning and housing concepts to even the most primitive community. It is terrifying because it describes the actual conditions of such communities today. Although the authors—an English town planner and two architects—are careful not to draw any generalizations from their material, the generalizations nevertheless protrude, like the bones of a half buried skeleton. West African problems are numerous and severe and none of them do any credit to the "White Man." A full four centuries after his appearance, malnutrition, disease, ignorance and poverty hold the African in stupefying squalor. Yet it is to their credit that the authors show little of that patronizing superiority which characterizes "civilized" men when confronted with the ruinous impact of their civilization upon defenseless primitive cultures. They went to Africa to prepare this handbook for the Resident Minister and they have reported with honesty and sympathy what they found.

"Mirrors are still expensive and beyond the income of many village authorities" while "plates and cutlery are beyond the income of most villagers." As far as they could find, "no villages at all (have) water-closets and a proper water-borne sewage disposal system" while "the day of village electricity is still some way off." Such a catalogue of disaster might well have daunted less persistent designers but not the present authors. There is much that can be done right now and they (Continued on page 180)
TRUSCON PLANNING BOARD

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FOREIGN PERIODICALS

MARQ. 25 Cuffe Parade, Colaba, Bombay 5, India. A new quarterly devoted to national problems and achievements. Covers all fields of art with a beguiling, but not too oriental, flavor. As might be expected, the major issues are city planning and housing. Annual rate: Rs. 18.

ART PRESENT. Published by Editions Clermont, 44 rue Copernic, Paris 16, France. A new bi-monthly printed in French and English which deals with architecture and the plastic arts in a very French manner. Yearly rate: 1,300 fr.

have shown how to do it. With simple text and a wealth of good diagrams, they cover problems of adapting village layout to climate, topography and social structure; various types of housing are shown (including that for the polygamous Mohammedans), together with minimal designs for communal kitchens, washhouses and public baths. There is a whole section on water supply and waste disposal. Protective measures against insect life are described (to protect the village against the dreaded tsetse fly, keep the bush cleared 230 yds. away from nearest house).

What is most impressive about the book, however, is the attitude of the authors towards the natives themselves. They show both sympathy and respect for tribal cultural patterns as, for example, in their discussions of the social uses of the front porch, the street and the "palaver" grounds. It is certain that not only Africans, but the rest of us as well, would be a lot happier if the spirit as well as the letter of this little book were to serve as an effective policy for colonial peoples everywhere.—J.M.F.

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Measuring 32 in. between handrails and designed for a maximum rise of 23 ft., this new Escalator is engineered to meet the needs of business establishments where moving stairways have not previously been considered economically feasible. Its handling capacity is 5,000 persons per hour. The 32 in. width between handrails provides ample room on one step for an adult and child and because the maximum rise is only 23 ft., the use of lighter weight structural and mechanical members is possible. The new moving stairway is a self-contained package in that its operating machinery is built within the unit's truss. The usual machine room is eliminated and because the new Escalator is approximately 25 per cent lighter in weight, structural reinforcement can be minimized or eliminated. According to the manufacturer, there has been no sacrifice of safety devices or operating efficiency but design changes have lowered the price, cut installation costs and reduced power consumption. The price of the new conveyor is said to be approximately 33 per cent less than for the standard 4,000 per hour capacity Escalator which measures 24 in. between handrails and is heavily constructed for rises up to 60 ft. Quiet operation and the elimination of slack in the handrails are other features. Otis safety tread and comb plates, 180° extended newels, aluminum deck covers and mouldings, and interior panels of porcelain enamel are standard equipment. Speed rate is 90 f.p.m., angle of incline is 30°.

Manufacturer: Otis Elevator Co., 260 11th Ave., New York, N. Y.

FLUID DRIVE ELEVATOR reduces engine size, simplifies electrical control system.

Warsaw Elevator Company's new “Gyroil” fluid drive elevator uses a coupling device similar to that on some automobiles to achieve economies in size, power and cost. According to Warsaw engineers, the new elevator's automatic acceleration and deceleration replaces present complex arrangements of heavy duty automatic switches with a two-switch control, one for up travel, one for down. Less service and maintenance is thereby required. A smaller elevator motor can be used because it starts under no load, being thrown on when the car switch is closed and gaining momentum before the fluid coupling takes hold. No heavy starting current is required and power costs thus are also decreased. Besides the savings of space and maintenance, the company estimates savings well over 10 per cent on installation. The unit shown is rated at 1,500 lbs. and 125 ft. per minute, with a 7½ hp motor, single speed, 1,200 rpm. Weight is 1,600 lbs.

Manufacturer: Warsaw Elevator Co., Warsaw, N. Y.

STEEL PICTURE WINDOW combines large fixed sash and two ventilating casements.

The new standard Fenestra picture window, an attractive three-unit combination with narrow steel frames and muntins, includes a large center fixed-glass area flanked on either side by an outswinging casement. The large fixed light sash is glazed with a single pane of plate glass set in non-hardening putty. The smaller ventilating casements which open out to catch the breezes and deflect them into the room are operated by Fenestra Roto-Adjusters. A locking handle clamps these vents firmly against the frame for a weather-tight seal. The new window may be used in a wall, bay or corner and may be equipped with storm sash and screens from inside the building.

Manufacturer: Detroit Steel Products Co., 3111 Griffin St., Detroit, Mich.

ALUMINUM JALOUSIES act as windows, provide ventilation, protect against rain and glare.

Developed primarily to meet the needs of the tropics, Thorn Tropic-al aluminum jalousies serve as a combination window, venetian blind and storm sash without the use of glass. They provide controlled ventilation, protection against rain and glare and afford complete privacy. Made entirely of non-ferrous materials, they are vermin, termite and rotproof, do not warp or swell, need no painting and are highly resistant to corrosion. Frames of Tropic-al jalousies have integral reinforcing ribs and water baffles designed to conduct water to the outside. The strong horizontal extruded slats, approximately ½ in. wide, are rib-reinforced and are connected together by a flat rod. Top and bottom reinforcing ribs interlock when slats are closed to provide protection against housebreaking. A friction control on the bottom of the connecting rod at the sill holds the slats in any position up to 185° and locks them firmly when closed. Tropic-al jalousies come to fit standard size openings and are delivered to the site assembled ready for installation.


DUAL-PANE TEMPERED GLASS DOOR with metal frame costs less than all glass doors.

This new Temprex Glass Door, which comes in standard sizes complete with handle and lock and drilled to receive double action floor checks, is reported to be the first dual-pane tempered glass door on the market with a metal frame. It is also reported to cost considerably less than existing all-glass doors. Framework of the new unit is extruded 3/32 in. aluminum with an Anodized finish. It is assembled in two sections locked together by special extruded keys running the full length of the vertical and top and bottom rails. The door is equipped with two panes of 5/32 in. Temprex (tempered plate glass) and has a standard floor lock mounted so that the cylinders may be removed by loosening screws on the front lower edge of the door. The unit may be had in any width up to 42 in. and in any specified height, or in standard units of 30 in., 32 in., 34 in. and 36 in. widths, with a 6 ft. 11½ in. height. The unit may be mounted on standard double action floor checks, or on butt hinges. Standard door closers may also be mounted on the top rail.

Manufacturer: Appleman Art Glass Works, North Hackensack, N. J.

ALUMINUM DOOR CANOPY is easily installed.

Designed to protect doorways from rain, snow, sleet and sun, the new Lumi-Shade all-weather door canopy features utility, low cost and easy installation. The roof is constructed of interlocking aluminum sections and is designed to drain rain water and snow to the gutter and off the sides at the corners. It will not catch leaves or dirt. The canopy is finished in

(Continued on page 188)
This Detroit school gymnasium illustrates the versatility of Fenestra Building Panels. Here is a combination ceiling and roof that provides desired quietness and fire safety, and does it by economical construction methods.

Fenestra Type AD Panels, 17' long, are laid directly on the beams, eliminating purlins and rafters. The result: a clean, unobstructed ceiling. This long-span panel is capable of carrying either roof or floor load between beams. The smooth, bottom face is perforated and backed up with fibre glass or rock wool, inserted within the cells, for sound absorption. Wiring for lights is also concealed in these cells. Insulation and roofing, applied to the top surface, completes the roof unit. When used for floors, the Type AD Panels are combined with concrete or other floor surfacing materials of your choice.

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It’s Otis throughout

HERE NOW — the new Otis “32”, designed especially for the medium-sized and smaller building. The result of many years’ research, this modern Escalator has all the time-tested features of earlier models, plus a wealth of post-war design features...it is truly the last word in Escalator design.

Capable of carrying 5000 people an hour, the Otis “32” handles more persons per dollar investment than any other moving stairway. Wide enough to comfortably carry an adult and child on one step, it is the ideal size for most stores, stations, plants, banks and other public buildings. Yet for all its spaciousness, the “32” requires less space and structural work than narrower moving stairways.

Best of all there has been no compromise with quality. In eye-appeal, in safety, in the inherent ruggedness that makes for long life and low upkeep, the new “32” is the equal of any Escalator we ever built. And remember, only Otis makes Escalators.

NEW FREE BULLETIN B-700A tells the whole story. Write for your copy to Otis Elevator Company, 260 Eleventh Avenue, New York 1, N. Y.
There's insulation and there's INSULATION!

Many new homeowners boast that their places are insulated ... then get a terrific let-down when they learn that the insulation has been installed so thin that they will get only a fraction of the benefits that home insulation can provide.

NATIONAL GYPSUM COMPANY, BUFFALO 2, N. Y.

(Apppearing in full color in the February 21st issue of The Saturday Evening Post.)

You'll build or remodel better with Gold Bond

Puzzle: which house costs less to heat?

The house on the left costs a lot less to heat—the one with the snow on the roof. The snow is still there because this house is insulated with Fireproof Gold Bond Rock Wool. Furnace heat is kept inside instead of leaking through the roof to melt the snow. Heating costs are cut as much as 40%.

Naturally you'll want your new home insulated. But don't make the mistake of just saying you want "insulation". That's like going to the butcher and asking for a pound of meat—any meat. It will pay you to remember two points about insulation:

1. Specify Fireproof Gold Bond Rock Wool. This National Gypsum product is not just "fire-resistant", not just "heat-retarding" but as fireproof as the rock from which it is made.

2. Specify that you want full thickness insulation—not 1 inch or 2 inches thick but full thick. With full thickness insulation you get the full benefits that home insulation can and should provide. And because it completely fills the wall, only full thick insulation provides an effective fire stop.

Gold Bond Rock Wool insulation is only one of over 150 Gold Bond Products—engineered to help you build or remodel better at a modern cost. Included are Gypsum Lath, Plaster, Lime, Sheathing, Metal Lath, Insulation, Wallboard, Acoustical Products and Sundries, the one-hour wall paint.

Your local Gold Bond lumber and building material dealer is headquarters for all this new in building products. See him first!

Gold Bond Building Products add beauty, fire protection, economy, and comfort at no extra cost. They include fireproof wallboard, lath, plaster, lume, sheeting, wall paint, insulation, metal and sound control products.

HOW TO SAVE UP TO 40% ON FUEL...

PUT FIREPROOF GOLD BOND ROCK WOOL BATTs BETWEEN WALL STUDS

INSTALL GOLD BOND ROCK WOOL BATTs OVER TOP FLOOR CEILINGS

INSULATE OLD HOMES WITH GOLD BOND ROCK WOOL "BLOWn" INTO WALLS AND ROOF.
How much air at 4th and Main?

You can’t afford gold-braided doormen for that store at 4th and Main. No luxurious “extras” of any kind.

And yet you know, from costly experience, that air conditioning for this store is a must. You know that next summer will be hot and sticky ... that shopping will be wearying work ... and that women will give their patronage to stores and shops that are comfortably cooled.

So it isn’t a question of whether you need comfort cooling at 4th and Main. The question is: How much can your store afford?

USAIRCO has the profitable business building answer in its 3 great comfort cooling systems ... each a pre-engineered package unit ... each available in a variety of sizes to meet any requirement.

Refrigerated Kooler-aire delivers the ultimate in air conditioning ... Cold Water Kooler-aire is designed for those locations where 55° water is available ... Evaporative Kooler-aire gives washed and filtered air cooling at “pennies-a-day” costs. USAIRCO co-operating engineering counsel is available for correct installation.

Would you like to see exactly what these systems are and what each one can do for you? Write and we’ll send you all the facts.

UNITED STATES AIR CONDITIONING CORP.
Como Ave. S.E. at 33rd, Minneapolis 14, Minn.

3 COMFORT COOLING SYSTEMS ... AT 3 BUDGET LEVELS

a variety of baked enamel colors and the colorfast enamel finish is chip- and crack-resistant. Lumi-­Shade comes complete in one package ready for installation and, as there are only six different parts, is easily installed.

Manufacturer: Thabet Manufacturing Co., 626 Huron St., Toledo, Ohio.

STEEL BRIDGING for reinforcing floors reduces building costs.

Pioneer Tru-tie bridging is a new, tested steel bridging for reinforcing floors. Replacing the conventional wood bridging, it is formed from rust-proofed, high carbon steel and is ribbed to provide extra strength. In use it is secured to the top of each joist by two prongs and is countersunk with one hammer blow. The two ends are then fastened to the bottom of the two adjacent joists with one nail in each. Ends are bent upward and the prongs driven into the wood for a permanent bond. According to the manufacturer the new unit effects savings in labor and nails which cut bridging costs in half. The unit comes in one standard size, fits 2 x 6 in., 2 x 8 in. and 2 x 12 in. joists.


RUBBER STRIPS attach to concrete forms to produce bevels and decorative treatments.

The U. S. Rubber Co. has recently introduced a new method of forming bevels and decorative grooves on concrete surfaces by means of rubber strips attached to the forms in place of conventional wood strips. These new strips, produced in various shapes and sizes, attach to the form with a waterproof adhesive and are easily removed without chipping the mortar. The rubber is said to produce a smooth finish and the strips can be reused many times.

Manufacturer: U. S. Rubber Co., Rockefeller Center, New York, N. Y.

SAFETY STAIR NOSING with colorful non-slip abrasive tread is designed for use with resilient floor coverings.

This new line of Tuff-Tred Safety Stair Nosings provides maximum safety, durability and enduring appearance to all types of stairways. Furnishing a wide, smooth, non-slip, non-trip surface which contains over 60 per cent abrasive grains, they are available in either square or round edge designs in a choice of four colors. Nosings can be installed with all types of resilient floor coverings, rabbeted into wood stairs or inserted into concrete or terrazzo stair construction.

Manufacturer: Goodloe E. Moore Co., Danville, Ill.

WASHABLE FLAT PAINT, applicable to fresh plaster, offers one-coat coverage, does not support flame spread.

Especially suitable for housing projects, Rubber Gard Velvet Flats is a washable, decorative flat finish that can be used on fresh, damp plaster walls as well as on existing surfaces. With excellent one-coat hiding qualities, it does not support flame spread even under intense heat, is resistant to staining and can be scrubbed like porcelain with ordinary cleaning compounds. It can be easily applied, dries in one hour and can be painted over with any type of paint. This new rubber base paint comes in white and ten colors.

Manufacturer: Wilbur & Williams Paint Corp., 43 Leon St., Boston, Mass.

FLUORESCENT LIGHTING FIXTURE for industrial installation is low cost.

According to the manufacturer, low cost is the main feature of this full-size Silv-A-King industrial fluorescent lighting fixture. Known as the Economical Unit, it is a two lamp, 40-w. open-end type fixture, completely wired with 6 in. No. 18 AF wire leads, ready to install. Reflector is full size, 13 in. wide, 52 in. long and comes in (Continued on page 192)
GENERAL ELECTRIC Q-FLOOR WIRING ADDS FLEXIBILITY TO STORE LAYOUT

To provide an electrical system that can be quickly adapted to any changes in store arrangement, the new Abraham Drug Store in Burlington, Vermont, has been equipped throughout with Robertson Q-Floors and General Electric Q-Floor wiring.

Planned for Efficiency
This attractive four-story building, like larger buildings constructed with Q-Floors, was designed for efficient service and economical maintenance now and throughout its life. Today, Q-Floor wiring provides ample facilities for general and showcase lighting, for cash registers, and other electrical needs. In the future, as layout changes are made, electrical outlets can be moved and new outlets added wherever needed — quickly, and without the expense of ripping up floors or installing new raceways.

How Q-Floors Save
Any building, large or small, can be designed to stay electrically flexible with G-E Q-Floor wiring. The Q-Floor system — a series of hollow steel cells under the finished floor — provides raceways that can be tapped anywhere in the floor on six-inch centers. Thus, electrical facilities can be changed at any time, with little effort, and at low cost. When building, get Q-Floor planning assistance from your General Electric Merchandise Distributor or a factory underfloor specialist. For information, write to Section C59-14, Appliance and Merchandise Department, General Electric Company, Bridgeport 2, Connecticut.

All electrical requirements in the up-to-date Abraham Drug Store, Burlington, Vt., are provided for with General Electric Q-Floor wiring. This modern wiring system, making changes in electrical layout simple and inexpensive, will keep this building always electrically young.

Left: Orin Lambert of Sherwin Electric Company, electrical contractors, demonstrates the ease with which new electric outlets can be installed in Q-Floors. Right: L. S. Newton, architect, proudly makes a purchase in the new Abraham Drug Store, which he designed to include General Electric Q-Floor wiring. Note accessibility of electric outlets.

GENERAL ELECTRIC
USG is a trade mark which distinguishes the products of United States Gypsum. Architects and builders know it as a symbol of highest quality. They look for it on the bag, tag or label of today's building materials. They know that USG products are developed in the most modern of research laboratories. In production, these products are checked against the highest standards in the industry. The trust and acceptance symbolized by the USG trade mark means more satisfied clients for architects and builders. It's a firm foundation for better business.
because of Steel Pipe
her drink is pure and clear...

She's the healthiest child in the world—this regular American kid. Pipe had much to do with making her strong, straight and sturdy, and in keeping her so.

She drew her first breath in a modern hospital. Mile after mile of pipe made possible the sanitary and therapeutic facilities that gave her a head start over the children of other nations.

Her home sets the world’s standards for comfort, convenience and healthful living, largely because of the thousand-or-so feet of pipe that provides pure water, heat and sanitation.

All through her life, steel pipe in one form or another will help to assure her health and happiness. She can take it for granted—we all can.

The interesting story of "Pipe in American Life" will be sent upon request.

COMMITTEE ON STEEL PIPE RESEARCH of American Iron and Steel Institute, 350 Fifth Avenue, New York 1, N.Y.

STEEL PIPE MAKES IT POSSIBLE!

...better living through pipes of steel for plumbing and heating purposes.
If Mr. and Mrs. Client were building their own home, they'd be sure to “build in” two important comfort features—an Emerson-Electric Home Cooler Fan for a cool, “sleepable” house on hot summer nights—and an Emerson-Electric Kitchen Ventilator for an airy odorless kitchen.

Emerson-Electric is continuing to sell these two home-comfort ideas in more than a score of popular magazines, reaching thousands of present and prospective home builders. You're sure to please your clients and make your client-job easier, when you specify and install Emerson-Electric Kitchen Ventilating Fans and Home Cooler Fans.

For detailed specifications and complete information, write for free illustrated catalog No. B-30 TODAY.


NEW FLUORESCENT FIXTURE LINE offers variety of types and models.

This complete new line of fluorescent fixtures, known as Troflelite, includes a variety of types and models in 12 in., 24 in. and 13½ in. widths, and in deep or shallow construction. The 12 in. and 24 in. width fixtures are manufactured in the following types: open, glass enclosed, haffied and houvered. In deep construction these fixtures can be had for use with 96 in. and 72 in. Slimline tubes. The 13½ in. width fixture is available only with Holophane Controlens. All of the new units are treated against rust and are finished in baked white enamels inside, gray enamel exteriors.

Manufacturer: Leader Electric Co., 6127 North Broadway Chicago, Ill.

DUPLEX REFRIGERATOR combines 7 cu. ft. deluxe refrigerator and 3.5 cu. ft. zero food locker in one cabinet. Actually two appliances in one cabinet, the Frostair Duplex provides a 7 cu. ft. refrigerator above a 3½ cu. ft. frozen food locker. The 40° refrigerator has a full 14.2 sq. ft. shelf area while the zero locker holds 130 lbs. of meat or 80 qts. of fruits or vegetables. Each compartment features a separate Dutch door and a separate refrigeration system. In the upper or refrigerator compartment the freezing coils are concealed inside the walls. Thus defrosting of the refrigerator area is eliminated. Humidity is kept at 80 per cent. Removable shelves glide out easily and because the refrigerator compartment has waist high reach to the lowest shelf, there is no stooping or bending. Other features of this compartment include a separate icemaker capable of making 90 cubes at one time, a special compartment for tall bottles and three wire baskets for fruits and vegetables. According to the manufacturer, the icemaking compartment needs defrosting only once or twice a year. The 3.5 cu. ft. frozen food locker, located behind the lower Dutch door, maintains temperatures at zero and requires no defrosting. The compartment has two aluminum-fitted bins equipped with automatic safety stops. The new Frostair Duplex is heavily insulated and employs two silent hermetically sealed refrigeration systems which are said to insure efficiency, few repairs and long life. Overall (Continued on page 196)
In aiding America solve her most drastic housing problem, KNOX — builders of good homes for 50 years — leaves nothing to chance; each operation from the selection of raw materials to final assembly is performed with the same skill . . . and precise workmanship which has been characteristic of Knox operations for half a century. Constructed in Knox’s modern plant with quality materials throughout, all operations are precise, accurate, dependable. Knox builds modern homes that will endure.

TODAY’S KNOX HOMES ARE PLANNED BY CHAPMAN AND EVANS, NEW YORK ARCHITECTS. DESIGN VARIATIONS ARE MANY AND ATTRACTIVE.

For complete information and data on Sales Representation in your area, write Knox Corporation, Thomson, Georgia. Learn about advantageous marketing of Knox Homes still open to arrangement in many parts of the country.
To remodel this lake home in Iowa, Andersen Windowwalls® were a wise choice. For they frame the view of the lake, permit plenty of sunshine and fresh air to enter the home, and function both as walls and windows, protecting the comfort of the interior while opening up the attractive vista.

Here the designer has placed a picture window between several Andersen Gliding Window Units, so that nearly the entire room is walled with glass. Specification data is in Sweet's Architectural and Builders' Catalogs or will be sent by Andersen Corporation on request. See your local lumber and millwork dealer for prices and delivery information.

* TRADEMARK OF ANDERSEN CORPORATION

Andersen Corporation
BAYPORT • MINNESOTA
This building is truly MODERN

... because the pipe joints are Silbraz®

Owners, architects, and builders of new buildings are using all the latest building techniques at their command. That's why the brass and copper pipe runs of truly modern buildings are specified Silbraz — the modern way of joining brass or copper pipe or Type B copper tubing. Silbraz joints are silver brazed—not soldered or threaded — and form a joint that is stronger than the pipe itself. They are leak-proof, permanent, and will not creep or pull apart under any condition which the pipe or tubing can withstand.

Silbraz joints actually make the brass or copper pipe or tubing into "one-piece pipelines" that save you money by eliminating leaky connections, costly maintenance, and repairs.

Walseal® Valves and fittings for Making Silbraz Joints

The Walworth Company, produces a complete line of Walseal Valves, Fittings and Flanges for making Silbraz joints — the modern method of joining brass or copper piping. For further information, see your nearest Walworth distributor, or write for Circular 84A.

WALWORTH valves and fittings

Make it a "one-piece pipe line" with Walseal

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD
And this is really a good "steer." It's the trend of home buyers' preference for automatic Electric Water Heaters.

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

Construction costs can be reduced with Electric Water Heaters because there's no flue or vent, so installation can be made anywhere—in a closet, in the kitchen, in the bathroom, in the utility room. Hot water lines can be short, cutting piping cost.

Customers like Electric Water Heaters because they are: (1) Automatic (continuous hot water, no attention); (2) Clean (smokeless, sootless); (3) Dependable (short hot water lines; no flue or vent); (4) Trouble-free (as electric light); (5) Economical (plenty of hot water, fully insulated storage at low cost); (6) Safe (all electric); (7) Flexible Installation (can be located in living quarters; does not consume oxygen.)

Electric Water Heaters Section NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

155 East 44th Street, New York 17, New York

**COMPACT REFRIGERATOR of 7 3/4 cu. ft. capacity fits into small and medium size kitchens.**

Designed to fit into small kitchens and apartments, Coolerator's new 7 3/4 cu. ft. "Kitchen Saver" refrigerator gives a maximum storage capacity in a cabinet requiring a minimum of floor space. The compact, streamlined cabinet measures only 56 3/4 in. high, 22 in. wide, and 25 in. deep. It provides 15.7 sq. ft. of shelf area and in addition a 25 lb. built-in frozen food locker. A separate shelf is included for three large ice cube trays or the freezing of 42 cubes at once. Other features include two special shelves for tall bottles, a fruit and vegetable crisper, defrosting tray, interior light and 3 in. of insulation. The new refrigerator is operated by a hermetically sealed freezing unit that does not require oiling or adjustments and has three zones of cold.

List price of the new unit is $239.75 f.o.b. Duluth.

Manufacturer: The Coolerator Co., Duluth, Minn.

**ELECTRIC RANGE for apartments and builder projects requires minimum floor space.**

Designed especially for apartments and builder projects as a companion to the Kelvinator Space Saver Refrigerator (B.R. 4/47), this new 21 in. electric range provides important space saving and efficiency advantages for the small, modern kitchen. Only 21 in. wide, 25 in. deep and 36 in. high, it features a full size two-unit oven and three surface units. The two-unit oven with a 3,000-w. top unit for broiling and a 2,000-w. bottom unit for baking measures 16 in. x 16 in. x 19 in. Heavily insulated with Fiberglas it has a counterbalanced door and broiler stop and rounded corners for easy cleaning. A concealed vent provides an outlet for excess vapor. There is a manually operated oven selector switch for bake, preheat and broil speeds and a signal light to indicate when oven is in operation. The three surface units, an 8 in. unit with wattage range from 130 to 2,100 w. and two 6 in. units with wattage ranging from 80 to 1,250 w., are of triangular tubular design. Each seven heat unit has two separately controlled cooking areas for greater flexibility and economy. Cooking units can be raised to allow easy cleaning of the reflector pan. The new range has a welded one-piece porcelain exterior with porcelain acid resistant top, recessed sloping switch panel and a handy appliance outlet. Connected load is 10,260 w.


**STAINLESS STEEL SINKS available in any number of units.**

This new line of seamless utility stainless steel sinks is available in one, two, three or more (Continued on page 200)
To have contented customers, popular home-buyer trends must be recognized. Today the trend is to Electric Ranges. Another million American families switched to Electric cooking last year. Estimates indicate that this year over 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. It’s simple and economical to include wiring for an Electric Range leading to a range outlet in the kitchen at the time of construction. This is assurance that the houses you build are not only modern today, but will stay modern for years to come!

Follow the trend... YOUR HOUSES WIRE FOR ELECTRIC RANGES

Another 1,000,000 American families switched to Electric Cooking last year.
York Products...

York Leadership...

Backed by These York-Trained

AIR CONDITIONERS
Sprayed finned surface dehumidifier single units up to 60,000 C.F.M.

Finned sections for central station coil banks.

ECONOMIZERS (evaporative condensers)
Sizes to match compressor capacities.

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WHATEVER the refrigeration or air conditioning specification, there's a complete range of York equipment to meet it ... And wherever the location of the job, there's a York-trained engineer within easy reach for practical assistance in planning and layout.

This experienced, technically trained manpower — backed by facts and figures from thousands of successful York installations — is at the service of architects, consultants and contractors, from the planning stage right through to final installation.

And installation is not the end of York responsibility. Through a special maintenance service contract, you are assured uninterrupted, efficient operation of York equipment by your nearest York-trained maintenance staff. York Corporation, York, Penna.

**Engineering Staffs**

**Turbo Systems**

9 compressor sizes ... air conditioning capacities to 1600 tons.

**Viw Freon Compressors**

15 to 350 tons.
This Control is a “MUST” for all types of RADIANT HEATING

Easily installed on New or Old Hot-Water Systems

Now for the first time at moderate cost, White-Rodgers offers an entirely new Indoor-Outdoor temperature control designed especially for radiant panel, radiator and convectore heating systems. Easily adjusted—it maintains constant indoor comfort and saves fuel by varying the water temperature in accordance with changes in outdoor weather, balancing for the heat loss of the individual home.

WHITE-RODGERS Controls

1255 Cass Avenue, St. Louis 6, Missouri

ELEVATOR MAINTENANCE RECORDS SHOW

OPERATIONAL REDUCTIONS OF

24% to 44% K.W.H.

WHEN EQUIPPED WITH

ELSCO ROLLER GUIDES

Reduce operational and maintenance costs and get smoother operation from new or old elevators. Elsco Roller Guides roll on wheels on a dry, greaseless rail, eliminating kilowatt consuming friction and rail maintenance costs. Compensating arms are spring loaded to maintain constant contact and to take up rail inequalities. Approved by the Board of Standards and Appeals.

FROM ONE BUILDING REPORT “... we actually show an estimated saving of 44.4%.”

FROM ANOTHER BUILDING REPORT “... our records now show a reduction in power consumed of approximately 30%.”

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ELEVATOR SAFETY CORPORATION—DEPT. A

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SINKS and CABINET TOPS

investigate the long-life economy and efficiency of JUST LINE quality. In addition to all-welded seamless construction, radius corners and many other features, JUST LINE SINKS give you the

EXCLUSIVE Radiiluxe DESIGN

1 IN-BUILT ANTI-SPASH RIM ON BOWLS

2 DOUBLE-PITCH DRAINBOARDS ... no channels to clean, no grooves to endanger fine glassware.

CUSTOM-BUILT or STANDARD SIZES

JUST LINE products also include SCULLERY SINKS in Stainless Steel or hot-dip galvanized after fabrication, as well as Stainless Steel equipment for hospitals, schools, factories and institutions. Prompt service.

Write today for bulletins and details.

Just Manufacturing Co.

4610-20 W. 51st Street, Chicago 50, Illinois
Asphalt Shingles are made to be both practical and beautiful. Year after year they have delivered to the home owner extra value in weather protection, in fire safety, in color, in looks, in long, low cost service.

Today, these extra values are at an all-time peak. With production of Asphalt Shingles at more than 2 3/4 times the level of 1926, wholesale prices are actually below those of that active building year. And today’s Asphalt Shingles are a better product than ever; better made, better looking, better wearing. They are construction’s biggest dollar’s worth!

The book pictured above, illustrated in full colors, prepared with the help of architects, offers some new thoughts on the design and color possibilities of Asphalt Shingles. Write for a free copy.
Baha'i's boilers offer three-fold warmth in welded steel from a triad of Type "C" BOILERS
Steaming Capacity, 500 horsepower, fueled with oil
L. J. Bourgeois, Architect
Advance Heating and Air Conditioning Corp.

The BAHÁ'Í TEMPLE
Wilmette Illinois

Nonagon in plan, tripartite in elevation, this architectural masterpiece blends the ancient mysticism of the Orient and of the Occident with the practicality of the present. It was laboriously molded block by block in gleaming white cement sparkled with fine-ground quartz.

Three tiers of nine capital-tipped pilasters support as many arched facades for the doorways inset below. All are richly fashioned in symbolic tracery. All converge triumphantly to a focal pivot-point, fit apex for the capping cupola, spheroid shaped and textured in frosted filigree.

In perspective a brilliant vista, this house of meditation is the visible nucleus of a cultural center to come, purposed as a social service grouping to exemplify in practice the unifying influence of Baha'i teachings.
Books of facts about PC Glass Blocks

Send the coupon for your copies

THE INDUSTRIAL BOOK treats comprehensively of the use of PC Glass Blocks in a wide variety of industrial plants to distribute light, to insulate, to exclude harmful dust and grit, to reduce maintenance and fuel costs.

THE COMMERCIAL BOOK deals with the use of PC Glass Blocks in office and public buildings, stores, cafes, schools and hospitals.

In each informative book you will find complete engineering data, charts, specifications and complete information on the application of modular coordination to the basic principles of Glass Block installations. Each book contains many photographs of actual PC Glass Block jobs. And there are also photographs of the various patterns of PC Glass Blocks and descriptions of their various functions.

Whether you are planning modernizing or new construction projects, you need this latest information on PC Glass Blocks. Why not send the coupon today and get these helpful books? Remember, they’re free. Pittsburgh Corning Corporation also makes PC Foamglas Insulation.

PC GLASS BLOCKS... the mark of a modern building

FOR ADDITIONAL INFORMATION SEE OUR INSERTS IN SWEET'S CATALOGS
**BURNHAM'S 2 TYPES OF BASE-RAY RADIANT BASEBOARDS**

**STANDARD BASE-RAY**
The radiant heat from these units is delivered from their front areas only. They are designed to supply ideal heating for the average insulated home or building.

**HY-POWER BASE-RAY**
For use where heat losses are greater or basement space is limited. Fin-back design of these units provides approximately 60% more heat.

...the practical approach to Radiant Panel Heating

Burnham BASE-RAY* Radiant Baseboards are the ideal approach to Radiant Panel Heating. While some forms of radiant heating installations are primarily applicable to new construction, BASE-RAY is easily installed in old buildings as well as in new. No change from orthodox construction is required in either case—no complicated engineering.

BASE-RAY is extremely flexible in application—with it you can solve practically any heating problem. It's efficient. And the radiant heat it delivers is second to none for winter comfort and general desirability.

When radiant heating is under discussion think first of BASE-RAY—first in the field with Radiant Baseboards—first in experience and know-how.

**BASE-RAY OFFERS THESE ADVANTAGES**

**NO STRUCTURAL CHANGES**
No change from orthodox framing and finishing is required for BASE-RAY installations in new or alteration jobs.

**EASY INSTALLATION**
No more difficult to install than conventional radiator systems. Standard practice is used in determining boiler and pipe sizes.

**EVEN HEAT DISTRIBUTION**
BASE-RAY maintains a floor-to-ceiling temperature differential of less than 3° even in zero weather. Ankle-height units deliver heat where most needed.

**FLEXIBILITY IN CHOICE OF SYSTEM**
BASE-RAY may be used with any type hot-water, two-pipe steam or vapor system.

**ACCESSIBILITY**
Heating units, piping and valves are all immediately accessible—an important feature that is not found in many other Radiant Heating Systems.

See our exhibit at
INTERNATIONAL HEATING & VENTILATING EXPOSITION
NEW YORK, FEBRUARY 2-6, 1948

Burnham Corporation

BOILERS and RADIATORS

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Burnham Corporation
Dept. AF 18
Irvington, New York
Please send me copy of "Ratings and Installation Guide on BASE-RAY Radiant Baseboards."

Name

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City

State

Mail coupon below for booklet giving complete information on BASE-RAY radiant baseboards. It gives ratings and installation data which will bring you up to date on this new and simple form of RADIANT heating.

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**Who are the Men who'll OK the Plans for the GREAT NEW PLANTS of Tomorrow?**

The Shell Oil Company's new Exploration and Production Research Laboratory in Houston, Texas—is fast becoming a reality in steel and stone. 63.2% of Shell's decision-making officers and directors are TIME-subscribers of record. Their subscription numbers are: 14-75-AH; 11-75-ZR1207-290; 3-50; 14-75-ZH; 10-10-ZMH-475-411; 12-10-H-1152-725; 1-50-A; 5-7-ZR1108; 9-82-MH; 11-57-MH372-511; NDH-422-44; 8-10-ZH112.

WHEN big business goes in for building, the big decisions on materials and equipment are made not by one "key" man, but by many top men together.

Your products and proposals are discussed and disputed among vice-presidents, associates, special advisors; your chance of getting the order depends a lot on how many are familiar with your name and story beforehand. That's a job you can do best in TIME.

Company after company, TIME covers decision-makers from board chairman to branch managers... and TIME reaches half of all the officers and directors of the major firms throughout all U.S. industry. You pre-condition your market in your favor—make it easier to get corporate okays—when you tell your story to the million key men in business who read TIME.
Already making roofing news . . .

The New FIBERGLAS* ROOF INSULATION

All over the country, architects, builders and roofers are welcoming an old, dependable friend—Fiberglas PF Insulating Board—put up in a form that makes it the ideal roof insulation.

Industry is familiar with the exceptionally high insulating efficiency and unique characteristics of Fiberglas PF Board. The core material, which is the heart of this great new roof insulation, won't swell or shrink—won't rot or decay. Moisture doesn't materially affect its durability. What a dependable material to use with a built-up roof!

To provide an efficient mopping surface, this Fiberglas Board (24" x 48") is covered on one face and both ends with a strong paper, adhered to the board with asphalt.

Now let's see what other advantages you have in Fiberglas Roof Insulation:

EASILY APPLIED—Requires no special technique or handling. Just follow the simple specifications.

LIGHTWEIGHT—Only 100 pounds per "square" for 1/2" thickness—to 233 pounds for 2" thickness. This permits easy handling during application.

TOUGH SURFACE and compressive strength—ample to withstand normal handling and traffic conditions on the job.

Get all the facts about this new Fiberglas Roof Insulation. Write for descriptive literature or get in touch with the nearest Fiberglas Branch Office listed below... Owens-Corning Fiberglas Corporation, Dept. 830, Toledo 1, Ohio

BRANCH OFFICES:
Atlanta, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Houston, Kansas City, Los Angeles, Milwaukee, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco, Seattle, Toledo, Tulsa, Washington, D. C.

"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.

BUILDING MATERIALS

BUILDING INSULATION - ACOUSTICAL TILE & BOARD - ROOF INSULATION - ROOFING MAT - ALSO BASIC MATERIALS FOR SIDING, WATERPROOFING MEMBRANE, ETC.

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Specify Spencer
and protect the
Home Owner

Since 1890 Spencer has manufactured
the Premium Boilers

For 57 years people who "know" heating have
specified Spencer. "Be in the know" and investi­
gate Spencer. There is a modern precision-built
Spencer for every heating requirement—for
every fuel type. You will really enjoy Spencer's
quick, economical heating comfort plus an abun­
dance of (year-round) hot water. Write
or wire us today for catalog and for the name
of your nearest Spencer Heating Engineer.

There is a size and type for
every heating requirement
Spencer C Boiler—jacketed type (above)
dresses up the basement. Jacket-enclos­
ed boilers combine with any standard
oil burner, rotary or gun type or it
forms a complete unit with any stand­
ad stoker. There is plenty of room for
installation of ash removal equipment.

High Quality Steel Tubes
... Easy to Clean

There is no dismantling of parts when you clean your Spencer
Boiler. It is quick-easy. All that is necessary to clean the tubes is
to open the flue door and run a flue brush through the
tubes to give them a thorough cleaning. The High Quality 2½”
steel tubes used in manufacturing the Spencer C Boiler give
you peak performance, long life and money saving operation.

One of many SPENCER FEATURES
Note the staggered location of the boiler
tubes which induces rapid water circulation.
Water flows completely around the
tubes for quick absorption. Spencer's modern
design also assures full heat absorption,
thus operates more efficiently at less cost.

SPENCER HEATER
Division—AVCO Manufacturing Corp.
Dept. AA-5, Williamsport, Pa.
Of special interest to hospital architects, these informative booklets offer much helpful data on the planning of X-ray processing facilities. The introduction points out that the flow of X-ray films from the radiographic room, through the processing facilities, to the viewing room may be expedited by the proper planning of the processing rooms within the X-ray department and by the efficient arrangement of equipment. The design approach is made from the standpoint of motion economy in routine procedures based on recommendations of time-study engineers. Part I "Planning the X-ray Processing Facilities" deals with the location of facilities, special purpose rooms, loading rooms, planning the floor space, single room layouts, arrangement of equipment and light tight entrances. It also covers electric wiring, ventilation, floor and wall coverings. Part II deals with illumination, the loading bench in the X-ray processing room and facilities for drying the X-ray films. Part III is devoted exclusively to X-ray processing tanks, their design, materials and construction, plumbing, temperature control and maintenance. The three volumes are fully illustrated with plans, diagrams, sketches, etc.


The first publication to be printed on the subject of golf ranges, this handbook provides pertinent information on the construction, maintenance and management of golf facilities. Opening chapters give information on the area required for golf ranges, selecting the site, planning and laying out the range. Following sections discuss fairways and target greens, tees, illumination, retrieving of balls, balls and clubs. A "Golf Range Operator's Forum" offers reports of construction, equipment and operating developments contributed by cooperative range operators. Concluding chapters cover practice sand traps, range turf maintenance and miniature golf. Architects' drawings illustrate a contemplated golf range project, photographs show various types of buildings, tees and other golf range facilities.

Ceilings. Leading The Trends, "It's Simple With Simplex." Simplex Ceiling Co., 552 W. 52d St., New York, N. Y. 16 pp. 8'/2 in. x 11 in.

These pages adequately describe the advantages and installation of Simplex Ceilings, a flexible, adaptable, easily-installed type of metal panel ceiling construction. Large scale diagrams illustrate the system's application to various types of construction and structural conditions. Drawings show how Simplex ceilings can be used with fluorescent lighting, for blanket air distribution, noise reduction, radiant heating, invisible music source, etc.

Steel. Warehouse Stocks. Allegheny Ludlum Steel Corp., 2020 Oliver Building, Pittsburgh, Pa. 72 pp. $8'/2 in. x 11 in.

This list of tool and high speed steel warehouse stocks not only indicates types, shapes and sizes available, but shows the local warehouses in which each item is stocked. It contains 62 pages of indices of all high speed and tool steels marketed by the company through its warehouse system. Each page is laid out in tabular form with the company's 18 warehouses represented vertically and sizes listed horizontally. Symbols, used to designate flats, squares and rounds indicate whether a warehouse stocks the particular shape and size desired. Additional pages list warehouse and sales office locations and carry basic information on the product listed. Final pages are devoted to Carmet (sintered carbide) products available.


Discussing the chemical nature of pentachlorophenol, the active ingredient in Chapman's "Penta" Preservative, this colorful booklet explains the many wood preserving advantages of the product. It also presents data on the treating equipment and treatment methods used, quantities of preservative needed and other outstanding features of the material.

(Continued on page 212)
What about the heating equipment?

Don’t worry. It’s all Post-advertised!
MANY OF YOUR CLIENTS CAN ANSWER THESE QUESTIONS...CAN YOU?

Is WELDWOOD EXPENSIVE?

No. We'll readily admit a Weldwood-paneled room looks like a million. But when maintenance expense over the years is considered, a room paneled in Weldwood compares favorably in cost with ordinary plaster, paint and paper...both for new construction and remodeling.

Fact is, you can do a 12 x 18 room in Birch Weldwood for less than $300...materials and installation. Stop and think how little that adds to monthly FHA payments, with a home improvement loan.

Many of your clients know this!

Is WELDWOOD VERSATILE?

Yes, indeed. Choose your style, then choose Weldwood for the interior. There's a wood for every mood. You'll find exactly what's needed for traditional effects; also beautiful woods for sleek, modern twentieth-century surroundings. Use Weldwood in several rooms, or just one. Do all four walls, even one wall, or simply the dado.

And you can work many clever, "built-in" miracles with Weldwood, for it provides structural strength as well as decorative beauty.

Many of your clients know this!

Is WELDWOOD DURABLE?

It is. Weldwood Plywood Panels are guaranteed for the life of the building in which they're installed.

And they'll remain luxuriously beautiful with a minimum of maintenance. No recurrent expense for papering and painting.

Dunableness like this makes Weldwood a good investment. Either in a new home or for remodeling, it adds a permanent value.

Many of your clients know this!

Is WELDWOOD AVAILABLE?

Yes, right now. Most grades and varieties of Weldwood...especially the decorative hardwoods...can be obtained immediately in the most popular sizes and thicknesses.

Fine domestic woods such as birch, oak, walnut, knotty pine and vertical grain cedar. Rich imported woods like de oro, mahogany, primavera. There's a wood to fit every taste and every pocketbook in the Weldwood line.

Many of your clients know this, too!

Why do your clients know these things? Because, in recent years, we've maintained a steady advertising program to tell them. We've hammered home the advantages of Weldwood in ad after ad.


And Economy.

Has our effort had any effect? Well, a recent independent survey indicates that 1 out of every 3 home-minded Americans wants wood-paneling in at least one room.

And Weldwood gives it to them at a price they can afford to pay.

Take advantage of this acceptance. You'll find a warm reception for plans that include Weldwood Walls. We'll be glad to send complete data.

**Prices may vary slightly in different sections of the country, due to local conditions.

WELDWOOD Plywood

Weldwood Plywood and Mengel Flush Doors are products of

UNITED STATES PLYWOOD CORPORATION
New York 18, N.Y.

THE MENGEL COMPANY
Louisville 1, Ky.


Weldwood Plywood is made in both Interior and Exterior types, the former bonded with extended area resins and other approved bonding agents; the latter with phenol formaldehyde synthetic resin.
HOTPOINT’s hard-hitting advertising of all-electric kitchens started a snowball that now pays big dividends to builders and architects. Public interest in, and desire for, the “Meadowlark” kitchen is proved by the thousands of inquiries received by the Hotpoint Kitchen Planning Service. This powerful trend for time and labor saving kitchens applies to every income bracket. And Hotpoint has a plan to fit every need, whether in building or remodeling.

Get on the Job NOW

To help you do this, Hotpoint offers the Portfolio of Personalized Kitchen Plans. It’s full of helpful suggestions and short cuts for planning and installing America’s favorite kitchens. Send for this handy Portfolio today. Satisfied home owners with Hotpoint kitchens will be a decisive factor in adding to your prestige and reputation.
DOOR FRAMES. Announcing the New Herculte Door-Frame Assembly. Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh, Pa. 8 pp. 8% in. x 11 in.

This booklet describes Pittsburgh’s new complete, packaged metal door-frame assembly for use with Herculte glass doors. The 12 available styles suitable for practically any type of business or commercial building are illustrated. Variable dimension tables and typical section views are also included.

FIREPLACES. Successful Fireplaces How to Build Them. Thirteenth Edition. The Donley Brothers Co., 13900 Miles Ave., Cleveland, Ohio. 80 pp. 8% in. x 11 in. Price $.50.

This new edition of “Successful Fireplaces How to Build Them” describes the design and construction of both indoor and outdoor fireplaces which burn cleanly and give maximum warmth. Beginning with a discussion of the factors involved in fireplace planning, such as location, size, etc., the book gives a brief step-by-step procedure for building a masonry fireplace. The following section elaborates upon the construction, includes tables of fireplace dimensions, flue lining capacities, etc. Another chapter fully treats the Donley Heat-saver, a heat-circulating type of fireplace — its advantages required equipment, installation procedure, etc. Additional sections discuss fireplace history; the Dutch oven fireplace, the outdoor fireplace; fireplace difficulties, their prevention and treatment; Donley fireplace products; etc.

HEATING. Winter Air Conditioning. Gravity Warm Air Heating Systems. Gas Heating. Surface Combustion Corp., 2375 Dor St., Toledo, Ohio. 7 pp. 8% in. x 11% in.

The first in a series of ten heating guides for architects, builders and heating engineers, these two publications provide technical information relative to best applications for various types of heating systems, most suitable arrangements of ducting, furnace location, etc. The “Winter Air Conditioning” guide covers forced air systems with or without humidity control. The Gravity guide discusses all types of gravity systems utilizing either natural, manufactured, mixed or liquified gas. Both booklets include plans and diagrams illustrating the correct placement of the heating unit, stacks, risers, registers and return air intakes. Floor plans of residences to which the various types of heating are particularly suited are also included along with suggested specifications covering installation and other pertinent data. The remaining eight guides will be available shortly, will be titled: Conversion Burners for Remodeling, Fuels and Fuel Conservation, Heating Systems in Review, Hot Water and Steam Systems, Multiple Dwelling Basements, Radiant Panel Gas Heating, Commercial and Industrial Systems and Janitor Equipment — Gas Heating.

LIGHTING. Westinghouse Recessed Type TR Troffer Luminaires. Westinghouse Electric Corp., Lighting Div., Edgewater Park, Cleveland, Ohio. 12 pp. 8% in. x 10% in.

This booklet describes the advantages, uses and installation of Westinghouse’s new recessed troffer luminaires. Pointing out the ease of installing and maintaining proper illumination by use of the versatile troffers, the book includes photographs, sketches, schematic diagrams, illumination design data and suggested layouts for various conditions.

ACOUSTICS. Sound Control. Johns-Manville Sales Corp., 22 E. 40th St., New York. 16 pp. 8% in. x 11% in.

Sound Control offers practical suggestions for quieting noise, correcting acoustics and isolating vibration. Describing the various sound absorbing materials produced by the company, it discusses their special advantages in solving sound control problems. Application recommendations, construction details and illustrations of commercial, educational and industrial installations are also included along with a description and data chart.


Many three dimensional models of various types of architectural projects are illustrated in this folder as examples of this model maker’s work. Text discusses use of models in promoting industrial and commercial projects, public programs, city planning and residential use, how they are made and how they pay for themselves. (Continued on page 216)
Here’s a report on B & G Hydro-Flo Heating that requires no further comment: "In 1945 your company made a layout for a radiant heating job which was to be installed in a new home which we were to build and occupy. To my knowledge, this was the first job of this kind in this immediate neighborhood.

"The house was completed and occupied in the Spring of 1946. We have now completed one full heating season and want to tell you how very much we enjoy this luxurious heating.

"To go home is like working in the cold all day and then going to Florida for the night. It is hard to describe the comfort that this type of heating provides.

"We have used much less fuel than we anticipated—at least a third less. The house has been comfortable, no drafts, less dirt, and warm floors all of the time. The room temperature is carried at 68° to 70° and we were actually very comfortable.

"Our boiler has been fired with a Winkler self-feed stoker, the coal bin being between the utility room and the garage which are connected together as one unit. We have a one-story house with no basement. We used wrought iron pipe with concrete floors throughout. The garage is heated also, although at a lower temperature than the house. The pipes in the bathroom are four inches apart and the balance of the house, twelve inches apart. They are eighteen inches apart in the garage.

"I appreciate the engineering information furnished by your company and want you to know all of the B & G equipment is performing 100%."
MURPHY CABRANETTE KITCHENS

PORCELAIN ON STEEL

The ultimate result of more than a quarter-century of design and manufacture in the specialized field of compact unit kitchens. 1948 models (four sizes) are characterized by clean, sweeping lines and such features as refrigerators with push-button doors and stainless steel frozen food compartments . . . gas or electric ranges of advanced design . . . one-piece sink and range tops. Best of all is the appealing, permanent beauty of genuine vitreous porcelain on all exposed surfaces. Murphy Cabranette Kitchens are recommended to those seeking tenant appeal, tenant permanence and absolute minimum of maintenance costs.

D WYER PRODUCTS CORPORATION • MICHIGAN CITY, INDIANA
Multiple Installations of **Oil-Fired Boilers** . . .

**cut** FUEL CONSUMPTION
You actually multiply fuel savings when you use several General Electric Oil-fired Boilers linked in series instead of a single large unit. Boilers are automatically cut out when higher temperatures decrease the heating load.

**cut** OPERATING COSTS
General Electric Oil-fired Boilers are fully automatic...operating without the continuous engineering supervision required for large industrial or commercial units. The G-E controls and safety features eliminate the need for an operating engineer.*

**cut** SHUT DOWN RISK
Service may be performed on one or more units leaving full output of remaining units available for heating. Call your General Electric dealer for full information. General Electric Co., Air Conditioning Dept., Section 8131, Bloomfield, New Jersey.

*Unless so required by local or state law.

**GENERAL ELECTRIC**
Automatic Gas and Oil Heat
"my architect didn’t forget a thing that meant a better home
... for example he specified the

LUCKE LEAK PROOF
Bath Tub Hanger"

Because it is the modern way to prevent leaks. There is no excuse for cracks, leaks, or repair expense in good building. That is why the Lucke Leak-proof Bath Tub Hanger was designed. That is why leading architects, contractors, and plumbers today use Lucke to prevent expense, spoiled ceilings and to guarantee tub edges free from leaks. End dirty, leaky, messy cracks at tub and wall line.

WILLIAM B. LUCKE, Inc.
Manufacturer
WILMETTE, ILL.
"Just what all does Bruce make?" That question is often asked, so we're giving you the answer on this page. These Bruce Products have two things in common. One is that they are either made of wood or, as in the case of Bruce Floor Finishes and Terminix, developed for the maintenance and preservation of wood. The other is that they are right at the top in their fields. When you recommend or use any of these materials your judgment is backed by Bruce's 35 years of experience and research in flooring and wood products.

Meet the family of Bruce Products

Strip Flooring
Block Flooring
Hardwood & Yellow Pine Lumber
Floor Maintenance Materials
Terminix

*Prefinished and Unfinished

Other Bruce Products: Random-width Planks • Hardwood Moulding and Trim Cedaline Closet Lining • Terminix Ventilator • Everbond X Floor Mastic Furniture and Furniture Parts • E. L. BRUCE CO., MEMPHIS, TENN.
Achieving the desired temperature and moisture content of air are complicating factors in the design of air conditioning systems. Calculations were long and complex until Trane engineers developed the Air Conditioning Ruler to be used with the Trane Psychrometric Chart. Now professional men—and students as well—use the Ruler and Chart to solve the problems of air conditioning quickly and easily.

As the Air Conditioning Ruler and the Psychrometric Chart are made available by Trane to aid the profession, so it is with Trane products. The complete line of Trane heating and air conditioning products is designed and built by manufacturing engineers to give architects, consulting engineers, and contractors a single source for the necessary elements in entire heating and air conditioning systems.

Trane heating systems and air conditioning systems—made possible by the complete line of Trane products—are designed for each application by architect, engineer, or contractor. 85 Trane field offices are ready to help them.

The Convector-radiator—modern successor to the old-fashioned cast iron radiator—has been engineered by Trane for universal application to steam and hot water heating systems, and is being produced in quantity so you can now secure it from local distributors' stocks.
From now on, you will continue to see the familiar Milcor trade mark on products of this company — but the company name only has been changed from Milcor Steel Company to Inland Steel Products Company.

This change is being made now for two reasons:

1. This company is not, and never has been, a steelmaker. The new name more accurately describes its business.
2. Since 1936, this company has been a subsidiary of Inland Steel Company. The new company name merely gives formal expression to this relationship of more than ten years’ standing.

The Milcor trade mark on material purchased from Milcor dealers will continue to stand for the same high quality and outstanding value which you have come to expect over the years. Remember, nothing is changed but the company name.

Specify "Milcor" as always in describing any of this company’s products.
A Choice of Weather with

Flexible Air Conditioning System

There's no disputing about comfort... when you put G-E Personal Weather Control in every room. A flick of a switch or thermostat gives the desired temperature.

This versatile equipment is designed—not for one arbitrary system—but for many systems, to meet the wide variety of conditions encountered in the air conditioning of multi-room buildings.

In addition to individual weather control for every room, consider these other important advantages of General Electric Systems. The amount of ventilation air can be adjusted to meet the need in each space—the room units can provide positive control of ventilation air. All the air handled by the units, both ventilation air and room air, must pass through the filter. This means cleaner air, less cleaning of the units themselves and easier maintenance.

There's a General Electric system for every type of multi-room or single space installation. Your local G-E air conditioning specialist will be glad to work with you in planning the proper system for any job.

General Electric Company, Air Conditioning Department, Section 81301, Bloomfield, New Jersey.
Dedicated to keep a restless world at peace, the buildings of the U. N. permanent headquarters in New York are slowly taking shape. And in the U. N. Manhattan Planning Office Building — one of the first to be completed — MA-TI-CO Asphalt Tile Flooring has been installed to the extent of 80,000 square feet. Just another example of MA-TI-CO's high standing in installations where quality counts. For durability as well as beauty be sure to make MA-TI-CO your choice when next you order flooring tile.

See the Beautiful Full-Color 8 Page MA-TI-CO Insert in Sweet's, 1948 — or Write for a Copy to Our New York Sales Office
Chromtrim

The answer

to More than
90% of all building
needs for
METAL MOULDINGS

Chromtrim has evolved 34 basic profiles and is mass-producing them at lowered cost for economy-minded builders.

Durable, dimensionally accurate — easy to cut and install, delivered with all necessary nails, Chromtrim shapes are expertly designed to fill the highest professional building standards.

Write for complete catalog sheet with full dimensions.

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Want to get maximum space in minimum area?

Today’s modern homes, shops, institutional and educational buildings demand flexible, multi-purpose interiors. Today’s costs demand full use of all interior space. Sliding doors meet both these demands—cut costs without sacrificing wall area, give complete flexibility in planning.

For more than half a century, GRANT has been developing ways to hang sliding doors so that they really slide! The installation above, for example, permits smooth, fingertip operation of all types of top hung sliding doors. Center hung from I-beam tracks, this model features simple, yet positive, vertical and lateral adjustments. Ball bearing carriers mean a lifetime of easy, dependable operation.

GRANT also makes sheaves and tracks for floor installations, ball bearing cabinet drawer slides, plus a complete line of curtain and drapery hardware.

For additional information write to . . .

GRANT PULLEY & HARDWARE CO.
Broadway at 57th Street
Woodside, L. I., New York

TECHNICAL LITERATURE

REQUESTS FOR INFORMATION

J. P. Crow, engineer, design and building construction, 625 E. 6th St., Montgomery, Ala., would like information on short-cuts and methods of effecting savings in residential, apartment and commercial construction.

ELECTRO CONSTRUCTION CORP., (att: Myron Freiberg) 3320 Council St., Los Angeles, Calif., requests technical data on new developments in specialized lighting, electrical construction devices and products for commercial, industrial and residential electrical installations.

THE HOME OWNERS COOPERATIVE, INC., R.D. No. 1, Camillus, N.Y., requests information on building materials and equipment, particularly hardware and heating equipment, suitable for use in a development of 150 medium size homes.

Robert A. Little, architect, 1303 Prospect Ave., Cleveland, Ohio, requests information on hardware, lighting fixtures, furniture, fabrics and finishes for contemporary residential and commercial work.

OAKLANDON HOMES, INC., construction, real estate, Oaklandon, Indiana, requests literature on all phases of residential construction as well as sub-division development.

John G. Quinn, architectural & engineering designer, 1715 Maple St., Saginaw, Mich., requests literature on residential and small commercial buildings suitable for north central states.

W. J. Robertson, lumber & building supplies, Thomaston, Maine, desires information and literature on wood and wood products.

Martin Schenker, industrial designer, 9 Warren St., Newark, N. J., requests information on materials and methods related to the design and construction of commercial interiors and exteriors.

It costs no more for a beautiful Modernfold Door than a conventional swinging door. And . . . Modernfold gives you not only sparkling, colorful beauty but amazing utility as well. In wardrobes, bathrooms, bedrooms, kitchens, etc., it saves space—for it eliminates the swing of the conventional door. Its cost is comparable because in considering the price of the swinging door, there is not only the cost of the door, but the price of trim, jamb, hardware, erection, painting, etc. Get full details on Modernfold’s beauty and space-saving today.

*Cost of door 2’ 4” wide x 6’ 8” high. Other doors at correspondingly low cost.

Consult your telephone directory for names of installing distributors.

NEW CASTLE PRODUCTS NEW CASTLE, INDIANA

As Low as $26.00

modernfold

DOORS

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Customers are easy to satisfy and to sell when you show them they are getting genuine Kohler quality, and explain the sanitary protection and long serviceability that first quality fixtures mean.

The bathroom above shows a convenient, practical way to arrange Kohler fixtures, with pleasing effect and ample, though compact, storage space.

The Gramercy vitreous china lavatory, with its roomy shelf has a glass-hard, lustrous, easy-to-clean surface.

The Cosmopolitan Bench Bath is of non-flexing cast iron, time-tested base for the heavy coat of lustrous pure white Kohler enamel. It is equipped with the efficient Triton Shower Mixer. The quiet, smooth-working Wellworth closet completes the matched set. All fittings are of durable chromium plated brass, built to the Kohler high standards of quality, which is now a 75-year-old tradition.

Kohler Co., Dept. 11-B, Kohler, Wisconsin.
Architects prefer stainless steel because it is a proven functional material in the modern style. Low coefficient of expansion and contraction eliminates expansion joints . . . permits greater freedom in design. Stainless steel is beautiful . . . everlasting . . . and available right now.

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

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

SHARON STEEL CORPORATION
Sharon, Pennsylvania
PECIFICATION AND BUYING INDEX

The advertising pages of Forum are the recognized market place for those engaged in building. Any house or any building could be built, completely products advertised in the Forum. While it is not possible to certify building products, it is possible to open these pages only to those manufacturers whose reputation merits confidence. This Forum does.

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**1. Many-Layer Construction.** KIMSUL* insulation is a prefabricated blanket made on the many-layer principle. The many layers create millions of tiny air-cells to give KIMSUL its remarkable insulating efficiency ("k" factor 0.27). And many-layer construction provides dependable, uniform thickness over every square inch of insulated area.

**2. PYROGARD† Cover.** Only KIMSUL insulation has the PYROGARD cover—chemically treated, just as the inner layers of KIMSUL are treated, to resist fire.

**3. Compressed Package.** Delivered compressed to 1/5th installed length, KIMSUL saves labor, space, and time.

**4. Extra Width.** The KIMSUL blanket is made extra wide to provide fully insulated fastening edges... and to fill extra wide framing spaces.

**5. Use For Caulking.** Trimmed pieces of KIMSUL are efficient for caulking around windows and door frames.

**6. Flexible Blanket.** Many-layer KIMSUL insulation can be easily tucked around obstructions, fitted into non-standard openings, pulled around corners.

KIMSUL insulation resists fire, moisture, fungi and vermin—is termite-proof. Packaged in easily handled rolls and cut to fit standard stud and rafter widths, it can be installed without expensive machinery or skilled labor. It’s light in weight, clean, and odorless... no irritating dust or sharp particles to injure workmen’s skin.

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As members of the Producers' Council, Inc., we are cooperating in the Industry-Engineered Housing Program sponsored by the Producers' Council and the National Retail Lumber Dealers' Association.

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★ A complete line of brass goods
★ Modern manufacturing facilities and methods
★ Planned advertising that helps you sell
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