

UNIVERSITY OF MANAGE

THE ARCHITECTURAL FORRUN

JULY 1939



... Shows Value of Modern Construction with Celotex Vapor-seal Sheathing, Vapor-seal Lath, Interior Finish and TRIPLE SEALED Roofing

MILLIONS of people who have been reading about *Celotex Safety Sealed Construction* in their favorite magazines will see a comprehensive exhibit of this construction when they visit Celotex Exhibit House No. 17 in the "Town of Tomorrow" at the New York World's Fair.

Be sure to see this house when you go to the Fair. See the "hidden materials" room on the second floor, which demonstrates in cut-away sections the use of Celotex Vapor-seal Sheathing and Vapor-seal Lath. See the rooms which have been decorated with Celotex Interior Finish Products, and the modern kitchen with its sound-quieting ceiling!

You'll get a world of profitable new ideas to help you build better homes, with more strong selling features, at lower cost! And you'll see exactly how Celotex Vapor-seal Products, Celotex Interior Finish Products, and Celotex TRIPLE SEALED Roofing Products are combined in Celotex Safety Sealed Construction—the modern method millions are reading about in Celotex national advertising!



Architects: HENRY OTIS CHAPMAN and HAROLD W. BEDER Celotex Exhibit House No. 17 under construction, showing how the veneer of 4" Pottsco concrete blocks is laid up over Celotex Vapor-seal Sheathing.

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JULY 1939

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Editor, Howard Myers; Managing Editor, Ruth Goodhue; Associates, Paul Grotz, Joseph C. Hazen, r., George Nelson, Henry H. Saylor, Henry Wright; Assistants, John Beinert, Anna De Cormis, Barbara Hunt, Richard E. Saunders, Madelaine Thatcher, Allan Woodle. THE ARCHITECTURAL, FORUM is published by Time Inc. Henry R. Lace, President; Roy E. Larsen, Eric Hodgins, P. I. Prentice, Vice Presidents; Charles L. Stillman, Vice President and Treasurer. Publication and Subscription Office, Eric Ave., F & G Streets, Philadelphia, Pa. Subscriptions may also be sent to 330 East 22nd Street, Chicago. Illinois. Executive, Editorial and Advertising Offices, Manager, George P. Shutt, Address all editorial correspondence to Time & Life Building, Reckefeller Center, New York, Ycarly subscription, Physhelic na davance, U. S. and Possessions, Canada, Cuba, Mexico, South America, §4.00. Elsewhere §6.00, Single issues, including Reference Numbers, §1.00. All copies Mailed Flat. Copyright under International Copyright Convention. All rights reserved under Pan American Copyright Convention. Copyright, 1939, by Time Inc. VOLUME 71-NUMBER ONE

THE MONTH IN BUILDING

PERMITS

(Source: U. S. Dept. of Labor)

100

90

80

70

1936





FANNY MAY'S SUITOR. Since February 1938 when it was organized, the Federal National Mortgage Assn. (nicknamed Fanny May from its initials) has been stabilizing the mortgage market by quietly buying mortgages and thus releasing mortgage money for reinvestment. However, FNMA has never been aggressive in its purchasing activities because there is more than enough mortgage money available without it.

Several fortnights ago, however, Fanny May had a suitor who offered to take her out from under the Federal Government's wing, set her up as a private mortgage association, get her out of her lazy buying habits. Name of this suitor was ex-FHAdministrator James A. Moffett, now president of the Texas-California Petroleum Company. If he cannot get FNMA, he wants to set up a new association with \$5 million of private capital.

But chances are that he will get neither, that Fanny May will remain a spinster. Neither of her parents-FHA and RFClook with much favor on Moffett's proposals, do not, in fact, take them very seriously. They have a lot more experimenting to do with the association before they think about putting it in private hands or letting private hands run one like it. FHA is empowered to charter these associations or to refuse to charter them. That negative prerogative was exercised last year, will be exercised again.

WEIGHTED ROOMS. Most important single basis for judgment of any rental project-whether it be a sumptuous Park Avenue apartment or a low cost housing project-is its operating costs. Such costs are the only key to the efficiency of management, are an important means of comparing one project with another. Yet, as any building owner or manager will testify, it is usually futile to compare projects, for there are no standards uniformly followed in compiling operating statements.

At bat for the creation of usable standards and their country-wide adoption is Chelsea Management Corp.'s Vice President H. Robert Mandel of New York City. In speaking before a recent conference on Planning for Low Cost Management called by the New York City Citizens' Housing Council, he pointed out that, although the room is commonly used as a basis in figuring operating costs, no two people have the same idea of what constitutes one room. FHA, for example, rules that a living room to be counted as a "room" in figuring operating costs must have a minimum of 121 sq. ft., while the New York State Housing Board says 180 sq. ft., the New York City Real Estate Board, 70 sq. ft. Even greater differences arise in weighting dining alcoves, dressing rooms, foyers.

According to Realtor Mandel, another fault of the per-room operating cost basis is that it does not reflect the size of rooms and thus is unfair to the apartment house with large quarters.

To answer the Citizens Housing Council's plea for a logical and reliable operating cost standard, H. R. Mandel produced a new unit which he calls the "weighted room." Quite simply, his new unit is nothing but the room count adjusted for room size. He would evolve a standard cube for an average room and adjust the room count in all rental projects to that standard. For example, assume that a 160-room building of 480,000 cu. ft. or 3,000 cu. ft. per room is the average. Then a building of the same cubage but with 150 rooms instead of 160 would have a room cubage of 3,200 cu. ft. Having fewer rooms to share operating costs, it would appear in an unfavorable light under the old room count. But, since its room cubage is 6% per cent higher than standard, its room count is adjusted by that per cent, bringing it up to 160 "weighted rooms." Its operating cost would be figured on that basis.

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1939

Whether or not his method is the best possible one, at least Realtor Mandel's effort is praiseworthy. Such a standard would stop the discordance of warring anti- and pro-housers, would give both criticism and laudation a basis in fact.

FORECLOSURE DAM. Four short years ago 40 per cent of the mortgages on city properties were in default-a grim reminder of the importance of foreclosures in the business of home finance. FHA helps to preclude recurrence of this mortgage morass by fostering small monthly home ownership costs. But there is at least one man in the U. S. who believes that the National Housing Act should more strongly benefit the borrower. That man is Ben H. Hazen, and he is not a borrower but a lender-secretary-treasurer of Portland, Oregon's Benjamin Franklin Federal Savings and Loan Assn. His justifiable claim is that while FHA protects the lender in the event of mortgage foreclosure, it does nothing for the borrower in such a case. While waiting for the Government to remedy this condition, his association is carrying out its own program to protect its borrowers.



Our dining-room used to be gloomy!BUT LOOK AT IT NOW!



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EYE-APPEALING EFFECTS—Masonite Products can provide any number of eye-appealing effects at very comfortable cost. In this living-room, Masonite Tempered Presdwood forms a durable, scuff-resisting wainscot, topped off with upper walls of Masonite Presdwood.



SMART. MODERN DESIGNS — In this den, the walls are completely covered with Masonite De Luxe Quartriboard. Here's a surface that can be painted any desired color. Or use it in its natural, warm-brown finish. Either way, it's a joy to your client because it's so easy to keep clean. And notice the interesting, horizontal grooved pattern that can be executed with this material. Mail coupon today for free samples of Masonite Tempered Presdwood and Masonite De Luxe Quartrboard.



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As simple as it is noteworthy, Hazen's plan involves 15- to 20-year mortgages amortized monthly and covering a conservative 75 per cent of property value. But the borrower each month pays more than the contractual requirement. For example, the home purchaser contracts for a fifteen-year loan but agrees to make his monthly payments according to a schedule which will retire the loan in twelve years. By so doing he builds up a substantial reserve of "advance payment equity." In the event of unemployment or other financial stress, contractual payments on the mortgage may be made from this reserve, and foreclosure will be forestalled, if not avoided.

Although the theory of advance payments on loans as a protection against foreclosure is not a new one, Ben H. Hazen's application of it to the long term, FHA-insured mortgage is new and, as a possible dam against the country's next foreclosure wave, it will be watched with interest by other mortgage lenders. To date, several building and loan associations * throughout the nation have shown more than interest in the program—they too are actively experimenting with it.

OLD SAW. Few more hackneyed comparisons exist than that between Home Building and Automobiles. It is the pet of the mass-production, factory-method advocates, and whenever Building is viewed with alarm the comparison is brought up.

Last month the Temporary National Economic Committee (popularly called the Monopoly Committee) was neither viewing with alarm nor airing old saws, yet the comparison was made at commit-

*Notably First Federal Savings and Loan Assn. of Pasadena, Calif.; Kankakee Federal Savings and Loan Assn., Kankakee, Ill.; and Railroadmen's Federal Savings and Loan Assn. of Indianapolis, Ind. tee hearings. Pierce Foundation's low cost housing protagonist, Robert L. Davison, produced a chart (shown below) to illustrate a cogent reason why automobiles sell better than houses.

Using \$750 as the dividing line between low and high cost autos, it shows the proportion of national income spent for these two price groups from 1921 to date. Also plotted on the same index base— 1925 equals 100—is the proportion of national income used for housing.

A telling indication of the income group to which Building caters is the fact that the curves for high priced automobiles and for Building coincide almost exactly. The low cost automobile curve, on the other hand, is sharply divergent. Automobiles costing less than \$750 are solely responsible for the revival of the automobile industry since mid-depression. Large scale production of houses costing less than \$4,000 would create a similar revival in the home building industry.

YIELD INSURANCE. A paradox of U. S. home financing is that there is more than enough money available for investment in mortgages on large scale rental developments, but a serious dearth of money for direct investment in such projects. In other words, large financial interests have not been attracted into the direct ownership of residential properties, although they have been willing to lend funds with mortgages as security. An explanation of that paradox lies largely in the fact that the Federal Housing Administration offers the insurance of mortgages on rental projects, does nothing about the owner's equity.

To adjust this difference is the purpose of a plan hatched last mid-winter from within FHA's own organization, for possible FHA operation, but without official FHA sanction. Assistant Administrator Frederick M. Babcock drew from his experience in mortgage insurance, developed a "yield insurance" plan for the direct investor. It is designed to guarantee a minimum return on large scale rental projects which would be free and clear of any mortgage or funded indebtedness.

The plan is divided into two principal parts: The first, designed to attract investment groups such as trust companies, savings banks and insurance companies into medium rent housing, would guarantee an investment return of 21/2 per cent for a period of twenty years. If a project did not earn that 21/2 per cent. FHA would pay the difference until it had paid 10 per cent of the total investment, at which time the insurance would terminate. The total investment, which is the basis for the insurance, would be depreciated at the rate of 2 per cent a year. Also, any earnings over 5 per cent would be cancelled against the investment in determining future yield. For this insurance, investors would pay a premium of oneeighth of 1 per cent.

Second part of the plan is for low rental housing in slum areas to be financed by privately organized corporations with powers of condemnation. Such groups would be guaranteed by the Government a return of 31/2 per cent on their investment which would be depreciated at the same rate as in the plan's first part. This type of insurance would be limited to 14 per cent of the investment and to twenty years. Any earnings over 41/2 per cent would go to maintenance, to reserves (limited to $7\frac{1}{2}$ per cent of investment) or be used as an additional premium to the FHA above the one-fourth of 1 per cent basic premium rate.

To put such a plan into effect it would be necessary for Congress to amend the National Housing Act; thus there is no possibility that it will see the light of day during the coming year. It will, however, be much discussed in housing circles, and rumor is that it will have an airing during the hearings of the Temporary National Economic Committee.

EARNINGS. The seven companies which last month reported their earnings for 1939's first quarter all made a favorable comparison with the same period in 1938. Two with a net loss reported a smaller loss than they did last year. Two others bootstrapped themselves from a net loss to a net gain. One really had something to crow about: Stone & Webster reported an increase in net earnings of nearly 200 per cent.

Quarter ending Mar. 31	1939	1938
Certain-teed Products8	\$148,659*	\$189,588*
Holland Furnace	158,644*	196,412*
Otis Elevator	957,627	798,113
Reliance Mfg	39,988	175,377*
Revere Copper & Brass	156,210	879,659*
Stone & Webster	210,707	72,328
Yale & Towne Mfg	6,605	5,096

PROPORTION OF NATIONAL INCOME SPENT FOR HOMES AND AUTOMOBILES



*Net loss



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1 9 3 9

The pictures show a Western Union telegraph counter in the Pennsylvania Railroad station at Baltimore, Maryland, and a telephone booth in the United States Post Office at Los Angeles, California.

For such uses Formica is becoming constantly more popular with the leading architectural offices. Let us send you all the facts including erection details.

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KANDULATION

FORUM OF EVENTS

SAN DIEGO'S NEW FOUNTAIN







Photos: WPA Federal Art Project

Credit WPA's Federal Art Project with a clean bull's-eye! On June 10 San Diego dedicated in its civic center a distinguished work of sculpture, "Guardians of Water." Donal Hord, a sculptor who has never been abroad, never studied under the influence of foreign masters, was born 1902 in northern Wisconsin, came to San Diego in 1917. He won the Gould Memorial Scholarship which took him to Mexico, another scholarship which took him to the Pennsylvania Academy in 1927, and one which took him to New York in 1930. His figure of a pioneer woman holding an olla, carved from silver gray granite, stands on a drum covered by mosaic—the kneeling figures pouring water over a dam into a citrus fruit orchard.

(Forum of Events Continued on page 16)

FORUM OF EVENTS

(Continued from page 15)



Whitney Memorial Hall, a new wing of New York's American Museum of Natural History History—Trowbridge & Livingston, architects—develops a new technique of the diorama. By holding a continuous horizon line and extending the exhibition space into an indoor sky dome, realism is gained. Backgrounds painted by Francis L. Jaques.



Rome Prize Winners: Joseph F. Balis of Paterson, N. J.—the Daniel H. Burnham Fellowship in Architecture; Frederick W. Edmondson, of Pittsburgh—the American Academy in Rome Fellowship in Landscape Architecture.





For the Motorist—Being tested near Hartford, Conn. is this tilted mirror at a hilltop crest, revealing the approaching traffic for some 2,000 ft. on either side.

Stage Version of the Sophisticated Interior. As a setting for Katharine Cornell in S. N. Behrman's "No Time for Comedy," Jo Mielziner designed these modern translations of Empire and Directoire (above) in ecru, dark brown and deep green, and the French Provincial marked by Chinese influence (below) in rich blue-greens and dull olive browns.







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For wood floors.

The one application wood finish that preserves and beautifies—and leaves nothing to wear off. Lignophol gives permanent protection, costs little to apply and less to maintain.



Liquid-for concrete floors.

is a liquid chemical *compound that penetrates the porous cement and binds the loose particles together into a fine, granite-hard surface that resists wear and is dustproof for years. Works equally well on new or old floors. *U. S. Patent Applied For



Filler and Dustproofer for wood or concrete floors.

A durable, decorative treatment for floors subjected to light or heavy traffic—in attractive colors—made to outlast conventional floor paints . . . and inexpensive to use.

PROOF BY ACTUAL TEST

Sonneborn floor treatments, Lignophol, Lapidolith and Cemcoat have proven themselves to be highly efficient and low in cost by actual comparison on numerous jobs.

Many of America's leading architects and building contractors have successfully used these products and evidence of actual tests on the job plus the customers' expressions of satisfaction are all on record for your inspection.

Write for proof of the effectiveness of Sonneborn's Tested Floor Products.

OTHER SONNEBORN TESTED PRODUCTS

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Write for descriptive literature and scientific tests. Dept. F7.

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FORUM OF EVENTS

(Continued from page 16)

THE MUSEUM OF MODERN ART displayed on the occasion of its formal opening these "Master Chairs of Modern Design" —significant milestones over the last fifteen years from five eminent designers. The Museum will be featured in the August FORUM.









1.

5.







- Marcel Breuer—first tubular metal chair, 1925
- Ludwig Mies van der Rohesprung tubular metal chair spanned with leather, 1927
- Marcel Breuer—tubular metal chair with caned bentwood seat and back, 1929
- Le Corbusier—tubular metal chair spanned with canvas, 1929
- Ludwig Mies van der Rohesettee for German Pavilion, International Exposition in Barcelona, 1929
- Alvar Aalto—chair for auditorium of Tuberculosis Sanitarium at Painio, Finland, 1932
- Russel Wright—armchair of primavera wood with pony skin seat, 1936

6.

LORD & TAYLOR'S second annual series of awards in American industrial designing-\$1,000 each to four designers picked by American Design Awards Jury (Mrs. Edna Woolman Chase, Georges F. Doriot, Mrs. Dorothy Draper, Walter Hoving, Mrs. Dorothy Wright Liebes, Mrs. Helen Appleton Read, John W. Root, Miss Dorothy Shaver, Mrs. Carmel Snow, Stephen F. Voorhees and Howard Myers).



MERRY HULL, designer of the "first radical glove change in 3,000 years"—the finger-free glove.



RAYMOND LOEWY designs locomotives, automobiles, ships, planes, refrigerators. Great Britain too has just honored him.



"ADRIAN," Paris-trained costume designer, who designed a ballet for Music Box Review, many costumes for Hollywood.



WALTER DORWIN TEAGUE, successful consultant in design of industrial products, World's Fair exhibits and Kodaks.

(Forum of Events Continued on page 42)

Protect The BEAUTY and EFFICIENCY OF THE MODERN HOME

* MAKE 100% EFFECTIVE THESE MODERN BATH AND KITCHEN UNITS •

303

CODD

-MUELLER BRASS CO-PORT HURON MICH-STREAMLINE-HARD

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Of course, the home should be modern in design – its kitchen, bathroom and laundry fixtures handsome and conveniently located, but unfortunately, good looks do not assure good service.

The efficiency of these modern fixtures and the very livability of the home itself depend upon a permanently reliable piping system for the plumbing and heating — in a word — A STREAMLINE COPPER PIPE AND FITTINGS SYSTEM.

To use out-moded, rustable pipe with its old-fashioned threaded fittings to supply modern fixtures and radiators, is as impracticable as it is inconsistent.

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The first cost of STREAMLINE Copper Pipe and Fittings is but slightly higher than one of rustable material, and over the years, it costs a great deal less because its first cost is its last one.

PROTECT THE BEAUTY OF A MODERN HOME AND ITS HANDSOME FIXTURES, PLAN FOR EFFICIENCY, INVESTIGATE THE STREAMLINE COPPER SYSTEM BEFORE YOU DECIDE.

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No longer can there be a shortage of home mortgage money, for now the Federal Home Loan Bank System

makes reserve credit facilities available to member savings or building and loan associations. A flow of funds to finance local homes is assured at all times.

On July 22, 1932, seven years ago, the Federal Home Loan Bank Act was signed. Its passage created another national safeguard for community investors . . . helped more families finance homes locally through *local* home financing institutions.

This Act provides twelve regional Federal Home Loan Banks which maintain a permanent reservoir of credit for *local* home financing institutions. No longer can depressions or recessions isolate member institutions.

In your own community, friendly savings or building and loan associations await the opportunity to serve you. Their service is without red tape and, therefore, easier to understand and faster to complete. And they utilize *local dollars* to finance home loans at home—a plan that builds *your* community and promotes *your* business.

Let a member of the United States

Building and Loan League in *your* community explain the function of the Federal Home Loan Bank System. It makes safe and prompt home financing possible for the people you serve.

ARCHITECTS—the map below shows the twelve Federal Home Loan Districts. Their geographical positions make convenient credit facilities available to 3944 local savings or building and loan associations which are members of this reserve system.



When you support Your Local Savings or Building and Loan Association—You help local business!

PRODUCTS AND PRACTICE



ROOF TERRACES

To most laymen, the flat roof is the trademark of modern architecture, and every flat roof a potential roof terrace. Those who like modern point to the roof terrace as one of its principal advantages. Those who don't are inclined to center their criticism on the appearance of flat roofs and the utility of roof terraces.

Actually, of course, modern design is not doomed to stand or fall according to the popularity of roof terraces. Its claims are much broader than that. But the desirability of the roof terrace, as one of these claims, is worthy of careful consideration.

Houses with flat roofs are as old as man's history. The Egyptians used the inside of their box-like houses mostly for storage, ate out of doors, and slept on the roof the year round. Somewhat refined, this same mode of life was common among the Greeks and the Romans. As civilization moved northward, however, the flat roof all but disappeared, and the roof terrace became a luxury.

Big claim of the present-day modernist is that the use of flat roofs on commercial structures has cheapened and perfected their construction to the point where they are now thoroughly practicable for all classes of work in every climate. In addition, he argues that the special advantages of the roof terrace, as compared with ground floor porches and terraces, are such as to commend its use under present conditions; outlook, privacy, and accessibility from upper floors—all at a premium in densely populated areas, and particularly in the multiple dwelling.

Despite numerous advantages, however, it is undoubtedly true that application of the roof terrace has been restricted by various factors, most importantly by a widespread misconception of their cost. Owners and even architects sometimes reject the roof terrace as a luxury item without actually investigating the expense involved, while at the same time showing no hesitation about paving an equal area at the ground floor level, even when the former is clearly more desirable.

Besides the fear of high costs, another factor which sometimes rules out the roof terrace is the erroneous suspicion that such construction cannot be made permanently watertight, and may prove a source of perennial trouble and expensive repairs.

Both fears are exaggerated. As a matter of fact, much of the better commercial work has for some time employed regular terrace construction for all flat roofs because of the added durability which it affords, while simplified surfacing methods, appropriate to residential construction, have recently been developed. Such construction remains, however, an exacting problem which requires a proper appreciation of the severity of the conditions involved.

(Continued on page 22)

PRODUCTS AND PRACTICE



Residence of Arthur MacMahon, Croton-on-Hudson, N. Y. H. V. Walsh, Architect, Photo, Wurts Bros.



CANVAS. Long used for residential roof terraces, treated canvas bedded in white lead and linseed oil and saturated with deck paint forms an economical watertight surface which will withstand wear. If well cared for and repainted every three years, this construction has been known to give satisfactory service for as long as a quarter of a century. Various weights of canvas are available for light and heavy traffic.



Residence of Mrs. Vadin S. Makaroff, Palm Beach, Fla. Treanor & Fatio, Architects. Photo, Gottscho.



Residence of John Michels, Atherton, Calif. Birge M. Clark, Architect, Courtesy, Celotex Corp.



2. WOOD SLATS. One of the simplest forms of protection for built-up roofing, removable wood slat platforms have the additional advantage that they can be applied to existing slagsurfaced roofs without altering the surface. Sections are made small enough for easy handling and are usually built on frames cut to conform to the roof surface, producing a level terrace. They may be stored during the winter when not in use and should be repainted every three to five years.

3. BITUMINOUS PAVEMENT. Applied directly over the usual slag or gravel surface, bituminous pavement produces a traffic surface with characteristics like the familiar "black top" road, but which may be painted any desired color. Pavement may also be surfaced with cement dust at the time of application.



4. IMPREGNATED FIBER BOARD. A recent innovation, impregnated fiber board* offers an economical wearing surface which is easily applied and maintained. Units are laid in cold plastic cement furnished by the manufacturer, and the $\frac{1}{\sqrt{8}}$ to $\frac{1}{\sqrt{4}}$ in. joints are calked with the same plastic. Available in black, green, and red. Requires occasional waxing.

*Trade name Celotex Promenade Traffic Top

GENERAL CONSIDERATIONS

No part of a structure must withstand such severe service conditions as the roof. Alternately wet and dry, frozen by winter temperatures and baked by summer sun, it must remain at all times impervious to moisture—a difficult requirement under the most favorable circumstances.

To these exacting specifications, the roof terrace adds still another: a permanent wearing surface. This surface must be of sufficient strength and hardness to protect the waterproofing membrane from wear and mechanical injury, and must be able to resist the action of the elements for a protracted period.

EXPANSION AND CONTRACTION

Since, even in temperate climates, a horizontal surface of this sort is subject to temperature changes of more than 100° Fahrenheit, adequate provision for expansion and contraction is absolutely necessary. It is not uncommon for terraces exposed to the full blaze of the summer sun to reach a temperature as high as 135° F. This means that a 20 ft. panel of cement or tile pavement laid at a temperature of 70° will expand about 3/32 of an inch in the summer, and will shrink an equal amount in zero weather—a total movement of 3/16 of an inch to be taken up in the expansion joints.

It also means that an unshaded roof terrace is scarcely the place to spend a pleasant summer afternoon. Any paved, unshaded area is likely to get quite hot in summer, but the roof terrace is particularly prone to this because the heat gathered by the surface is not as readily carried off into the construction as the heat in a sidewalk, for instance, is carried into the ground. For this reason it is especially important that terraces intended for summer use be provided with awnings or other coverings, particularly since they are less likely to be shaded by trees and buildings than are groundfloor terraces.

Roof terrace expansion joints must therefore be provided at least as often as the 20 to 25 foot intervals recommended by most manufacturers, and this recommendation may safely be halved for absolute assurance of a trouble-free roof. Even with satisfactory joints at 20 ft. intervals, terrace panels have been known to split along a mortar joint near the middle in freezing weather, making a crack through which the waterproofing may force its way under the action of the summer sun, and form ugly, sticky patches on the pavement.

SLOPE

Another important consideration is the question of slope to drains. Exaggerated slope, especially on a large area with many drains, gives an effect of a slight groundswell which is very disturbing, besides making it difficult to level furniture. (Continued on Page 24)

THE JONESES SEE WHY A HOME IS AS MODERN AS THE

WALLS

MRS. JONES: "Here's all the evidence I need! This quiet, inviting living room with Insulite walls and ceiling, is proof that a home is as modern as the walls!

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MRS. JONES: "And the colorful appearance isn't all! Insulite walls give us cool rooms in the summer—and lower winter fuel bills!"



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PRODUCTS AND PRACTICE



"Helicline," New York World's Fair. Harrison and Fouilhoux, Architects. Armstrong's Monocork pavement.

Roof Garden, British Empire Building, Rockefeller Center, N. Y. Reinhard & Hofmeister, Corbett, Harrison & MacMurray, Hood & Fouilhoux, Architects.





9. SLATE. Light weight, relatively inexpensive, and permanent, thick roofing slate set in mastic makes an attractive pavement for residential roof terraces which requires little or no maintenance. Available in a wide range of colors which will not change with exposure. For harder wear, slate is set in cement with occasional expansion joints. Thickness used ranges from 1/4 to 1 in.

b. CONCRETE AND CEMENT. If properly applied, concrete may be used as a protective pavement with good results, provided that it is adequately reenforced and provision is made for expansion and contraction. American practice calls for a minimum thickness of 11/2 in, with 6 x 6 in. No. 6 reenforcement, marked off in 2 ft. squares, and expansion joints 10 ft. on center. The construction shown at the left has been used successfully for some years in England, consists of an inch of cement with integral waterproofing scored to within 1/8 in. of the roofing at 1 to 2 ft. intervals, and calking the joint thus formed with a plastic compound.

7. PROMENADE TILE. Long time standard for quality roof terraces, promenade tile laid in a $\frac{34}{4}$ in. mortar bed over built-up waterproofing produces one of the most permanent roofs known. They require no maintenance and are almost impossible to damage. Available in various types and sizes, the 6 x 6 in. red tile is most commonly used.

8. PLASTIC COMPOUND. Introduced in time for the New York World's Fair (Building Reporter, Nov. 1938, BR-1105), a new cork and rubber compound* used as a pavement in many of the Fair structures holds considerable promise for roof terraces, has the advantage of forming a resilient, non-slip surface. Troweled on like cement topping, it sets in 48 hours, requires no further attention, may be colored by the addition of pigments or marble chips. Natural color: dark gray to black.

*Trade name, Armstrong's Monocork



9. SOIL FILL. Besides permitting attractive landscaping, the soil fill type of terrace affords protection against excessively high and low temperatures for the waterproof membrane and rooms below the roof. Any type of pavement normally used on the ground may be placed on the fill. Three feet of earth fill over 2 in. of reenforced concrete is sufficient for most purposes. The one disadvantage of this construction is its great weight, but in low structures this may easily be provided for. Slope should be held to the absolute minimum which can be maintained without the danger of forming pockets—not more than $\frac{1}{2}$ in. to the foot—and the possibility of employing gutters to permit slope in but one direction and reduce the number of drains should also be considered,

WEIGHT

Still another factor which must be taken into account in designing a roof terrace is the question of the weight of the construction. Some kinds of surfacing materials add as much as 20 lbs. to the square foot to the load on the roof construction, while an earth fill for landscaping will add about 100 lbs. per square foot per foot of thickness. In the case of the former, choice of a heavy surfacing material may mean increasing the thickness or depth of the roof rafters by one size over what would be required for an ordinary flat roof-a not too costly precaution. For the earth-fill type, special framing is of course required, but this is by no means prohibitive if spans are kept short.

CONSTRUCTION AND MATERIALS

The general principle of all forms of roof terrace construction is basically the same: a continuous waterproof membrane covered and protected by a wearing surface. In the case of tar and felt waterproofing, the slag or gravel protection commonly used on flat roofs is unsuitable for promenade purposes; some more durable surface, affording more protection to the membrane, must be used. In the case of canvas roofing, use of a good grade of canvas is sufficient to withstand wear for some time.

Choice of roof terrace construction is determined by first cost, maintenance cost, and the effect desired. Cost of the various types ranges from about 20 cents per square foot (in place including waterproof membrane) to about \$1 according to surfacing material. Canvas, wood slats, bituminous pavement, and impregnated fiber board are usually cheapest, all require maintenance. Slate, cement, and tile are more expensive but do not require painting or waxing. Earth fill, with concrete protection for the waterproofing and flagstone pavement, is most expensive because of the heavy supporting construction required.

All types of insulation commonly used with flat roofs are applicable to roof terraces. Some types of pavement supply some insulation, while 3 ft. of earth fill has an insulating effect approximately equal to that of 4 in, mineral wool.

Flashing the roof deck is substantially the same problem as with other flat roofs, except that appearance is more of a factor. For this reason, sloping cant strips are not generally used, and flashing is usually concealed in the parapet wall. Another method is to carry the roof surfacing material up the wall to cover the flashing.



Each Webster System Radiator includes a complete enclosure of Armco furniture steel given a baked prime coat at factory. Contained within the enclosure is a one-piece unit, combining heating surface, valve, orifice, trap and union connections shipped ready for connection to supply and return piping. Choice of two standard grilles. Lengths 18" to 54". Heights 18" to 80". Depths 3", 5" and 7".

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The completely prefabricated Webster System Radiator provides *all* of the advantages of low pressure steam for heating, *all* of the advantages of concealed light-weight convector heating surface, *maximum heat output per unit of space occupied*, easy low-cost installation and ready accessibility for cleaning.

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Webster System Radiation is displayed in House No. 18, Town of Tomorrow, New York World's Fair 1939.









PIVOT

ROTOR SUNDECK Estate of Mrs. Dahlia Loeb, Redding, Conn. Designed and executed by Hans Otto Stagel.

No mere gadget, this interesting device is designed to fill a definite need in Northern climates: protection from chilling winds while enjoying late fall and early spring sunshine. Built to revolve on a 20 foot circular track, the overhead canvas vane holds the open side to the lea of even a moderate breeze, while glass sidewalls and roof offer a minimum obstruction to the sun's rays. It is pronounced a complete success by the owner, whose only regret is that it was not made big enough to accommodate more sun bathers.





The wood of today in the world of tomorrow!



Entrance, Firestone Building, New York World's Fair, George W. McLaughlin, Architect; 2,700 sq. ft. of Figured Red Gum Flexwood used. One of the 27 Flexwood installations in the World's Fair.

A mellow-brown figured Red Gum Flexwood wall greets visitors to the Firestone Building at the New York World's Fair giving an immediate impression of quality, substantialness and good taste. A striking double-inverted cone with Flexwood used in a flush treatment to a height of 19 feet frames an oil painting of the Founder, Mr. Harvey S. Firestone. The direction and movement of the grain in the soffit invites and directs the crowds into the hall where they see Firestone Tires being made. An interesting feature of the design by George W. McLaughlin, Architect, is the continuous side matching of the veneer on the tapered surface of the cones. When the luxury obtainable only with genuine wood treatment is desired, and economy and time are imperative, Flexwood is the answer. Complete data and samples are yours for the asking.

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Flexwood is thin wood mounted on cloth and made flexible for direct application to flat and curved surfaces...it takes any wood finish. Wood in no other form approaches Flexwood in cost, ease and speed of application in modern wood treatment.

BOOKS



DINING ROOM IN MILAN

L'ARREDAMENTO MODERNO, by Roberto Aloi. Ulrico Hoepli, Milan. 786 plates. 9 x 11, L. 180.

The Italian publishing house of Hoepli has to its credit a sizable number of publications which sum up in monumental fashion the achievements of contemporary architects, engineers and decorators all over the world. Alberto Sartoris' book on modern architecture, for instance, is by far the most complete to be published in any language,* and this new book on interior decoration is in the same category.

Most impressive, of course, is the sheer bulk of the work presented: with nearly every important country represented, and with sections on furniture, fabrics and accessories the book is an extraordinarily comprehensive reference manual. Somewhat less impressive is a large part of the work illustrated; whether this is a reflection of lack of taste on the part of the author, or the result of a desire to present an accurate cross-section can only be a matter of conjecture. Certainly, if one accepts as "modern" everything that is shown it becomes apparent that no rigid formula can be applied to contemporary interior design. Curved forms are as common as rectilinear, elaborated surfaces are used almost as much as plain, and taken as a whole the work ranges from the most nakedly "functional" to the plush decadence of the designers who are still copying from the catalogues of the 1925 exposition in Paris.

As striking as the variety of solutions is their almost total lack of recognizable national characteristics; in the great majority of cases it is quite impossible to determine whether a room is in Budapest, New York or Copenhagen without reading the caption. The most obvious reasons for this similarity of appearance would seem to be a widespread desire for uncluttered space, simple wall treatments, comfortable chairs, and built-in storage units. The interest of this book comes from the great diversity of solutions for this essential set of requirements.

As a collection of outstanding modern work this book can be recommended only with reservations; as a comparative study of modern interiors it is unique.

* See Arch. Forum, Feb. 1936.

DESIGNS FOR 60 SMALL HOMES, by Samuel Glaser. Coward-McCann Inc., New York. Illustrated with plans and perspective sketches, 9 x 11, \$2.00.

A catalogue of small house designs in a variety of styles, ranging in price from an estimated \$2,000 to \$10,000. Data are given in the form of captions and construction outlines. A preliminary chapter gives general information on site selection, relation of house cost to annual income and financing methods.

SCHOOL BUILDING COSTS, by N. L. Engelhardt, Jr. 95 pp. 6 x 8¹/₂, \$1.60.

A detailed analysis of the principal factors influencing the cost of school construction, based on the costs of fifty-two school buildings constructed in New York State between 1930 and 1937. Valuable for its comprehensive treatment of the many variable factors involved and for the clear presentation of the data collected.

AMERICAN ART TODAY, published by the National Art Society. 342 pp., with 32 pp. of text and 1,150 illustrations. 9 x 12, \$2.00.

This catalogue contains reproductions of the work of each of the 1,150 artists exhibiting at the huge show of contemporary art at the New York World's Fair. It covers painting, sculpture and graphic arts, and probably represents the most complete cross-section of American art available in book form.

SWIMMING POOL STANDARDS, by Frederick W. Luehring. A. S. Barnes and Co. New York. 273 pp. 6 x 9. \$5.00.

Written by a professor of physical education, this book is an exhaustive study of every aspect of swimming pool planning, administration, history and equipment. Its usefulness to the architect is lessened by the absence of drawings, but the very complete statement of requirements and legal regulations makes it a valuable reference.

HEATING, VENTILATING, AIR CONDITIONING GUIDE, 1939.

American Society of Heating and Ventilating Engineers. 1248 pp. 6 x 9, \$5.00.

The seventeenth edition of the standard reference book in the field. Containing, in addition to text and charts, a valuable section on available equipment for various heating systems.

RICHARD UPJOHN, ARCHITECT AND CHURCHMAN, by Everard M. Upjohn. Columbia University Press. 243 pp., 109 illustrations. 6¹/₂ x 9¹/₂. \$4.00.

The first biography of Richard Upjohn, considered by some critics "the most important American architect between Jefferson and Richardson." Best known for his churches, particularly Trinity Church in New York City, Upjohn did a sizable amount of residential and public work as well, most of it being in the Gothic Revival style of his ecclesiastical buildings. A sympathetic and scholarly study, the book presents a quantity of valuable data on the little-known period between 1835 and 1870.



WHEN a woman is making an important decision about a house, her thoughts naturally fly first to the kitchen. "Is it *modern*? Is it well planned; and are there plenty of good, strong, easy-working, easy-toclean cabinets?"

If the cabinets are of Armco Steel, it is easy to get her approval. She knows from experience with range and refrigerator that metal makes a neat kitchen. You can tell her that steel drawers open smoothly and quietly on roller bearings—that doors open and shut without protest. As for the bathroom cabinets, she'll appreciate the beauty and convenience you can provide for her here — since this room has almost equal importance in her eyes. When you are designing the house of today, sanitary cabinets of steel can well be your first choice for kitchen and bathroom. They are strong, dustproof and vermin-proof. Their finish is smooth and gleaming. Cabinets of Armco Steel come ready to fit your design — are easily installed, and assure beauty, usefulness and customer satisfaction. All built-in accessories are readily available, of course.

Our free manufacturer reference service will help you achieve the kind of installation you want. Write to The American Rolling Mill Co., 1431 Curtis Street, Middletown, Ohio.



ARMCO STEEL SHEETS

World Fairs

Forum:

The June issue has just reached me. I want to congratulate you upon the beautiful job that you have done with the two "World Fairs." It's a great story that you have told, and one that will have its distinct influence on the future approach to many of our problems.

FRANCIS KEALLY New York, N. Y.

Predictable Taxes

Forum:

THE FORUM always is "required reading" in our office because of its broad and informative coverage of a great many fields. We feel that a diligent study of all of the data which you have assembled, particularly as to land use, planning, designing and new materials in various sections of the country (ARCH. FORUM, Apr., 1939) should yield many ideas which can be adapted to our own problems.

We join with you particularly in your finding that "the biggest variable in the monthly cost of home ownership is taxes." We believe that some plan which would assure the home purchaser of the amount of his future taxes would do as much even as the FHA system of insured loans to stimulate home ownership. As matters now stand, the one important item in the cost of home ownership, which cannot be predicted, is taxes. Our newspapers, particularly our real estate sections, are filled -and rightly so-by the protests from owners of office buildings, apartment houses and other business properties of ruinous taxes and false valuations. Yet, tragically, most of our advertising appeal must run on the same pages.

In the New York area, at least, the great market for homes is with apartment dwellers, most of whom never have owned homes. They are accustomed to pay one fixed monthly sum for shelter (generally including heat and water). They rent according to their income. When they become interested in a home, we are able to show them costs fixed to the penny for interest, amortization, FHA fees and fire insurance, and to give them surprisingly accurate estimates of the cost of heat and water. But we can only show them *present* taxes. . . .

To reduce the monthly carrying charge a single dollar a month means that the builder must cut his costs or his profits about \$200 a house. To wipe out the builder's saving to the purchaser, the tax gatherer need increase the tax rate less than 30 cents per \$100 of assessed valuation, or increase the assessed valuation less than \$300....

As much as two years ago I was much surprised at the response from all parts of the country to my mild suggestion, made in New York City, that any longrange scheme of social security might well include tax-exemption of the small home occupied by an owner who has reached retirement age. . . . I have become convinced that home ownership will be a great factor in preserving the social stability of this country in the years ahead. I am glad to see that a member of the U. S. Senate, as thoughtful and as conservative as Senator Sheppard of Texas, has proposed full tax exemption upon homes valued up to \$5,000, both as a social and economic remedy. . . .

In the past, we have passed many laws to protect or provide homes ranging from tax exemption of soldiers' bonuses invested in homes to tax exemption for a decade to provide the incentive necessary to overcome a housing shortage. Is tax protection for the small home anything more than the streamlining of an old established principle?

IRWIN S. CHANIN New York, N. Y.

Patented Planks

Forum:

... The framing system shown in photo 10, page 246, in THE FORUM'S April Low Cost House issue discloses features of my staggered self-insulating plank roof and staggered vertical plank wall, which are fully protected by letters patent No. 2,000,897. People who read such publicity without qualification are being misled into committing an infringement thereof without knowledge.

I licensed the National Lumber Manufacturers Assn. to construct one dwelling, House No. 8, in their 1938 experimental "Low Cost House" series at Fairway Hills, Md. Apparently their publicity describing this house does not indicate the fact that this form of construction is protected by patent.

Such a situation is, of course, doing us considerable injury since we are licensing lumber dealers and builders to prefabricate plank units and panels for walls, floors, partitions, and roofs especially for the low cost field. While we have every desire to extend the regulated use of these devices, we do not propose to have our proprietary rights infringed or otherwise mitigated.

FRANK J. ALCOTT Palisade Homes New York, N. Y.

To Forum readers a belated warning to respect Inventor Alcott's rights.—ED.

Client Trap

Forum:

My secretary, a beautiful Chinese girl named I Gong Wong, has found it necessary to remove the May issue of THE FORUM from my reception room and hide it some place where it would never be disturbed. She put it in the safe.

It seems that a client came into the office, and she (my secretary) failed to carry out my explicit instructions, which are that all clients shall be chained to a ring in the floor until I can get around to seeing them. This client, a Mr. Zup, sat down and started reading THE FORUM with every evidence of pleasure until he came to the PLUS section, and the Ozefant article headed "Upon Beautiful Form or Do You Like Mushrooms? Eggs? Snails?" He then rushed from the office.

Pausing only to don my Junior G-Man badge I followed him. Hailing a hansom cab I set off for Waterloo station, adjusting my deer-stalker cap as we drove down Baker Street. You know my methods. In less than a month I had solved the mystery. It seems that when Mr. Zup read that query "Do You Like Mushrooms? Eggs? Snails?" it came over him suddenly that he had left the house without eating breakfast. So as soon as the words "Do You Like Mushrooms? Eggs? Snails?" met Mr. Zup's eyes he rushed right out and bought a mushroom omelet. He hates snails.

He never came back to the office.

I am a patient man, but this is too much. I have been put to considerable expense to remodel my reception room so that such a deplorable fiasco cannot fiasc again. By an ingenious arrangement, as soon as a client enters the only door to the reception room it closes behind him and becomes part of the woodwork. He is unable to find the door again and has to stay there while a concealed loud speaker plays soft music interspersed with announcements that Allen is a bright fellow.

The first day we bagged two asphali shingle salesmen, a young lady looking for the wash room, and a sales ambassador for the Little Giant dandelion extractor. No clients. It has occurred to me that Mr. Zup may well have been the last of the species. The wood pigeon disappeared, didn't it? Possibly we should have taken steps to preserve clients where they would be safe from predatory hunters. One might have thought THE FORUM would have been in the front rank of such a movement. No; instead, they print articles that put ideas in client's heads. No good ever came of that.

ROGER ALLEN

Grand Rapids, Mich.

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PENBERTHY AUTOMATIC ELECTRIC SUMP PUMP Made in 6 sizes

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THE sales record established by these Penberthy Products is probably the best evidence of their outstanding quality.

Architects, engineers, plumbing and heating contractors...all have expressed a preference for a Penberthy Automatic Electric Sump Pump or Automatic Cellar Drainer wherever seepage water accumulates. The many advantages and economies of hot water heating plant modernization with these Penberthy Specialties are also appreciated.

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RESILIENT SASH AND BARS For maximum protection to plate glass insist on the famous Kawneer line of rustless metal store front construction in aluminum with the alumilite finish, bronze or stainless steel.



CONCEALED AWNING BARS -both rolled and extruded types; hide awning rolls in recessed boxes when not in use. Simple lines and lustre of metal beautify the complete front.



ATTRACTIVE ENTRANCE DOORS Kawneer Rustless Metal Doors-for all types of store fronts and buildingsharmonize with any architectural style. Require practically no maintenance.



FRONT

DESIGNERS

★ New opportunities await the store front designer who has not yet worked with K.Z.S. Architectural Porcelain Enamel—for it has practically no limitations. Available in 27 standard colors (permanent and acid-resisting), this remarkable facing brings life, beauty and attention-value to any store front or building.

K.Z.S. Panels are of heavy, extra-flat steel, fused with inorganic porcelain enamel. They combine the strength, adaptability and comparative lightness of steel with the permanence and non-porous nature of glass. Each panel is individually suspended on resilient Rustless Spring Clips and may be removed at any time without disturbing adjoining units. CONSULT SWEET'S OR WRITE FOR NEW ILLUSTRATED BOOKLET.



THE KAWNEER COMPANY, NILES, MICHIGAN. BRANCHES: NEW YORK, CHICAGO, BERKELEY, CAL. DISTRIBUTORS IN PRINCIPAL CITIES.

THE SMITHSONIAN GALLERY OF ART COMPETITION

FIRST prize in the competition for the Smithsonian Gallery of Art has been awarded to Eliel Saarinen, Eero Saarinen and Robert Swanson of Bloomfield Hills, Michigan. This award marks the first time since the days of Thomas Jefferson that the architect for an important public building in the Nation's Capital has been selected by *open* competition. Considered from this point of view alone it is an event of wide public interest and concern.

The competition was divided into two stages, one open to all qualified applicants, the second limited to those who won the first ten places in the preliminary judgment. Results have more than confirmed the efficiency and fairness of this method: a minimum of time and expense was required in the first stage, while the ten finalists were assured adequate compensation for the more elaborate drawings demanded of them. The jury, moreover, was able to give each project the attention it merited, since there were only ten instead of the usual hundreds. Also worth noting is that the great majority of the final contestants had already distinguished themselves professionally, a fairly strong argument against the common claim that competitions are a lottery in which almost any incompetent might be lucky enough to win.

The significance of this competition, however, overshadows the importance of the building or the success of the method. That an impeccable jury should have chosen—for Washington—a building without the usual Roman draperies is not only a tribute to their courage and honesty, but gives, at long last, some hope that the Capital may show three-dimensional evidence of its existence in the twentieth century.

This triumph for the modern approach by no means implies a flaunting of all that Washington stands for, but rather a step towards its fulfillment. There is no virtue in the denial of change: the America of 1939 is not the country of the Federal period, and there is little reason why Washington should be the only city to pretend that it is. Had the Roman emperors and Renaissance churchmen attempted to perpetuate the Etruscan style merely because it was the manner in which the Tarquins built, the absurdity of such an attitude would be as apparent in Rome as it is in Washington today. The great virtue of the winning design, aside from the technical excellence of its solution, is that it shows beyond the possibility of denial that the monumental tradition of Washington can be given appropriate expression, and new vitality, within the framework of modern architecture.

The Congress, in authorizing the use of funds for this competition, has discharged its official obligations. Funds for the building are to be raised either from private sources, or by means of a new Congressional appropriation. In the light of what public monies have already built in Washington, it seems far from unreasonable to expect that this building, of truly great architectural significance and cultural value, will be erected by the same means. Everything possible should be done to prevent the winner of our most successful national competition from remaining a project on two sheets of paper. The important thing is that the building be built.

THE REPORT OF THE JURY

THE Smithsonian Gallery of Art Commission announces the award of the First Prize of \$7,500 in the Smithsonian Gallery of Art Architectural Competition to Eliel and Eero Saarinen Associated with J. Robert F. Swanson of Bloomfield Hills, Michigan. These architects will be recommended by the Commission to be employed as architects of the proposed museum. Construction will begin as soon as funds become available. The Commission announced at the same time the award of the Second Prize of \$3,500 to Percival Goodman of New York City. There were also eight third prizes, each of which carried an honorarium of \$1,000. These were awarded to

PAUL P. CRET, Philadelphia, Penna.

PHILIP L. GOODWIN, New York City

(LOUIS C. JAEGER and ALBERT FREY, Associates) HARRY F. MANNING, Chicago, Illinois

(DAVID W. CARLSON, Associate)

JAMES A. MITCHELL, Pittsburgh, Penna. (DAHLEN K. RITCHEY, Associate) ELIOT F. NOYES, Cambridge, Mass. (ROBERT W. KENNEDY, Associate)

G. HOLMES PERKINS, Cambridge, Mass.

PETER and STUBBINS, Boston, Mass.

EDWARD D. STONE, New York City

This Competition which was conducted in two stages was first announced last January. Out of 2,600 requests for entry, 408 architects actually submitted designs in the first stage. From the 408 drawings submitted the jury chose ten contestants to participate in the second stage.

The Jury, composed of Frederic A. Delano, Chairman, John A. Holabird, Walter Gropius, George Howe and Henry R. Shepley, submitted the following report to the Smithsonian Gallery of Art Commission today:

It is unanimously agreed that the designs submitted by Eliel Saarinen and Percival Goodman are the best among those in the final competition. Both offer simple, direct solutions in which all facilities are adequately provided for and in which the relation of part to part is correct. In both designs the location of exhibition spaces on the first floor and the immediate accessibility of these spaces to the entrances is commended. The relation of exhibition space to the auditorium, as well as the provision for access to the auditorium, are well studied. In each the service areas are organized in a practical manner.

The design submitted by Eliel Saarinen is considered especially appropriate in its relation to the site. It offers a remarkable clarity of composition in mass and a restraint and dignity in expression which appears to the majority of the jury especially suitable for a building to be built on the Washington Mall. The building has the distinction which comes from a fine use of materials, and shows throughout a professional competency on the part of the designer which leads the jury to believe that he could be safely trusted with the execution of the work.

The design submitted by Percival Goodman is commended by all members of the jury for the thorough study given to the organization of the elements of the plan. The exterior composition is full of interest and of that imaginative quality which gives distinction to architecture. The peculiar excellence of this design lies in its consistency throughout and the remarkable plasticity.

In their decision to place the design by Eliel Saarinen first, the jury were strongly influenced by considerations governing the proposed expansion of the building at some future date. The provisions for expansion in the design placed first are so managed that the building would be as efficient in organization after the expansion as it is before expansion. This is not as evident in the design submitted by Percival Goodman and it is believed that the sculptural quality of this design, to which it owes so much of its excellence, would be impaired when the proposed expansions are carried out. On the other hand, the expansion of the design placed first would improve rather than injure the design.

The jury finds a high standard in all the designs given third prize.

The design submitted by James A. Mitchell and Dahlen K. Ritchey offers what would comprise, when fully developed, an admirable scheme, but in the part proposed for immediate construction the galleries are too narrow, and the work areas, administration offices and library are unnecessarily broken up.

The plan submitted by G. Holmes Perkins is considered to be exceptionally well organized, but the access to the auditorium on the second floor and the excessive length in the working areas are considered faults.

The design submitted by Paul P. Cret is especially admired for its presentation. The introduction of a court impairs the flexibility of the general galleries and also makes the functioning of the work areas difficult. Access from the first floor gallery to the second floor is somewhat indirect and the high gallery is considered inadaptable for exhibition use.

The design submitted by Edward D. Stone is commended for its excellent grouping and for the admirable placing of the auditorium and the arrangement of entrances and exits. The arrangement of the galleries is criticized, however, since the introduction of the overdeveloped circulation elements in the center impairs the flexibility of the exhibition spaces. These defects might

be less evident should the expansion of the building be effected.

The design submitted by Philip L. Goodwin shows competent knowledge of the workings of a museum. The facilities are well organized. The introduction of the auditorium in the center of the composition results in a complicated plan and in congestion in circulation.

The design submitted by Peter and Stubbins proposes a scheme admirable in its simplicity and clarity. The unification of the elements on the main floor by means of a long gallery is considered excellent and the flexibility of the exhibition spaces, combined with variety in form, is another excellent feature. The principal defect is the introduction of two courts which are high, narrow and useless, and the placing of the administration unit at the extreme end of the composition.

The design submitted by Eliot Noyes and Robert Kennedy offers one of the most compact plans. The relation between the working areas and storage and the exhibition spaces is admirable and the design as a whole is unusually straightforward and practical. The elevations are considered unsatisfactory in proportion, especially in that part proposed for immediate construction.

The design submitted by Harry F. Manning and David W. Carlson proposes compact, well organized galleries but the forced relations of the auditorium to the body of the building, and the complication of the working areas are considered defects.

Respectfully submitted,

June 29, 1939

FREDERIC A. DELANO

Chairman of the Smithsonian Gallery of Art Commission

JOHN A. HOLABIRD, architect, Chicago

WALTER GROPIUS, architect, Cambridge, Mass.

GEORGE HOWE, architect, Philadelphia

HENRY R. SHEPLEY, architect, Boston

Professional Adviser: JOSEPH HUDNUT, Harvard University

Technical Adviser: THOMAS MABRY, Museum of Modern Art, New York



An air view of Washington with its long projected Mall between the Capitol and Washington Monument. The white rectangle represents the site allotted the Smithsonian Gallery of Art, just opposite the Mellon National Gallery now under construction.





SMITHSONIAN GALLERY OF ART COMPETITION The Architectural forum july 1939

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Isometric of the group, in which the dotted lines indicate future expansion



SECOND PRIZE DESIGN BY PERCIVAL GOODMAN, NEW YORK CITY



SECOND PRIZE DESIGN BY PERCIVAL GOODMAN, NEW YORK CITY



PAUL P. CRET, PHILADELPHIA



PHILIP L. GOODWIN: LOUIS C. JAEGER AND ALBERT FREY, ASSOCIATES, NEW YORK CITY





HARRY F. MANNING: DAVID W. CARLSON, ASSOCIATE, CHICAGO





JAMES A. MITCHELL: DAHLEN K. RITCHEY, ASSOCIATE, PITTSBURGH




ELIOT F. NOYES: ROBERT W. KENNEDY, ASSOCIATE, CAMBRIDGE, MASS.



G. HOLMES PERKINS, CAMBRIDGE, MASS.



FIRST FLOOR



SECOND FLOOR



PETER & STUBBINS, BOSTON





GROUND FLOOR



NORTH ELEVATION



EDWARD D. STONE, NEW YORK CITY



MODERN HOUSES IN AMERICA

40KT

AUGULT FUT UAL FUTURE TO MALE FUTURE

It is thirty years since Frank Lloyd Wright built the Coonley house, fourteen since LeCorbusier's pavilion disrupted a Paris fair, nine since Miës van der Rohe produced the Tugendhat plan. Long enough, one might think, for the modern house to come of age in an epoch of swift development. But the new dwellings in the 1939 U. S. landscape are still predominantly traditional.

Should this seem to give cause for premature discouragement or gratification, a few other facts might be considered. There is the fact that this issue could not have been published four years ago, not for fear of irate readers, but simply because there would not have been the houses to fill it. There are the recent polls, which show a consistent consumer opinion of 40 odd per cent favorable to the modern house, some four times the figure of a few years back. Finally there is the house itself, no longer a dogmatic geometrical essay in stucco and corner windows, but warm, catholic in its choice of materials and furnishings, indifferent to the degree of pitch of its roof, free and varied in its manner of providing shelter. The modern house today is no longer the frigid white symbol of a small cult, and in changing it has immeasurably broadened its appeal.

Discussion of whether the modern house is here to stay or not has become academic. It is here. And the number of examples has increased substantially with each passing year. If further evidence of its vitality is required one need only consider the modifications it is producing in the design of traditional dwellings.

The houses in this issue are neither small nor inexpensive; this does not mean that a good small modern house is an impossibility, but it does accurately reflect the position of the buyer of modest income, who often cannot overcome the attitude of over-conservative lending institutions which thus far have shown little faith in the resale value of the modern house. It has remained for the owners of such houses as these to break through the vicious circle. Evidence is not lacking that acceptance is spreading swiftly beyond the limits of a restricted group with independent means.

Quantitatively insignificant as these houses may be, THE FORUM'S editors present them as important. They are important not only as indicators of a trend, but as outstanding examples of a powerful influence that is slowly but inevitably changing the appearance of the American residential scene. They are important because they represent the emergence of the age-old tradition of honest building, interrupted by more than a hundred years of eclecticism. And most important to the public, they are no longer experiments.



KENNETH DAY, ARCHITECT

THREE HOUSES IN MIQUON, PENN.

ARCHITECT: * "The factors leading to the construction of three modern houses at once were three: economy, the fact that the three families, knowing each other well, happened to need new houses at the same time, and the fact that the architect saw an artistic opportunity and made every effort to make it an actuality. The site was picked because of a really magnificent view of the valley of the Schuylkill to the southwest, and because it was one of the few very open sites left at its distance from the center of Philadelphia. The view, the compass point, and the fall of the ground determined the arrangement of all of the plans. A great advantage in site-planning resulted from an agreement between the three families never to spoil the big field below the houses which, although owned in three separate pieces, becomes in effect a community foreground for the view."

* Mr. Day is also the owner of one of the houses.



"Certain other aspects of cooperative saving, such as joint laundry, kitchen or garage facilities, were turned down on the ground of 'rugged individualism.' This same individualism dietated radically different plans and color schemes, but permitted use of similar materials and methods of construction. Only the architect member of the group, however, chose to employ fireproof construction.

"In the Day house, an awning projecting 14 ft. over the terrace to the southwest of the long living-room window has provided a summer porch and shade for the window, but may be removed in winter to allow full utilization of solar heat. This renders use of the heating plant unnecessary in sunny winter weather, so that the large glass areas have added nothing to the cost of heating.

"A great deal of the furniture, particularly in the bedand dressing rooms, was built under the millwork contract, with substantial savings in original cost, upkeep, and especially a saving in floor space.

"An interesting point is illustrated by the living room of the Day house, where nearly all the furniture and decorative objects were old, and the architectural color scheme and scale were developed as a background for inherited objects. This refutes the statement, so often made, that if you want a modern house you must throw away all your old things."





WEST ELEVATION, ARCHITECT'S HOUSE



LIVING ROOM, ARCHITECT'S HOUSE











LIVING ROOM. Ceiling: natural insulating board (light tobacco brown) between ivory beams. Walls: ivory. Trim: exterior, turquoise; interior, natural gum-wood. Doors and wainscoting: highly varnished brown Masonite. Floor: deep raspberry red; rugs, horizon blue. Window sills and shelf under window: gloss black, Upholstery: green and yellow.

LIVING ROOM



KENNETH DAY, ARCHITECT





BEDROOM, BATH: "Glass partitions between the bedroom, dressing room, and bath in the Day house serve to create an illusion of a large space in what might otherwise have seemed three tiny rooms, while at the same time permitting separate control of temperature. The herbarium in the bathroom has proven most agreeable, to both humans and plants."



CONSTRUCTION OUTLINE

FOUNDATIONS: Walls-18 in. local stone. STRUCTURE: Exterior walls-8 in. and 12 in. cinder block, 2 coats Medusa Portland Cement Co. cement paint; inside asphalt waterproof paint and wall board; living room shellac and oil paint directly on asphalt. Bearing walls-painted cinder block. Steel columns in long windows. Interior partitions-(non-bearing) 1/2 in. Johns-Manville insulating board nailed to studs, sized and painted. Floor construction-C1/2 in. concrete slab monolithically colored with terra cotta metalichron; Formigli prefabricated concrete joists. Ceilings-(wood) 1/2 in. Johns-Manville insulating board; (concrete) Medusalite paint, Medusa Portland Cement Co. ROOF: S.ab, $2\frac{1}{2}$ in., on Formigli joists fin-ished with 15-year Eonded Ruberoid Co. built-up roofing and gravel. Overhangs and slopes-40 lb. tin. Decks-2 in. Celotex, Celotex Corp., poured concrete squares with expansion joints.

CHIMNEYS: Terra cotta lined. Damper-Old Style, H. W. Covert Co. INSULATION: Roofs-(wcoden) 4 in. rock

INSULATION: Roofs—(wooden) 4 in. rock wool; (concrete)—2 in. Celotex, Celotex Corp. Deck—1 in. Celotcx and 1 in. Johns-Manville insulating board. Walls—1 in. Johns-Manville insulating board.

WINDOWS: Sash—steel casement, Hope's Windows, Inc. Glass—Pennvernon, quality A, double strength and 1/4 in. polished plate, Pittsburgh Plate Glass Co. Glass block—12 in., Pittsburgh Corning Corp.

WOODWORK: Interior finished in maple, birch, beech and gumwood. Interior doors— Masonite finish, Masonite Corp. Wainscots— 3/16 in. Masonite Corp. Presdwood.

PAINTING: Exterior woodwork and doorsgulf cypress some parts painted with Tector, Pittsburgh Plate Glass Co. and 3 coats lead and oil. Interior woodwork-spar varnish, Duco and wax, lacquer and wax and shellac and wax.

HARDWARE: Stanley Works, Schlage Lock Co. and P. & F. Corbin.

ELECTRICAL INSTALLATION: Wiring system—BX. Fixtures—built-in and Lumi-line.

KITCHEN EQUIPMENT: Refrigerators-Electrolux, propane gas. Servel, Inc. Ranges --Geo. D. Roper Corp. Cabinets-wood. Sinks --Kohler Co.

BATHROOM EQUIPMENT: All fixtures by Kohler Co., except square tub by Standard Sanitary Mfg. Co. HEATING AND AIR CONDITIONING:

HEATING AND AIR CONDITIONING: Day house—Makin Kelsey winter air conditioning; other houses—Bryant Heater Co. winter air conditioning. All houses burn propane gas. Hot water heater—Welsbach propane gas. Propane gas kept in single tank above grade and piped to three houses and metered separately.

Robert M. Damora Photos

CLARENCE W. W. MAYHEW, ARCHITECT HOUSE FOR HAROLD V. MANOR, SOULÉ TRACT, CALIF.





ARCHITECT: "Mr. and Mrs. Manor are among the few clients I have had who have really let me be their architect, in the fullest sense of the term. They let me pick out their lot and design the house I thought they should have. At our first meeting they said that they wanted a house that would open up to the garden and bring the garden into the house. This, together with the number of rooms required, constituted the program. From then on it was up to me.

"The entrance to the lot, which is about two acres, is from the north. The main view is to the south with nice outlooks in all other directions. With the main view south, the view windows are also sun windows.

"Beyond a large, level garden-area to the south of the house the site drops off sharply, which prevents anyone from building and cutting off the view. This also gives complete privacy to the garden and the open southern glass walls.

"In general, the house has a Japanese character in both plan and elevation. Although I did not copy any Japanese details, I did copy the underlying principle. I feel that this type of house represents country living in California better than any style I know. It is certainly a relief after playing Rancho or Spanish Don."

COLOR NOTES

INTERIOR. Ceilings natural Insulite in patterns to fit rooms (see bottom picture). Walls, trim, and cases: natural redwood. Floors: natural Masonite; rugs, natural hemp, light and dark brown.



DINING

LIVING ROOM



Roger Sturtevant Photos

CONSTRUCTION OUTLINE

FOUNDATION: Walls and cellar floor-reenforced concrete. Waterproofing-Emulsion, Standard Oil Co., and 4 in. drain tile.

STRUCTURE: Exterior walls—2 x 4 in. studs, flush lapped redwood boarding and $\frac{3}{4}$ in. Insulite Co. sheathing. Interior partitions —1 x 10 in. flush lapped redwood boarding. Ceiling— $\frac{3}{4}$ in. Insulite, left natural, covered with redwood batten. Floor construction— 2 x 10 in. joist, 16 in. o.c., and 2 ft. squares Tempered Presdwood, Masonite Corp.

CHIMNEY: Common brick with terra cotta flue lining, Gladding, McBean & Co. Damper —Heatmore, Richardson & Boynton Co.

SHEET METAL WORK: Flashing and leaders—Anaconda copper, American Brass Co. Gutters—4 x 6 in. redwood. Ducts—galvanized iron, U. S. Steel Corp. copper steel sheets.

INSULATION: Outside walls and ceiling-34 in Insulite board, Insulite Co.

WINDOWS: Sash—casement and sliding, sugar pine. Glass—double strength, quality A, Pennvernon, Pittsburgh Plate Glass Co. Screens—Berkeley Disappearing Screen Co. WALL COVERINGS: Main rooms $\frac{3}{4} \times 10$ in. flush lapped clear redwood, sanded and left natural. Kitchen and bathrooms—Wall-Tex, Columbus Coated Fabrics Corp.

WOODWORK Trim, cabinets and interior doors—redwood. Exterior doors—sugar pine. Garage doors—tempered Presdwood on Oregon pine, Masonite Corp. HARDWARE: Supplied by Schlage Lock Co.,

HARDWARE: Supplied by Schlage Lock Co., Richard Wilcox Mfg. Co. and Grant Co. PAINTING: Exterior walls—Dutch Boy

PAINTING: Exterior walls—Dutch Boy white lead, National Lead Co. Roof—stain, Samuel Cabot, Inc.

ELECTRICAL INSTALLATION: Wiring system and switches—General Electric Co. KITCHEN EQUIPMENT: Range and refrigerator—General Electric Co. Sink—Crane Co. Cabinets—wood, Lanmon Brothers Mill. LAUNDRY EQUIPMENT: Sink—Crane Co. washing machine—Bendix Co.

BATHROOM EQUIPMENT: All fixtures by Crane Co.

PLUMBING: Soil pipes—cast iron. Vent pipes—steel. Hot and cold water pipes— Streamline, Mueller Brass Co.

HEATING AND AIR CONDITIONING: Delco filtering and humidifying system with Delco oil burner, Delco Frigidaire Conditioning Div., General Motors Sales Corp. GEORGE FRED KECK, ARCHITECT HOUSE FOR MR. B. J. CAHN





LAKE FOREST, ILLINOIS

ARCHITECT: "In a flippant mood Mrs. Cahn once said she wanted the house of the day after tomorrow. Actually, she wanted a contemporary house suited to her property, convenience, and comfort; a house that could be closed in a few minutes, with nothing in it that would deteriorate while it was unoccupied, and could be opened as quickly; a house to be practically servantless, for present day informal living.

"The crescent-shaped plan was developed to afford a full view of the sunrise and sunset from the living room, and to give privacy to the bedrooms. As you approach the house in a car you have the pleasant sensation of 'driving into it': it seems to bend to take in the sweep of your car.

"To reduce deterioration to a minimum, two heating systems were installed, one to keep the house just above freezing when unoccupied, the other a yearround air conditioning system for use when occupied. Fuel is gas, and the systems are entirely automatic.

"The exterior venetian blinds take the place of old fashioned shutters, and are handier to operate. They are used to regulate winter solar radiation. Summer solar radiation is stopped by the large overhang over the south windows, so that the blinds need not be drawn.

"The living room was made large with a high ceiling to accommodate string quartets, radio, and recorded music. There are no materials in the house, including fabrics, which require much care to be kept in condition. Floors are rugless and windows without draperies. Other points: Lighting for bedrooms is from pin holes in ceilings over beds, tilted and masked to fall on top half of bed only, with handy switch for each bed. Glass block is generously used for borrowed light, sometimes through three layers. A loudspeaker on wheels plugs in to numerous outlets, with remote control in various rooms."

OWNER: "Our experience with the traditional home was responsible to a large degree for our conclusion that a modern house would fit our ideas of living. It was the "House of Tomorrow" at the Chicago Exposition which indicated to us that its architect would attain our objective.

"We like the house because it is spacious, colorful, bright, restful and in harmony with the surrounding landscape, and because it is a home in the fullest meaning of the word, since it affords the fullest amount of comfort and contentment. It has made our way of living simpler, easier, and more responsive to our demands. It requires no effort in housekeeping.

"We believe that the modern house is the house of the future, and that when it is fully understood and its potentialities are known, more and more modern houses will be erected. If we were to build again we would repeat what we have done in every respect."

Hedrich-Blessing Photos







ENTRANCE



Hedrich-Blessing Photos

LIVING ROOM. Ceiling: Sanicoustic tile, painted dark blue. Walls: plaster, painted yellow. Floor: black rubber. Furniture: yellow, upholstered with fabric combining jute and blue leather. Movable furniture: aluminum. Lighting from 18 pin holes in ceiling, for reading in any part of room.



DAY AND NIGHT VIEW, BEDROOM WINDOW









CONSTRUCTION OUTLINE

FOUNDATION: Walls—reenforced concrete. Cellar floor—cement, interior sprayed with Sprayo-Flake, Sprayo-Flake Co., exterior dampproofed.

STRUCTURE: Exterior walls—heavy cement stucco on metal lath, Stran-Steel Co. studs, wood furring strips, Sprayo-Flake Co. insulation, and plaster. Interior partitions—gypsum tile and plaster. Floor construction— H. H. Robertson Co. steel welded, cement fill and rubber. Ceilings—suspended metal lath and plaster. Structural steel frame by Carnegie-Illinois Steel Co.

ROOF: Twenty-year bond tar and gravel, Haydite Co. fill.

CHIMNEY: Reenforced concrete on brick base. Fireplace screen—Fyr-Slyd Screen, Inc. SHEET METAL WORK: Flashing and expansion joints—crimped lead-coated copper, Revere Copper & Brass Co. Downspouts cast iron.

INSULATION: Outside walls and ground floor—Sprayo-Flake Co. Roof—Sprayo-Flake and Haydite Co. fill. Weatherstripping inter-locking, Chamberlin Metal Weather Strip Co. Sound insulation in living room perforated metal ceilings, Johns-Manville.

WINDOWS: Temporary windows—cypress; future metal windows will drop electrically into basement. Glass—1/4 in. plate, Pittsburgh Plate Glass Co. Glass blocks—4 in., Owens-Illinois Glass Co.

FLOOR COVERINGS: All rooms-black rubber, American Tile & Rubber Co.

WOODWORK: Trim-metal. Cabinets-birch. Folding doors-Newcastle Products Co. Exterior doors-aluminum, Kawneer Co.

HARDWARE: Finish hardware special alumilited aluminum, Illinois Hardware Co. PAINTING: Interior and exterior paints by Pratt & Lambert.

ELECTRICAL INSTALLATION: Switches-Bakelite Corp. Fixtures-built-in, Major Equipment Co. Lenses-Corning Glass Co.

KITCHEN EQUIPMENT: Range—Hot Point, Edison-General Electric Appliance Co. Refrigerator—McCray Refrigerator Co. Sink— Crane Co. Cabinets—wood, special.

BATHROOM EQUIPMENT: Fixtures by Crane Co.

PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—copper, Mueller Brass Co. HEATING AND AIR CONDITIONING: Complete air conditioning by Air Comfort Co. using Carrier Corp. equipment throughout. Two heating systems, one forced hot water and one split forced air system.

SPECIAL EQUIPMENT: Swimming poolprecast sidewalls and gutters, Chicago Art Marble Co. Venetian blinds—aluminum, Chain Tape Venetian Blind Co. Incinerators —Ewing Incinerator Co.

BEDROOM. Ceiling: yellow. Walls: green. Floor: black rubber. Furniture: yellow; fabric white cotton loop material, specially woven. Beds built-in with cove base.

HARWELL HAMILTON HARRIS, DESIGNER





HOUSE FOR GEORGE C. BAUER, GLENDALE, CALIF.



DISCARDED PRELIMINARY A. "Living room looks into children's bedrooms. Entrance hall and bedroom hall are too long. A long kitchen is needed so that both dining room and entrance hall can be reached from kitchen. No room is left for a service yard on the street side. Paving separates the interior from the planting."



DISCARDED PRELIMINARY B. "Bedroom hall is moved to the east side and widened, shortened, and the outside wall made entirely of glass. Children's bedrooms are narrowed and provided with wide openings to bedroom hall—which now becomes a sunny playroom opening into the garden. Other disadvantages remain as in 'A.'"

DESIGNER: "The problem was to provide a house for a family of five: parents, a boy of 5, a girl 1, and a maid or guest—giving seclusion for common family life, in which privacy for the individual members is not essential except for the maid or guest; to keep the house informal, simple, and with a close connection between the inside and the out-of-doors.

"In the solution, seclusion is provided by turning the house away from the street and opening it up at the back to make the most of the garden. This permits a maximum use of glass as the rear garden is completely screened from the street. Full use of glass makes possible a close connection between the house and the outof-doors.

"Informality is secured by making the living, dining, play, and garden areas separate and yet merging easily into one another, while the circulation is worked out to permit separation of activities when this is desirable. The fireplace is visible from many of the rooms. Children at dinner or at play are visible to the parents in the dining or living rooms, yet separated from them by a glass partition. On occasion, one-half of the partition may slide in front of the other half to open the living and play rooms to each other. A curtain in front of the glass may be used to separate the rooms entirely."

OWNER: "We wanted a house that was simple, open, and which did not require a lot of furniture to make it livable. We did not discuss the question of modern versus traditional.

"We like the openness of the house, its airiness, and informality. It is homey and lacks pretense. It fits into its surroundings.

"We think our house a good investment because it suits the site, is comfortable to live in, and is not dated."

COLOR NOTES

EXTERIOR. Light gray green walls with roof stained brown and door and window rails black.

INTERIOR. Straw colored floor, pale yellow walls, pinkish-white ceilings, natural birch furniture, natural pongee curtains, oiled redwood cabinets, burnt orange upholstery, and black door and window rails.



ACCEPTED PRELIMINARY C. "Dining room is turned 45° which shortens kitchen. Guest room is turned 45° which widens approach to entrance hall. Parents' room is turned 45° to allow the house to be pushed further back from the street. A triangle is cut out of the play room to shorten its length. This allows garden terrace to penetrate the mass of the building and increases the amount of glass wall opening on the garden. The paved area is divided and reduced in size permitting the planting to come up to the glass screen in the center. A wall between the house and the street conceals the service yard from both and provides a private garden for the guest room."



SECTION 'A-A'



DINING







HARWELL HAMILTON HARRIS, DESIGNI

CONSTRUCTION OUTLINE

FOUNDATION: Walls-concrete.

STRUCTURE: Exterior walls-colored stucco over 16 gauge galvanized wire mesh, 60 lb. Mullen Test waterproof paper and 16 gauge wire, 6 in. o.c. Interior partitions—2 x 4 in. studs, interior stucco on plaster board lath. Floor construction-1 x 4 in. T. & G. pine over 2 x 6 in. joists, 16 in. o.c.

ROOF: Wood rafters covered with redwood shingles.

CHIMNEY: Reenforced common brick with plaster finish. Damper-Superior Fireplace Co. SHEET METAL WORK: Flashing-24 gauge Arm-

co, American Rolling Mill.

WEATHERSTRIPPING: Felt.

WINDOWS: Sash-horizontal sliding with sheaves on metal track. Glass-single strength, quality B, Pittsburgh Plate Glass Co. Screens-No. 16 galvanized wire cloth, stationary wood frames.

FLOOR COVERINGS: Living room, bedrooms and halls-Chinese grass matting, California Asia Co. Kitchen and bathrooms-linoleum.

WOODWORK: Trim and cabinets-clear redwood, natural finish. Doors-paneled Douglas Fir. HARDWARE: By Schlage Lock Co. and Stanley

Co.

PAINTING: Interior: Bathroom and kitchen walls and ceilings-sealer, flat coat and enamel; remainder La Hubra colored interior stucco. Sashoil color in spar varnish. Garden wall-3 coats outside oil paint, General Paint Corp.

ELECTRICAL INSTALLATION: Wiring systemconduit, Steel & Tubes, Inc. Switches-tumbler type. Fixtures-built-in; indirect and flush panel; exposed lumilines in kitchen and bathrooms.

KITCHEN EQUIPMENT: Range-gas, Universal, Landers, Frary & Clark. Refrigerator-electric Coldspot, Sears, Roebuck Co. Kitchen and laundry sinks—Standard Sanitary Mfg. Co. Cabinets—wood. BATHROOM EQUIPMENT: All fixtures by Standard Sanitary Mfg. Co. Cabinets-Hallenscheid & McDonald Co.

PLUMBING: Soil pipes-cast iron, Hercules Foundries Co. Hot and cold water and vent pipes-National Tube Co. Fittings and valves-galvanized iron, Walworth Co.

HEATING: Gas fired warm air floor furnace and wall radiators, Monarch Heating Co.; Thermador electric Radiant Heaters in bathrooms, Thermador Electric Heating & Mfg. Co. Hot water heater-American Radiator Corp.



FORDYCE & HAMBY AND GEORGE NELSON, ASSOCIATED ARCHITECTS HOUSE IN SCARSDALE, N. Y.



EAST ELEVATION

M

ARCHITECTS: "Westchester building sites seem uniformly designed to make the use of an automobile impossible, and this was no exception. While generous, the lot consisted largely of a rocky slope which presented a major building problem, solved by the conventional expedient of building three levels on one side and two on the other.

"The owners' living requirements were simple: accommodation for parents, two children, guests, and two servants. Their interest in a workable plan, ample glass areas, and simply furnished interiors led naturally to the development of a modern scheme, while their insistence on permanent, fireproof construction resulted in a somewhat unusual wall construction of concrete slabs.

"These units, made of vibrated concrete with the exterior finish integrally cast, are of ribbed construction with a shell four to six inches in thickness. Easy to erect, they also meet the architects' requirement of a reasonably honest expression of the structural method employed.

"This masonry construction conditioned the exterior design. It eliminated ribbon windows, since concrete posts 4 ft. on centers were more economical. The scale of the blocks also called for a simplification of detail wherever possible. A base of local fieldstone seemed like a good idea since the stone is very pleasant in color and provided a more suitable and flexible means of transition to the irregular ground than the large concrete slabs.

"The house was slow in building, due partly to difficulties with the local building department, which was upset for a long time by the unfamiliar wall construction. It was finally necessary to build up to the second floor without a permit and then make a loading test, a method which, if often repeated, would hardly contribute to an architect's longevity.

"The neighbors also were profoundly disturbed by the house, which sits next to a half-timbered affair on one side, Colonial cottages on another, and a pseudo-Georgian house on a third. The curious conviction of inhabitants of New York suburbs that they live in architecturally homogeneous communities is undisturbed by anything from a Scotch castle to a Mediterranean villa; modern is apparently the one exception. They seem resigned at present and no windows have been broken."

OWNER: "After having lived and visited in traditional homes for a period sufficient to enable me to form an opinion of them, and having watched developments and improvements in other types of buildings, I became dissatisfied with home life in surroundings designed for my Pilgrim forbears. I therefore decided on a modern house, which seemed to me a step in the direction away from muzzle-loading guns and pony express communications. Our transfer from a conventional to a modern house has made our home life more enjoyable, and, I think, less expensive."









FORDYCE & HAMBY AND GEORGE NELSON, ASSOCIATED ARCHITECTS



RECREATION ROOM



DINING ROOM



LIVING ROOM. Walls: light beige. Rug: rose-beige. Narra veneer. Large curtain: cedar.











BATH



KITCHEN. "The usual contradictory requirements of maximum cupboard space and window space resulted here in an attempt to provide both. From the illumination point-of-view in particular it has been very successful."



CONSTRUCTION OUTLINE

FOUNDATION: Walls-local fieldstone and concrete block. Cellar floor-4 in. concrete

over cinder fill. STRUCTURE: Exterior walls—vibrated concrete slabs with integral exterior finish; shapes specially cast, Dextone Co. Interior partitions—(bearing) cinder block; (nonbearing)—gypsum block. Floor construction —precast concrete joists and slabs, Bedford

Hills Concrete Products Co. ROOF: Truscon Steel Co. bar joists covered with Gypsteel planks. Structural Gypsum Div., American Cyanamid & Chemical Corp.,

4-ply tar and gravel. CHIMNEY: Common brick, fireclay lining; Damper—H. W. Covert Co.

Damper_H. W. Covert Co. SHEET METAL WORK: Flashing-copper. Gutters and leaders-lead coated copper.

Gutters and leaders—lead coated copper. INSULATION: Outside walls—Balsam wool quilt, Wood Conversion Co. Roof—4 in. rock wool. Weatherstripping—Accurate Metal

Weatherstrip Co. WINDOWS: Sash—steel casements, Hope's Windows, Inc. Glass—double strength, quality A, Pennvernon, Pittsburgh Plate Glass Co. Glass blocks—Owens-Illinois Glass Co. Blinds—Venetian, Percy P. Hopp. Screens—

Anchor Weatherstrip Co., Inc. STAIRS: Reenforced concrete, carpet cov-

ered. FLOORS: Main rooms—white oak. Kitchen —rubber, Voorhees Rubber Co. Bathrooms—

linoleum. WALL COVERINGS: Living room, dining room and study—Eastern Woodcraft Co., veneers on flush panels.

veneers on flush panets. WOODWORK: Metal door bucks—flush, Superior Fireproof Door & Sash Co. Shelving and cabinets—wood, Eastern Woodcraft Co. Doors—flush, birch veneer, "Sturdibilt", M. & M. Woodworking Co.

& M. Woodworking co. HARDWARE: Equipment by John Schoemer. PAINTING: Primer-Sealer by Gall Bros., all

other paints by Ben'amin Moore. ELECTRICAL INSTALLATION: Wiring system—rigid conduit. Fixtures—H. S. Whiting

Co. KITCHEN EQUIPMENT: Range—gas, Chambers Mfg. Co. Refrigerator—Electrolux Sales Div., Servel, Inc. Sink—Monel Metal, International Nickel Co. Cabinet—wood, millmade. BATHROOM EQUIPMENT: Master bath by Crane Co. Tub—Standard Sanitary Mfg. Co. Toilet—W. A. Case & Son Mfg. Co. Shower —G. M. Ketcham Mfg. Co.; head by Speakman Co. Cabinets and accessories—The Charles Parker Co.

PLUMBING: Soil pipes—extra heavy cast iron. Hot and cold water pipes—copper. HEATING AND AIR CONDITIONING: Steam system in kitchen, pantry and bathrooms. Filtered, humidified warm air in balance of house. Boiler—gas.fired, Bryant Heater Co. Radiators—American Radiator Co. Thermostat—Minneapolis-Honeywell Regulator Co., Inc. G. HOLMES PERKINS, ARCHITECT HOUSE IN BROOKLINE, MASS.



ENTRANCE SIDE





Paul Davis Photos



EAST ELEVATION



EL SECOND FLOOR



G. HOLMES PERKINS, ARCHITECT

ARCHITECT & OWNER: "The design of the house centered to a large degree around the desire of Mrs. Perkins and myself to have a home which would permit the utmost flexibility in living both indoors and out. Our desire was not only to have the usual terrace and outdoor dining areas, but to give a feeling of unity between indoor and outdoor living in winter as well as during the summer months; this was accomplished by the large glass areas in the living room and dining room and by keeping the floor and terrace level the same.

"To obtain the utmost privacy the house was oriented with its long side to the west facing a cliff which falls some 30 ft., about 150 ft. west of the house. The only close neighbor is to the southeast and due to the topography it is impossible for anyone to build within our view although we have only $1\frac{1}{4}$ acres. The location of the neighboring house and a large rock outcrop rising some 20 ft. to the south made the west orientation preferable, and, because of thick woods which have been left undisturbed, the house is amply protected from the too hot west sun."

COLOR NOTES

EXTERIOR. Brickwork: white except under dining terrace roof, where wall is gray. Vertical siding: cypress, bright copper color.

LIVING ROOM. Ceiling: white. Fireplace walls: grayblue; window walls: white with white venetian blinds. Floor: natural American Walnut. Rug and furniture: blue and gray, with touches of brown.

CONSTRUCTION OUTLINE

FOUNDATION: Walls and cellar floor—concrete. Waterproofing—R.I.W., Toch Bros.

STRUCTURE: Exterior walls—studs, rock lath and plaster; outside finish partly second hand brick, white cement paint and remainder vertical T. & G. cypress siding. Interior partitions—wood studs, rock lath and plaster, U. S. Gypsum Co. Ceiling—metal lath and plaster; kitchen—Acousti-Celotex, Celotex Corp. Floor construction—wood joists.

ROOF: Five ply tar and gravel; decks covered with deck boards.

INSULATION: Outside walls and roof-4 in. Red Top glass wool, U. S. Gypsum Co. Sound insulation-Acousti-Celotex in kitchen and pantry, Celotex Corp.

WINDOWS: Sash—steel casement, Hope's Windows, Inc. Glass—quality A, American crystal sheet, except 1/4 in. plate in living and dining room windows, Pittsburgh Plate Glass Co. Glass blocks—Insulux, Owens-Illinois Glass Co.

FLOOR COVERINGS: Living room and main hall-walnut. Bedrooms and upstairs hall-oak. Kitchen and bathroomslinoleum.

WOODWORK: Kitchen cabinets-flush plywood. Doors-flush birch.

HARDWARE: Interior and exterior-dull chrome finish. W. C. Vaughan Co. Garage doors-Overhead Doors Co.

PAINTING: Walls and sash—Hancock Paint & Varnish Co. Ceilings—calcimine. Floors—shellac and wax. Exterior walls —cement paint on brick; Valentine & Co. Valspar varnish on wood.

KITCHEN EQUIPMENT: Range-gas, Bengal Time Saver, Floyd Wells Co. Refrigerator-Servel, Inc. Sink-Monel Metal, International Nickel Co.

LAUNDRY EQUIPMENT: Sink—Kohler Co. BATHROOM EQUIPMENT: All fixtures by Kohler Co. Cabinets—J. P. Eustis Mfg. Co.

nets—J. P. Eustis Mfg. Co. HEATING AND AIR CONDITIONING: Complete unit by Delco-Frigidaire Div., General Motors Sales Corp. Thermostat—Minneapolis-Honeywell Regulator Co. WALTER GROPIUS & MARCEL BREUER, ASSOCIATED ARCHITECTS



Paul Davis Photos





HOUSE IN LINCOLN, MASS.





ARCHITECT & OWNER: "The aim for the conception of the house: a corridorless, compact plan, fitting snugly around the family life. Shortest communication. A maximum of sunlight during the winter from southeast to west. Protection against the sun during the hot time of the year, on the south side by built-in, overshadowing roof overhang, on the west side by exterior venetian blind of anodized aluminum.

"Large windows give full view of the landscape to the east, south, and west from the hilltop where the house stands. The screened porch extending from north to south catches the westerly and easterly summer breezes.

"Labor saving kitchen and pantry with automatic dish washer and garbage disposal. Special heating circuit for bathrooms and dressing room so that house heating can be switched down during the night and bathrooms remain warm. All bathrooms placed around one stack for economy. All water installation placed away from the living rooms.

"White painted lattice work on east and west sides, stretching out like tentacles, in order to weave plants around the house.

"The house stood in the full stream of last September's hurricane and behaved perfectly, without damage to the roof, windows, or other parts. As roof drainage is through the inner part of the house, no icicles whatsoever formed during the winter."

WEST ELEVATION









DINING ROOM





WALTER GROPIUS & MARCEL BREUER, ASSOCIATED ARCHITECTS



AR ELEVATION - FRAMINC PLAN

LIVING ROOM





DRESSING, BEDROOM



CONSTRUCTION OUTLINE

FOUNDATION: Walls-fieldstone. Cellar floor -3 in. concrete on gravel. Dampproofing on outside wall.

STRUCTURE: Exterior walls—vertical redwood siding, asphalt felt, Barrett Co., fir boarding, 2 x 4 in. studs, rock lath, U. S. Gypsum Co., and National Gypsum Co. plaster. Interior partitions—studs, 16 in. o.c., and plaster. Floor construction—34 in. fir finished flooring over 7_8 in. fir sub-floor. Ceilings fir joists, strapping, metal lath, National Gypsum Co. plaster.

ROOF: Fir boarding and joists, strapping, covered with Barrett Co. 5-ply, 20 year Bond roofing.

SHEET METAL WORK: Flashing—16 oz. soft copper, Revere Copper & Brass Co. One interior downspout—4 in. cast iron, Sanitary Co. of America. Ducts—Toncan galvanized iron, Republic Steel Corp.

INSULATION: Outside walls and roof-Cabot's Quilt, Samuel Cabot, Inc. Weatherstripping—Athey Weatherstrip Co. Sound insulation in living room—acoustical plaster, California Stucco Co.

WINDOWS: Sash—steel, Hope's Windows, Inc. Glass—1/4 in. plate and 3/16 in. sheet, quality A, Pittsburgh Plate Glass Co., some 1/4 in. Louvrex, Blue Ridge Div., Llbbey-Owens-Ford Glass Co. Glass blocks—Pittsburgh Plate Glass Co. Screens—Hope's Windows, Inc., and Cambridge Screen Mfg. Co. STAIRS: Plywood sides with pine risers and stringers. Treads—cork, Armstrong Cork Co. FLOOR COVERINGS: Living room and bedrooms—carpet covered. Halls—cork. Kitchen and bathrooms—linoleum covered.

WALL COVERINGS: Bedrooms—wallpaper. Dining room—plywood, U. S. Plywood Corp. Halls—vertical white pine siding. Bathrooms —tile, Mosaic Tile Co.

WOODWORK: Trim—white pine. Cabinets pine and birch. Doors—"Sturdibilt", M. & M. Woodworking Co. Garage doors—Barber-Colman Co.

HARDWARE: Equipment by W. C. Vaughan Co.

PAINTING: Bathroom walls and interior and exterior sash—Dutch Boy lead and oil, National Lead Co. Ceilings—Moresco, Benjamin Moore Co. Floors—wax, S. C. Johnson & Son. ELECTRICAL INSTALLATION: Wiring system and switches—General Electric Co. Lighting fixtures—Light Control, Inc., Kliegl Bros., and Kurt Versen.

KITCHEN EQUIPMENT: Range, refrigerator, dishwasher and disposal unit—General Electric Co. Sinks—(pantry) Ryan Mfg. Co., (kitchen) Just Mfg. Co. Cabinets—Modern Steel Equipment Co.

BATHROOM EQUIPMENT: Lavatory and toilet—Briggs Mfg. Co. Tub—Kohler Co. Cabinets and accessories—Charles Parker Co. PLUMBING: Vent pipes—galvanized steel, The Cohoes Co. Soil pipes—Sanitary Co. of America. Hot and cold water pipes—red brass tubing, Phelps Dodge Co. Brass fittings —Northern Indiana Brass Co.

HEATING AND AIR CONDITIONING: Delux split system, hot water and hot air, filtered and humidified, conditioner and copper tank saver coil, Wintermaster, Inc. Radiators —Shaw, Perkins Mfg. Co. Grilles—Tuttle & Bailey Mfg. Co. Thermostats—Perfex Mfg. Co. Kitchen vent fan and hood—Universal Blower Co.





COLOR NOTES

EXTERIOR. Roof: copper covered, now dark brown, beginning to turn green. Walls and window trim: white. All paving, steps, terraces, etc.: exposed aggregate, yellow bank gravel.
KENNETH KASSLER, ARCHITECT HOUSE IN PRINCETON, N. J.



GARDEN WALL AND STEPS

DETAIL OF WALL



All photos, Rob



ARCHITECT & OWNER: "Mrs. Kassler and I desired a small house with relatively large-size rooms which would give as much sense of space as possible. We also desired a house which would be flexible in use either for ourselves or another owner. Hence, the studio was designed so that it might be turned into an additional bedroom and bath with either a library or another bedroom enclosed between the studio and the house. It was separated from the house because it was essentially a work room and not a living room, and also because of the desirable summer porch facing the summer breeze that was obtained thereby.

"The situation of the house was worked out primarily for privacy, sunshine, avoidance of winter winds and utilization of summer winds. The main living rooms have through cross-ventilation, and the overhang of the large living room windows admits sun during the winter months but keeps out the hot summer sun.

"Although the intersecting street has not yet been built, the property is a corner lot and the house has for reasons of privacy turned its back on these two exposures.

"The selection of materials was made chiefly on the basis of the material that seemed best suited to fulfill the conditions at hand. An experiment which has turned out very successfully is a type of panel or radiant heating used only in the studio and designed by an engineer and myself."





MASTER BEDROOM. Walls: prima vera Flexwood. Window trim and ceiling: beige. Furniture: gray turquoise, coral, and beige. Carpet: turquoise.

DINING ROOM. Ceiling and window trim: off-white. Walls: white sand plaster. Floor: dark brown cork tile. Furniture: firwood, rubbed white paint finish; chair seats copper-pink leather. Furniture by Rena Rosenthal Inc.



DINING ROOM



CONSTRUCTION OUTLINE

FOUNDATION: Walls-8 in. cement block. Cellar floor-4 in. concrete over 6 in. cinder fill. Waterproofing-asphalt.

STRUCTURE: Exterior walls-8 in. plain and molded cinder block, George Piper, 1 x 2 in. spruce furring, 11/2 in. corkboard and plaster. Interior partitions-2 in. plaster, 34 in. steel channels, wire lath and plaster. Floor construction (1st. and 2nd.)-steel, H. H. Robertson Co. Hall and studio-concrete slab.

ROOF: Wood purlins covered with copper covered steel sheets, H. H. Robertson Co. CHIMNEY: Brick clay flue lining, H. W. Covert Co. damper.

SHEET METAL WORK: Flashing-copper covered steel strips, H. H. Robertson Co. Gutters and leaders-1/2 in. round copper.

INSULATION: Outside walls— 1_{2} and 2 in. corkboard, United Cork Co. Attic floor—4 in. rock wool, Baldwin Hill Co. WINDOWS: Sash and screens-steel, double

glazing in studio, Hope's Windows, Inc. Glass-double strength, quality A, Libbey-Owens-Ford Glass Co.

FLOORS: Living and dining room-5/16 in. Cork tile, Cork Insulation Co. over $\frac{1}{2}$ in. Homasote Co. board over steel. Bedroomswhite oak, carpet covered. Hall and studio -yellow pine wood block, Carter BloxonEnd Co. Kitchen and bathrooms-linoleum covered.

WALL COVERINGS: Living room and mas-ter bedroom—Flexwood, U. S. Plywood Co.; other bedrooms paint or wallpaper. Halls and kitchen-painted plaster. Bathrooms-white Micarta, Westinghouse Electric & Mfg. Co. WOODWORK: Shelving and cabinets-red gum and white pine. Interior and exterior doors-flush birch. Garage doors-flush panel

steel, Kinnear Mfg. Co. HARDWARE: Supplied by Yale & Towne Mfg. Co., Ostrander & Eshleman Co., and Charles Parker Co.

PAINTING: Interior: Walls-Muresco, Benjamin Moore & Co., remainder of rooms— Anaconda white lead, International Smelting & Refining Co. Exterior walls-cement paint, California Cement Products Co.

ELECTRICAL INSTALLATION: Wiring system-BX. Switches-toggle type. Fixtures-Kurt Versen, Inc., and special designed with Corning Glass Co. cast glass and lenses.

KITCHEN EQUIPMENT: Range and refrigerator-electric, Westinghouse Electric & Mfg. Co. Sink and cabinets-steel, The Accessories Co., Inc. BATHROOM EQUIPMENT: Lavatory and

tub-Crane Co. Toilet-Standard Sanitary Mfg. Co. Seat-C. F. Church Mfg. Co. Shower-(door) Lehman Sprayshield Co., (fixtures) Speakman Co. Cabinet-Charles Parker Co.

PLUMBING: Soil pipes-cast iron. Hot and cold water pipes-brass, Chase Brass & Copper Co.

HEATING AND AIR CONDITIONING: Specially designed system with panel heating and cooling in studio, by Kraemer Luks, Heating Engineer. Boller—Capitol, U. S. Radiator Co. Oil burner-Truheet Co. Thermostat — Minneapolis-Honeywell Regulator Co. Hot water heater-Taco Heaters, Inc. BUILDERS: L. C. Bowers & Sons.

LANDSCAPE ARCHITECT: Daniel M. Lenker.



LIVING ROOM

Ceiling and window trim: off-white. Walls: natural figured red gum Flexwood. Floor: dark brown cork tile. Fireplace facing: marble, cream; hearth, polished black slate. Furniture: cream, copper, brown, white, and emerald green.

Large stone sculpture by Bennett Kassler. Furniture by Steese & Emmons, Inc.



WILLIAM LESCAZE, ARCHITECT

HOUSE FOR ALFRED L. LOOMIS







ENTRANCE SIDE

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ARCHITECT: "The fundamental scheme of the house was dictated by the owner's desire to experiment with a novel system of heating and air conditioning, in an effort to approximate the temperature and humidity conditions of his South Carolina home. For this reason the building has double exterior walls, about 2 ft. apart, and a ceiling space. The effect is that of a house built entirely inside of another structure. Because of this construction, it is possible to maintain a high humidity within the inner house without condensation on the glass areas. This gives the air a 'balmy' feeling. The house itself is equipped with a year-round air conditioning system and the surrounding shell space with a heating system of its own. With this arrangement the shell space may be heated above outdoor temperature, and if no heat is added will come to a temperature about mid-way between the indoor and outdoor temperatures.

"Due to the double wall construction the inner house is extremely quiet. Wind and rain are barely audible within the building."





WILLIAM LESCAZE, ARCHITECT



CONSERVATORY



LIVING ROOM





LIVING ROOM, Walls: one white, others beige and brown. Rug: walnut. Upholstery: brown and beige.



DINING

j



BEDROOM



MASTER BEDROOM







PORCH on West End of House



TCHEN



CONSTRUCTION OUTLINE

FOUNDATION: Walls-12 in. brick.

STRUCTURE: Exterior walls-8 in. brick, waterproofed on inside, plaster. Interior partitionswood studs, plaster. Floor construction—wood joists, oak finish flooring. Ceilings—plaster. ROOF: Light steel joists covered with Truscon sheets, Truscon Steel Co. and Barrett roofing.

CHIMNEY: Terra cotta lining, brick flue. Damper

-H. W. Covert Co. SHEET METAL WORK: Flashing, gutters and leaders—copper. Ducts—galvanized iron. INSULATION: Outside walls and roof—4 in. glass wool, Chamberlin Metal Weather Strip Co. Sound insulation-glass wool tiles in ceiling of conservatory.

WINDOWS: Sash-steel casement. Glass-1/4 in. plate, quality A.

FLOOR COVERINGS: Living room and bedrooms —carpet covered. Halls and conservatory—blue-stone. Kitchen—linoleum. Bathrooms—rubber tile. WALL COVERINGS: Bathrooms-Vitrolite Div., Libbey-Owens-Ford Glass Co. Conservatory-Travertine blocks and rubber.

WOODWORK: Interior doors-walnut. Exterior doors-pine and hollow metal. Garage doors-oak, overhead type.

HARDWARE: Equipment by Schlage Lock Co.

ELECTRICAL INSTALLATION: Wiring systemsingle and 3-phase. Switches-General Electric Co. KITCHEN EQUIPMENT: Range and refrigerator —General Electric Co. Sink and cabinets—metal, Excel Metal Cabinet Co.

BATHROOM EQUIPMENT: All fixtures by Crane

Co., fittings by Charles Parker Co. HEATING AND AIR CONDITIONING: See de-scription on page 37. Boiler—General Electric Co. Grilles—Tuttle & Bailey Mfg. Co. Thermostat— Minneapolis-Honeywell Regulator Co.

PHILIP B. MAHER, ARCHITECT HOUSE IN LAKE BLUFF, ILL.







LIVING ROOM



ARCHITECT & OWNER: "The location of the house on a lake, some 75 ft. above the water, dictated that the principal rooms should enjoy the view. As the winters are quite cold, it was considered desirable to limit the amount of glass except where windows faced in this direction, and in the living rooms all exposure was concentrated in a single, 18 foot window. On the entrance court side, away from the view, plenty of light is obtained through the glass block walls, while privacy is insured and exposure minimized by the insulation provided by the block.

"The design of the house was adopted because its horizontal lines fit well with the lake horizon and permit modern treatment of the windows to take advantage of the lake view. It resulted in a type of construction which was simple and economical to build and requires little maintenance. Brick veneer is used throughout with wooden joists and a flat, gravel-surfaced roof. The house is insulated in walls and ceilings with mineral wool, and the walls receive the benefit of the three air spaces made possible by veneer construction.

"The interior was treated very simply and all possible woodwork omitted. Windows have plaster reveals and stools formed from rubber floor covering. Doors are trimmed with bullnose metal beads.

"In the kitchen, metal cases and stainless steel sinks were used. The object of this treatment, in addition to economy and simplicity, was to reduce deterioration resulting from closing the house during the winter. The second floor has been arranged with a door at the foot of the stairs so that it can be entirely cut off from the rest of the house, as only the first floor will be heated for winter week-ends. This arrangement results in a house that can expand and contract for varied use and seasons." DINING



PHILIP B. MAHER, ARCHITECT



BEDROOM

Hedrich-Blessing Photos

KITCHEN



CONSTRUCTION OUTLINE

concrete, FOUNDATION: Walls-poured continuous. Cellar floor-cement finish on reenforced concrete, cinder fill. Waterproofing -R.I.W., Toch Bros. STRUCTURE: Exterior walls-brick veneer,

select common brick painted, building paper, yellow pine sheathing, 2 x 4 in. studs, 16 in. o.c., rockwool insulation, rock lath, and plaster, U. S. Gypsum Co. Interior partitions -2×4 in. studs, 16 in. o.c., rock lath, plaster finish. Floor construction- 2×10 in. joists, rough flooring, paper, woodstrips, and finished oak flooring.

ROOF: Flat deck-2 x 8 in. joists, 16 in. o.c., wood sheathing covered with tar and gravel; main roof-2 x 10 in. joists covered with same.

CHIMNEY: Common brick, terra cotta flue lining.

SHEET METAL WORK: Galvanized iron throughout.

INSULATION: Outside walls and roof-rock wool, U. S. Gypsum Co. Weatherstrippingcopper.

WINDOWS: Sash-steel casements, Truscon Steel Co. Glass—double strength, quality A; glass blocks—Decora, Pittsburgh Glass Co. Screens-copper mesh, metal frame. STAIRS: Treads-oak. Risers-birch. String-

ers-pine. FLOOR COVERINGS: Living room and bed-

rooms-oak. Halls, kitchen and bathrooms-

rubber tile, Wright Rubber Products Co. WOODWORK: Trim, cabinets and interior doors—birch. Exterior and garage door white pine.

HARDWARE: Interior-chromium on brass. PAINTING: Interior: Walls, ceilings and sash—lead and oil. Floors—stain and wax. Exterior walls-2 coats Cabot's white. ELECTRICAL INSTALLATION: Wiring

system-white metal rigid conduit. Switches -toggle. KITCHEN EQUIPMENT: Range-gas,

George D. Roper Corp. Refrigerator-Elec-trolux, Servel, Inc. Sink-Elkay Mfg. Co. Cabinets-steel, Elgin Stove & Oven Co. BATHROOM EQUIPMENT: All fixtures by Crane Co.

PAUL DOERING, DESIGNER; H. G. BALCOM & ASSOCIATES, ENGINEERS



HOUSE IN GREENBURGH, N. Y.

All photos, Robert M. Damora

ARCHITECT: "Location of the property on a high ridge between Long Island Sound and the Hudson Palisades affords a view of both from the second floor terrace. The land is level for about 200 ft. from the road, which is on its north side, and then slopes sharply down to a meadow at the south end of the property. The surrounding land is mostly unimproved or farmed, with an uncertain future. "The nature of the property clearly suggested a long plan, with most of the rooms opening down-hill, to the south, and with the north wall, facing the road, mostly closed with masonry or glass block for privacy and protection from the prevailing winter winds. An important requirement of the young and growing family was provision for expansion to accommodate more children later on. Plans for future expansion include a new garage and servant's room to be attached to the end of the house, with the present garage added to the present play room. This would permit use of the present servant's room as a guest room, releasing the present second-floor guest room for use as a child's bedroom.

"Flexibility of living space is obtained by the use of Fairhurst moving walls between the living and dining room, and between the living room and library. The living-dining room wall can be pushed around the corner so that it extends along the north wall of the dining room, or it can be moved so that either of the two sections remains as a partial screen. One sliding panel in each wall serves

PAUL DOERING, DESIGNER; H. BALCOM & ASSOCIATES, ENGINEERS G.



LIVING ROOM. Walls: grass cloth; paneling, teak. Columns and sash on garden side: gray-green. Rug: brown twist-weave. Furniture upholstered in yellow, eggshell, green, and blue. Curtains: eggshell and gray. Living room lighting: dimmer-controlled indirect trough lighting giving a maximum of 15-20 foot-candles throughout the room; louvered lighting strip over windows.









ELEVATION & SECTION OF BALCONY RAILING









BATH

KITCHEN

CONSTRUCTION OUTLINE

FOUNDATION: Walls—reenforced concrete. Cellar floor—5 in. reenforced stone concrete slab; 1 in. integrally colored cement finish in playroom. Waterproofing—integral. STRUCTURE: Exterior walls—face brick, Fredenburg and Lounsbury, bonded to cinder block backing, insulated with 1 in. cork laid in hot waterproof asphalt and plaster. Interior partitions—plaster on 3 in. cinder concrete blocks. Floor construction—Aerocrete Corp. slabs. Ceilings—plaster and metal lath.

ROOF: Open-web steel joists, Bethlehem Steel Corp., surfaced with concrete, covered with Johns-Manville 4-ply built-up roofing. Decks-reenforced concrete covered with integrally colored cement finish, Preservative Products Corp.

CHIMNEY: Brick, hard-burned terra cotta flues. Dampers—H. W. Covert Co. Fire screens—Rolling Screens, Inc.

SHEET METAL WORK: Flashing—rubberseal and lead coated copper, Mitchell Rand Mfg. Co.

INSULATION: Outside walls and roof—cork in hot waterproof asphalt, United Cork Co. Weatherstripping—Zero Weatherstripping Co. and Accurate Weatherstripping Co.

WINDOWS: Sash-steel casement and fixed, Hope's Windows, Inc. Operators-H. S. Getty Co. Glass-double strength, quality A, flat

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drawn and 1/4 in. heavy plate, Pittsburgh Plate Glass Co.; owner's bedroom—Vita glass. Mississippi Glass Co. Glass blocks— Pittsburgh-Corning Corp. Screens—steel, Hope's Windows, Inc. Screen doors—aluminum, Orange Screen Co.

STAIRS: Main—steel, cork treads, Armstrong Cork Co.

FLOOR COVERINGS: Living room and hall -oak squares, set in mastic on cement subfoor, Ritter Lumber Co. Bedrooms-some cak; remainder asphalt tile, Tile-Tex Corp. Kitchen and bathrooms-Tile-Tex Corp. asphalt tile.

WALL COVERINGS: Living rooms—grass cloth, teak paneling, Eric Jansson Co. Bedrooms—one wall each of Salubra paper, Frederick Blank & Co., remainder—plaster. Kitchen —linoleum. Bathrooms—Keene's cement and Salubra paper, Frederick Blank & Co.

WOODWORK: Doorbucks and base-steel, Knapp Bros. Mfg. Co. Interior doors-flush, "Sturdibilt," M. & M. Woodworking Co. Moving walls-teak, manufactured by American Car & Foundry Co., Fairhurst patents. Garage doors-Overhead Door Mfg. Co. HARDWARE: Yale & Towne, Peter Neale,

HARDWARE: Yale & Towne, Peter Neale, Inc., Kroder Reubel Co. and Garcy Mfg. Co. PAINTING: Interior—flat oil and enamel, Benjamin Moore & Co. Cement floors—clear cement finish, Minwax Co.; aluminum paint primer, Pittsburgh Plate Glass Co. Entrance door, garage door and sheathing—varnish, Edward Smith & Co.

ELECTRICAL INSTALLATION: Wiring system—General Electric Co. Switches—Harvey Hubbell Co. Fixtures—built-in, Kurt Versen, Inc. Spotlights—Kliegl Bros. Dimmers—General Radio Co. KITCHEN EQUIPMENT: Range—coal burn-

KITCHEN EQUIPMENT: Range—coal burning, American Gas Assn. Refrigerator and dishwasher—General Electric Co. Sink and cabinets—Excel Metal Cabinet Co.

LAUNDRY EQUIPMENT: Sink-Kohler Co. Washing machine-Bendix Co.

BATHROOM EQUIPMENT: Fixtures by Kohler Co. and Standard Sanitary Mfg. Co. Shower stall—G. M. Ketcham Co. Shower heads—Speakman Co. Cabinets—Charles Parker Co.

PLUMBING: Soil pipes—extra heavy cast iron. Cold water pipes—copper tubing, American Brass Co. Pressure reducing valves— Mueller Co.

HEATING AND AIR CONDITIONING: Twozone system, 2 units, air filtered, humidified, Carrier Air Conditioning Corp. System designed for cooling but equipment not yet installed. Air conditioning ducts — Hauxwell Smith Co. Boiler—Carrier Corp. Grilles—Register & Grille Corp. Regulators—Minneapolis Regulator Co.

SPECIAL EQUIPMENT: Incinerators—Kerner Incinerator Co. Blinds—aluminum, Chicago Venetian Blind Corp. Dark room exhaust— American Blower Corp.



WILLIAM F. DEKNATEL, ARCHITECT HOUSE FOR WALTER J. KOHLER,





KOHLER, WISCONSIN

ARCHITECT: "The property comprises 54 acres of pasture and woodland through which meanders the Pigeon River. The site commands a magnificent view of a valley to the east and a lesser view southward down a meadow cut out of the woods. To the west a rise shelters the house from the highway approach. A strip of circulation and service spaces isolates the living quarters from the north which is the source of the principal storms and is unembellished by any view.

"The house is placed on the edge of a bluff which drops about 40 ft. to the bottomland eastward, and its northwest corner, the garage wing, nestles into the side of a gentle hill. Its isolation-since it is one and one-half miles from the nearest village —as well as the prominence of the family led to a sharp separation of family life from the reception end of the house. Thus the entrance is a considerable distance from the three principal living rooms and separated from them by a stair hall. At the entrance is a guest suite and a study which serves also as a reception room for casual callers. Similarly the south wing of the house, which is continued by a high lilac hedge, separates the lawn to the south from the entrance way.

"In the main living room the usual problem of two generations under one roof was solved by placing a playroom on center with the dining room, and connecting both DINING ROOM



to the living room. This affords great flexibility for entertaining large numbers and in the ordinary course of family life provides the children with a living room of their own apart from the parents and yet close to the service rooms.

"In arranging the bedrooms I placed the two young children in line with the master bedroom in such a way that these three rooms can be shut off from the rest of the house for safety's sake. The elder daughter has a suite of her own somewhat apart from the others. By the use of sleeping porches a large capacity for week-end guests and flexibility in the use of the various bedrooms are created."

OWNER: "We selected modern rather than traditional architecture because the modern approach to the problem of design as a function of need and utility seemed so innately sensible. It didn't seem reasonable to build a house with faked halftimbers, for example, in copy of sixteenth century technical limitations, when it was possible to take advantage of twentieth century knowledge of steel, concrete, and cantilevers and have more spacious, lighter, and more livable rooms. Consequently, we chose an architect whom we knew to be profoundly sympathetic to this point-ofview.

"There are many things we like about the house—the actual openness to the out-ofdoors in summer and the illusion of it in winter; the spaciousness due to the use of folding partitions instead of doors; its coolness in summer, its sunshine and warmth in winter; the practical relationship of the rooms; the orientation in respect to the view and the south; its sleeping porches; its living and dining room porches—and many others.

"The lack of basement storage space is somewhat inconvenient. This could easily have been provided by excavating under the entire house instead of only under its central portion. However, this defect could exist in any house, traditional or modern. "Mrs. Kohler says it is much easier to clean but that dirt is more apparent. I would put these both on the credit side. It seems to me maintenance costs will be less, although only time can definitely determine that.

"No house of this size is a sound investment from the resale point-of-view and this factor was considered of secondary importance. I believe that today a traditional house could be more easily financed and sold than a modern house of comparable size, construction, and excellence of design. Ten years from now, however, the position of these same two houses will, I believe, be reversed and the 1939 modern will have a higher resale value than the 1939 traditional."



LIVING ROOM



LIVING ROOM



DROOM

NG ROOM. Ceiling and walls: plaster tinted warm ge. Woodwork: natural red birch. Rug and draes: off-white. Upholstery matches walls with acts of flame red.

SERY. Walls: bright yellow plaster. Woodwork: te birch. Rug: yellow with brown squares. Upstery: brown; drapes match walls.

LLERY





NURSERY

CONSTRUCTION OUTLINE

FOUNDATION: Walls-poured concrete, vibrated. Cellar floor-concrete on cinder fill. Waterprooling-asphalt dampproofing.

STRUCTURE: Steel frame, fireproofed with concrete. Bearing wallsface brick, Hydraulic Press Brick Co. and plaster on 8 in. Speed-abacker tile, National Fireproofing Co.; inside furred, lathed with 1 in. Celotex Corp. Thermax, and plaster. Curtain walls-4 in. face brick, 4 in. tile, furring, 1 in. Thermax and plaster. Interior partitions-2 x 4 in. studs, 3% in. U. S. Gypsum Co. perforated rock lath, gypsum plaster and finish coat Best Bros. Keene's cement, National Gypsum Co. Floor construction: Stair hall, gallery and main stairs-reenforced concrete slab; remainder-wood joists.

ROOF: Wood joists suspended on steel beams by hangers, covered with 20-year Bond tar and gravel, Koppers Co. Dead level roof designed to carry 2 in. of water as insulation. Deck (master's suite)-Tidewater red cypress plank laid on sleepers. CHIMNEY: Face brick with common brick backing, circular burnt

clay flue lining. Fire screens-Flex-screens finished in copper, Bennett Fireplace Corp. Face of fireplace-black granite, Cold Spring Granite Co.

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

INSULATION: Outside walls-1 in. Thermax, Celotex Corp. Roof-4 in. rock wool, U. S. Gypsum Co., 1 in. Thermax, 2 in. water. Weatherstripping-bronze, Chamberlin Metal Weather Strip Co. Sound insulation—Thermax, Celotex Corp. WINDOWS: Sash—Tidewater red cypress, outswinging casements;

double glazing. Glass (living and dining room)-1/4 in. polished plate, elsewhere-quality A, double strength, Lustraglass, American Window Glass Co. Glass blocks-Owens-Illinois Glass Co. Screens-Rolscreen Co.

FLOOR COVERINGS: Living room and bedrooms-hard maple. Entry hall and porches-brick. Dining room, halls, kitchen and bathroomslinoleum covered.

WOODWORK: Trim and cabinets-birch. Interior and exterior doors -Tidewater red cypress, Roddis Lumber & Veneer Co. Folding wood screens, Aeroshade Co.

HARDWARE: Equipment by Yale & Towne Mfg. Co., Builders Hard-ware Co., Richards-Wilcox Mfg. Co., The Stanley Works, Casement Hardware Co. and H. S. Getty Co.

PAINTING: Exterior and interior woodwork and floors-Minwax Co. Kitchen, pantry and laundry—3 coats enamel. ELECTRICAL INSTALLATION: Wiring—rigid conduit. Switches—

tumbler. Fixtures-Moe Bros.

KITCHEN EQUIPMENT: Range-Standard Electric Stove Co. Refrigerators-(bar) Westinghouse Electric & Mfg. Co., (kitchen) General Electric Co. Cabinets-Steel Kitchens, Inc.

BATHROOM EQUIPMENT: All fixtures by Kohler Co. Cabinets-

Miami Cabinet Div., The Philip Carey Co. PLUMBING: Soil, waste and vent pipes—extra heavy cast iron, Somerville Iron Works. Heating pipes—National Tube Co. Drains— Josam Mfg. Co. Hot and cold water pipes-copper, Revere Copper & Brass Co. Deep well pump-Lane Northwest. Water softener-Permutit Co.

HEATING: Hot water, one pipe system in four zones using B. & G. Booster Pumps-Bell & Gossett. Boiler-Kohler Co. fired by Iron Fireman Mfg. Co. steker. Radiators, convectors and grilles-Kohler Co. Automatic controls-Minneapolis-Honeywell Regulator Co. Hot water heater-Bell & Gossett.

GEORGE PATTON SIMONDS, ARCHITECT

ARCHITECT: "The property consists of a long, narrow strip between the street and a creek, varying in width from about 75 to 35 ft. The street side of the plot is southeast. This indicated a long plan with high windows on the street facade for privacy. Bedrooms, bath, and kitchen were placed on the street side where they receive the morning sun. The living room, on the back of the house, does not receive sun in the morning when not in use, and is protected from the hot noon and early afternoon sun by the roof overhang. It does receive the low western sun in the late afternoon.

"The budget was limited, and had to be increased when the bids came in. The house cost more per square foot than any I have done to date, but in spite of the amount of glass, insulation, and difficult construction, totaled only \$5,500 including architect's fee."

OWNER: "Fortune's article 'The House That Works' changed a French-Norman dream to a modern reality . . . We like especially the abundant light and the compactness of the plan without sacrifice of privacy. The exterior of the house blends well with the landscape and fits our peculiarly shaped lot.

"The lack of a service entrance we find something of a nuisance, and the black floors a mental hazard. Due to plain surfaces and many windows the modern house is easier to clean and for the same reason harder to keep clean-looking than the traditional."



Esther Born Photos



ENTRANCE



HOUSE FOR WILLIAM ROGER STOLL, HAYWARD, CALIF.







LIVING ROOM





KITCHEN

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—1 x 10 in. channel redwood boards, Reynolds Corp. Type C metallation, 2 x 4 in. Douglas fir studs, wall board inside. Interior partitions— 2 x 4 in. Douglas fir studs and wall board. Floor construction—Douglas fir joists. ROOF: Covered with Johns-Manville built-

up asphalt and gravel roofing.

SHEET METAL WORK: Flashing and leaders—Armco galvanized iron, American Rolling Mill Co. Ducts—galvanized iron.

ing Mill Co. Ducts—galvanized Iron. INSULATION: Outside walls—Reynolds Corp. Type C metallation; 1 in. Insulite Co. board in living room, and 34 in Celotex elsewhere, Celotex Corp.

WINDOWS: Sash-horizontally sliding, sugar

pine. Glass—double strength, quality B, Libbey-Owens-Ford Glass Co. Glass blocks— Insulux, Owens-Illinois Glass Co. Screens sugar pine, copper mesh.

FLOOR COVERINGS: Main rooms— $\frac{1}{8}$ in. tempered hardboard, Insulite Co. Kitchen and bathrooms—linoleum over $\frac{1}{4}$ in. plywood. WOODWORK: Trim, cabinets and exterior doors—Douglas fir. Interior doors—"Sturdibilt", M. & M. Woodworking Co.

HARDWARE: By Rylock Co., Ltd. PAINTING: Interior: Walls, ceilings and

PAINTING: Interior: Walls, ceilings and sash—Muraltone on insulation, Muralo Co. and E. I. du Pont de Nemours & Co. Dulux on wood. Exterior walls—prepared L.T.Z., E. I. du Pont de Nemours & Co.

ELECTRICAL INSTALLATION: Wiring system-knob and tube. Switches-tumbler,

Bryant Electric Co. Fixtures—special. KITCHEN EQIUPMENT: Range—Hot Point electric, Edison-General Electric Appliance Co. Refrigerator—Coldspot, Sears, Roebuck Co. Sink—Kohler Co.

LAUNDRY EQUIPMENT: Sink—cement tray, Washing machine—Kelvinator Corp. BATHROOM EQUIPMENT: Lavatory—

Standard Sanitary Mfg. Co. Tub and toilet-Kohler Co. Seat-C. F. Church Mfg. Co.

PLUMBING: Soil pipes—cast iron, Crane Co. Hot and cold water pipes—streamline copper, Mueller Brass Co.

HEATING. Atlas Heating Co. forced air unit, Minneapolis-Honeywell Regulator Co. controls. Boiler—gas fired, Ruud Mfg. Co. Grilles—Tuttle & Bailey Mfg. Co. Automatic storage heater—Hoyt Heater Co.

BURNHAM HOYT, ARCHITECT



ARCHITECT: "The house was planned entirely from the inside out—starting first with the furniture arrangement, windows were located with the furniture and view carefully considered. It is situated on a westerly sloping hill, commanding a superb view of the mountains. The entrance is directly on axis with Mount Evans, which can be seen through the west garden door down the stairs leading to the living room. The circular dining room affords vistas to the three important mountain peaks in this part of the Rockies: Long's Peak, Mount Evans, and Pike's Peak.

"The owners are modern minded and lived for years with all the reproductions of modern jobs they could find. I simply helped them weed out this collection." OWNER: "It had been our idea for years to use modern, because modern gave us what we wanted most without the restrictions of traditional. Our location, a rolling hill in the country with a 150-mile panorama of snow-capped peaks before us, necessitated windows, many of them, and large ones too. Also we feel that modern conforms to Colorado topography. "We like the sense of space which modern gives us. In no room are we aware of limitations or walls: the closed garden on the east of the living room brings us quiet and repose; on the south a garden of gay flowers; on the west our 14,000 foot peaks with rolling green lawn as a foreground. These stimulating, restful, and gay spots are all a part of our daily living because of *plan*, *windows*, and *modern*.

"The only way in which the house has proved at all unsatisfactory is in respect to the windows; on the basis of our experience we would say it is advisable to have eaves as a protection against snow and rain, especially in bedrooms where ventilation is a requirement." HOUSE FOR MR. AND MRS. ALFRED J. BROMFIELD, JR., DENVER, COLO.





BURNHAM HOYT, ARCHITECT



BREAKFAST ROOM

DINING ROOM

LIVING ROOM





COLOR NOTES

EXTERIOR. Walls: brick and wood lapsiding, brick painted cool light gray, siding dark gray-blue. Joints in glass block painted gray-green.

LIVING ROOM. Ceiling, walls and floor: shades of yellow. Furniture and draperies: gray.

DINING ROOM. Ceiling, walls and floor: shades of gray. Furniture and draperies: gray. Curved, sliding partition is Celoglass on wood frame.

MASTER BEDROOM. Ceiling, walls, and floor: shades of blue. Bedspread, draperies and furniture: white.

BEDBOOM





BATH

DRESSING ROOM

CONSTRUCTION OUTLINE

FOUNDATION: Walls-concrete, continuous. Cellar floor-cement on dirt fill. Waterproofing-2 coats Western Elaterite on outside of concrete, Western Elaterite Roofing Co.

STRUCTURE: Exterior walls-9 in. common brick, 2 in. wood furring; interior plaster. Interior partitions— $\frac{7}{8}$ in red-wood drop siding, $\frac{7}{8}$ in. sheathing, 2×6 in. studs, Sisalkraft Co. paper, wood lath and plaster. Floor construction— 2×12 in. joists, sub- and finished fir flooring.

ROOF: Light trusses of fir covered with sheathing and 34 in. Elaterite roofing, Western Elaterite Roofing Co. Decksjoists, sheathing and canvas topped with Elaterite. CHIMNEY: Terra cotta flue lining. Damper-Colonial Damper

Co. SHEET METAL WORK: Flashing-galvanized iron. Drains -Josam Co.

INSULATION: Outside walls and roof-rock wool, U. S. Gypsum Co. Weatherstripping-Chamberlin Metal Weatherstrip Co.

WINDOWS: Sash-Fencraft casement, Detroit Steel Products Co. Glass-1/8 in. double strength and 1/4 in. plate. Screens-Rolscreen Co.

STAIRS: Treads, risers and stringers-linoleum covered. FLOORS: Fir throughout.

FLOOR COVERINGS: All floors linoleum covered. WALL COVERINGS: Living room—linoleum at fireplace. Bedrooms-quilted chintz at head of bed. Kitchen and bathrooms-linoleum.

WOODWORK: Trim-metal. Cabinets and exterior doors-pine. Interior doors-"Sturdibilt," M. & M. Woodworking Co. Garage doors-Ro-way, Rowe Mfg. Co.

HARDWARE: Equipment by Yale & Towne Mfg. Co.

PAINTING: All interior and exterior paints by McMurtrie Mfg. Co. Exterior brick walls-Bondex, Reardon Co. ELECTRICAL INSTALLATION: Wiring system and

switches-General Electric Co. KITCHEN EQUIPMENT: Range-Hot Point, Edison-General

Electric Appliance Co. Sink-Crane Co. BATHROOM EQUIPMENT: All fixtures by Crane Co. Cabi-

net-Hallensheid & McDonald.

PLUMBING: Hot and cold water pipes-copper tube. HEATING: Boiler-L. J. Mueller Furnace Co. with Iron Fireman stoker. Thermostat-Minneapolis-Honeywell Regulator Co. Attic and kitchen have ventilators.

ALDEN B. DOW, ARCHITECT HOUSE FOR DR. CHARLES MACCALLUM



MIDLAND, MICHIGAN



LIVING ROOM

ARCHITECT: "The family consists of Dr. and Mrs. MacCallum, three children, and a maid. Location overlooks a golf course and stream from the living room, dining room, and game room windows. The open terrace also overlooks the stream and golf course."

OWNER: "We chose modern because we believe it best fits our manner of living, and since it is planned and built after a thorough study of the owner's needs—it gives greater living satisfaction.

"Our house works as it should in every way; its lack of waste space; our lovely views through the large windows; the feeling of spaciousness; and especially the joy it is to take care of. "We did not consider resale value when we built, but with increasing interest in modern and lowering construction costs, I believe the resale value will approach that of other types of houses. Several of our friends have changed their preference from traditional to modern after seeing our house, and one in particular—who was a confirmed antique collector and could see nothing but Colonial—is now building a modern house of her own.

"I am sure we would never consider building anything but a modern house again and would certainly like to see more modern houses. They are so much more interesting and livable than most traditional ones."



ROOF

GAR 20'x19'

N BM



CONSTRUCTION OUTLINE

FOUNDATION: Walls-poured concrete. Cellar floor-cement; TileTex Co. finish in game-room. Waterproofing-hot pitch on exterior walls.

STRUCTURE: Exterior walls-brick veneer; inside plaster, brick and Acoustex, Celotex Corp. Interior partitions—plaster, Acoustex. Floors-wood.

ROOF: Wood covered with asbestos shingles. Decks-5-ply paper with brick finish set in asphalt.

CHIMNEY: Common brick, flue lining. Damper-Colonial Damper Co.

SHEET METAL WORK: Flashing, gutters and leaders-copper. Ducts-galvanized iron. INSULATION: Outside walls and roof-Inc. Sound insulation-Johns-Manville, Acoustex, Celotex Corp.

WINDOWS: Sash-cypress. Glass-plate and double strength, quality A. Glass blocks-Pittsburgh-Corning Corp. Screens-16 mesh, copper.

FLOOR COVERINGS: Main rooms-carpet covered. Kitchen-linoleum. Bathrooms-tile. WALL COVERINGS: Living room and bedrooms-plaster and brick. Halls and game room-Acoustex, Celotex Corp.

WOODWORK: Louisiana red cypress used throughout.

HARDWARE: Equipment by Schlage Lock Co., Stanley Works, and H. S. Getty Co. PAINTING: Interior and exterior sash-2coats No. 61 float varnish, Pratt & Lambert, Inc.

ELECTRICAL INSTALLATION: Wiring system-Romex, General Cable Co. Switches -Pass & Seymour. Fixtures—Kurt Versen, Modernage, Nessen Studio, and Faries Mfg. Co.

KITCHEN EQUIPMENT: Range-gas. Refrigerator-Kelvinator Corp. Sink-Dalcross, Kohler Co. Cabinets-cypress, Linoleum tops. Laundry trays-Shelfon, Chicago Granite Co. BATHROOM EQUIPMENT: All fixtures by Kohler Co.

PLUMBING: Soilpipes-cast iron. Hot and

cold water pipes—copper. HEATING: General Electric Co. gas-fired, split system.

BUILDING MONEY

The House of Tomorrow—a \$6,000 design in brick, glass and redwood by Architects Landefeld & Hatch. In a poll conducted by THE ARCHITECTURAL FORUM, visitors to the Town of Tomorrow at the New York World's Fair cast 17 per cent of their votes for this "Bride's House," thus placed it before its three modern and eleven traditional competitors. For a more complete presentation of this house (No. 3) see page 66.



MODERN HOUSES TOP N. Y. FAIR,

run off with 41 per cent of the votes in Architectural Forum

poll. A house-by-house presentation of the Town of Tomorrow.

A shining display of new building mateials, the fifteen houses known as "The Town of Tomorrow" are now a completed part of the New York World's Fair. In no sense a town and distinctly of today rather than tomorrow, these houses—presented in order of cost in the following portfolio—constitute the Nation's No. 1 show.*

Of the fifteen, four houses are modern n exterior design, and two others are, with scant justification, so labeled by the Fair. The remaining nine are traditional, hearly all Colonial. Here for the first time the public can see modern and traditional nouses side by side. Thus, by far the most interesting and significant question which the Town asks and answers is the public's reaction to modern architecture.

The 5,000 dime-paying people who visit the Town every day represent a good cross section of U. S. public opinion and THE FORUM has sampled their reaction, has uncovered two newsworthy facts: 1) more than 40 per cent of the visitors favor modern architecture, and 2) the Town's most popular house is one of modern design (see isometric above, plan and pictures on page 66).

Trends. Other modern tendencies are apparent in various design and construction elements of nearly all of the houses:

▶ There is a growing emphasis on living space at the sacrifice of dining space seven of the fifteen houses have a combination living-dining room or have folding walls (screens) which make it possible to combine the two.

▶ The pantry is no longer a required room—only one house (No. 21.*) bucks this trend.

▶ The kitchen is progressing from its traditional location on the view-commanding rear of the house to the side or front only three of the fifteen houses have a rear kitchen.

▶ The garage, long since moved from the back to the side of the house, is now moving to the front—four houses have their garage facing the street; six, the side yard; two, the rear yard; the remaining three

*All house numbers used herein are those assigned by the Fair. Explanation of the fact that the Fair's numbers are not consecutive is that only fifteen of the original twenty-one houses were built. are small houses and are without garage. Natural, unpainted woods are increasing in importance both as interior and exterior decorative material—three houses underline this trend.

▶ Glass is becoming an increasingly important building material—eight houses make advantageous use of glass block in exterior walls wherever light, but not vision, is required. And it is used in every kind of room, from parlor to bath. Glass block also serves strictly decorative purposes in the Town of Tomorrow—such as in the serpentine wall in front of House No. 4.

▶ Corner windows and larger-than-average windows are becoming increasingly popular—ten houses show this.

▶ Lath and plaster for interior wall finish is giving way to "dry finish"—in about half the houses the inside walls are finished with plywood, wall board, gypboard, cane fiber sheeting, etc., either papered, painted, or "raw."

▶ Most important, the long-standing theory that modern and traditional houses do not mix is exploded before the public's eyes. In the Town of Tomorrow modern houses stand toe to toe with traditional neighbors, collectively present an attractive, integrated appearance.

(Text continued on page 72)

^{*}The Town of Tomorrow is only part of Home Building's participation in the Fair. It is supblemented by a huge Home Building Center wherein manufacturers' wares are exhibited in isual exposition manner, by the Furniture and Decorations Building, and by the Electric Farm group. (ARCH. FORUM, June 1939, p. 431).



SMALL HOME OF WOOD (House No. 6)





TOWN OF TOMORROW

Primarily an exhibit of the U.S. lumber industry, the house to the left is a variation of one of the two basic stock plans developed for this year's National Small Homes Demonstration by Architects Evans, Moore & Woodbridge. Aside from its abundant window areas, its design is completely traditional. Construction, however, features several new departures. Solid 2 in. planking is used for both floors and roof, supported by fewer but sturdier structural members than seen in conventionally framed houses. As shown in the interior photograph, these members are exposed as decorative ceiling beams. Interior walls are "dry-finished" with unpainted wood paneling.

Justified claim of the lumber industry is that these construction innovations save time, labor, materials and money. Through their use it is estimated that a duplicate of this house could be erected in the vicinity of New York City at a cost of approximately \$3,500. This price (like all others presented in this portfolio) is figured to include concrete foundations in lieu of the wooden ones upon which all Town of Tomorrow houses rest. Unfortunately, erection of this house, in which lumber is used to the utmost, would not be permitted by the obsolete building codes of many cities.

This house falls into $Group \ 3$ of the Forum poll. (For an explanation of this poll see top of page 72.)

Sharing the low cost honors with the wooden house above, this 26 x 29 ft. brick unit is Architect George D. Conner's idea of the minimum house for the typical American family of four. A spacious kitchen provides modest room for dining, and a large exterior utility closet houses the washing machine and garden tools. Otherwise the plan is quite similar to that of most low cost houses. Construction is marked by the use of a 10 in. cavity brick exterior wall, an English importation. Its 2 in. air space has insulating properties, permits the application of plaster directly upon the interior face of the wall. Cost: \$3,500. Forum poll: Group 3.









NEW YORK WORLD'S FAIR

This house successfully accomplishes its purpose to bring to the public's attention the many and varied uses of one of Home Building's newest materials. It is covered with plywood-inside, outside and on top. And, with the exception of the sheathing on the roof, most of the plywood is finished natural. Equally significant with its construction is the house's modern design, the work of Architect A. Lawrence Kocher. It features a large, high-ceiling living room lighted in part by a clerestory strip window, commendable segregation of the sleeping quarters, and a small but adequate dinette. Note also the number of large closets whose doors are sliding panels of plywood. Cost: \$4,500. Although painting its exterior plywood would have reduced the exhibition value of the house, such a step might have improved it in the eyes of the public. Forum poll: Group 2.



PLYWOOD HOUSE (House No. 2)

Samuel H. Gottscho



Designed by Architect Henry S. Churchill, this \$5,000 house is so planned and furnished that most of its rooms serve two purposes. Thus, the living room is an additional bedroom at night and its wallhigh windows permit its use as a solarium. The small dining alcove when not used as such becomes a study. Housed in the master bedroom closet are a movable ironing board, sewing table, typewriter stand, files and drawers-making this room also an office for the housewife. With floor and walls attractively finished, the garage becomes a recreation room when the automobile is backed out. Forum poll: Group 2.





DOUBLE DUTY HOUSE (House No. 1)





BRIDE'S HOUSE (House No. 3)







TOMORROW TOWN 0 F

Most popular house in the Town of Tomorrow is this creation of Architects Landefeld & Hatch-it earned 16.9 pcr cent of the votes cast in the two-day poll conducted by The Architectural Forum. The plan is completely modern (see isometric, page 63) and the exterior is a frank expression of the interior which features two Bermudian importations: a knee-high fireplace and chamferred ceiling-wall intersections. The latter results from the use of low over-hanging eaves designed to exclude direct sunlight in the summer, to admit it in the winter.

Actually a part of the living room, the dining alcove is screened by a glass block spur wall which admits borrowed light to the otherwise dark vestibule and by a curtain which isolates the space from the living quarters. The latter is lighted on the facade wall by a row of large glass block, high enough to permit the facile arrangement of furniture beneath, and by a large strip window in the other two exterior walls. Focal point of the plan is its recreation room, one wall of which opens completely upon the paved terrace. It is separated from the living room by transparent glass, from the sleeping elements by a folding partition which slides on a ball-bearing ceiling track. Two bedrooms of identical size are lighted by large areas of block and transparent glass, are serviced by large sliding-door closets. Since this house is intended to be without basement, heating and laundry as well as cooking equipment is concentrated in the spacious L-shaped kitchen.

Although it was the house as a whole that pleased the public most, these elements were frequently singled out for favorable comment: its compact plan, its abundant built-in storage space, and its apparent low cost of maintenance.

Most frequent public criticism of the house, is that it makes use of too many types and colors of building materials. In addition to glass, the following materials enter into its design: white asbestos cement siding, reddish black brick with black cement pointing, redwood doors and window frames, black asphalt shingles on the roof and natural redwood on most of the interior walls and ceiling. This multiplicity of materials is attributable, in part, to the display purpose of the house.

Landscaping and brick garden walls are integral parts of the design. Contrasting with the sharp angles of structural walls and overhanging hipped roofs, is the serpentine wall which bounds the terrace Equally attractive is the continuous brick window box located on two sides of the sleeping wing. Cost: \$6,000.



NEW YORK WORLD'S FAIR

Behind the comparatively small facade pictured to the right hides a house of large proportions, for as seen in the plans below, an extension perpendicular to the house proper provides space for a workroom, maid's room and garage on the first floor, a bedroom and two baths on the second. Unfortunately this room arrangement places the garage in an unaccessible location which, in turn, gives rise to a difficult driveway problem unless the house were situated upon a corner lot.

Use of asbestos shingles on roof and exterior walls, wood fiber insulating board upon interior walls and ceilings and stock trim, doors and windows reduced the cost to \$9,500.

Architects: Godwin, Thompson & Patterson. Design: "a modification of a Wil-liamsburg Colonial." Forum poll: Group 3.



JOHNS-MANVILLE TRIPLE INSULATED HOUSE (House No. 15)



For providing abundant closet space and an upstairs porch, Architect Cameron Clark has received many a verbal bouquet from Town of Tomorrow visitors. Furthermore, in an otherwise traditional house several modern tendencies are apparent: dining room and living room are one; the kitchen has been moved to the house's least desirable exposure-the front; and the garage is economically located near the street. Note also that, serviced by a small bath, the study is readily convertible into a guest room.

Newsworthy are its window screens whose horizontal wires have been replaced by thin strips of copper slanted to break the entry of direct sunlight, much as does a venetian blind. Cost: \$10,000. Forum poll: Group 2.











Wurts Bros.







TOWN OF TOMORROW

Designed by a woman, Architect Verna Cook Salomonsky, this house impressed a great many women visitors. Their comments by and large centered on two phases of design: 1) the exterior which the public thinks will "look pretty when the vines begin to grow" and 2) the room arrangement. Most interesting room is the second floor bath whose tub and shower are side by side against the exterior glass block wall and partially enclosed by a sheet of plate glass. Cost \$13,000. Forum poll: third place in Group 1.



Another excellent example of material display, this house is built principally of the products of a single manufacturer: slag and cement block veneer, asphalt shingle roof, insulating sheathing board, and colored cane fiber board and moldings for interior wall finishes. The public commented favorably on its over-size steel casement windows, its second floor deck. The latter proved so popular as a resting place, that to keep people moving the Fair was forced to move the furniture to the first floor terrace. Architects: Henry Otis Chapman, Jr. & Harold W. Beder. Cost: \$14,500. Forum poll: Group 3.







CELOTEX HOUSE (House No. 17)




NEW YORK WORLD'S FAIR

The most authentic Colonial design in the Town of Tomorrow, this house appealed to most of its Colonial-minded visitors, took second place in THE FORUM'S poll of public preferences. Contributing to its popularity was the complete air conditioning equipment housed (for lack of a basement) in the servant's room. No other house in the Town boasted as cool an interior. Pictured to the right, the staircase which serves both the front and rear rooms on the first floor also made a favorable impression upon the public. Note similarity of the general shape and room arrangement between this house and house No. 15 (page 67) and that Architect Electus D. Litchfield has here given the garage a more practical location. Cost: \$15,000.



AR. 9"×20-0 SERV'T Scale

SECOND FLOOR





Called the "House of Vistas" due to its three terraces and large corner windows, this is one of the Town's four examples of modern architecture. Focal point of the living room, two steps below other first floor rooms, is the fireplace corner whose white painted brick work is similar to the house's exterior. A screenwall of large glass blocks admits light from the living room to the entrance and stair hall. Although the multi-use room (study or bedroom) opens into this hall, it may be shut off by a folding wall hung from the ceiling and constructed of fabric on a steel frame. Most frequent favorable comments from the public concern the spaciousness of rooms and the outdoor living facilities. A large cantilevered canvas-on-steel awning shelters the second floor deck. Archi-Verner Walter Johnson. Cost: tect: \$17,000. Forum poll: Group 2.

T FLOOR









69



ELECTRIC HOME (House No. 18)





TOWN OF TOMORROW

One of the largest residences in the Town of Tomorrow, this nine-room Georgian house was designed by Architect James W. O'Connor. With one possible exception-the use of glass block in the fenestration of the rear elevation-both design and construction are strictly traditional. Exterior materials are wood flush siding and shingle roofing; interior walls are painted plaster on wire lath. Modern, however, is its equipment-all electrical. In the garage the house's chief sponsor set up a duplicate kitchen, wired it for sound. The displayed equipment "moves and talks," holds the interest of a seated audience. Cost: \$17,000. Forum poll: fifth place in Group 1.



Classified by the Fair as "modern," the "Motor Home" is actually a flatroofed traditional house with its garage in a novel but questionable location. For visitors who were unaccustomed to enter a house between two garage doors, the Fair had to hang up a sign on the door knob reading "Front Door." It discourages the public from tramping on the grass in search of a more likely entrance. While some of the Town visitors interviewed by THE FORUM commented that "maybe we are coming to this sort of thing," many more thought otherwise. Architects: Adams & Prentice. Cost: \$22,000. Forum poll: Group 3.



MOTOR HOME (House No. 21)



Samuel H. Gottscho





NEW YORK WORLD'S FAIR

Although purpose of this house is to boost fire safe building materials (brick walls are backed with terra cotta and insulated with metal while the roof is of asbestos shingles), the public devotes most of its attention to the attached greenhouse and pool. Down each sloping glass panel in the roof of this "garden room" flows a stream of water which is picked up by a gutter and directed into the pool. Designed by Architect Perry M. Duncan, the plan features compact room arrangement, abundant closet space. The garage, which would ordinarily face the street, is used as an office at the Fair. Cost: \$22,000. Forum poll: fourth place in Group 1.



The most imaginative house design in the Fair's group of fifteen is also the most expensive-\$35,000. In view of its extremely open plan, its tremendous window areas and the fact that it was not open for inspection during THE FORUM'S poll, it is somewhat surprising that the public placed this house as high as sixth place. Particularly noteworthy are the sliding panels which subdivide two of the bedrooms. Flesh-tinted to make them visible, these panels permit the ventilation of half the bedroom for sleeping while the other half is kept warm for dressing. Fenestration that would be excessive on the street elevation opens up the rear or garden facade. Cavity walls and cantilevered slabs of concrete add interest to design of Architects Landefeld & Hatch.





Wurts Br





PITTSBURGH HOUSE OF GLASS (House No. 4)





TOWN OF TOMORROW

(Continued from page 63)

People's Choice. Not satisfied with guesses, THE ARCHITECTURAL FORUM month ago conducted within the Town of Tomorrow a two-day poll of public opinion to determine which houses most interest the Town's visitors. Avoiding the comments of youngsters and oldsters, THE FORUM at the exit turnstiles singled out men and women in the middle age group (25- to 45-year-olds, comprising the biggest part of Home Building's market), asked them which house in the Town of Tomorrow pleased them most from the standpoint of architectural design and planning. Those interviewed were asked to disregard interior decoration and furnishings-most of which unfortunately are old vintage reproductions-and to base their answers solely on the houses themselves. This questioning brought to light two salient facts: 1) that 41.1 per cent of the Town's visitors favor modern houses*, and 2) that the Town's most popular house is one of the four true moderns.

Fact No. 1 is based upon the number of votes cast for the six houses which the Fair classifies as "modern" as opposed to "traditional"-Nos. 2, 3, 4, 5, 10, and 21. Noteworthy in this connection is the fact that No. 5's only modern characteristics are its large corner windows, its flat roof; that No. 21 was so classified by the Fair due solely to the novel location of its garage and its flat roof. But, even if these two houses are shifted to the traditional classification, votes cast for the other four modern houses still account for an impressive 34.5 per cent.

Fact No. 2 is based upon the polling of 16.9 per cent of the votes by House No. 3-a \$6,000 one-story brick, wood and glass unit whose exterior appearance and interior planning seems to meet the fancy of young and old, men and women alike. Designed by Architects Landefeld and Hatch, its plan is distinctly of the contemporary, open type, its exterior is uncompromisingly modern.

Closest competitor to this misnomered "Bride's House" (it provides a bedroom for a Boy Scout son) was House No. 16, most authentic Colonial design in the Town. Since it is the only air conditioned exhibit within the gates, the popularity of this house must in some measure reflect a growing public acceptance of this feature. However, its clean, simple lines and direct plan prove again that a wellhandled Colonial house is never far from the top in U.S. home buyers' estimation. Designed by Architect Electus D. Litchfield, it trailed the winner by only 2.2 per cent.

A greater percentage difference existed between the public's second and third choice than between any of its others. Thus, House No. 13 in third place polled 8.5 per cent of the votes. People liked its

room arrangement, its upstairs bathroom. Following in close order on the list of public preference came Houses No. 19, 18 and 4. Significantly, House No. 4, with the most imaginative modern design of the group, polled 6.9 per cent of the votes to wind up in sixth place. Constructed principally of glass and concrete, it was unfinished and unfurnished at the time of THE FORUM'S poll, was not even open to the public. Now completed, this house seems certain to increase in popularity, further increasing Town visitors' preference for modern.

Results of the poll logically divide the fifteen houses into three groups according to public preference, the first of which includes the six houses already mentioned. Into the second group fall houses Nos. 1, 2, 8, 10, and 17. The third group contains the remaining four: Nos. 5, 6, 15 and 21.

Shortcomings. In general, the public heartily approves of the Fair's home building efforts; only a handful of the interviewed visitors regretted having spent their time and dime in the Town of Tomorrow. To those who believe that the most effective way to promote building materials and techniques is to display houses (rather than materials and techniques) the Town offers full confirmation. But, to those who hoped and expected that the houses exhibited would, for the first time in any U. S. Fair, present a forward looking, integrated neighborhood, the Town offers little more than a Sunday afternoon visit to any of the better subdivision developments.

In short, the Town stands simply as an exercise in present-day good house building practice. At a time when more than ever before the building business needs to put its best foot forward, needs more than ever to dramatize to the public its achievements, there is little at the Fair which rebukes that nasty person who continues to make odious comparisons between progress in automobiles and progress in houses. Fortunately for Building, there is progress aplenty to exhibit; unfortunately for the public, it will have to wait for the next Fair to see that progress adequately displayed.

The following paragraphs list the names, architects, sponsors and decorators of the fifteen houses which comprise the Town of Tomorrow.

SMALL HOME OF WOOD (page 64)

ARCHITECTS: Evans, Moore and Woodbridge. SPONSORS: American Gas Assn., Crane Co., Edison Electric Institute, International Nickel Co., Johnson & Son, Inc., Line Material Co., National Adequate Wiring Bureau, National Better Light-Better Sight Bureau, National Lumber Manufacturers Assn., New York Telephone Co., Overhead Door Co., Owens-Illinois Class Co., C. I. Sellers & Son Co., Surface Combustion Co., Servel, Inc., Tappan Stove Co., Yale & Towne Manufacturing Co. DECORATOR: Quackenbush, Paterson, N. J.

SMALL HOME OF BRICK (page 64) ARCHITECT: George D. Conner. SPONSORS: Crane Co., Edison Electric Institute, Edison General Electric Appliance Co., International

Nickel Co., S. C. Johnson & Son, Inc., Line Material Co., National Adequate Wiring Bureau, National Better Light-Better Sight Bureau, New York Telephone Co., Structural Clay Products, Inc., Wall Paper Institute.

DECORATORS: Hortense Reit and Paul Bry for Sheltered Workshops.

PLYWOOD HOUSE (page 65) ARCHITECT: A Lawrence Kocher. SPONSORS: Crane Co., Douglas Fir Plywood Assn., Edison Electric Institute, General Electric Co., Johns-Manville Corp., S. C. Johnson & Son, Inc., Line Material Co., National Adequate Wiring Bureau, National Better Light—Better Sight Bureau, New York Telephone Co., Orange Screen Co., Truscon Steel Co., Wall Paper Institute. DECORATOR: Modernage Furniture Corp.

DOUBLE DUTY HOUSE (page 65)

ARCHITECT: Henry S. Churchill. SPONSORS: Andersen Corp., Crane Co., Certain-Teed Products Corp., Cork Insulation Co. Inc., Edison Electric Institute, International Nickel Co., S. C. Johnson & Son, Inc., Line Material Co., Mueller Furnace Co., National Adequate Wiring Bureau, National Better Light-Better Sight Bureau, Na-National Better Light—Better Sight Buteau, rua-tional Home Builders' Bureau, New York Telephone Co., Sloane-Blabon Corp., Wall Paper Institute, Weyerhauser Sales Corp., Wood Conservation Co. DECORATOR: Bloomingdale Brothers, Inc.

BRIDE'S HOUSE (page 66) ARCHITECTS: Landefeld & Hatch.

SPONSORS: Barrett Co., Cork Insulation Company, Inc., Crane Co., Edison Electric Institute, General Electric Co., S. C. Johnson & Son, Inc., Line Material Co., National Adequate Wiring Bureau, National Better Light-Better Sight Bureau, New York Tele-phone Co., Owens-Illinois Class Co., Structural Clay Products, Inc., Wall Paper Institute. DECORATOR: Gimbel Brothers, Inc.

JOHNS-MANVILLE TRIPLE INSULATED HOUSE (page 67) ARCHITECTS: Godwin, Thompson and Patterson.

SPONSORS: American Gas Assn., American Hardware Corp., American Stove Co., Crane Co., Curtis Companies, Inc., Douglas Fir Plywood Assn., Edison Electric Institute, Fir Door Institute, Johns-Manville Corp., S. C. Johnson & Son, Inc., Jones & Laughlin Steel Corp., Line Material Co., National Adequate Wiring Bureau, National Better Light-Better Sight Bureau, National Chemical & Mfg. Co., New York Telephone Co., Stanley Works, Structural Clay Products, Inc., Servel, Inc., Wall Paper Institute. DECORATOR: Gertz Department Store.

NEW ENGLAND HOME (page 67) ARCHITECT: Cameron Clark

SPONSORS: Acme Metal Products Corp., American Flange & Manufacturing Co., Crane Co., Edison Electric Institute, Fiat Metal Manufacturing Co., Ilg Electric Ventilating Co., Ingersoll Steel & Disc Division-Borg Warner Corp., S. C. Johnson & Son, Inc., Jones & Laughlin Steel Corp., Line Material Co., Modine Manufacturing Co., National Adequate Wiring Bureau, National Better Light-Better Sight Bureau, New York Telephone Co., Overhead Door Co., Standard Gas Equipment Corp., Structural Clay Products, Inc., Tilo Roofing Co., Wall Paper Institute

DECORATOR: Gimbel Brothers, Inc.

GARDEN HOME (page 68) ARCHITECT: Verna Cook Salomonsky

SPONSORS: American Hardware Corp., Crane Co., Edison Electric Institute, Estate Stove Co., General Bronze Corp., International Nickel Co., Johns-Man-ville Corp., S. C. Johnson & Son, Inc., Line Material Co., National Adequate Wiring Bureau, National Better Light-Better Sight Bureau, New York Telephone Co., Overhead Door Co., Philco Refrigerator Co., Pittsburgh Corning Corp., Pittsburgh Plate Class Co., Richard E. Thibaut, Rome-Turney Radia-tor Co., Structural Clay Products, Inc. DECORATOR: James McCreery & Co.

CELOTEX HOUSE (page 68) ARCHITECTS: Henry Otis Chapman, Jr., Harold W

Beder. SPONSORS: Celotex Corp., Crane Co., Edison Electric Institute, Floyd-Wells Co., International Nickel Co., (Continued on page 34)

^{*}Nine months ago LIFE magazine polled its readers, found that 44 per cent favored modern over traditional architecture.

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TOWN OF TOMORROW

(Continued from page 72)

S. C. Johnson & Son, Inc., Line Material Co., National Adequate Wiring Bureau, National Better Light-Better Sight Bureau, National Chemical & Manu-facturing Co., New York Telephone Co., Overhead Door Co., Truscon Steel Co., Wall Paper Institute. DECORATOR: W. & J. Sloane.

KELVIN HOME (page 69)

ARCHITECT: Electus D. Litchfield. SPONSORS: Crane Co., Edison Electric Institute, Fiat Metal Mfg. Co., Ingersoll Steel & Disc Division, Borg-Warner Corp., International Nickel Co., Johns-Manville Corp., S. C. Johnson & Son, Inc., Keystone Varnish Co., Kimberly-Clark Corp., Line Material Co., Kelvinator Div., Nash-Kelvinator Corp., National Adequate Wiring Bureau, National Better Light—Better Sight Bureau, New York Telephone Co., Sampson Cordage Works, Sargent & Co., Structural Clay Products, Inc. DECORATOR: Frederick Loeser & Co., Inc.

HOUSE OF VISTAS (page 69) ARCHITECT: Verner Walter Johnson

SPONSORS: Barrett Co., Crane Co., Douglas Fir Ply-SPONSORS: Barrett Co., Crane Co., Douglas Fir Ply-wood Association, Edison Electric Institute, Fiat Metal Mfg. Co., Inc., Fir Door Institute, Inter-national Nickel Co., S. C. Johnson & Son, Inc., Line Material Co., National Adequate Wiring Bureau, National Chemical & Mfg. Co., New York Telephone Co., New York Telephone Co., Pittsburgh Corning Corp., Pittsburgh Plate Glass Co., Sargent & Co., Truscon Steel Co.

DECORATOR: John Wanamaker.

ELECTRIC HOME (page 70) ARCHITECT: James W. O'Connor. SPONSORS: Crane Co., Edison Electric Institute. Fiat Metal Mfg. Co., General Electric Co., S. C. Johnson & Son, Inc., Kimberly-Clark Corp., Line Material Co., Benjamin Moore & Co., Nash Motors Div., Nash-Kelvinator Corp., National Adequate Wiring Bureau, National Better Light-Better Sight Bureau, New York Telephone Co., Orange Screen Co., Owens-Illinois Class Co., Sargent & Co., Robertson Art Tile Co., Warren Webster & Co DECORATOR: Joseph Horne Co., Pittsburgh, Pa.

MOTOR HOME (page 70) ARCHITECTS: Adams & Prentice. SPONSORS: Barrett Co., Crane Co., Edison Electric Institute, Fiat Metal Mfg. Co., J. W. Fiske Iron Works, Ilg Electric Ventilating Co., International Nickel Co., Johns-Manville Corp., S. C. Johnson & Son, Inc., Line Material Co., National Adequate Wiring Bureau, National Chemical & Mfg. Co., New York Telephone Co., Pittsburgh Corning Corp., Pittsburgh Plate Class Co., Stanley Works, Truscon Steel Co., Wall Paper Institute, Weil-McLain Co., Yale & Towne Mfg. Co. DECORATOR: John Wanamaker.

FIRE SAFE HOME (Page 71) ARCHITECT: Perry M. Duncan. SPONSORS: American Flange & Mfg. Co. Inc., Burnham Boiler Corp., Crane Co., Edison Electric In-stitute, Fiat Metal Mfg. Co., General Electric Co., Home Insurance Co., Johns-Manville Corp., S. C. Johnson & Son, Inc., Jones & Laughlin Steel Co., Kawneer Co., Line Material Co., Lord & Burnham Co., National Adequate Wiring Bureau, National Better Light—Better Sight Bureau, New York Tele-phone Co., Owens-Illinois Glass Co., Standard Coated Fabrics Corp., Structural Clay Products, Inc., West Dodd Lightning Cond. Corp., Yale & Towne Mfg. Co. DECORATOR: James McCutcheon & Co.

PITTSBURGH HOUSE OF GLASS (page 71) ARCHITECTS: Landefeld & Hatch. SPONSORS: Crane Co., Douglas Fir Plywood Assn.,

Edison Electric Institute, Fir Door Institute, General Electric Co., S. C. Johnson & Son, Inc., Line Material Co., National Adequate Wiring Bureau, National Better Light—Better Sight Corp., New York Telephone Co., Pittsburgh Corning Corp., Pittsburgh Plate Glass Co.

DECORATOR: Modernage Furniture Corp.

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FORUM OF EVENTS

(Continued from page 18)

AWARDS

To WILLIAM ADAMS DELANO, an honorary degree by Yale University. Citation: "With deep appreciation of the distinction you have brought to American architecture and the luster thereby reflected upon Yale and with affectionate gratitude for your direct services to Yale as architect and as alumnus, your university confers upon you the degree of Master of Arts."

To WILLIAM EMERSON, an honorary degree of Doctor of Arts by Harvard University. Citation: "An educational statesman in the field of architecture, administrator and teacher at the Institute of Technology, our distinguished neighbor."

To BRUCE ROGERS, an honorary degree of Master of Arts by Harvard University. Citation: "A skilled designer of the printed page, adviser to the press in both this university and in the ancient Cambridge across the sea."

TO SIDNEY WAUGH, sculptor, the degree of Master of Arts (honoris causa) by Amherst College.

TO JOHN G. FARON of Princeton, a Fellowship of the American-Scandinavian Foundation for the study of architecture in Sweden.

To WILLIAM S. BROWN of New York, the F. Augustus Schermerhorn Traveling Fellowship of Columbia University School of Architecture made annually to the winner of a competition among the School's graduates of the preceding ten years.

To GEORGE A. DOWNS of Reading, Pa., a graduate student in architecture at Princeton, the 1939 Paris Prize in Architecture of the Society of Beaux-Arts Architects. F. Kirk Helm, a student at Syracuse University was chosen alternate.

To JESSE CLYDE NICHOLS, Corresponding Membership in the American Society of Landscape Architects. Citation: "In recognition of his many and varied activities which have advanced the interest of the profession; . . . a leader in the promotion of good design in residential districts; a constant advocate of planning and conservation in city, State, and nation; and a tireless worker in the advancement of art and cultural activities."

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Charles Donagh Maginnis: "For his broad and sensitive sympathy with many arts other than his own, . . . architect, artist, public servant, trusted collaborator, defender of the vital traditions of design."

Stephen Francis Voorhees: "In appreciative recognition of his services in coordinating the many arts which find expression at the New York World's Fair . . . architect, designer of many notable buildings, past president of the American Institute of Architects."

(Continued on page 44)

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WALL PAINT

when in New York see the Mural-tone display at PEDAC

FORUM OF EVENTS

(Continued from page 42)

NAMED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUC-TION for their Eleventh Annual Awards for the most beautiful bridges built during the year: Middletown-Portland Bridge, Middletown, Conn.—most beautiful monumental bridge. Capital Bridge, Frankfort, Ky.—most beautiful medium sized bridge. Middle Fork of Flathead River Bridge, Bolton, Mont.—most beautiful small bridge. Lafayette Avenue Bridge, Bay City, Mich.—most beautiful movable bridge. The jury of awards: Graham Erskine representing Arthur L. Harmon, architect; J. André Fouilhoux, architect; Kenneth Hayes Miller, artist; F. E. Schmitt, Editor Engineering News-Record; and Prof. David L. Snader, Stevens Institute of Technology.

COMPETITIONS

IN A COMPETITION TO ENCOURAGE DETROIT ARCHITECTS to study the possibilities of the out-swinging casement windows to houses of Colonial character, Detroit Steel Products Company sponsored a "Fenestra Architectural Competition." Contestants not only submitted designs, but also served as the jury of awards. The prize winners: First, Hyde & Williams; Second, J. Ivan Dise; First Mention, Ditchy-Farley-Perry; Second Mention, Earl W. Pellerin; Third Mention, Talmage C. Hughes; Fourth Mention, J. Ivan Dise.

INSULUX GLASS BLOCK COMPETITIONS. For winners in Competition No. 1 see page 7.

Competition No. 2, A Group of Three Stores, offering \$2,500 in prizes, closes August 21, 1939 at midnight. For complete program see ARCH. FORUM, May 1939. A reprint will be sent upon request to the Professional Adviser, H. H. Saylor, A.I.A., 9 Rockefeller Plaza, New York, N. Y.

U. S. GOVERNMENT'S REGIONAL COMPETITIONS. The second project of a series of regional competitions for designs for Federal Buildings has been announced by Admiral C. J. Peoples, Director of the Procurement Division of the Treasury Department.

Under the program announced last March by Secretary Morgenthau, architects of the five States of Region No. 7 are being invited to enter a competition leading to a design for the new Post Office, Court House and Custom House Building for the City of Evansville, Ind., with an estimated cost of \$600,000.

This competition is open to all registered architects who are citizens of the U. S. of America and whose home-offices are located within the confines of Region No. 7 of the regional divisions set up by the Procurement Division. Region No. 7 includes the following States: Ohio, Indiana, Michigan, Wisconsin, and Illinois.

However, architects who are not registered but whose home-office is within the region above mentioned, are eligible to enter this competition upon the submission of qualifications satisfactory to the Department. The material for such submission consists of one or more photographs and a sufficient number of prints of working drawings to indicate the character of a building designed and executed by the applicant and considered by the Adviser as being comparable to the building which forms the subject of this competition. And it is further provided that no employe of the Federal Government or of the Government of the District of Columbia is eligible to enter this competition. For the purpose of this competition the term "employe" includes not only those employed on a salary basis but also any architect who, during the time that this competition (Continued on page 46)



Koduce FIRE - HAZARDS and Construction Costs

NCLOSURES



Expanded Metal enclosures solve, in a practical way, the partition problem in tenant garages. Note how bright the interior of this garage is. The open nature of Expanded Metal is particularly advantageous in buildings protected by sprinkler systems, for Expanded Metal does not interfere with the operation of the sprinklers and thereby further increases the fire safety of the building.

CTEELCRETE Expanded Metal for apartment building Storerooms, laundry compartments and garage partitions, is available in standard panels approximately 4' wide and of various heights, with framing, ready for easy installation. The mesh in each panel is expanded from a single sheet of steel. The strands cannot be pried apart and will not unravel. The open diamond mesh permits free circulation of air and unobstructed distribution of light. Should alterations become necessary, Expanded Metal partitions offer full salvage value. Write for details on this practical firesafe construction.

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We invite you to write for "Tomorrow's Homes," using your firm's letterhead. Only one copy to a firm.



FORUM OF EVENTS

(Continued from page 44)

is in progress, has a contract for professional services with the U.S. Treasury Department.

If a design is submitted by a firm, the copy of registration certificates or the other evidence of qualification mentioned above must be furnished by at least one member of the firm.

The author of the winning design will receive \$6,000 for this distinction and will be paid an additional \$6,000 in his capacity as consultant during the preparation of working drawings and specifications, these to be prepared under the direction of the Public Buildings Branch of the Procurement Division.

In order that all eligible architects of the seventh region may be free to compete, it has been arranged to draw a jury of award from neighboring regional districts.

Drawings called for are to be in pencil, free from elaborate rendering, thus keeping to a reasonable minimum the labor involved in the competition drawings.

Copies of the program will be available about June 21, 1939, and in order to enter this competition competitors must apply by letter or by telegram so that their names may be placed on record in the Public Buildings Branch of the Procurement Division. The letters or telegrams should be addressed as follows: "Director of Procurement, Procurement Division, Treasury Department, Washington, D. C."

Applications by letter should have the envelope conspicuously marked with the words "Architectural Competition." And included with the letter of application from a registered architect there must be a photographic copy of the applicant's certificate of registration or a statement from a qualified State officer attesting to the applicant's registration status; in the case of unregistered architects, they must submit with the letter of application evidence of qualifications mentioned above. Applicants by telegram must state that copy of certificate or evidence of qualifications has been mailed. Action on the application will be subject to the receipt of such certificate or other acceptable evidence as described.

The program for competitions for designs of Federal buildings in other regions will be issued in the near future.

COMPETITION FOR A SMALL CHURCH. Under the sponsorship of University of Notre Dame's Department of Architecture 27 drawings for a small church were submitted to the following jury: Rev. Michael Andrew Chapman, P.R., of Lafayette, Ind., and architects Harold Maurer of South Bend, Ind., T. Clifford Noonan of Chicago, and Thomas E.



First Prize Award-John W. Davis, Urbana, Ill. (Continued on page 48)

THIS SIGN INVITES YOU TO NEW SOURCES OF INSPIRATION





• The marvels of the New York World's Fair the splendors of Manhattan—both will attract you to the metropolis this year. Both will offer to the architect limitless sights of compelling interest—limitless sources of inspiration.

In New York, readily accessible in famed Radio City, is the Permanent Exhibit of Decorative Arts and Crafts. And here Libbey. Owens.Ford conducts a permanent and complete exhibit of flat glass.

The photographs of sections of this exhibit illustrate some of the novel, practical and ornamental possibilities of glass. However, they do not portray the full scope of the display. You will find there in infinite variety, new and artful uses of glass in keeping with today's trend in architecture—a trend that emphasizes the functional and decorative value of this fascinating material.

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Photomicrograph of the New R. W. K. Note how much smoother it is.

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FORUM OF EVENTS

(Continued from page 46)

Cooke of Chicago. First prize awarded to John W. Davis, Urbana, Ill.; Second Prize, Bernard E. Loshbough, Washington, D. C.; Third Prize, George W. Edwards, Carnegie Institute of Technology, Pittsburgh. Mentions Commended: Michael F. Gaul and John C. Vooson, Chicago, Ill.; Bitt Atkinson, Cornell University, Ithaca. Mentions: Herman H. Meinberg, St. Paul, Minn.; Morris C. Hertel, Chicago, Ill.; Myron E. Pauley, Stillwater, Minn.

CALENDAR

September 4-8. Institution of Mechanical Engineers of Great Britain to meet with American Society of Mechanical Engineers, the two societies to be joined by the Institution of Civil Engineers and the Engineering Institute of Canada, who are meeting with the American Society of Civil Engineers, Hotel Pennsylvania, New York, N. Y. (Mechanical Engineers at Hotel Pennsylvania, Civil Engineers at Columbia University.)

September 25-28. Fifteenth International Congress of Architects, Washington, D. C.

September 28. International Congress of Architects as guests of the A.I.A. leave by steamer for Old Point Comfort.

September 29. International Congress of Architects as guests of the A.I.A. in Williamsburg, Va.

October 2. Architects' Day at the New York World's Fair.

January 22-26, 1940. Sixth International Heating and Ventilating Exposition, Lakeside Hall, Cleveland, Ohio.

PERSONALS

The new firm of Ditchy-Perry-Sidnam, architects of Detroit, Mich., is announced as the successor of Ditchy-Farley-Perry, architects. The members of the partnership include Clair W. Ditchy, Leo I. Perry, and Verne H. Sidman.

The partnership of Grant & George, architects, has been dissolved by mutual consent. Alfred Watts Grant has opened an office for the practice of architecture at 1340 Post Road, Fairfield, Conn. L. Livingston George will continue to practice architecture at 44 East State St., Westport, Conn.

Gilbert Rohde, industrial designer, has moved his offices to 22 East 60th St. in New York.

Stanton Willard, architect, announces the dissolution of the partnership, Symmes & Willard, and that he will carry on the practice of architecture under his own name with offices at 1314 Seventeenth St., Bakersfield, Calif. Associated with Mr. Willard, as in the former partnership, are architects Arthur C. Metcalf and J. Warren Wright.

James W. Follin, who has become widely known to architects through his work with the Federal Home Loan Bank Board in Washington, D. C. as chief of the Home Building Service Division, has been appointed managing director of The Producers' Council. Mr. Follin is a graduate professional engineer, a past president of the Philadelphia Section, A.S.C.E., and for several years he was assistant engineer to the Pennsylvania Department of Highways. He also served as secretary of the Construction Code Authority, Inc., the administrative and coordinating agency created by the Construction Code.

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THE Pittco Store Front Metal line is notable for its beauty... for the sharp contours, the pleasant lines, the harmonious relationship of design which exists between all bars, mouldings and sash. But it is also distinguished by its sturdy practical construction. Every Pittco Metal member has been so styled as to contribute definitely to easier installation, greater adaptability and longer life.

At the New York World's Fair, see the full-size Pittco Store Fronts of the "Street of Tomorrow" in the Forward March of America Building, and the miniature Pittco Fronts in the Glass Center Building. Or, at the Golden Gate International Exposition, see these miniatures in the Homes and Gardens Building.



DETAIL:

section of Pirco Store Front Metal Sash No. 16, showing its practical construction. Note (1) the "cushion grip" on glass; (2) adjustability to various glass thicknesses; and (3) that all operations take place from the <u>outside</u> of the show window, simplifying installation.



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(Below) Dormitory at Northwestern University, Evanston, III. Architect, James Gamble Rogers.

> (Above) Roberts Hall, Bucknell University, Lewisburg, Pa. Architect, J. Frederick Larson.

(Laft) Chemistry Building at Trinity College, Hartford, Conn. Architects, McKim, Mead & White.

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BI

This test panel is a 2' by 3' piece of wallboard, painted with Dutch Boy White-Lead and Dutch Boy Lead Mixing Oil. For a solid week, this panel lay in a busy corridor. The test panel was walked on by hundreds of people daily. Horizontal streaks show how it was then defaeed with grease, ink, pencil, crayon, shoe blacking, lipstick, etc. Swath shows marks completely removed by washing with soap and water.

This is the slogan of the national advertising campaign on white-lead now being conducted by the Lead Industries Association. The purpose of this campaign is to promote a wider understanding of the advantages of white-lead paint.



AND LEAD MIXING OIL

"U.S.S GALVANIZED COPPER STEEL is the Logical Choice for Duct Work . . .



Experience Has Proved that it Gives Longer Life"

VE specified U·S·S Galvanized Copper Steel Sheets for ducts and housings in your new home-and for downspouts, gutters and flashings, too — because 21 years of testing have shown that this material lasts longer when exposed to corrosive conditions. Wherever U·S·S Galvanized Copper Steel is used, you can be certain of freedom from replacements or repairs for years to come. And here's why I can make that statement. Metallurgists long ago discovered that a little cop-

base metal surprisingly long life. It certainly has made the problem of specifying steel sheets an easy one for me."

Although air conditioning is too new to present an adequate picture of steel performance, the extra resistance to atmospheric corrosion of U·S·S Copper Steel is clearly demonstrated by the chart shown here.

U·S·S Galvanized Copper Steel possesses qualities which enable it to

per added to molten steel gives the stand up under the attacks of alternate wet and dry conditions-to resist the high humidities and condensation of modern heating plants. Give your clients the added advantages that may be obtained through the use of U·S·S Galvanized Copper Steel Sheets. Any one of the companies listed below will be glad to give you complete information about U·S·S Copper Steel. U·S·S Galvanized Copper Steel Sheets are available for quick delivery in important cities.

FORUM



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ARCHITECTURAL

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Installed in the UNITED STATES GOVERNMENT BUILDING at the NEW YORK WORLD'S FAIR



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THE STANLEY WORKS, New Britain, Connecticut



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"BUT LUTHER, THE **GUTTER WE CHOSE** WAS UNDER A WORN-OUT ROOF"



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LUTHER: It's fire-safe too.

MARIA: Must have cost a lot.

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- MARIA: When we go South next winter, Luther, we must find a house with a Barber Genasco Roof.

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BARBER GENASCO ROOFINGS - and no others - provide the valuable waterproofing and weatherproofing of genuine Trinidad Native Lake Asphalt-The Vital Element. These roofings are offered in a wide variety of beautiful, non-fading colors, and in a range of sizes and shapes that are sure to please. Specify Barber Genasco for roofing new homes . . . for reroofing present homes. Free catalog and details FOR FURTHER will be sent on request. Address Barber SEEOUR Asphalt Corporation, Barber, New Jersey. SWEET'S



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made with

THE VITAL ELEMENT



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(HARD COAL) THE ONLY 7 STAR FUEL

EVERY day thousands of visitors attend the Anthracite Exhibit in the Home Building Center of the New York World's Fair. Most of these thousands are not merely sightseers, but thoughtful householders. Many of them are discovering for the first time how efficient, economical, and how convenient modern Anthracite equipment really is.

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The important fact for the architect—and builder —is that there are literally thousands of families that are eager for homes in which they can have the convenience, the safety and healthfulness, the comfort and, especially, the economy of Pennsyl-



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8

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Leadership means being first—setting the pace which others follow years later. In the insulation field, leadership means the ability to be right the first time . . . knowing why you are right and having the courage to stick to the right way rather than to follow the crowd in the opposite direction. And leadership means constant improvement as construction practices improve.

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For 17 years Balsam-Wool has been fastened in place —allowing no settling or packing. Balsam-Wool introduced the Spacer Flange, making application 50% easier with consequent savings to the consumer.

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It's easy for an insulation to have a few good qualities. Balsam-Wool, since its inception, has had every quality that an insulation needs to perform efficiently on the job. It is moisture-proofed—wind-proofed vermin-proofed — termite-proofed — non-settling highly fire-resistant. It meets every test of actual service —and it's available in 3 thicknesses for every need and purse.

Let us give you full information about why Balsam-Wool is the sure way to insulate—why Balsam-Wool leadership means outstanding performance in the buildings YOU plan!

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THE THREE "R's" GO MODERN ..

Here, today, is the school of tomorrow—a noteworthy example of the happy application of modern design, modern materials and modern construction methods to a difficult architectural problem.

Because of the possibility of ground settlement and slippage caused by neighboring mining operations, for the Girardville, Pa., high school, the architects, Grootenboer and Knobloch, turned to steel for lightweight and safety – and in Republic's wide line of building products they found materials already at hand to carry out their modern design with speed and economy.

Yes, Girardville is proud of its smart, new building where the three "R's" are dispensed-proud of the beauty of its brilliantly-colored enameled Toncan* Iron surface, trimmed in gleaming ENDURO* Stainless Steel-proud of the protection which steel construction will afford its youth through years to come.

REPUBLIC STEEL CORPORATION GENERAL OFFI



EADIN'-'R ITIN' and **REPUBLIC**

In every modern building there is a place where you can use to advantage one or more of these Republic building products, all of which went into the Girardville High School:

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EL AND TUBES, INC. • UNION DRAWN STEEL DIVISION • TRUSCON STEEL COMPANY M NII

BEAUTY AND THE BASEMENT

Three home recreation rooms get beautiful, long-wearing floors of Armstrong's Asphalt Tile



Modern to the Nth degree, but in excellent taste, is this basement recreation room with its attractive floor of Armstrong's Steel Gray and Lead Gray Asphalt Tile.

RCHITECTS can no longer A ignore basements, because the client of today knows and wants a basement recreation room. And to make your task easier-to keep costs down-Armstrong offers you a truly economical asphalt tile flooring that lends itself to the creation of beautiful basement floors.

Armstrong's Asphalt Tile dispels many important basement problems. It is the only type of resilient floor that can be used over concrete in direct contact with the ground. Maintenance is inexpensive and easy. Daily dusting and occasional washing and waxing keep it fresh and new-looking for years.

This asphalt tile provides a scuffproof play floor with colors that can't wear off because they run right through the material. It is fire-resistant, and cigarette burns can be easily removed by rubbing lightly with fine steel wool. Waxed, Armstrong's Asphalt Tile makes a fine game board or dance floor.

The color schemes you can create in asphalt tile are practically unlimited. In addition to a wide range of plain and marble colors, you can have insets cut to almost any shape you wish. Get all the facts. See Sweet's or let us send you a copy of "Gay Floors for Basement Playrooms." Armstrong Cork Company, 1204 State Street, Lancaster, Pa.

Armstrong manufactures the only complete line of resilient floors-Asphalt Tile, Linoleum, Linotile (Oil-Bonded), Cork Tile, and Reinforced

Rubber Tile. Therefore our Architectural Service can offer you unbiased suggestions.





"Relax," says this ingenious rustically-styled base-ment recreation room. The architect has used Spanish red asphalt tile with a feature strip of white, creating a floor that is beautiful as well as comfortable and quiet.

Note the entirely different effect obtained with Spanish red and white asphalt tile in this modern room. Diagonal strips seem to add yards of space to the room. The ceiling is Armstrong's Temlok De Luxe.





ON LOS ANGELES' BUSIEST STREET

Beauty of Terrazzo pavement improves after 5 years

B^{EAUTIFUL} when laid . . . beautiful years after—that's Terrazzo. In Los Angeles the staccato pounding of sidewalk traffic polished and actually improved the color and pattern of this pavement. And if fine Terrazzo can keep its life, warmth and color outdoors, you know what you can expect inside.

Fine Terrazzo means rich, clean-cut colors and distinctive patterns exactly as you design them. And fine Terrazzo is obtained only with white portland cement, as in the pavement shown here. Atlas White is pure white cement. Specify it (plain or waterproofed) for Terrazzo that is moderate in first cost, low in upkeep, and ideal for many types of buildings.

Consider Terrazzo with Atlas White for your next job. Write for free Booklet showing 24 true-color specimens of fine Terrazzo. Universal Atlas Cement Co. (United States Steel Corporation Subsidiary), Chrysler Bldg., N. Y. C.

Colorful Terrazzo pavement ade with Atlas White cement, as looks today, outside the entrance Clifton Cafeteria, Los Angeles. was laid in 1934 by the Veneun Terrazzo and Mosaic Commy, Los Angeles.

FOR FINE TERRAZZO SPECIFY ATLAS WHITE PORTLAND CEMENT



WALTER GROPIUS

HOUSE BY



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G-E Kitchen Cabinets

The Modern Kitchen is ALL-ELECTRIC!

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Other modern houses described in this issue of "The Architectural Forum" also feature General Electric Kitchen equipment. G-E Electric Kitchens are FIRST CHOICE of the majority whose house specifications have appeared in the profession's No. 1 magazine. Complete G-E Electric Kitchens are available in practically any size, any style, any price class. Ask your G-E Appliance Distributor for detailed information or write direct to General Electric Co., Specialty Appliance Division, Section CG7, Nela Park, Cleveland, Ohio, or General Electric Home Bureau, 570 Lexington Avenue, N. Y. C.

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GENERAL ELECTRIC

See the General Electric Kitchens in homes of the "Town of Tomorrow" at the New York World's Fair—also visit the G-E "House of Magic" at both Fairs.

GENERAL 🛞 ELECTRIC

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Temant "Servel Electrolux gives me more satisfactory and economical service than any other type of refrigeration I have ever used. Just think what it means to me to have an automatic refrigerator with no moving parts in its freezing system you enjoy permanent silence, continued low operating cost! So it's little wonder I'm so sold!" Mr. Duward D. Crowe, 2101 N. Beechwood Drive, Hollywood, Calif. **biline "I am an** apartment house owner and builder and our experience with another type of refrigerator decided us on Servel Electrolux. Lack of annoying service calls, satisfied tenants and the knowledge that there are no moving parts in our gas refrigerators to wear and grow noisy seem almost too good to be true." Mr. Herman Johnson, 2301 N. Beechwood Drive, Hollywood, Calif.





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"FURNITURE BY TAPP" was specified throughout by Architect George Fred Keck for the B. J. Cahn residence, illustrated in this issue of Architectural Forum.

Because the world has learned to judge people by the environment in which they live and work, selection of the right furniture is particularly important. During the past twenty years furniture by Tapp has been the choice of a great number of the nation's leading Architects and Interior Designers because of the fine artistry of Tapp creations, and the high quality of Tapp craftsmanship and finish.

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At the New York World's Fair, be sure to see the exhibits of Pittsburgh Glass in the Glass Center Building, the Forward March of America Building and the All-Glass House; and at the Golden Gate International Exposition, see them in the Homes and Gardens Building.

IN THIS SCARSDALE, N.Y. home, designer Paul M. Doering has used PC Glass Blocks with exceptional effectiveness in the stairwell wall. There are scores of other places in the home where these blocks can increase both beauty and practical usefulness.



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TVA

Depending on where you sit, TVA stands as a fiendish invasion of private rights or a glorious demonstration of enlightened government. But stripped of its economic and political implications TVA is not only the largest but unquestionably the most mature example of large scale planning in the U.S. To tell the story of its emergence, of its great dams and power stations, of its tiny homes and stores, its schools, its roads, its full architectural significance, FORUM editors have made three exploratory trips through TVA land. They have questioned at length the men behind this enormous project. The story of TVA, which is the story of remaking/miles of territory and the lives of thousands of people, will be told in text and a portfolio of the most superb photographs THE FORUM has been privileged to present.

But two other features have been admitted to next month's issue . . . an exclusive and complete showing of the most applauded modern building of this year the new Museum of Modern Art. And finally, a portfolio of selected new houses in the San Francisco area built as a supplementary exhibit to the Golden Gate Exposition.

For FORUM subscribers this will not be a dull August.

HE ARCHITECTURAL FORUM · AUGUST

Ine big job

that no architect wants!

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sults-without worrying over technical sound-transmission problems --if you'll just do what many leading architects have done: Call in Graybar's experts to solve your problem for you.

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LEADER IN SOUND-TRANSMISSION APPARATUS

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"WE WANTED

With Crane Complete Heating Systems—for every fuel and every type of heating—you can easily provide these and other important advantages for your clients. Because Crane supplies every heating need: a full line of boilers, oil burners, stokers, radiators,

CRAN

convectors, controls, piping, valves and fittings, you can specify a complete system with all its parts designed to work together as a unit for utmost efficiency.

RIT I

For example, take the new Crane No. 10 Boiler. You'll find it easy to satisfy clients—yourself as well—by writing it into your specifications. It's a modern boiler in every sense of the word. Designed with new features of improved performance and economy, it also has new and attractive styling.

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Look into the new No. 10 Boiler as well as the complete line of Crane systems. Available entirely from one source ... with one high standard of quality in every part ... and backed by a single, undivided responsibility, Crane *Complete* Heating Systems will assure carefree winter comfort in every home you plan. Consult

your Crane Architects' Catalog —or the local Crane Display Room. Bring your clients, too.



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NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

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SPECIFICATION AND BUYING INDEX

The advertising pages of THE ARCHITECTURAL FORUM have become the recognized market place for architects and all others engaged in building. Each month these pages offer the most complete guide to materials, equipment and services to be found in any magazine. A house or any other building could be built completely of products advertised in THE FORUM. While it is not possible for a magazine to certify building products, it is possible to open its pages only to those manufacturers whose reputation merits confidence. This THE FORUM does.

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