THE ARCHITECTURAL FORUM

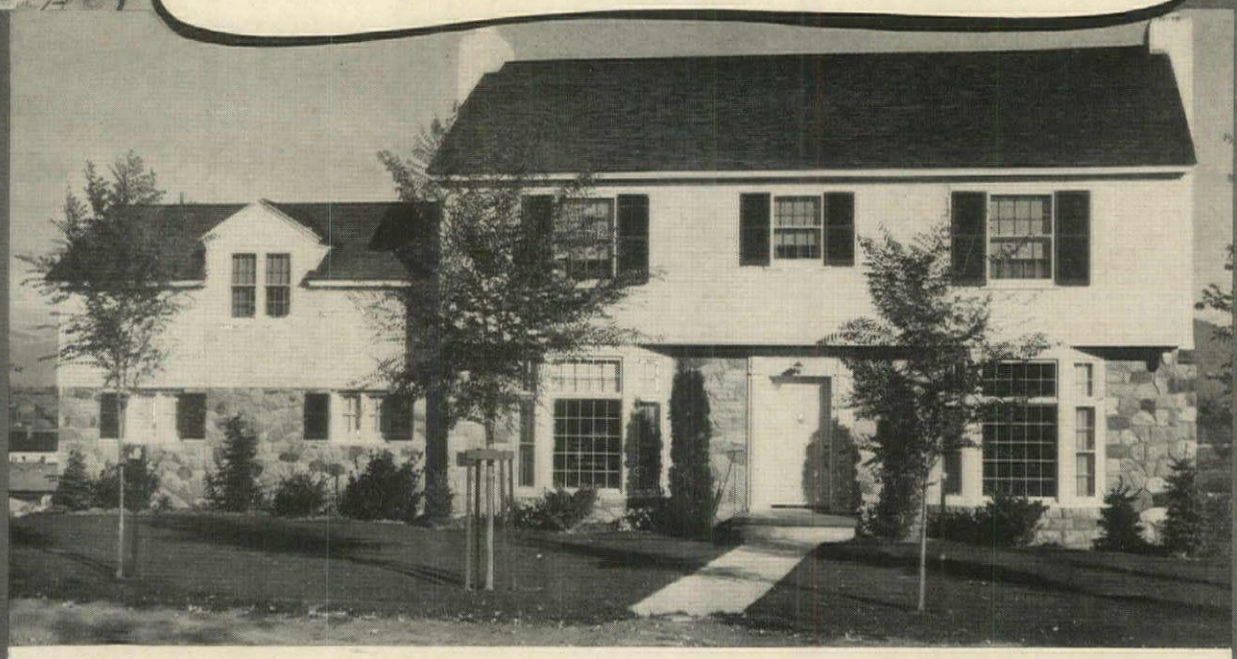
JUNE 1940

EVERY ACCEPTED MEASURE OF HEAT LOSS PROVES

SIDEWALLS NEED INSULATION

. . . and Economy Says—

INSTALL IT WHEN BUILDING!



Russell Mills, arch., planned this handsome home for D. O. Robinson, Reno, Nev. Sidewalls and top-floor ceilings are safeguarded by Celotex Insulation.

CELOTEX GUARANTEED INSULATION REPLACES OTHER MATERIALS— PROVIDES STRUCTURAL STRENGTH, INSULATION, VAPOR SEAL, AT ONE COST!

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ARCHITECTURAL FORUM

JUNE 1940

Editor, Howard Myers; *Managing Editor*, Ruth Goodhue; *Associates*, Paul Grotz, Joseph C. Hazen, Jr., C. Theodore Larson, George Nelson, Henry H. Saylor, Henry Wright; *Assistants*, John Beinert, Anna De Cormis, Betty Judell, Richard E. Saunders, Madelaine Thatcher, Nadia Williams. THE ARCHITECTURAL FORUM is published by Time Inc., Henry R. Luce, Chairman; Roy E. Larsen, President; Charles L. Stillman, Vice President and Treasurer; Howard Black, Allen Grover, Eric Hodgins, P. I. Prentice, Vice Presidents; David W. Brumbaugh, Secretary. Publication and Subscription Office, Erie Ave., F & G Streets, Philadelphia, Pa. Subscriptions may also be sent to 330 East 22nd Street, Chicago, Illinois. Executive, Editorial and Advertising Offices, Time & Life Building, Rockefeller Center, New York. Business Manager, H. A. Richter. Advertising Manager, George P. Shutt. Address all editorial correspondence to Time & Life Building, Rockefeller Center, New York. Yearly subscription, payable in advance, 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.

VOLUME 72—NUMBER SIX

THE MONTH IN BUILDING

BUILDING TRENDS. While the March value of building permits surpassed April's by 20 per cent, it was not sufficient to boost 1940's first quarter volume to last year's level (see tabulation, right). Preliminary statistics point to a healthier second quarter.

Highlights from the complete picture of building trends presented on page 448: construction costs are leveling off; FHA mortgage insurance is running ahead of last year's record; foreclosure rate hits new post-Depression low; marriage volume betters 1939's; rents continue steady.

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

	Monthly Data			Three months	
	Mar. 1940 (millions)	Comparison with Feb. '40	Comparison with Mar. '39	1940 (millions)	Comparison with 1939
Residential	$ 99.6	+27.1%	+ 5.3%	$240.5	— 4.9%
Non-residential	41.6	+14.3	—17.0	111.3	—23.2
Additions, repairs	25.7	+ 8.9	—10.5	69.7	—10.8
TOTAL	166.9	+20.6	— 3.7	421.5	—11.4

ROUND ONE. To date Assistant Attorney General Thurman Arnold's building trust busting drive has attained no victories, suffered one set-back. It came in late April when Justice F. Dickinson Letts ordered a jury in the U. S. District Court of the District of Columbia to acquit the local teamsters union and four of its officers of conspiracy charges involving a tie-up of Federal and private construction in the nation's capital. His grounds: Government prosecutors had not shown "criminal intent."

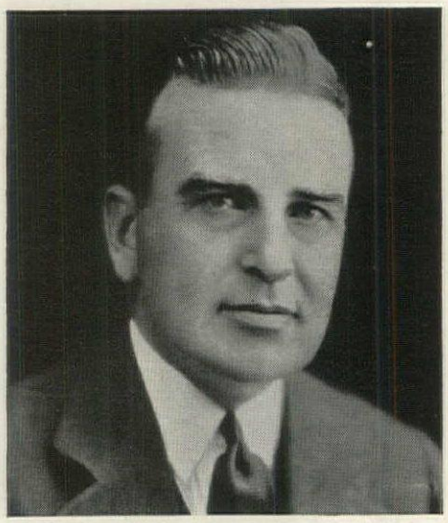
Growing out of a jurisdictional dispute between teamsters' and engineers' unions over the operation of concrete mixing trucks, the case was an important one for "Buster" Arnold, despite the judge's specific declaration that he was passing on neither the liability of labor to prosecution under the Sherman Act nor the legality of jurisdictional disputes. The judge's action pointed to one big loop hole in the Justice Department's enforcement program when he instructed the jury to return a not-guilty verdict. Thus, the defense attorney, as is his privilege, asked the court to order a verdict that evidence had not proved criminal intent, and that the accused should therefore be acquitted. The judge obliged, and the show was over. Reason: under these circumstances, a jury has no option; it must bring in the directed verdict or be discharged and possibly cited for contempt. Moreover, it is difficult for the public prosecutor to obtain an appeal from such a verdict, since in legal theory this would subject the defendants to double jeopardy and violate the Constitutional guarantee that no man shall be tried more than once for the same offense.

If other judges handling Arnold's cases choose to follow Justice Lett's directed-verdict precedent, it is readily admitted that the building industry crusade may flatly flop. It is obviously more difficult to prove the same degree of criminal intent in a Sherman Act case than in a murder trial. But, the trust busters are not particularly worried. They claim to have found a provision in the criminal code which may permit them to appeal the Washington verdict. Furthermore, they realize that it is more difficult to show criminal intent in the jurisdictional dispute case than in any other of the alleged labor rackets, argue that there is little doubt about Labor's intentions when it conspires to prevent the use of particular building materials. Meanwhile, Labor claims the first round.

TIMBER. Representing some 20,000 lumber and building material dealers coast to coast, the Board of Directors of the National Retail Lumber Dealers Assn. month ago stormed Washington, D. C. for their 23rd annual meeting. They re-elected President Roger S. Finkbine of Des Moines, Iowa, head of the local Wisconsin Lumber Co. and past president of Northwestern Lumbermen's Assn. Then they stormed three Government agencies with verbal bullets:

▶ U. S. Housing Authority was attacked for "an unjustifiable expenditure of the taxpayers' money, in view of the fact that our members have built thousands of sound, attractive homes for people in the lower income group, for $2,500 and even less." The lumber dealers' directors were unanimously opposed to the proposed extension of USHA activities, sent letters to House Banking and Currency Committeemen saying so.

▶ Wages and Hours Division of the Department of Labor was caught in the lumbermen's second barrage. Hearing that the Division was on the verge of issuing an opinion that sales of building materials to industrials and building contractors would henceforth be classed as "wholesale" and therefore subject to the Wages and Hours Act, President Finkbine appointed a committee to meet with Government labor officials and attempt to change their minds. Its sales to contractors, claims the lumber industry, should be classed as retail. Fortnight ago, no decision had been reached.



Lumberman Roger S. Finkbine

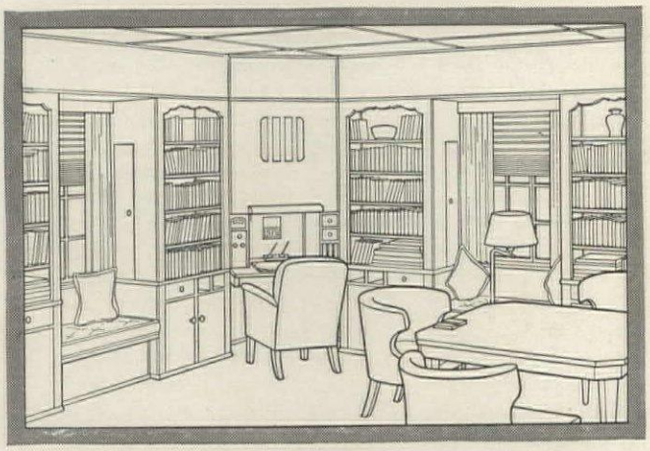
▶ Federal Housing Administration was also hit by a few pop shots aimed directly at its Title I Class 3 loan program. Lumbermen do not object to FHA's construction requirements which were upped on New Year's Day, but they do object to the minimum property standards which were simultaneously raised to the Title II level. Claiming that the new regulations are stifling the construction of low cost houses in rural and vacational areas throughout the country (ARCH. FORUM, Mar. 1940, p. 207), the association directors formed a committee to discuss liberalization of Title I's property standards with FHA officials.

At their closing session the lumber dealers were urged by Public Relations Director Carleton K. Matson of Libbey-Owens-Ford to expand their market by advertising the advantages and satisfaction of home ownership rather than just the merits of their specific materials and equipment items. For a convincing example of what form such promotion may take, Publicist Matson might well have pointed to Hartford, Conn.'s enterprising Capitol City Lumber Co. (see page 445).

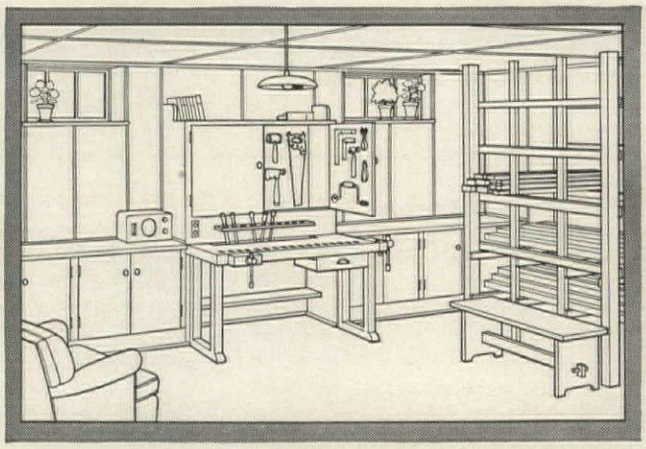
ANNUAL WAGE. Interesting reading for Building Labor should be the report issued month ago by the International City Managers' Assn. It brings to light a new practice by municipal governments—a guaranteed annual wage for laborers and skilled tradesmen, long advocated by everybody (except Building Labor) as a benefit for the building industry in general and its labor in particular.

Covering the nine U. S. cities which have adopted the plan, the Association's report singles out Milwaukee as the scene

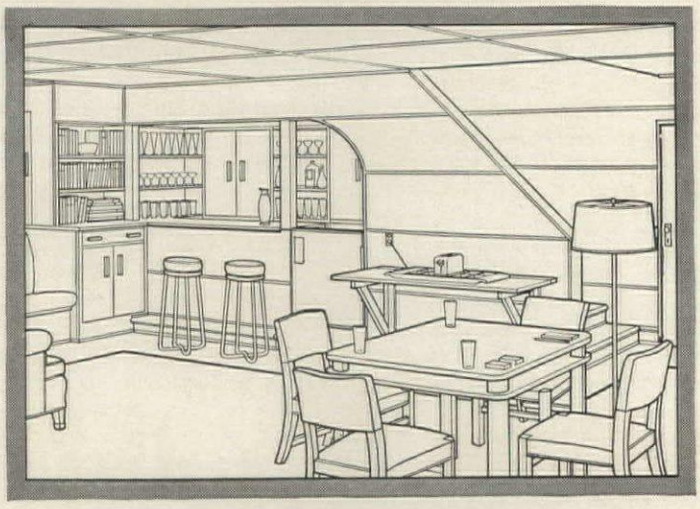
Rooms for recreation



Ace high is this card room-library. The flexibility of Masonite Tempered Presdwood permits several unique features. For walls and ceilings the board can be left in its natural warm-brown finish, or painted or varnished. Radio loud-speaker is installed behind a Tempered Presdwood panel over built-in desk. Ample bookshelf space is provided by using Tempered Presdwood for cabinetwork.



For the home craftsman waste space in the cellar can be used to make this practical workshop. Tempered Presdwood is ideal for walls, ceilings, shelves and cabinets because it is highly moisture-resisting. Even though the cellar may be damp, Tempered Presdwood will not warp, chip, split or crack when it's properly applied. Walls and ceiling are grooved with U scoring, and painted white.



This might have been left a dark, barren cellar. But Tempered Presdwood has been nailed to furring over the concrete walls and to the joists overhead, turning it into a smart, modern game room. Horizontal U scoring on the walls and a block-pattern scoring on the ceiling add an interesting treatment. Folding snack table and refreshment bar are exceptionally easy to achieve when you use Masonite Tempered Presdwood.

● Many new and unusual results have been achieved by those who have discovered the versatility of Masonite Tempered Presdwood. This grainless board not only offers the advantages of a dry material that is easy to cut and saw, but it also provides unusual durability. These illustrations have been designed to offer helpful suggestions for using this modern material. If you would like to examine Masonite Tempered Presdwood at close range, we'll gladly send a sample. The coupon is for your convenience.

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THE ARCHITECTURAL FORUM

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VOLUME 72
Number 6

of the most comprehensive annual wage system. There, unskilled laborers who collect ashes, clean streets, etc., have been on a long-term pay basis for as many as five years. Today, about 65 per cent of the city's unskilled laborers work for yearly or monthly wages, receive an average of about $1,380 per year. They lose no pay when weather conditions make work impossible, but generally make up lost time on emergency assignments. Employes enjoy a two weeks' vacation if there has not been more than 30 consecutive days' intermission in employment. Otherwise, they receive one day's vacation for each month worked. Benefits claimed of Milwaukee's noteworthy employment system would make any building laborer's mouth water: steady employment, steady annual income, the opportunity accurately to budget family expenses.

INDOOR HOUSES. Year ago Promoter J. Frank Cantwell brought home show honors to Indianapolis by including a full-scale shopping center and a six-room bungalow in his building extravaganza, announced that the 1940 show would make it look like a fourth-rate bazaar. And, Managing Director Cantwell was right. Long known for its imaginative home shows, Indianapolis this year built three life-size houses inside the huge one-room Manufacturers Building at the local fair-grounds, landscaped the "subdivision" and surrounded it with the display booths of 150 material and equipment manufacturers (see photograph, below).

Centerpiece of the show was a two-story, seven-room house designed by Architect Frederick Wallick and veneered half way up with squares of manufactured stone—one of Building's newest products. To its left was Architect Leslie F. Ayres' compact modern retreat for an Indiana lake or hill, enclosed in red wood, glass, and sandstone and topped with a shed roof. Third unit, also by Ayres, was a blue cinder block house whose horizontality was emphasized by the insertion of continuous aluminum strips between alternate block courses.

At show's end Showman Cantwell reviewed the accomplishments: A record-breaking crowd of 100,000 Hoosiers had attended the nine-day display, had bought about a million dollars worth of materials and equipment, had given salesmen potential leads for a million more, and three of them had purchased the model houses for outdoor re-erection.

Dwarfed by the size of Indianapolis' exhibit but equally significant, is a one-house show opened last month on the ground floor of the new Associated Press Building in New York City's Rockefeller Center (see photograph, right below). It represents one of the building industry's first attempts to sell a packaged house via the permanent show room technique. The package is prefabricated in Timbolok Inc.'s Hawthorne, N. J. factory, is distributed by Wilbur H. Young & Associates Inc. who are also agents for a fleet of motor and sail boats displayed in the model house's front and side "yards".

A streamlined log cabin, Timbolok's house is built up horizontally of long 4 x 8 in. tongue and groove red cedar members which are further secured to one another with 10 in. spikes. The members present a clapboard appearance on the exterior, a smooth surface on the interior. Construction's major talking point is that the solid 4 in. wood wall takes the place of exterior siding, sheathing, studs, insulation, and, in some cases, lath and plaster. While interior of the wall may be stained or painted, usual procedure is to apply furring strips and a dry wall finish.

During the past several years Timbolok has sold scores of houses throughout New Jersey but has commanded little attention. Last month, however, it put in a strong bid for recognition with its show room debut and a new feature for its numerous stock models: professional design by New Jersey Architects McMurray & Schmidlin.

REVOLT. The first of its kind in the history of real estate, a two-day meeting to crystallize a national viewpoint on property taxation was held last month in Washington. Calling themselves the National Conference of Real Estate Taxpayers, the 276 representatives of 33 States viewed as inequitable and ruinous the taking of $4.5 billion in taxes from a gross annual income of $7 billion derived from privately owned U. S. real estate, demanded economy in government, endorsed a broader tax base and an overall limit on real estate taxes. Principal result: a petition to Congress to name a "commission on taxation and land" which would 1) study the present tax system, particularly the overlapping of functions inherent in their division among some 175,000 taxing authorities, 2) appraise the cause and effect of urban decentralization, 3) determine if there is evolving a pattern of policy "consonant with modern democratic, economic and social concepts" which can be recommended for uniform adoption.

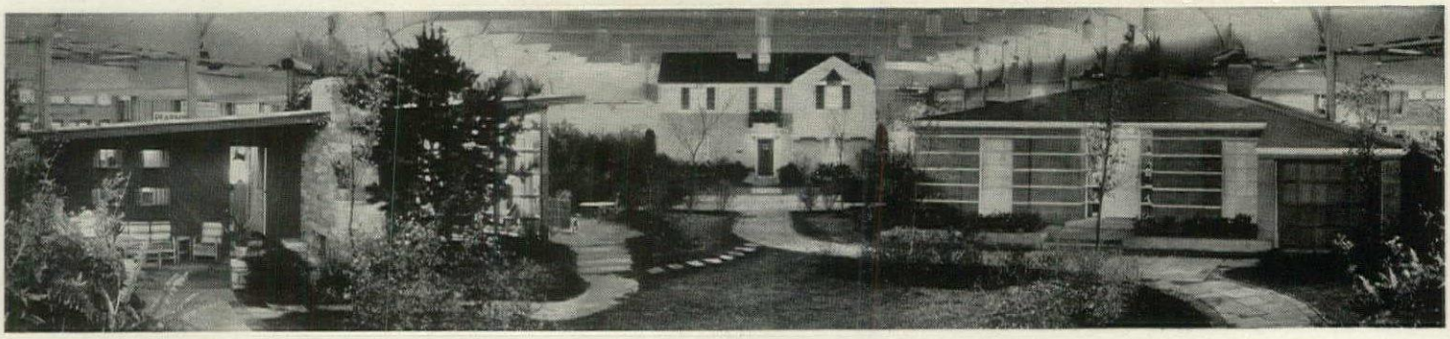
Heading the National Conference is Myers Y. Cooper, ex-Governor of Ohio. Vice chairmen: Graham Aldis representing the National Assn. of Building Owners and Managers; President James McD. Shea of the National Apartment House Owners Assn.; President Byron T. Shutz of the Mortgage Bankers Assn. of America; John C. Bowers of the National Association of Real Estate Boards. Secretary: NAREB's Lawrence Holmes.

LOW COST SAND. On New Year's Day FHA announced that RFC Mortgage Co. would discount its Title I loans, that property standards for this section of the program would be upped to the Title II level, and that both actions should grease private enterprise's low cost house machinery. (ARCH. FORUM, Jan. 1940, p. 2). Month ago, the grease turned to sand as RFC Mortgage Co. decided that it would no longer discount these $2,500 (maximum) loans unless the properties securing them were appraised by FHA.

For many a builder this decree removed one of Title I's two advantages:

(*Continued on page 50*)

Indoor houses: Above—Timbolok's streamlined log cabin in a ground-floor show room at Rockefeller Center, New York City. Below—three full-scale models at Indianapolis' nineteenth building extravaganza. (See col. 1.)



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In the Hagerstown (Md.) City Hall, shown in the illustrations, the architects, Taylor & Fisher, A. J. Klinghorst, associates, specified the material for wainscot and counters and got a very attractive and practical result.

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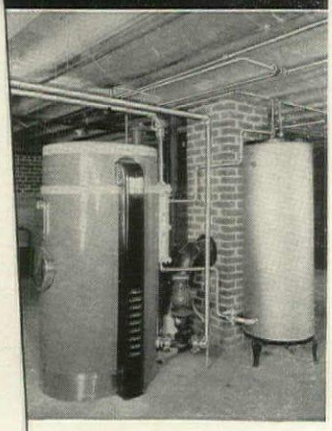

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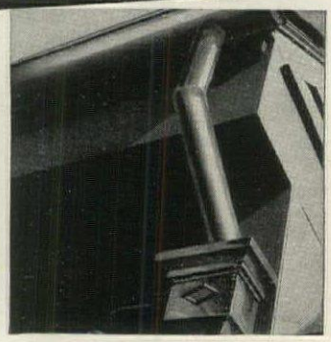

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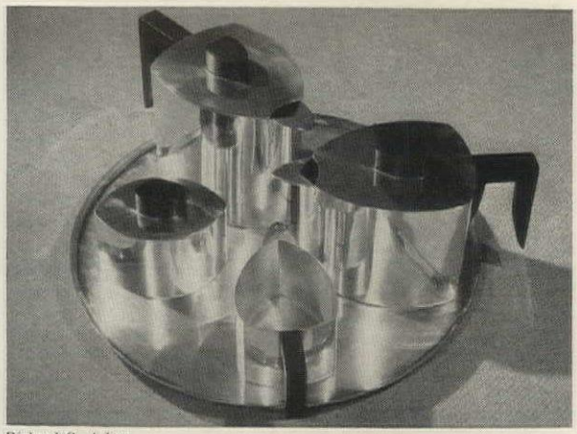
FORUM OF EVENTS

CONTEMPORARY AMERICAN INDUSTRIAL ART. Since 1917 the Metropolitan Museum of Art in New York has presented fifteen comprehensive exhibitions of American industrial art. Shown on these pages is the 1940 exhibit, the result of the collaborative efforts of nearly 600 architects, designers, craftsmen and manufacturers. The Museum, commendably exercising no editorial function, has presented an exhibit which is noteworthy for its scope, certainly not for its restraint. Those few rooms which seem effortless easily strike the only significant and refreshing note:

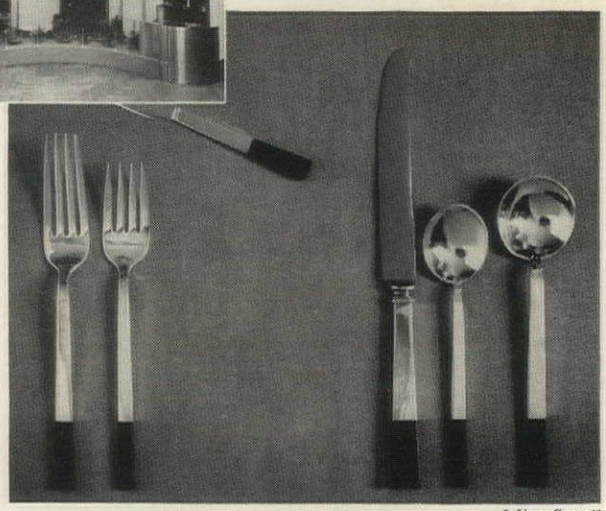


Richard G. Askew

METALS AND SYNTHETIC TEXTILES. Harvey Wiley Corbett and Louis Skidmore, architects. The exhibit is arranged as an abstract composition of metal shapes and textiles. Silver tea service (above) designed and made by Harry Bertoia.

Ezra Stoller

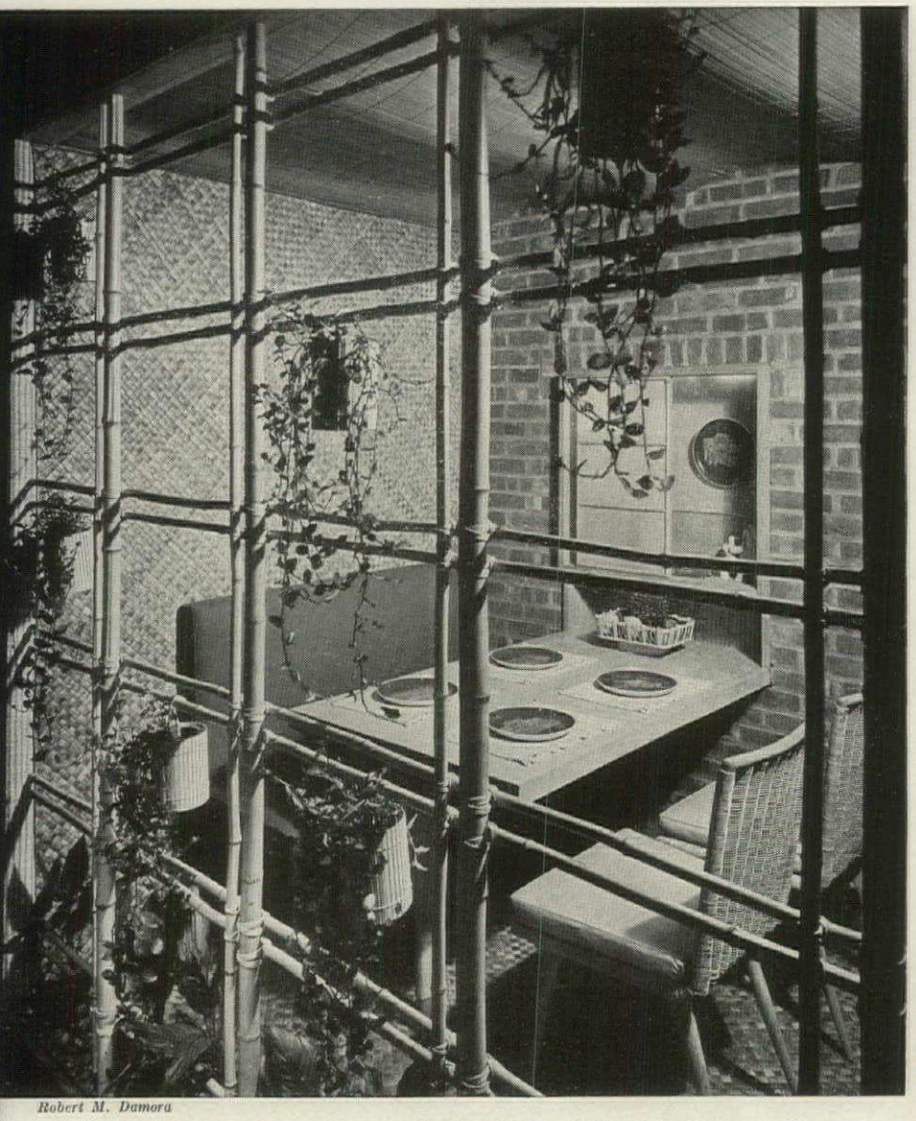
METALS AND GLASS. Ely Jacques Kahn, architect, Walter W. Kantack, designer. Colored aluminum vacuum bowl (above), designed by Ely Jacques Kahn. Silverware designed and made by Laurits Christian Eichner.



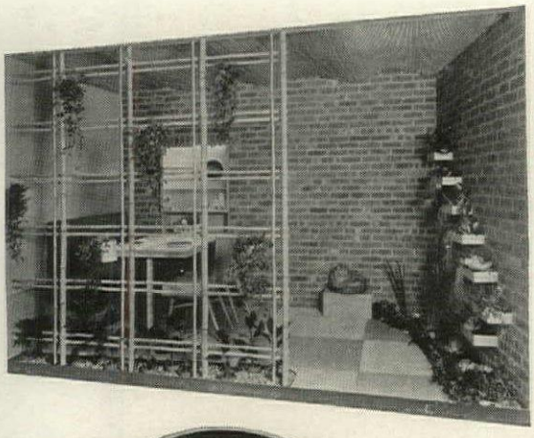
Julien Garrett

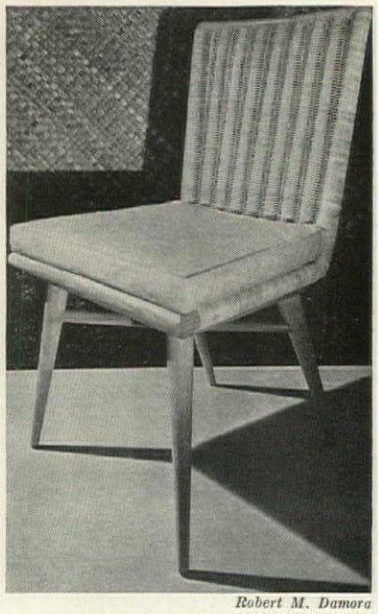
CERAMICS, GLASS AND PLASTICS. Arthur Loomis Harmon, architect, Leon V. Solon, designer. The pottery shown below was designed by Morris Sanders.

Richard Garrison



Robert M. Damora





Robert M. Damora

DINING ALCOVE. Edward D. Stone, architect. An attractive outdoor room in brick, straw matting and bamboo, with plants set in metal containers built into the wall. China plates designed by Simon Slobodkin, with decoration by Marguerita Mergentime. Chair (right) designed by the architect.

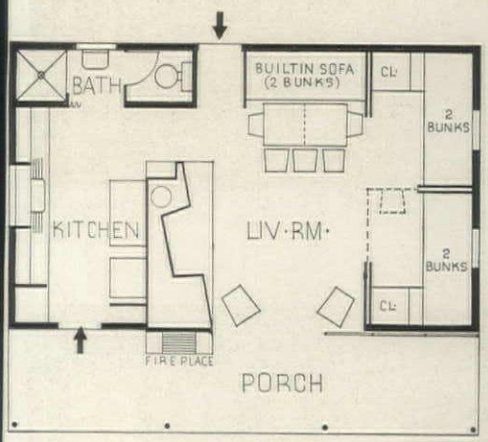
MUSIC ROOM. Walter Dorwin Teague, designer. Decorative wall panel by Pierre Bourdelle. The piano and chairs designed by Mr. Teague.

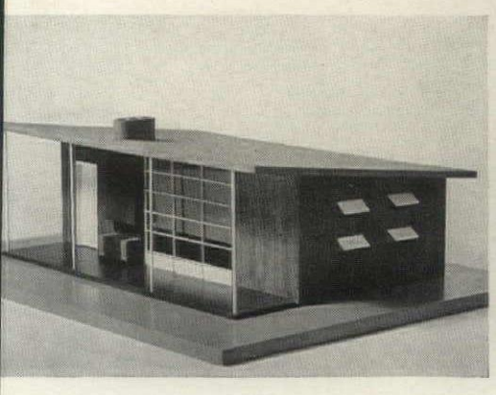
ENTRANCE HALL OF A COUNTRY HOUSE. Archibald Manning Brown, architect. A formal interior with a linoleum floor carved and painted by Domenico Mortellito.

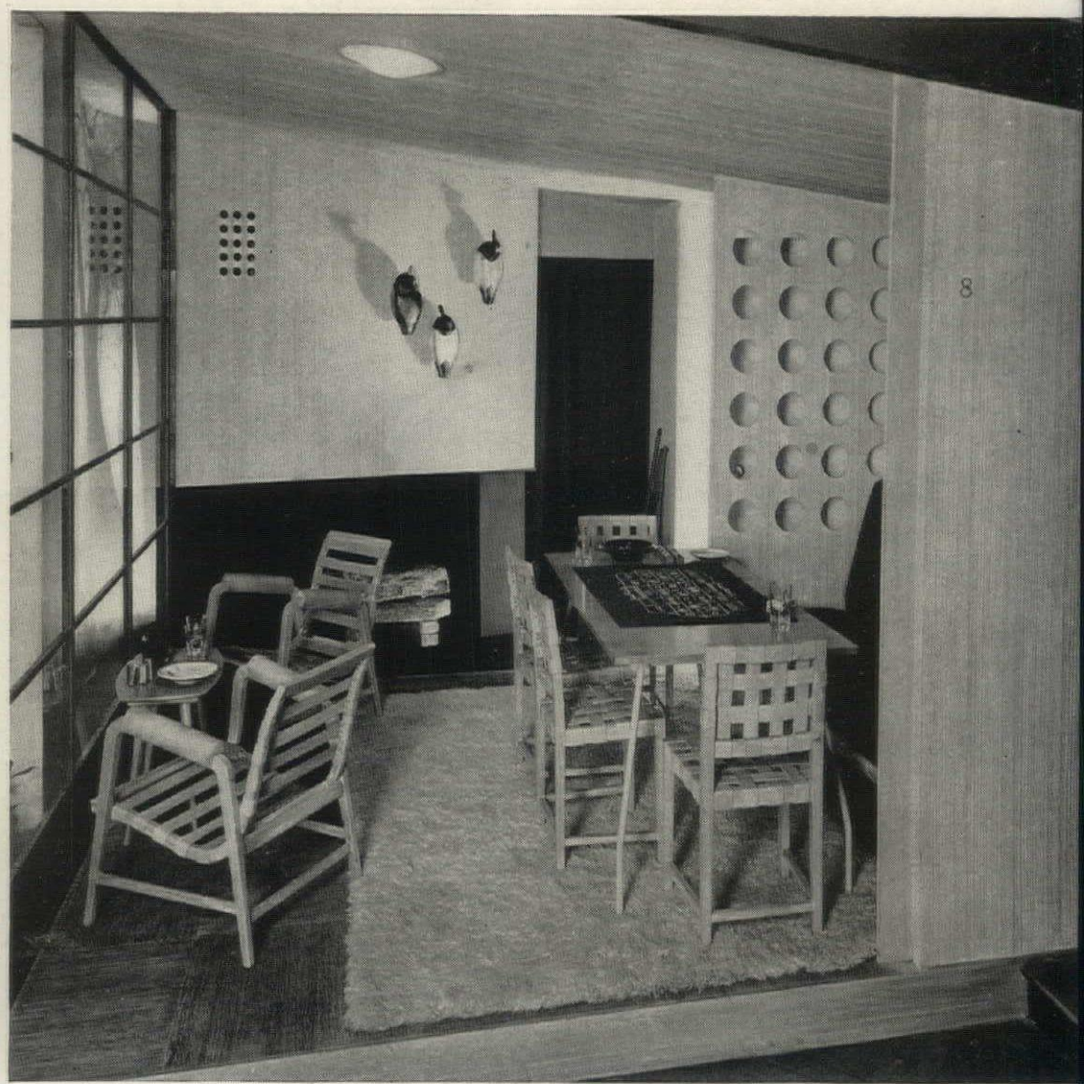
LIVING ROOM. Eugene Schoen, architect. The fireplace is set against a wall that is half mirror, half plaster. Mosaic decorations designed by Pierre Bourdelle.

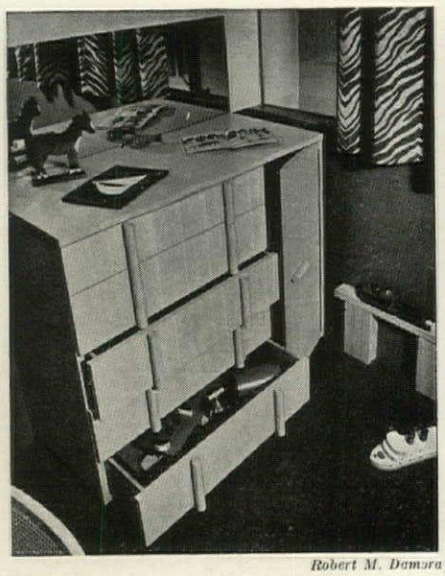
PORCH. Walter von Nessen, designer. A small space adjoining the living room shown above. The chair in the foreground has a seat and back made of plastic webbing.

PREFABRICATED CABIN INTERIOR. Donald Deskey, designer. The plan and model of the complete cabin are shown below. The living room is in specially textured plywood and is equipped with a couch that becomes a double bunk.



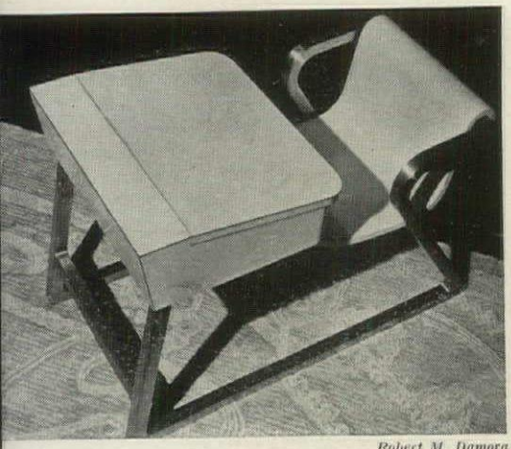






Robert M. Damora

ROOM FOR A CHILD AGE FOUR. William Lescaze, architect. Open shelving and wall niches are provided for toys. The bureau (above) has cupboard space as well as drawers.



Robert M. Damora

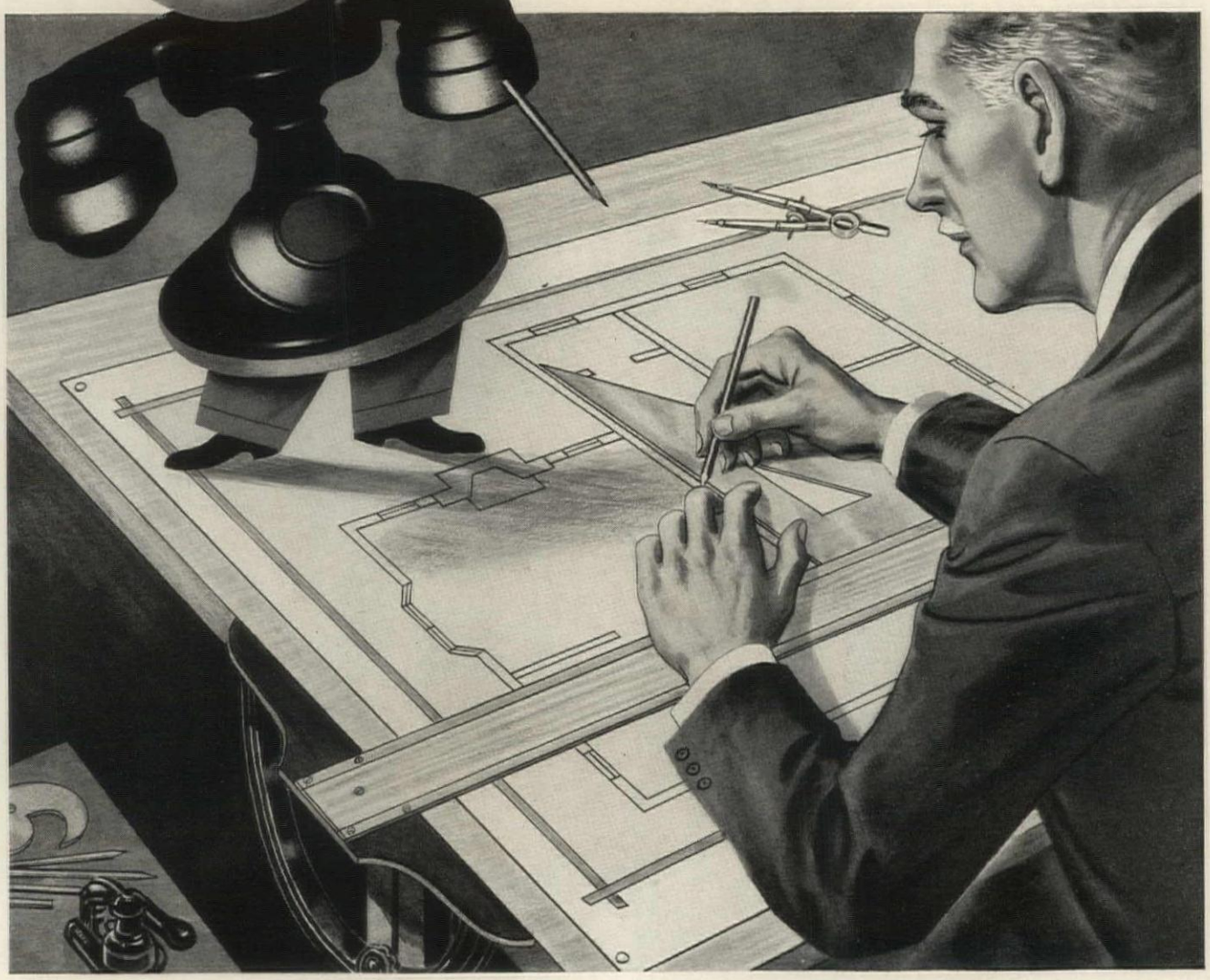
ROOM FOR A CHILD AGE FIVE. Raymond Loewy, designer. The room has a glass drawing board, special rubber flooring, a tile stove. Above is a combination seat and desk in metal, wood and plastics.

Robert M. Damora

LIVING ROOM. Gilbert Rohde, designer. An interesting variation on conventional metal furniture is shown here, with multiple members providing the necessary rigidity.

CORNER FOR LIVING. Ralph Walker, architect. An assortment of furniture and textiles. All furniture and the lighting fixture designed by Mr. Walker. Printed textiles by the American Design Group; woven textiles by Ann Franke.

"Count me in on this!"



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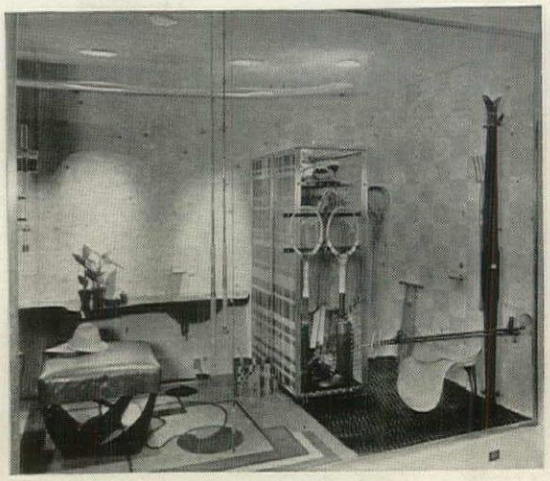
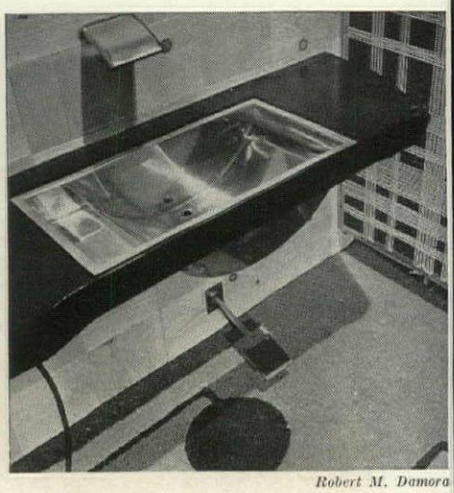


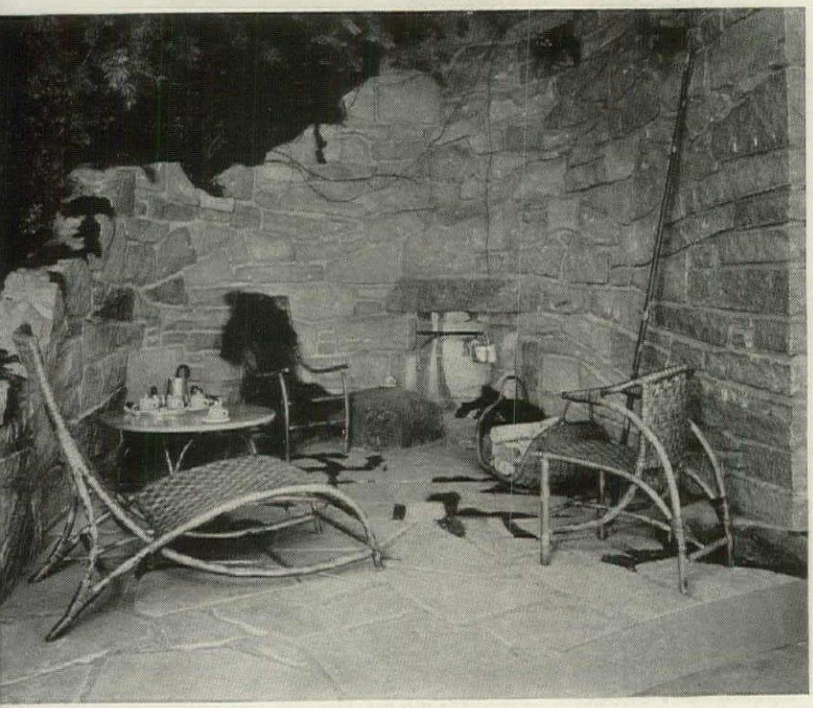


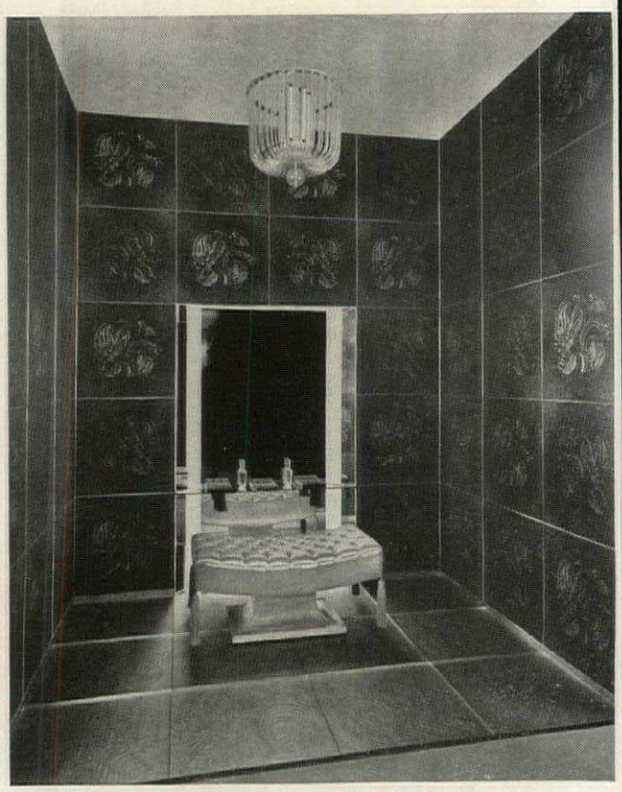
Robert M. Damora

HALL OF A COUNTRY HOUSE. Wallace K. Harrison, architect. Walls are of pine blocks. The special basin is in copper; faucets are replaced by a foot pedal.

Robert M. Damora

OUTDOOR LIVING ROOM. Russel Wright, designer. A rustic treatment, with furniture in bent wood and rattan. The armchair is shown at the left.

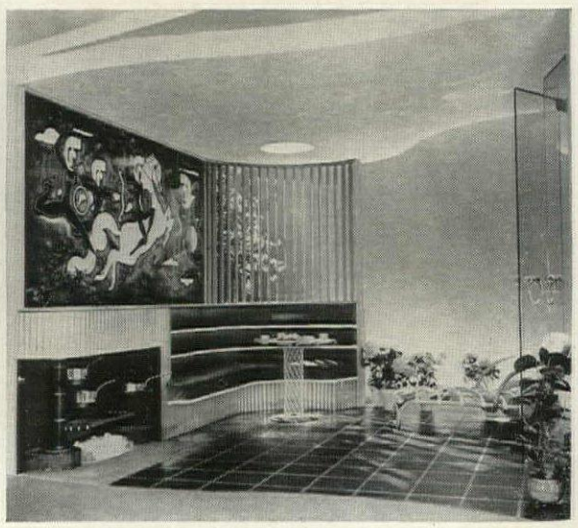




POWDER ROOM. Gustav Jensen, designer. The floor is of cast glass. Walls are covered with black and gold paper.

Robert M. Damora

COVERED TERRACE. Irvin L. Scott, architect. Focal point of this room is the panel, "Hercules and the Amazons," designed by Russell Barnett Aitken and executed in porcelain enamel on steel.



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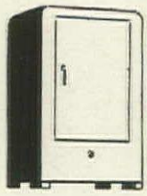
A Good  has it

A Good  has it

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"it" *means* TRADE-IN VALUE

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A good paint job may grow old—may eventually need to be done over—but even so, it still has *trade-in value.* It's in the same class with an automobile or a refrigerator.

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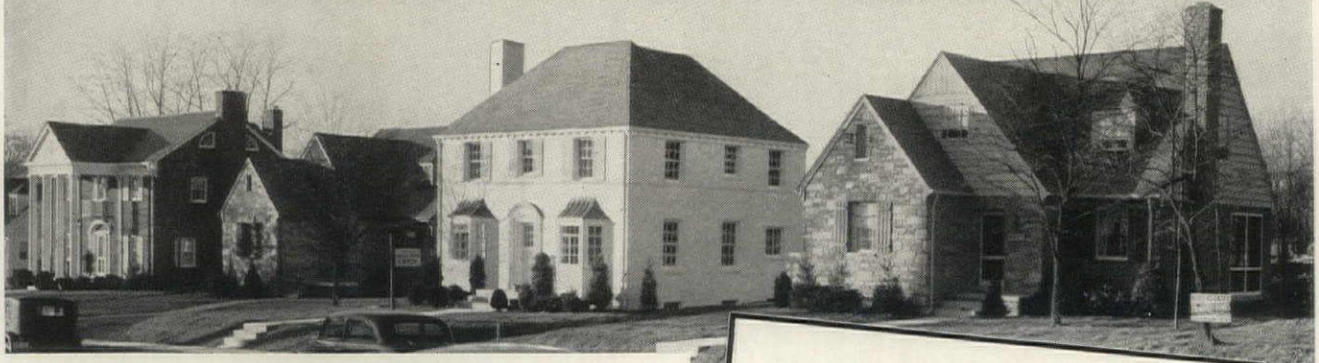

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Associated architects on the Arrowhead Springs Hotel were Paul Williams and Gordon Kaufman. The builder: Wm. Simpson Construction Co.

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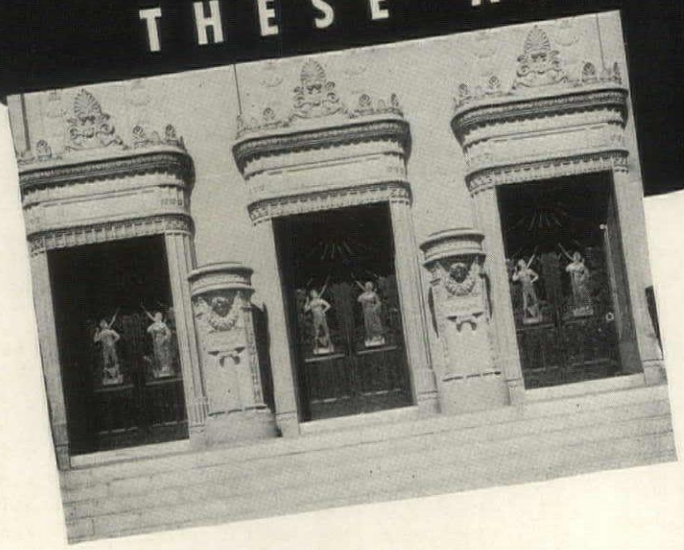

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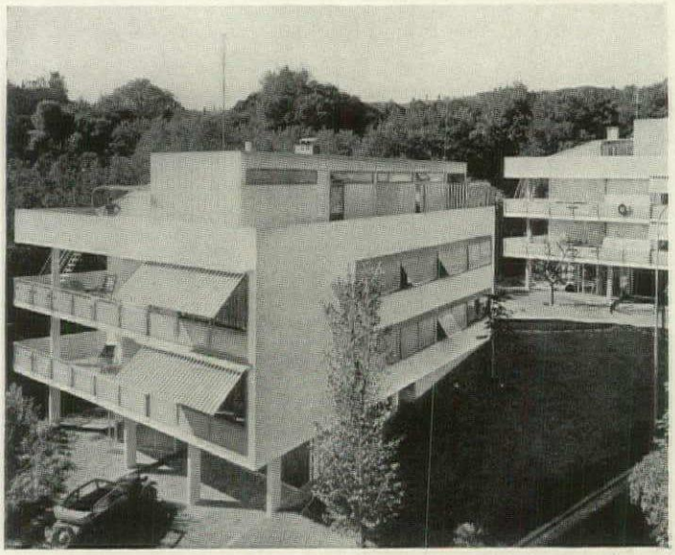

THE NEW ARCHITECTURE, by Alfred Roth. Dr. H. Girsberger, Zurich, Switzerland. 233 pp., illustrated. 9½ x 11¼. $8.00.

It is difficult to write about this book in anything but superlatives, as Mr. Roth has succeeded in producing a book on modern architecture not only radically different from any of its predecessors, but what is probably the most valuable one to date. The scheme is simple: twenty buildings, erected in various parts of the world, were selected and each subjected to minute critical examination. Descriptions are long and completely factual, and they are admirably supplemented by drawings and photographs. As a result we have a book that cannot be read but must be studied, and at the end one has an enormously enriched understanding of what makes modern architecture tick.

As an example of how the book is put together, one might consider the two apartment houses illustrated above, and the manner of their presentation. Fourteen pages are devoted to these buildings, which are located in Zurich and were designed by Alfred and Emil Roth and Marcel Breuer. There are brief biographies of the architects and a description of the buildings. The latter covers the location, character of the surrounding neighborhood, and the program furnished the architects. It also describes the construction, equipment, finishes, use of color, and the general effect of the finished structure. There are eleven photographs, and scale drawings which show not only the room layouts, but also the relation of the group to the city, the elevations, details of framing, window sections, sound insulation, etc. Obviously, with so comprehensive a presentation it is possible to study the examples in the most minute detail, and the drawings leave nothing to be desired.

The selection of buildings is of interest. There are three from this country: Kocher's week-end house, a school by Richard Neutra, and a cooperative farm community built by the Farm Security Administration. Other examples include Aalto's library in Viipuri, a chemical factory in England, prefabricated wood houses in Sweden, a tennis hall in Amsterdam, housing developments in Switzerland and Holland, and a couple of exhibition buildings. While one might quarrel with the choice, it would only be because there are more than twenty good modern buildings in the world; certainly none of those selected are lacking in interest. The architectural profession—or that section of it interested in furthering the contemporary trend—owes a debt to Mr. Roth and his collaborators for a monumental achievement. The book is an invaluable addition to the modern architect's working library and it is to be hoped that it may be expanded to include other work equally worthy of detailed examination.

YOUR HOUSE IN THE COUNTRY, by Henry and Eugenia Mins. Simon & Schuster, Inc., New York, 424 pp., illustrated. 5½ x 8¼. $1.96.

There is a little of everything in this rambling guide to country living. The timid city dweller is taken by the hand and told how to find a site, whether to build or remodel, what games to play in the country, and how to improvise a meal in split seconds. In addition, the authors discuss fire extinguishers, comparative merits of wood and metal windows, week-end gardening, how to avoid poison ivy and how to get rid of it if you get it. Unlike most books of this sort, there is a refreshing lack of the customary sentimental effusion and all precedents are broken by the suggestion that good modern architecture can look quite as well in the rural setting as the inevitable Colonial.

If an encyclopedia on the problems and possibilities of building and living in the country could be compressed into one volume, this book would come as close to succeeding as any.

OLD VERMONT HOUSES, by Herbert Wheaton Congdon. Stephen Daye Press, Brattleboro, Vermont. 190 pp., 125 illustrations. 7 x 10¼. $3.00.

Vermont shows one of the most interesting developments of the Colonial style to be found in America. Its oldest existing buildings date from a century later than those in Massachusetts and they do of course carry on the major style trends of the states which were settled earlier, but the character of the country and its landscape have produced house types which have distinct regional traits.

The story told here was written by a Vermonter who is a photographer as well as architect, and it is a competent survey of work that has been neglected for the richer material provided by the other New England states. Unfortunately the quality of the photographs leaves much to be desired, and the pictorial section weakens an otherwise excellent book.

THEY BUILT THE CAPITOL, by I. T. Frary. Garrett and Massie, Inc., Richmond, Virginia. 324 pp., illustrated. 7¼ x 10¼. $4.00.

A history of the Capitol, the men who built it and the political events which shaped its growth. It has biographies of Hallet, Latrobe, Thornton, Bulfinch and other architects and engineers concerned with its design at various times. There are numerous reproductions of early drawings showing a great variety of proposed schemes. The paintings and sculptures commissioned for the building are also described, and biographies of the most important artists are given. Photographs present the building as it is today, and there are a number of extremely interesting early prints, one of which shows a view of the Capitol with the dome still unfinished. A chronology is appended giving a complete history of the building in condensed form. The book also contains a bibliography and index.

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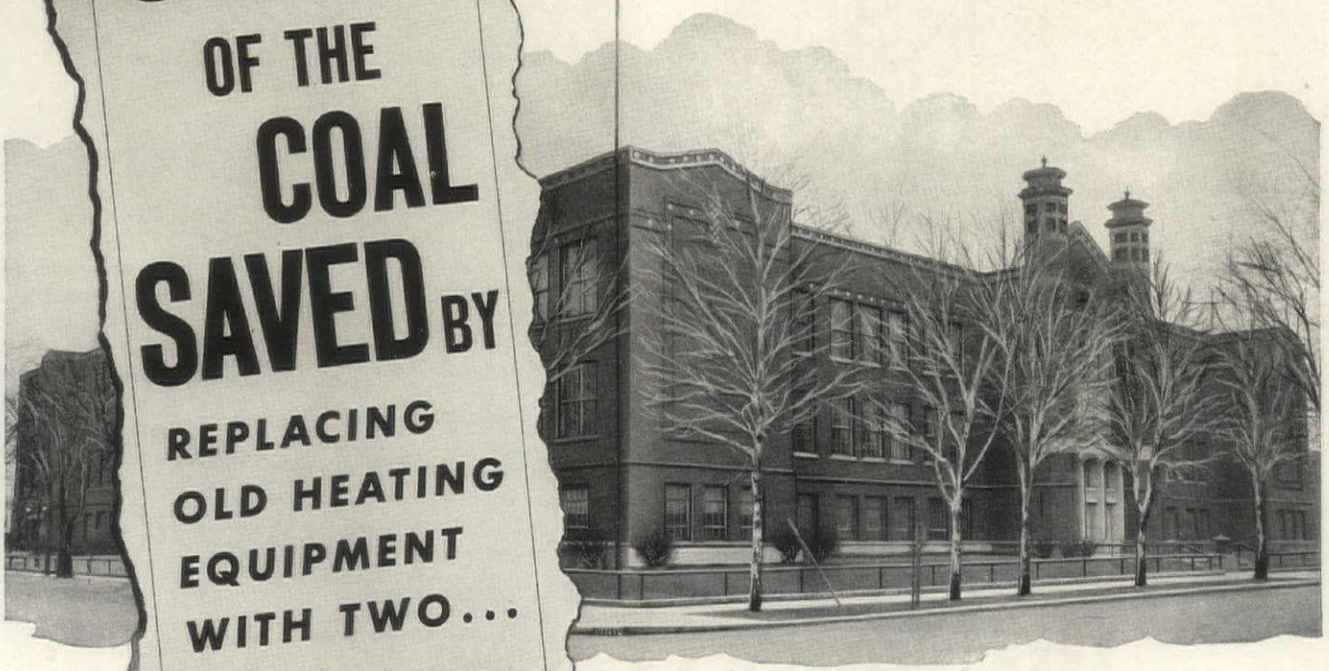

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Development of Benson & Vest, Arlington, Va. Roofed with 450 squares RU-BER-OID 12" Thick Butt Asphalt Shingles. Sided with 450 squares Eternit Sno-White Colonial Timbertex Siding.

A COMBINATION HARD TO BEAT...

{ *Roofs* . RU-BER-OID ASPHALT SHINGLES
{ *Sidewalls* . . . ETERNIT ASBESTOS SIDING

Prospective home owners see the roofs and sidewalls *first.* And what *clinches* the sale in many developments, are the powerful sales features of this combination—RU-BER-OID Asphalt Shingles and RU-BER-OID—Eternit Asbestos-cement Sidings.

RU-BER-OID Asphalt Shingles have everything—colorful beauty, fire safety, plus a performance record of durability that insures freedom from upkeep expense—real economy. The line of RU-BER-OID Asphalt Shingles is complete. There are types, colors, designs and thicknesses to meet every price home you may build.

RU-BER-OID—Eternit Asbestos-cement Sidings also provide a real sales spark. They have style and beauty. In Colonial or Thatch designs, they give charm to today's most popular architecture. These sidings are water-repellent, fireproof and rotproof. Neither paint nor stain is required to prolong their life. That means reduced upkeep costs.

See these new modern sidings—with "wood grain" beauty—in colors of sno-white and steel gray, or, with a smooth finish in browntone, greentone and varitone. See also the line of RU-BER-OID Asphalt Shingles. Together, they are a combination hard to beat. They give your clients sound building investments. They give you a plus to talk about and sell.

We urge you to get all the facts. Write today. Dept. AF-6. The Ruberoid Co., *Executive Offices,* 500 Fifth Ave., New York, N.Y.

RU-BER-OID
ROOFING AND BUILDING PRODUCTS

Reg. U.S. Pat. Off.

Let 'em splash!

They can't harm these walls

IF you can take your eyes away from the dog for an instant and look at the walls, you'll see the newest idea for distinctive bathrooms at moderate cost—porcelain enamel with stainless steel trim which can be kept clean by merely wiping with a damp cloth

Here are familiar, time-proved materials used in an interesting, different way. Large panels in a variety of colors give you new possibilities for bathroom design. Any shape that can be made with steel is possible with porcelain enamel. You can get rounded corner sections, fluted panels, special ornaments and borders which give you freedom to design unusual bathrooms.

Porcelain enamel wall paneling is easily applied on old or new walls. Methods are detailed in the Don Graf data sheets. If you don't have these in your files we'll send them on request.

Joints are made water-tight with a special cement which has adhesive qualities to allow for expansion and contraction. Backing of the panels is usually done with plywood or rigid insulating board to increase rigidity and deaden noise.

This porcelain enamel is permanently fused on U·S·S VITRENAMEL — a sheet with a special surface on which porcelain can be fused better than ever. You can identify it by the seal shown below. To find out where to buy U·S·S VITRENAMEL products, write to Carnegie-Illinois Steel Corporation, 621 Carnegie Building, Pittsburgh, Pa.

PORCELAIN ENAMEL ON STEEL KEEPS HOMES BRIGHT AND CLEAN

In sinks and kitchen cabinets.

In shutters and house trim.

In hot-water heaters and laundry tubs.

In bathtubs, lavatories and medicine cabinets.

This seal marks porcelain enamel on the U·S·S Vitrenamel base.

PORCELAIN ENAMEL ON USS Vitrenamel (PATENTED) UNITED STATES STEEL SUBSIDIARIES

CARNEGIE-ILLINOIS STEEL CORPORATION

Pittsburgh and Chicago

Columbia Steel Company, San Francisco, *Pacific Coast Distributors*
United States Steel Export Company, New York

UNITED STATES STEEL

CAREY SCORES AGAIN...

SCIENTIFICALLY FILLED AND SEALED • YOUR ASSURANCE OF DEPENDABLE QUALITY •

MANUFACTURED UNDER PATENTS
- 2,105,531 JAN. 18, 1938
- 2,159,586 MAY 23, 1939

ASQU

ASPHALT ROOFING PRODUCTS

...WITH SENSATIONAL IMPROVEMENT IN ASPHALT ROOFING

Here's news of vital interest to every member of the building industry. The Philip Carey Company announces that it has been licensed under patents of the United States to manufacture ASQU asphalt roofings — one of the most important developments in asphalt roofing in a generation. The improved process assures:

Felt saturated to at least 98½% of its total capacity.

Practical Elimination of Severe Blistering, Sliding, and Loss of Mineral Granules

Uniformity of Quality, Controlled Hour by Hour in Manufacture

Longer Roof Life — Lower Cost per Year

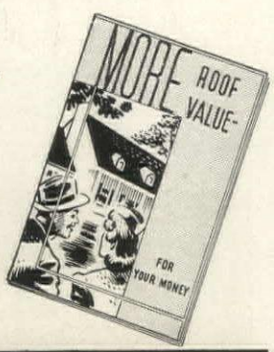
ASQU roofings and the process of manufacture are the result of a long search to find the *cause* of the lack of uniformity in asphalt roofings and in their wearing quality. Scientific research developed the reason — *incomplete* asphalt saturation of the felt was the principal cause.

The Underwriters' minimum standard requires saturation of the felt with asphalt to at least 85% of its total capacity. CAREY ASQU roofings are saturated with asphalt to no less than 98½% of maximum capacity, effectively preventing the weather from getting in and damaging the felt.

CAREY is taking the story of ASQU roofings to the buying public of America through its national advertising. The Architect who wishes to render real service to his clients will want to know all about this patented product.

SEND FOR THE FACTS ★

Send today for this new book. It tells the story of ASQU roofings — why and how this roofing was developed—what it means in roofing economy. This is BIG NEWS, so don't wait. Write today—address Dept. 10.



Carey

THE PHILIP CAREY COMPANY • LOCKLAND • CINCINNATI, OHIO

WHAT DO THEY SAY ABOUT YOU..

After their House is Built

MANY a home that suited its owners perfectly when they moved in turns out to be a headache when the operating costs pile up. Then the owners, who may have stretched their resources to make the down payment and keep up the installments, are likely to say, **"Why didn't someone tell us that it would cost so much to operate this house?"**

One of the operating expenses that often run far higher than anticipated is the heating bill. Keeping a house warm enough to be comfortable and healthy with high cost fuels in very cold weather upsets many a carefully planned budget.

So the owners fret about the cost, or endanger their health by keeping their home too cool for comfort. Criticism about heating costs can be avoided. Show your owners how it is healthy to be comfortable and smart to keep warm at low cost by using either hand-fired or automatically stoked bituminous coal or coke. The choice of a heating plant and fuel for a new home should be made only with a complete understanding of these important factors: *1—The cost of installation of the heating plant. 2—The yearly operating costs based upon sufficient heat for comfort. 3—The degree of convenience for which your clients are willing to pay.*

To help you serve your clientele, we have prepared two interesting booklets: "*Unmasking the Great American Delusion That 'You have to Be Cold to Be Healthy'*," and Modern Basement Plans illustrating the fundamental principles of planning basements for modern coal heating. Free copies of these booklets are yours for the asking.

IT'S HEALTHY TO BE COMFORTABLE • TREAT YOURSELF TO PLENTY OF HEAT THIS WINTER

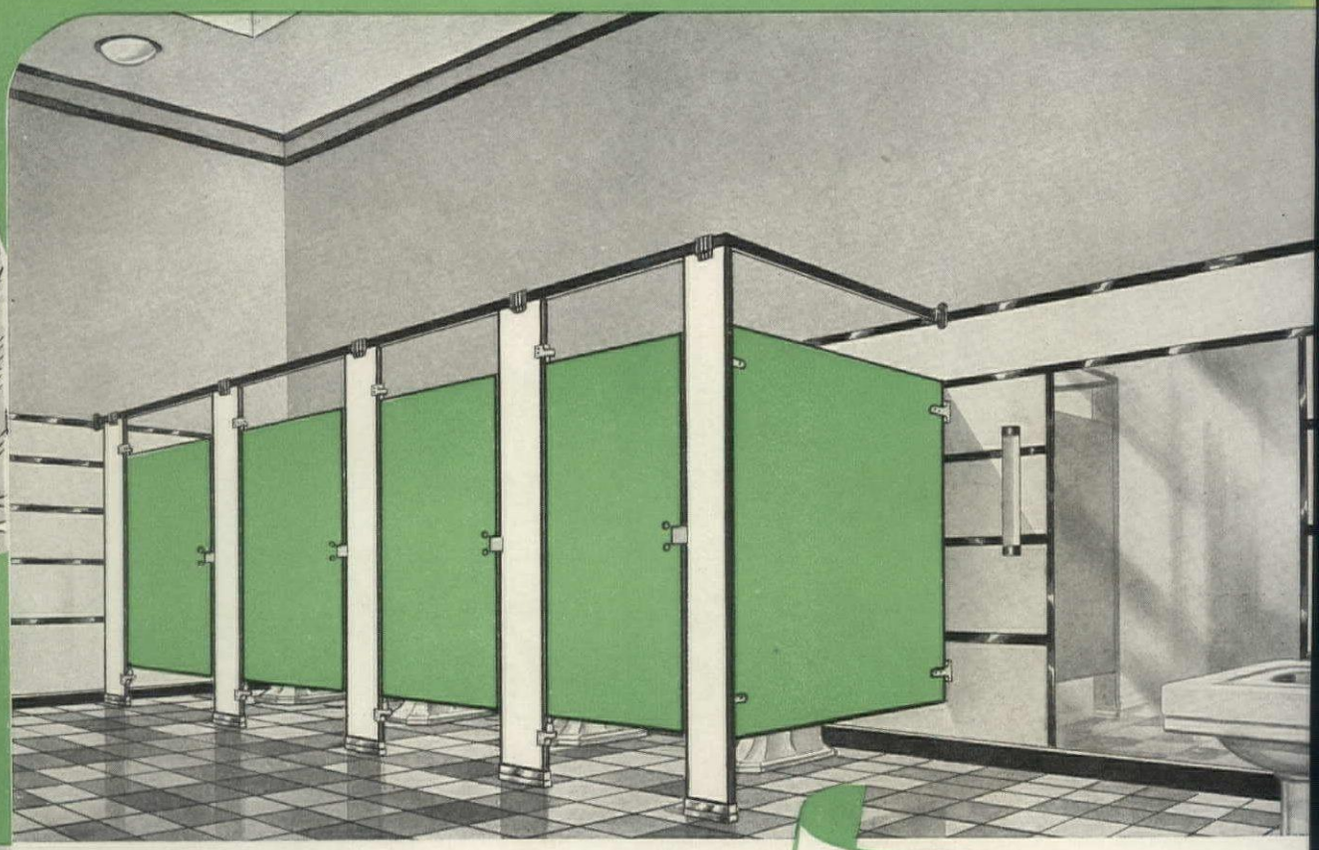
BURN BITUMINOUS COAL OR COKE

the Universal Low Cost Fuels

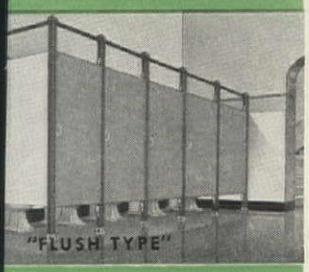
NATIONAL COAL ASSOCIATION AF 6-40
Headquarters:
804 Southern Bldg., Washington, D. C.
Western Office:
307 N. Michigan Ave., Chicago, Ill.
Please send me a free copy of the Unmasking Story and the Modern Basement Plan Book.

Name .....
Address .....
City ..... *State* .....

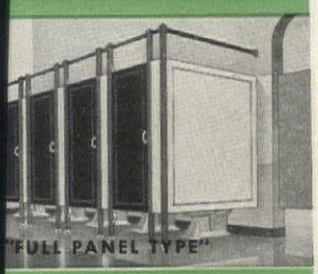
anymetal
ERS 5 TYPES OF
ILET PARTITIONS
CHOOSE FROM



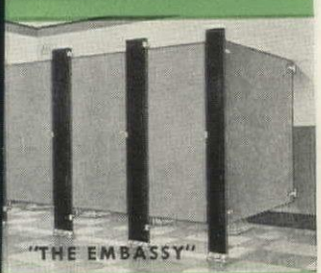
"THE NORMANDIE"



"FLUSH TYPE"



"FULL PANEL TYPE"



"THE EMBASSY"

When does the toilet room become a liability?

● Whenever a toilet room environment fosters resentment, ill-will, or merely critical comment, it is a liability to the building and the owners of the building in which it is located. People are extremely sensitive about toilet facilities, because the standards of convenience of the modern bathroom has induced them to expect something more than mere "commonplace convenience". Toilet rooms often become liabilities long before they become a menace to health.

Consider the influence toilet compartments can exert upon a toilet room environment. The primary function of toilet compartments frequently becomes secondary to the fact that the right type and finish of toilet compartments emphasizes the modernity and convenience of toilet facilities and encourages orderliness, cleanliness, and respect for such facilities. Sanymetal offers five distinct types of toilet compartments, three of which are strikingly modern and especially suited for the creation of unusual toilet room environments. Three of Sanymetal's five types of compartments are available in a range of three finishes, among which is "Porcena" (porcelain enamel) finish, available on the Normandie, Embassy and Academy types. The flint-hard, glass-smooth surface that is non-porous, absorbs no odors, resists the effects of ordinary acids, and is moisture and rust-proof, provides a compartment that is as suitable for exclusive clubs and hotels as it is for industrial plants, on account of the structural strength and cleanliness of this finish.

Porcena
(porcelain enamel finish)
TOILET PARTITIONS
possess the natural structural strength of steel (not one sheet, but two 16-gauge sheets, each securely bonded on opposite sides to dense insulating core); strengthened by porcelain enameling (four layers on each sheet) which provides a non-porous, flint-hard, glass-smooth surface that is positively impervious to odors, acids, and moisture.

The sound, simple, and exclusive construction features embodied in Sanymetal Toilet Compartments are a guarantee against obsolescence and a protection against a toilet room becoming a liability. All five types of Sanymetal Toilet Compartments are suitable for both modernization and new construction projects. They are the result of twenty-five years of research and experience in making over 47,000 installations.

The use of Sanymetal Toilet Compartments in new structures forestalls critical comment, develops good-will. The Sanymetal Representative in your locality is prepared to help you plan toilet rooms for schools, factory buildings, office buildings, and every other type of structure. Consult him. Write direct for Catalog No. 77.

THE SANYMETAL PRODUCTS COMPANY, INC. • 1687 URBANA ROAD • CLEVELAND, OHIO

FOR A FULL DESCRIPTION OF ALL FIVE TYPES, REFER TO SANYMETAL SECTION 20/23 IN SWEET'S FOR 1940

Craftsmanship in Metal

Sanymetal TOILET AND OFFICE PARTITIONS

Openings need Insulation, too!

SILENTITE IS THE *"Insulated"* WINDOW

WHEN you specify insulation sheathing, you aren't entirely insulating the wall. Unless the windows are "insulated" too, your wall isn't as efficient as it might be. Today architects are doing a complete job of insulation by using modern "insulated" windows.

For over 8 years, Curtis has been making SILENTITE—America's trouble-free window. Over 100,000 homes are giving better service and greater enjoyment because their SILENTITE windows won't stick, jam, rattle or leak heat. And these owners report savings in fuel bills up to 25%–savings that SILENTITE helped make.

A few of the outstanding, patented features which have made SILENTITE America's fastest selling modern window are listed here. They'll help you make clients better satisfied; aid room decoration, health and charm. 1. Lifetime springs replace weights and cords; 2. Sash slides smoothly in metal channels; 3. Sturdy, built-in weather-stripping (proved by test far superior to ordinary weatherstrip); 4. All wood parts given Curtis toxic dip; 5. The beautiful designs of Mitertite trim add to room beauty; 6. "Pre-fit" sash speeds up installation; 7. Narrow mullions admit more light and greatly aid charm and decoration.

Write for complete information on the entire SILENTITE family which includes double-hung windows, casement windows, circle and basement sash. We'll send you literature on other Curtis woodwork, too. If you live in Canada, write to W. C. Edwards & Co., Limited, 991 Somerset Street West, Ottawa, Canada.

CURTIS WOODWORK IS SOLD BY RELIABLE DEALERS EVERYWHERE

1866
CURTIS
WOODWORK
SILENTITE
PRE-FIT
the *"Insulated"* window

THERE IS ONLY ONE SILENTITE AND ONLY CURTIS MAKES IT
Its patented features aren't available in any other window

CURTIS COMPANIES SERVICE BUREAU
Dept. AF-6, Clinton, Iowa

Please send me full details on the *Silentite Window Family.*

Name.....

Address.....

City.....*State*.....

A Million Gallon Tank Overhead ...

... and MONOTUBES underground!

● To the Town of Lake, Wis., goes the distinction of being the first to combine town hall and water tower into one complete and attractive structure. Upper part of the tower houses a million gallon steel storage tank. Municipal offices are housed on the ground level and the second floor is a town hall having a seating capacity of 300.

The job of supporting this heavy structure was delegated to Union Metal Monotubes. 279 of these sturdy steel casings, ranging from 25 to 65 ft. in length, were driven through blue clay and quick sand *without the aid of a mandrel.* They carry a design load of 50 tons but test piles were subjected to 100 tons before approval.

Once again Monotubes demonstrate their ability to carry heavy loads with a wide margin of safety. And with this greater strength go the economies resulting from the use of a sturdy steel pile casing which is easily handled, requires no driving mandrel and can be installed with standard equipment.

Union Metal engineers are available for consultation on your foundation problems. Write today for Catalog No. 68A describing the Monotube Method of installing cast-in-place concrete piles.

●

William D. Darby, Consulting Engineer; Pittsburgh-Des Moines Co., General Contractor; Edward E. Gillen Co., Piling Contractor.

UNION METAL

THE UNION METAL MANUFACTURING CO. CANTON OHIO

ARCHITECT: Well, not exactly—but he certainly helps me *sell* houses. His name's Certain-teed.

MR. NEWHOUSE: Did you say Certain-*steed?* With that name he can't lose.

ARCHITECT: The fact is Certain-teed never lost a single housing handicap in which I specified him. Actually this little horse is just an amusing souvenir of a big building company, Certain-teed Products Corporation. I keep him on my desk as a reminder of the fine public service his company is rendering.

MRS. NEWHOUSE: Public service? To whom?

ARCHITECT: To the nation—and to the building industry. You see, the Certain-teed Company has an idea that home owners are the very soul of our democracy. They believe America can build its way back to prosperity — so they've unselfishly set out to sell my industry and my services—even ahead of promoting their own products.

MR. NEWHOUSE: Certain-teed—s-a-y! Why that's the outfit who published that message by an American Father. Remember "Look Homeward, America" Helen?

MRS. NEWHOUSE: I'll say I do! I even sent in to Certain-teed for that lovely painting. And you wouldn't even discuss the house with me until you read that ad, Homer. It made you look homeward, all right.

ARCHITECT: Well, Mrs. Newhouse, that means we can both thank Certain-teed for convincing the man of the house. It also illustrates exactly what I mean about Certain-teed serving the building industry and America.

MR. NEWHOUSE: But how about Certain-teed products? Are they any good?

ARCHITECT: They're already certified by ten million home owners. And I'm recommending Certain-teed to you, Mr. Newhouse, because I know you want to make every dollar count.

MR. NEWHOUSE: So it pays to be Certain-teed, eh?

MRS. NEWHOUSE: I'm so glad. I just knew that cute horse stood for something important.

CERTAIN-TEED PRODUCTS CORPORATION

100 EAST 42nd STREET, NEW YORK CITY

ONE OF THE WORLD'S LARGEST MANUFACTURERS OF:

ASPHALT SHINGLES, ROOFING AND SIDINGS · STRUCTURAL INSULATION · WALL BOARDS · GYPSUM BOARDS AND PLASTER PRODUCTS

1940 Specifications..

Subsidiary of
KENNECOTT
COPPER CORPORATION

CHASE BRASS

make them rustproof

MAKE your specifications *rustproof* and corrosion resistant! For these metal failures can ruin the finest building, cause repairs and expense and criticism of both architect and builder by the owner.

Use brass and copper where they should be used and you are not so apt to have these troubles. For brass and copper *cannot* rust, and they resist corrosion.

Chase Copper Water Tube and Chase Sweat Fittings, for example, will give you the advantages of copper for little more than the cost of rustable pipe and fittings.

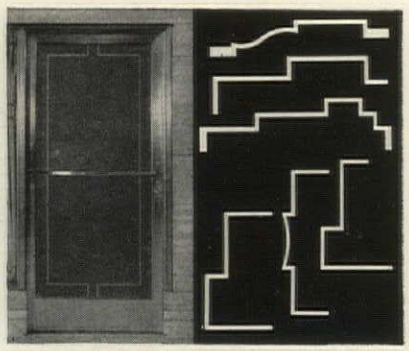
Chase Copper Flashings and Gutters, Chase Bronze Screen Cloth and other rustless Chase products will help keep down the maintenance cost of a house.

Architects and Builders will find their clients already familiar with Chase products through national advertising. And Chase products are carried in stock by leading jobbers and building supply dealers everywhere.

Complete information on Chase products will be gladly sent, upon request, to any Architect or Builder.

CHASE

CHASE COPPER THRU-WALL FLASHING
Directs water to face of wall. Helps to prevent masonry discoloration and inside wall leaks. Made of 16 oz. copper.

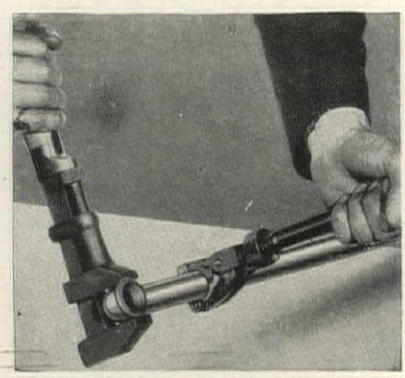


CHASE BRONZE EXTRUDED SHAPES
Architectural Bronze offers lightness of weight . . . economy . . . and shapes for all types of bronze work.

CHASE BRONZE SCREEN CLOTH
Strong, rustproof screen cloth made from full gage .0113" wire as approved by U. S. Bureau of Standards.

CHASE COPPER ROOFING PRODUCTS
All Chase gutters, downspouts, heads, elbows, ridge rolls and flashings are full weight *16 ounce copper*.

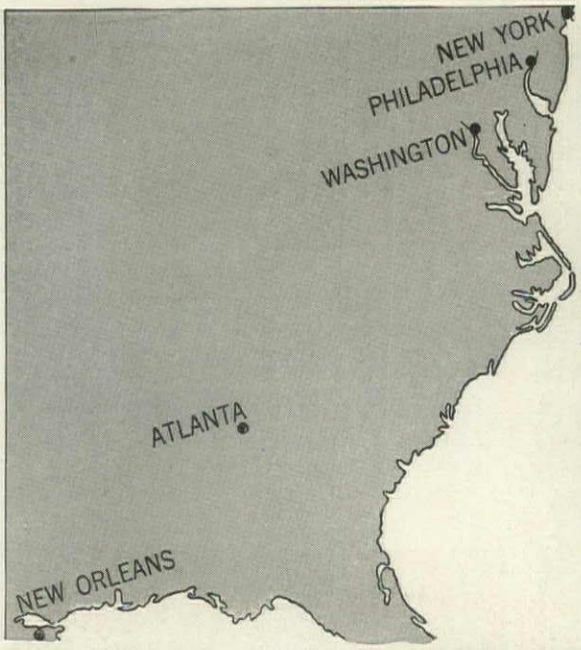
CHASE PLUMBING FIXTURES
Chase bathroom fixtures are made in two distinctive designs ("Doric" and "Round"), with matched accessories.



CHASE BRASS PIPE
When the job calls for brass pipe, Chase Red-Brass Pipe is the best commercial brass pipe we know of.

& COPPER CO. INCORPORATED WATERBURY CONNECTICUT

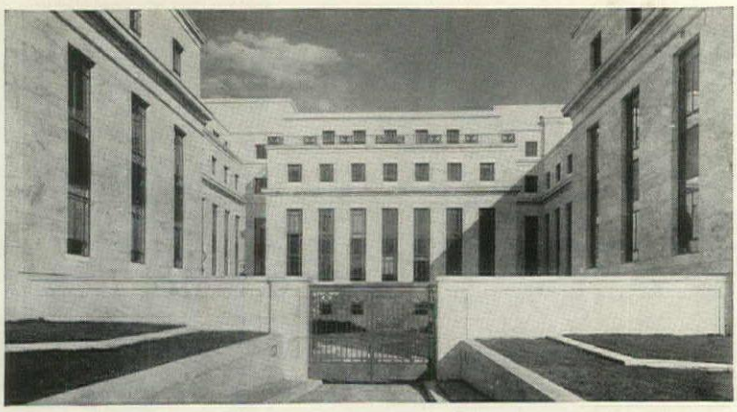
North and South agree on the advantages of paneling with this popular dark stone



Station KYW., Natl. Broadcasting Co. Bldg., Phila., Pa., Tilden & Pepper, Archts.; exterior facing and paneling of polished Alberene Black Serpentine.

Manhattan Family Court Bldg., New York, N. Y., Chas. B. Meyers, Archt.; panels of Alberene Black Serpentine.

State Office Bldg., Atlanta, Ga., A. E. Constantine, Archt.; spandrels of Alberene Black Serpentine.



Federal Reserve Bank, Washington, D. C., Paul Cret, Archt.; polished Alberene Black Serpentine spandrels on interior court.

Addition to Charity Hospital, New Orleans, La., Weiss, Dreyfous & Seiferth, Archts.; Alberene Black Serpentine spandrels matching those on original building.

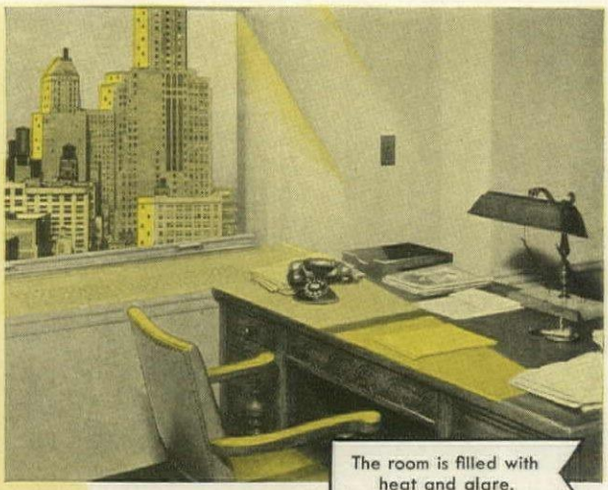
MODERATE COST... NEGLIGIBLE UPKEEP!

The ever-increasing use of Alberene Black Serpentine and its companion materials, Blue, Dark Green, and Black Tremolite, for paneling is due as much to their cost and their durability as to their design possibilities. These stones polish naturally to a rich, deep satiny finish, not reflective or mirror-like. Having great toughness and density, they can be cut into sections as thin as 7/8" for panels, facings, bulkheads and spandrels. A request on your business letterhead will bring you samples, showing the range of stones, including black and mottled dark blues and greens. Please address Alberene Stone Corporation of Virginia, 419 Fourth Avenue, New York. Quarries and Mills at Schuyler, Virginia. Sales Offices in principal cities.

ALBERENE BLACK SERPENTINE

FROM THE ALBERENE QUARRIES

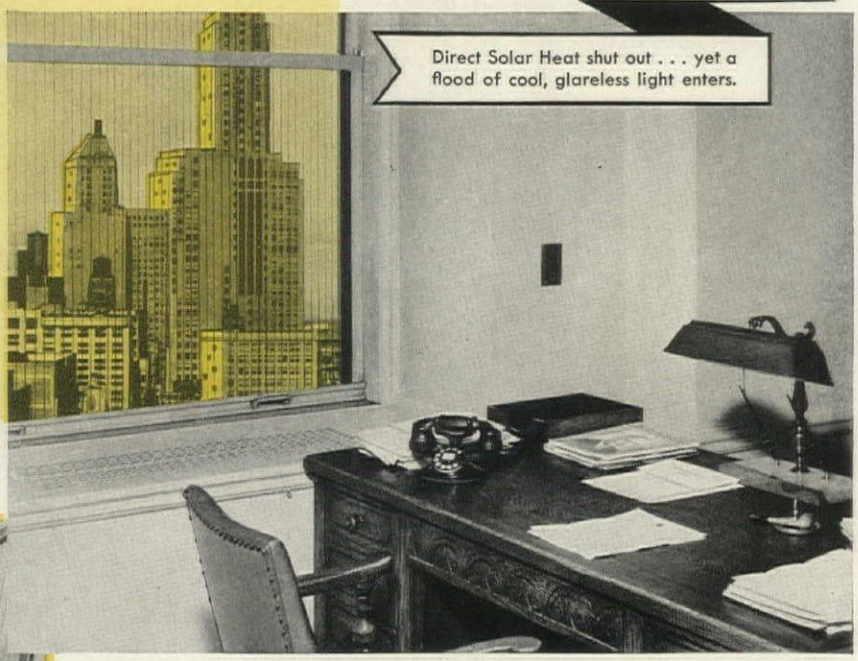
Window Glass makes this room a HEAT TRAP
. . . Once the Sun Heat gets in, it can't get out.



The room is filled with heat and glare.

SEE WHAT A CHANGE KOOLSHADE* SUN SCREEN MAKES BY STOPPING THE SOLAR HEAT OUTSIDE!

The room stays cooler . . . sun-glare is killed . . . yet there is ample light and a clear, pleasant view.



Direct Solar Heat shut out . . . yet a flood of cool, glareless light enters.

MADE LIKE A TINY VENETIAN BLIND . . . INSTALLED LIKE AN ORDINARY SCREEN

• Imagine a Venetian blind with "slats" so extremely small they are made of FLAT WIRE—as narrow as a pencil-lead and thin as paper . . . and you have a perfect idea of KOOLSHADE Sun Screen. These horizontal louvers are spaced 17 to the inch, rigidly held by vertical wires one-half inch apart.

KEEPS OUT INSECTS, TOO.

Wholly automatic . . . requiring no attention or setting . . . KOOLSHADE "Sun Conditioning" cuts Solar Load through windows as much as 80% to 85%

• The beauty of KOOLSHADE Sun Screen as a device for shutting out Sun Heat is that its astonishing efficiency is accomplished without shutting off light or view. The strong, fine-mesh bronze fabric is so inconspicuous you scarcely know it is there. The room is bathed in softly diffused light. But the fabric is so designed that direct solar heat is completely stopped as soon as the sun has risen 40°—which means, of course, the hot hours of the day in all seasons of the year. The increase in comfort is nothing short of startling . . . for remember that Sun Heat entering through windows often accounts for 75% of the cooling load. And in addition, KOOLSHADE is good-looking, long lived, fire-safe, inexpensive and negligible in cost of maintenance.

• *Specify KOOLSHADE "SUN CONDITIONING" for Homes, Apartments, Offices, Factories, Hotels, Institutions and other places where people want living or working comfort . . . whether mechanically cooled or otherwise.*

*TRADE MARK . . . property of Ingersoll Steel & Disc Division, Borg-Warner Corporation

Ingersoll

KOOLSHADE* *Sun Screen*

It's cooler in the shade!

Ingersoll Steel & Disc Division,
Borg-Warner Corporation, Dept. F5
310 So. Michigan Ave., Chicago, Illinois.

Please send your SUN HEAT DEMONSTRATION KIT (without charge) and also complete KOOLSHADE Literature.

Name.....

Firm.....

Address.....

City.....*State*.....

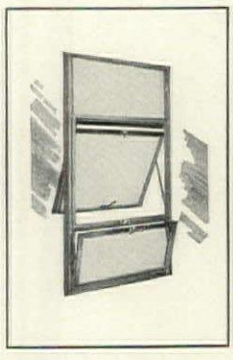
WINDOW IDEAS BY ARCHITECTS

Memorial Hospital, New York City
James Gamble Rogers, Architect
Henry C. Pelton, Associate

The functions of windows in a structure like this are many and varied. Occupying such a large percentage of the exterior surface they must first harmonize with the architectural design of the building. They must provide an abundance of light, with control of fresh air ventilation, as well as many other practical conveniences.

By fulfilling *all* of these demands in hundreds of monumental structures, Fenestra Projected Fenmark Windows have gained the preference of leading architects. Their attractive lines and well proportioned glass areas have fully met the architects' desires from a design standpoint.

"More Light" admitted through every opening is the result of narrow frames and slender muntins. "Controlled Ventilation" is assured by the "Projected Fenmark" design. Open-out vents are designed to form canopies over openings. Open-in vents deflect drafts upward, shed water outside. Easy, safe, economical inside washing of both sides of the windows is provided. Screens are readily installed when desired. Under-screen operators permitting vent operation without touching screens are available for open-out vents.



Complete details furnished upon request. See Fenestra Catalog in SWEET'S for 1940 (31st consecutive year) or use coupon below.

Fenestra

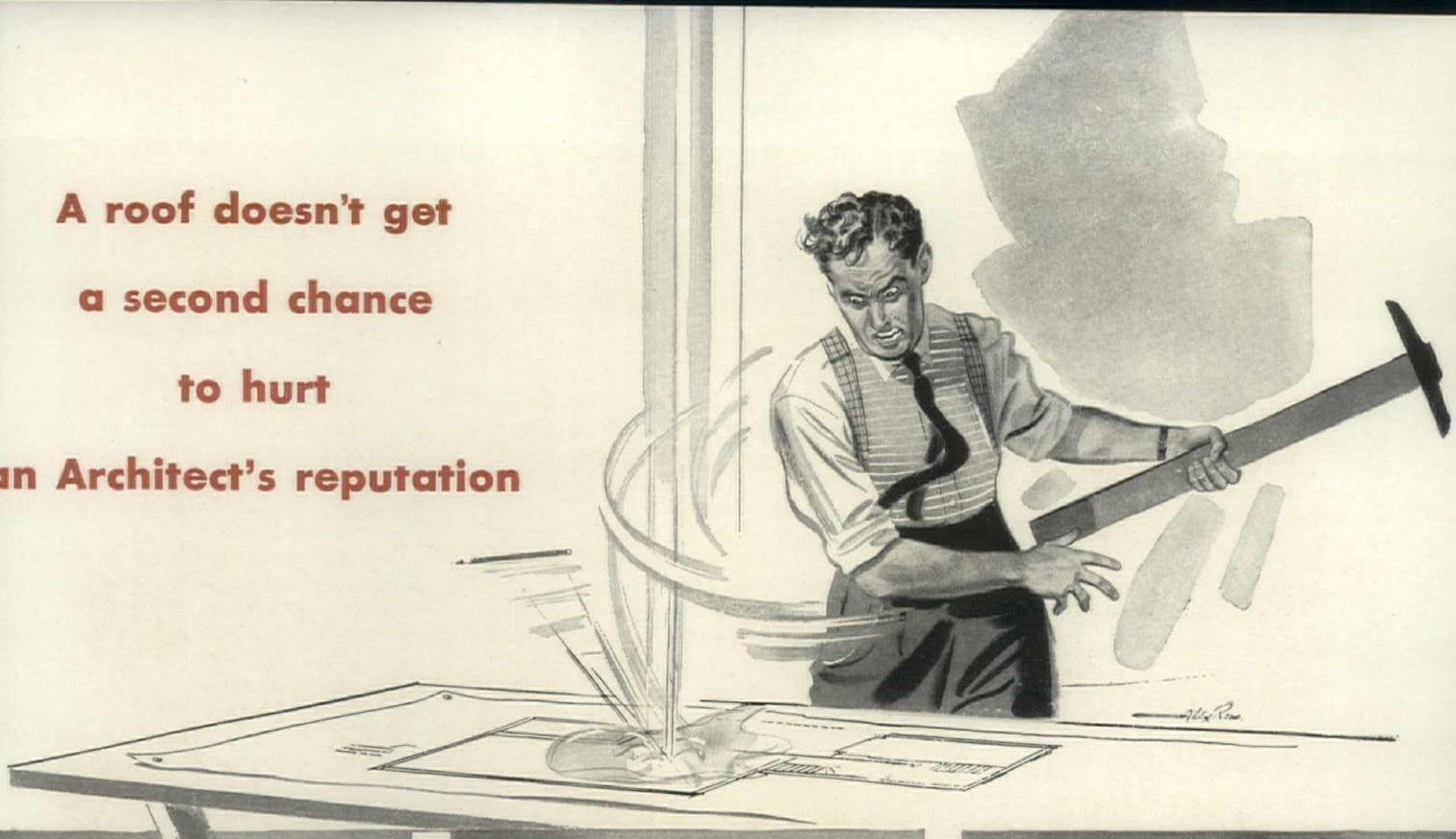
HEAVY CASEMENT-TYPE STEEL WINDOWS

Detroit Steel Products Co.
2252 E. Grand Boulevard, Detroit, Mich.
Please send free literature, as follows:

- ☐ Heavy Casement-Type Steel Windows
- ☐ Detention Steel Windows
- ☐ Residence Steel Casements

Name_____
Address_____
City_____ State_____

A roof doesn't get a second chance to hurt an Architect's reputation

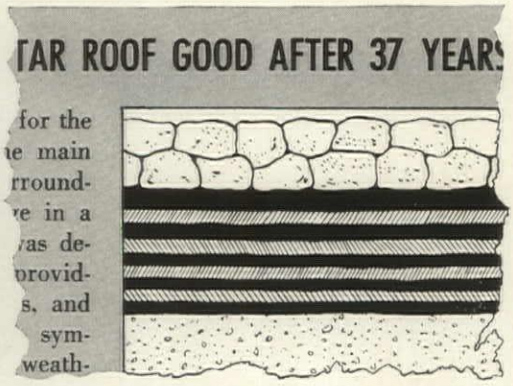


NOTHING HURTS an architect's reputation like a leak . . . in a roof or in a waterproofed foundation. Many a fine job of designing and construction is forgotten when a trickle of water gets through.

BUT ONCE a roof or a waterproofing job fails to keep out the water . . . that particular kind of roofing or waterproofing isn't specified by that particular architect again.

AN OLD-TIMER in the roofing business was saying the other day "When I started in the roofing business, 40 years ago, all the roofs we ever put on were gravel-topped coal tar pitch."

"**THEN THERE** came a time when all we seemed to put on were roofs other than coal tar pitch and tarred felt. But now things have swung back again and all we put on now-a-days are gravel-topped or slag-topped coal tar pitch. And I like 'em."



THOSE OTHER roofs won't get a second chance to hurt any architectural reputations. Not so long as coal tar pitch roofs go on delivering 20, 30 and even 40 years of dependable service.

THE FINE OLD RECORDS for long life have been piled up by roofs of coal tar pitch and tar-saturated felt. Nothing has happened in the roofing business that would justify anyone in taking a chance on anything else.

OTHER KOPPERS PRODUCTS:

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LETTERS

Dolce far niente

Forum:

ART . . . "The movement and pattern of curvilinear units which prevail in all four sections bind together the contrasting aspects in an uninterrupted flow of color-rhythms which encompass the central building. At each corner of this undulatory frame, the contrasts are greatly reduced by the intermediary transitional relationships." *Dr. Albert C. Barnes writing of a painting by Henri Matisse.*

POETRY . . . "Into the dark of the arch
the swan floats
And the black depth of my sorrow
Bears a white rose of flame." *F. S. Flint.*

ARCHITECTURE . . . "Does a view of the sea improve the quality of the roast? Or do cooks prefer flowers? Is this the warmth of home versus the operating room?—or the calm of quiet backgrounds versus the clutter of relics of a dead past?"

The Architectural Forum, April 1940.

When the tired business man persists in following pictorial art, poetry and modern architectural thought presented as they are, what does it indicate?

R. C. Erskine

Seattle, Wash.

Perhaps it means that the business man isn't really tired.—Ed.

Pander

Forum:

The Forum, along with most other such periodicals, used to be the medium of publication for distinguished architectural work. But I have just encountered the May, 1940 issue and I am disgusted thereby. I am an architect by education and an interior decorator by force of circumstances. Having lately returned from several years abroad, where I was otherwise occupied, I have no ax to grind in behalf of my own or any other architectural or decorative work.

The whole trend of the world, admittedly, is toward universal mediocrity, but I do not subscribe to the trend, nor submit to its influence when it applies to published architectural examples—published, I assume, by the editors because they believe them in one way or another to be praiseworthy.

Not a single example of domestic architecture in the current number even suggests graceful or desirable living . . . nor bears any relation to individual human instincts. On the contrary, every such example is marked with a vulgarity of social significance that is worthy of teutonic brutality. Of necessity my statement applies less to your non-domestic examples, in which there may be some ideas that indicate progressive thought, admissible as being distinguished. This is, however, a grudging admission.

By inference (if you insist) I suggest that the editors of The Architectural Forum have either deliberately, or through inability to discriminate, chosen to pander to the aforesaid trend toward mediocrity.

Ralph B. Jenkins

New York, N. Y.

Editorial selection, as we see it, is not governed solely these days by a search for beauty and "graceful living." Nor have we the right to limit what we print to that which we "believe to be praiseworthy." The editors' meat is apparently reader Jenkins' poison . . . perhaps a change of diet is indicated for Mr. J.—Ed.

Vs. (con't.)

Forum:

. . . I suspect these two houses (April, p. 295) are as divergent, in their development, as any you will find again.

Curiously they are probably not quite so "utterly contradictory in their basic approach," which leads me to suggest that there are pitfalls for the caption writer in over-simplified argument.

For instance, the implication that the traditional house is inevitably forced into a preconceived exterior. That particular argument seems somewhat unreal to us who for years, even before Bauhaus, have subjected a client's manner of living to close study before beginning a sketch. Actually the Thorp house is "a design for a special living problem in a particular location," developed from a program which was specific and unusually individualized, in terms of use and not merely of background. It is fair to say that the room which focuses the personal quality of the Thorp house, the Shed, was omitted from your comparative showing—though I'd have been willing to match it to the under-the-house terrace to which it is somewhat analogous, since with its whole front open it is a semi-outdoor room in summer.

And, would you believe it, I have known the owner of one of those uncompromising modern houses to engage in a desperate struggle with his architect to obtain a desired plan arrangement which was in conflict with an elected exterior design.

The allusion to the house that "looks a century and a half old" drives home that side of the argument, but would the point be weakened by a parenthetical remark that here the material which looks old *is* old and that design has been applied to it by using it in relations that differ from, though in harmony with, its original setting? The question of its validity for use in a new design would remain—(that issue concerns a choice of values)—without suggestion that a fake antique has been concocted.

One other term strikes me as less than accurate. Granting that something has happened to twentieth century eyes, and avoiding the dispute as to how dead is the past, do you think "clutter of relics" in a house almost stark in its furnishing is somewhat overdrawn?

David D. Barnes

Derby, Barnes & Champney, Architects
Boston, Mass.

Cost per

Forum:

The present practice in estimating house costs is based on a cost per cubic foot, for example, 35 cents. But in each house there are costs for plumbing and electric wiring that have a fixed minimum value for the type of house and are not materially changed by the cubic foot size.

The Forum for April 1939 gives a breakdown cost for small, one story houses, from which is obtained the average cost, neglecting special designs, as follows: plumbing $300, electric wiring $85. The variations are probably due to the fixtures selected. The cost per cubic foot is not given but it could be expressed without plumbing and wiring and then add $385 depending upon fixtures. This method would show a more accurate cost for adding a room or altering other dimensions.

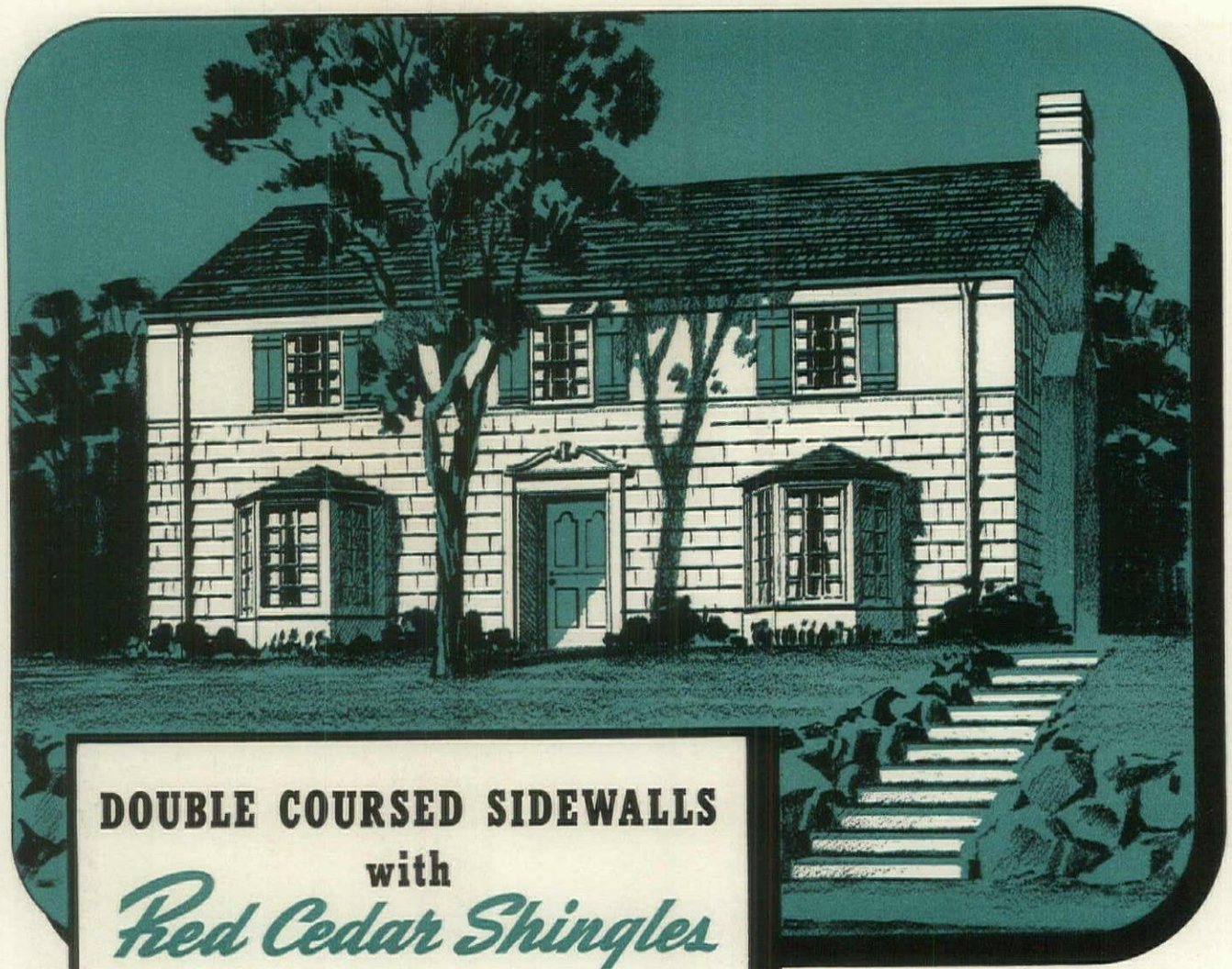
It would be useful in computing rent. The Forum has pointed out that renting 3-4-5-6 room houses at the same value per room is in error as the kitchen, bathroom and living room cost more than the bedrooms. The rent should be less per room for 5 and 6 room houses. You have also shown that 5 and 6 room houses cost less if two stories are used which means that the cost per cubic foot depends upon the general shape. Heating is a fixed plus a variable factor for each locality and other similar factors exist, all of which require experience in selecting the correct cost per cubic foot when making an estimate.

If costs were reported on a cubic foot basis with an additional constant factor, it would reduce the error in estimating the cost of different size houses of the same type. A second bathroom might add 50 per cent to the plumbing constant, etc.

H. D. James

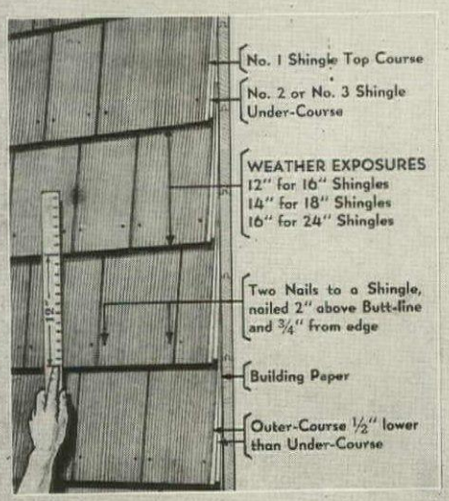
Pittsburgh, Pa.

Do other readers second Engineer James proposal?—Ed.



DOUBLE COURSED SIDEWALLS with *Red Cedar Shingles*

Double-Coursing of Side-Walls



Side-walls covered with double-coursed Certigrade Shingles and given a very wide exposure, create a strikingly attractive appearance.

The deep butt shadows are most effective and give the appearance of a much more expensive construction. The double course adds greatly to the known insulating qualities of Certigrade Shingles.

The exposed shingles in each course should be No. 1 Certigrade—the under-course of No. 2 or 3 grades. Use 5d small head hot-dipped, zinc-coated nails, two nails to a shingle, placed near the edge of the shingle, and not more than three inches above the butts.

The following table shows the reason why the double-coursing is economical due to the greater allowable exposure of the shingles.

Length of Shingles (in inches)	*Exposure of Shingles (in inches)*	
16"	6" to 7½"	8" to 12"
18"	6" to 8½"	8" to 14"
24"	8" to 11½"	12" to 16"

*Assuming exposed course is face or butt-nailed.

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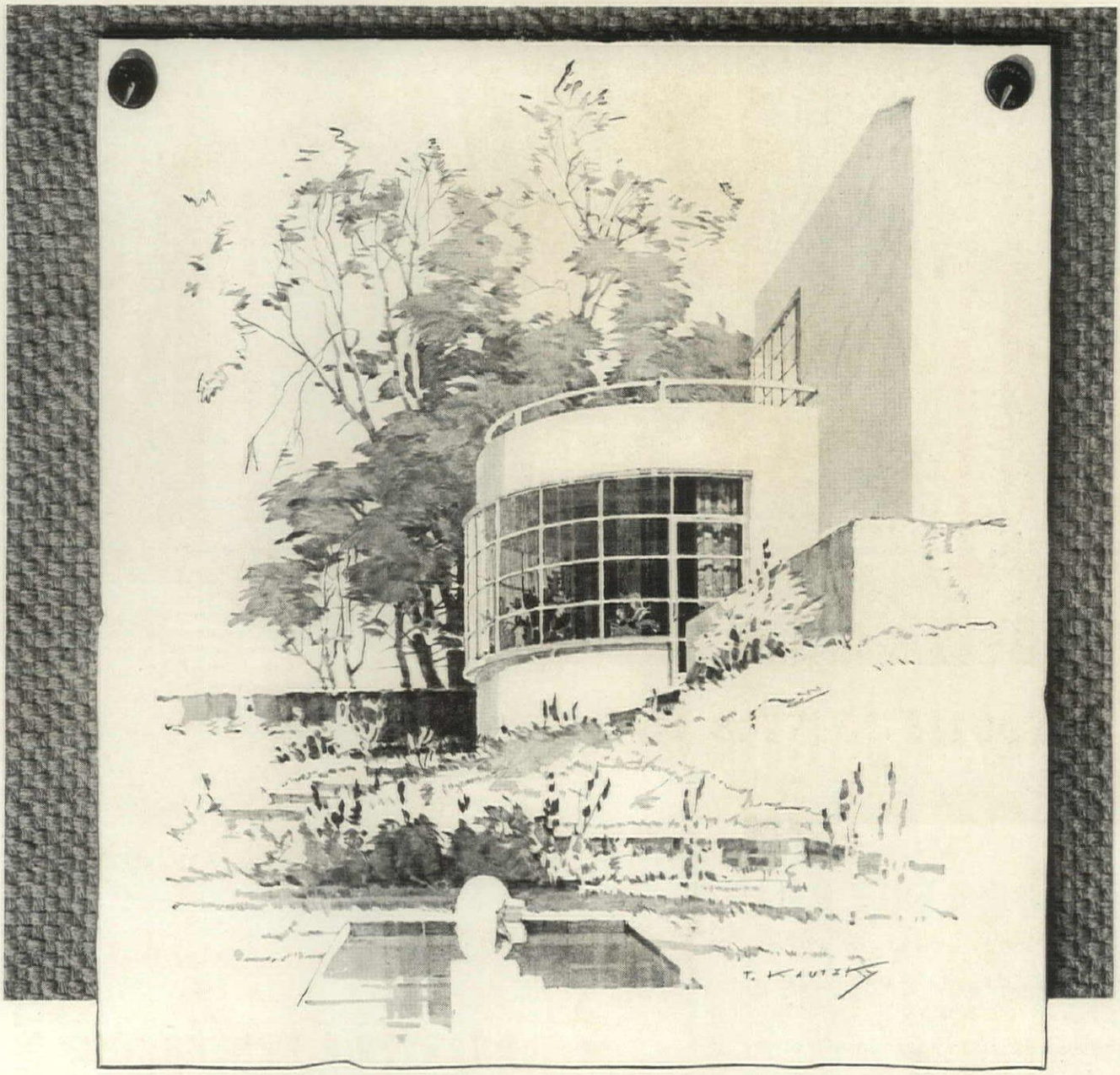

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MINNEAPOLIS HONEYWELL *Gradutrol System* OF PNEUMATIC CONTROL

This large building project, which included two wing additions to the main plant of the Austin-Western Road Machinery Co., Aurora, Illinois, was designed by E. O. Sessions & Co., Consulting Engineers, Chicago. The James Stewart Corporation, New York, were General Contractors. The roof deck erection contract was handled by Leslie-Nelson, Inc., Chicago, Ill.

1890 GOLDEN ANNIVERSARY 1940

The new additions to the plant of the Austin-Western Road Machinery Co., Aurora, Illinois, constitute not only one of the largest installations of Wheeling Tri-Rib Steel Roof Deck, but also one of the fastest construction jobs on record. As soon as the sheet metal workers had laid the individual Tri-Rib sheets in place and clipped them to each other and to the purlins, other workers started installation of the eaves troughs and down spouts. They were followed immediately by the roofing gang with their insulation materials. Construction broke all previous speed records!

Skylights were set on an 8″ curb, and the roof deck work at the valleys was handled with a special saddle made by Wheeling to simplify bringing the roof deck materials together at the valley. 20 gauge galvanized deck was used and the roof deck was fastened to the purlins by means of holding clips, *spike style.* The spike protruding permits the roofer to lock the insulation to the steel deck.

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Illustrated: Abbotsford Apartments, Milwaukee, Wis. Buemming and Jahn, Architects

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STORE FRONTS • DOORS • WINDOWS • ARCHITECTURAL METAL WORK

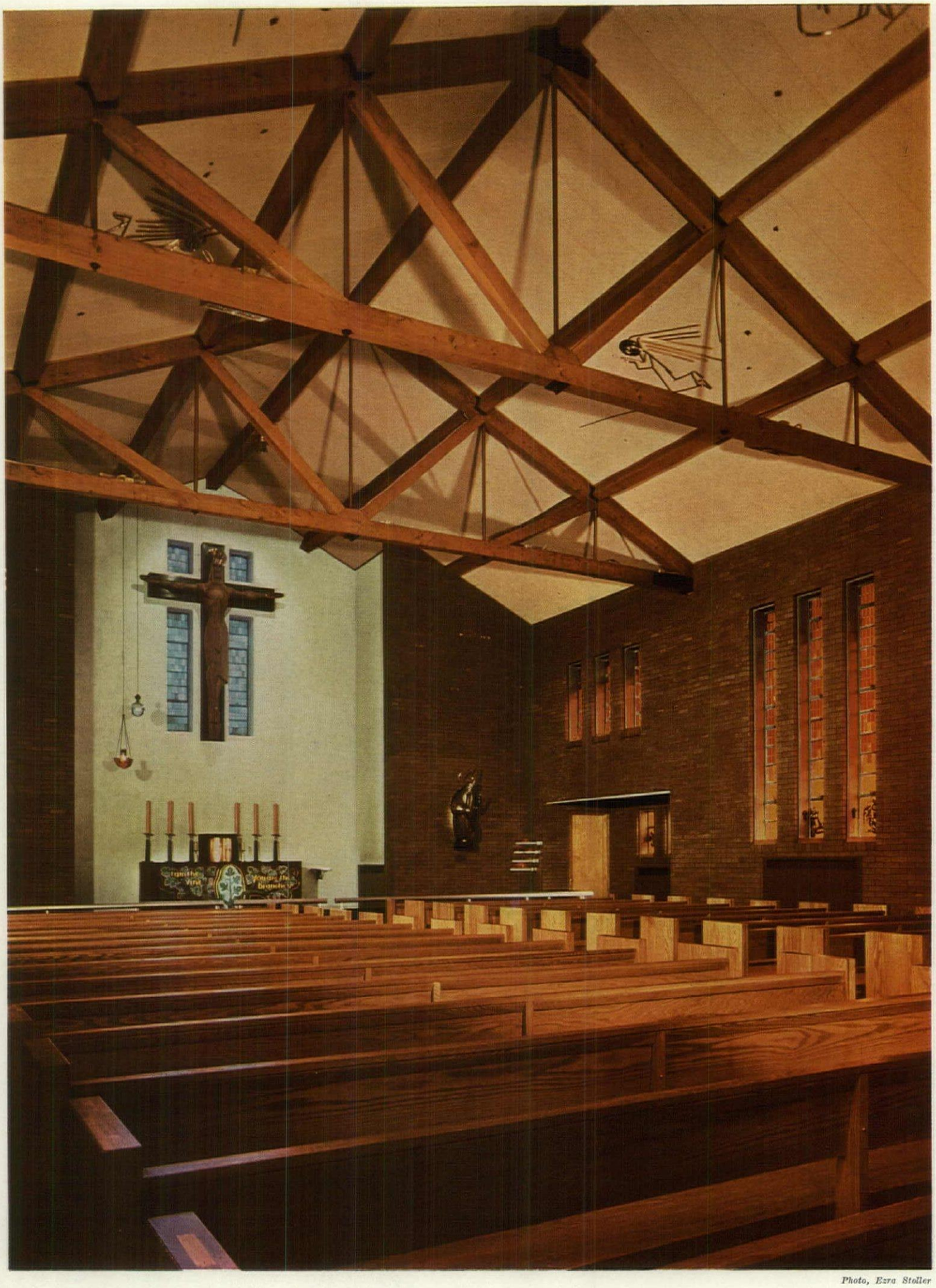
W. Eugene Smith

FIRM OF THE MONTH . . . they plan for 500,000 clients (page 399)

BUILDING OF THE MONTH . . . those to come will be smaller (page 401)

John D. Beinert

PRODUCT OF THE MONTH . . . there's nothing wrong with this picture (page 413)



Photo, Ezra Stoller

ST. PETER CLAVER MISSION

ST. PETER CLAVER MISSION MONTCLAIR, N. J.

ALBERT HOFFMANN, DESIGNER

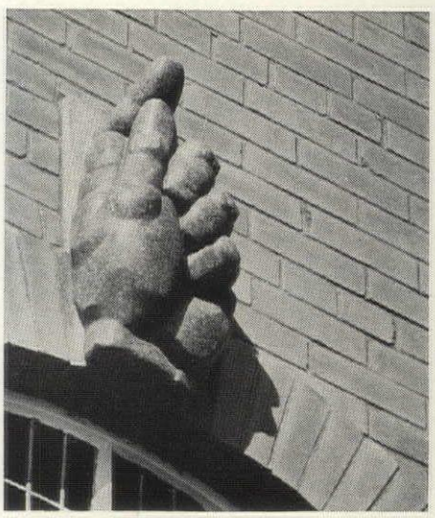
GEORGE KRATINA, SCULPTOR

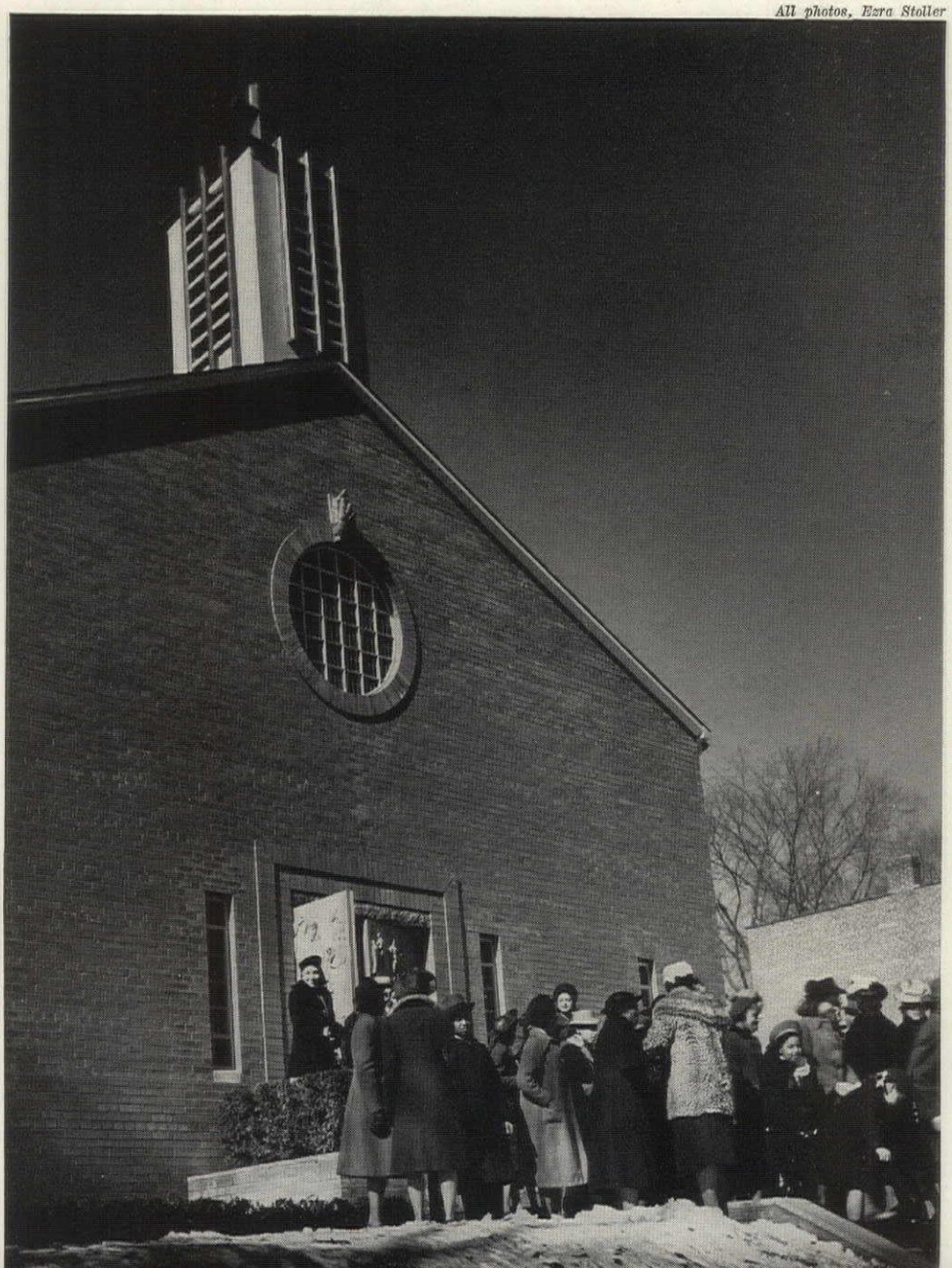
VINCENT PACELLI, PAINTER

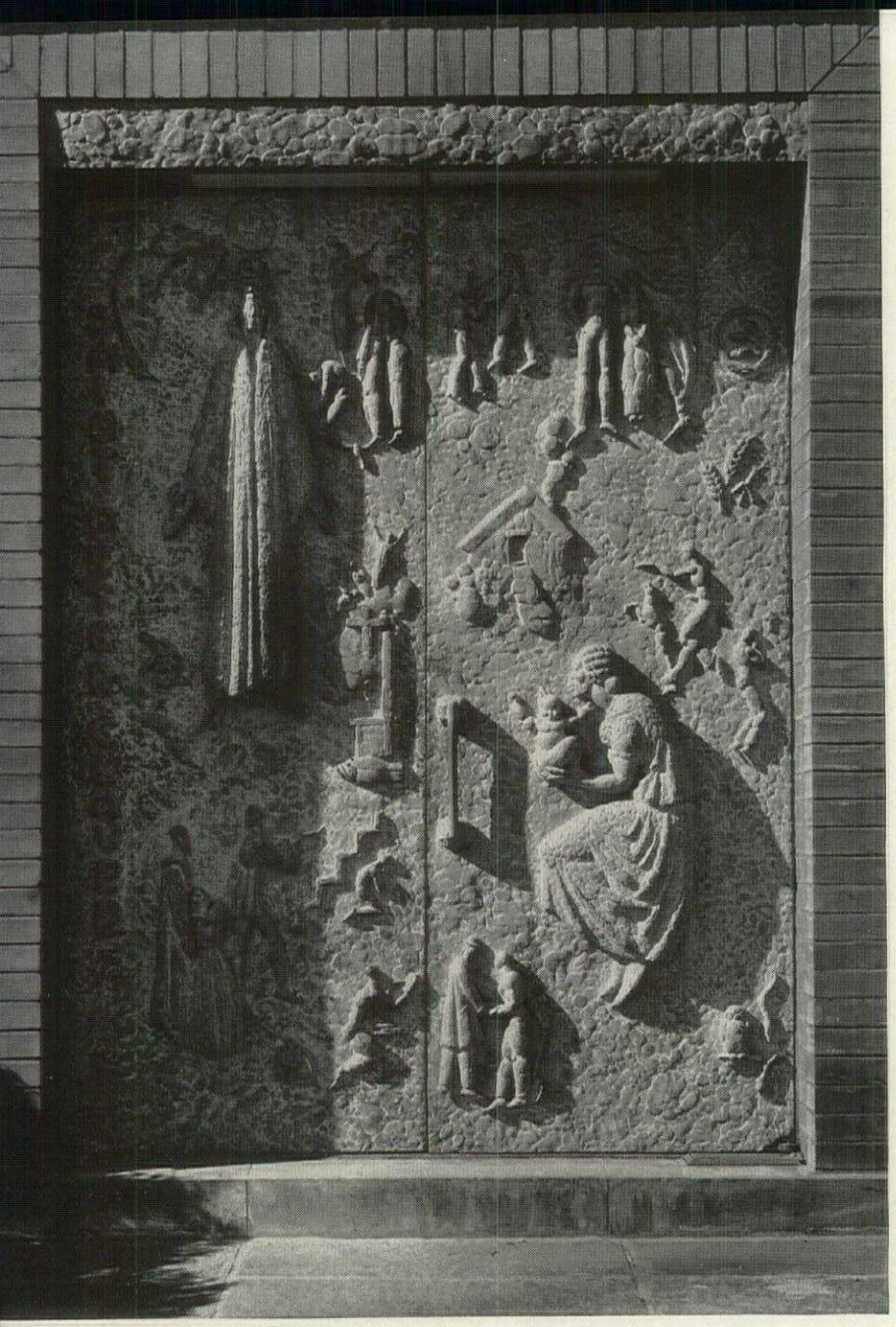
PAUL C. REILLY, ARCHITECT

The church, more than any other type of building, has consistently withheld itself from contemporary trends in architecture; there have been distinguished exceptions, notably in Europe, but in the main they have served merely to point up a resistance to change that is easily understood. The break with stylistic tradition represented in this example is by no means a radical one, but it does show a serious attempt to restate in present-day terms an age-old problem of building. Aside from the fact that it serves a Negro community, this church presented no unusual program to the designer: it had to provide for the customary Catholic liturgical requirements, the congregation wanted a dignified structure, and the budget was extremely restricted. The finished building is a plain rectangular structure in brick, its pitched roof supported by a series of wood trusses. Despite the total lack of the trappings generally believed necessary to proper ecclesiastical atmosphere, the interior is impressive. Thoroughly American in character, realistic in its rigid economy, the church is a distinguished building and a splendid example of collaboration among the arts.

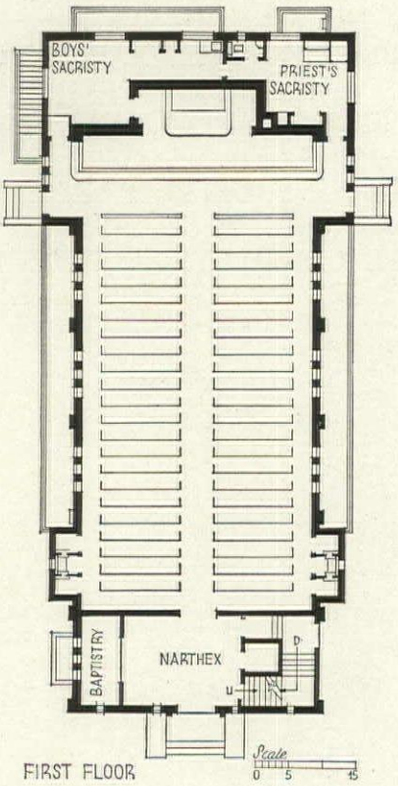
All photos, Ezra Stoller



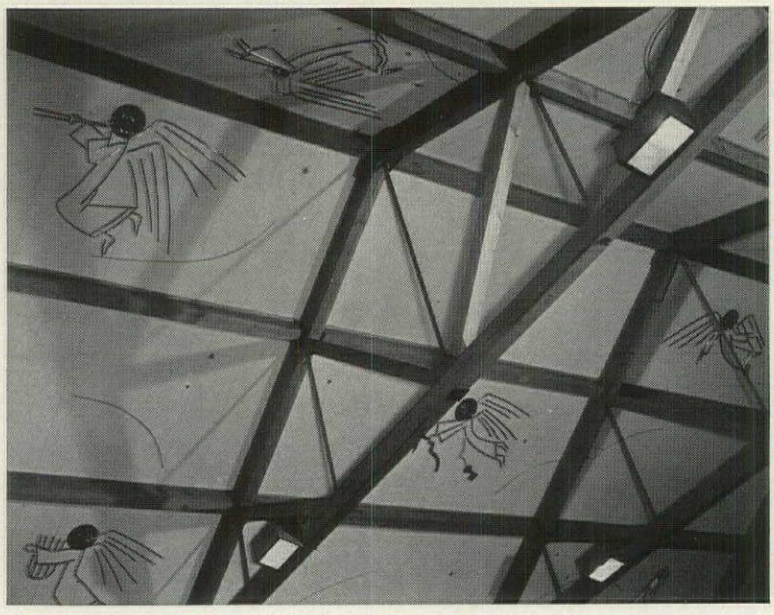


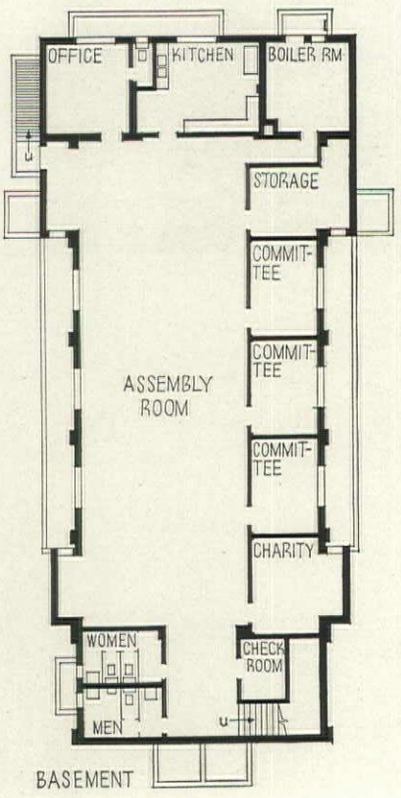


ST. PETER CLAVER MISSION



Few recent buildings show a better understanding of the possibilities of collaboration with designer, painter and sculptor than this. The doors are in green bronze, with the figures modeled in bold relief. Gay figures of angels, executed for the most part in copper tubing, enliven the ceiling. The figure of Christ is in teak.





ALBERT HOFFMANN, DESIGNER • GEORGE KRATINA, SCULPTOR • VINCENT PACELLI, PAINTER

Macassar ebony flexwood and aluminum are used for the altar rail; the altar, set on a base of glass blocks, is of wood which is carved and painted. An interesting detail is the sanctuary lamp, which is balanced on a pulley with a ball of lucite. The vigil lamps (upper right) have been handled with ingenuity; arranged on four arms of aluminum, they can be pulled out to be lighted and then swung back against the wall. Illustrated at the lower right is a massive figure of St. Jude, executed in black walnut and white metal; the figure is given emphasis by the use of concealed lighting to illuminate the wall behind it.

ST. PETER CLAVER MISSION, MONTCLAIR, N. J.

ALBERT HOFFMANN, DESIGNER

GEORGE KRATINA, SCULPTOR

VINCENT PACELLI, PAINTER

PAUL C. REILLY, ARCHITECT

CONSTRUCTION OUTLINE

FOUNDATIONS: Concrete, steel reenforcement. Waterproofing—integral.
STRUCTURE: Exterior walls—8 in. brick, 2 in. air space; inside—4 in. brick veneer. Interior partitions—studs, metal lath and plaster. Structural steel—Bethlehem Steel Co.
Floors: Basement—concrete; remainder—pine sub- and finished flooring.
ROOF: Covered with slate; inside facing—Temlock, Armstrong Cork Co.
SHEET METAL WORK: Flashing and gutters—copper, Chase Brass & Copper Co.
INSULATION: Flat roofs—1 in. roof insulation, Celotex Corp.
WINDOWS: Sash—steel, Croft Steel Windows, Inc. Glass—double strength, quality A, Lustra, American Window Glass Co. Glass blocks—Pittsburgh-Corning Corp.; bronze frames—Allied Bronze Corp.
FLOOR COVERINGS: Linoleum, Congoleum-Nairn, Inc.
FURNISHINGS: Altar rail—Flexwood, U. S. Plywood Corp. Aluminum rail—Allied Bronze Corp. Organ—Hammond Organ Studios.
WOODWORK: Trim—birch. Doors—Hardwood Products Corp.
HARDWARE: By Oscar C. Rixson Co. and P. & F. Corbin.
PAINTING: By Pratt & Lambert, Inc.
ELECTRICAL INSTALLATION: Wiring system—conduit and BX. Fixtures—Holophane Co. Lucite ball on lamp—E. I. DuPont de Nemours Co., Inc.
PLUMBING: Fixtures by American Radiator-Standard Sanitary Mfg. Co. Kitchen range—Magic Chef, American Stove Co.
HEATING: Two-pipe semi-vacuum system. Boiler—Fitzgibbons Boiler Co., Inc. Radiator—American Radiator-Standard Sanitary Corp. Sump pump—Chicago Pump Co. Regulators—Minneapolis-Honeywell Regulator Co. Valves—Crane Co. Condensation pump Nash Engineering Co.

SCHOOLS

NURSERY SCHOOL • KINDERGARTEN • ELEMENTARY SCHOOL INTERMEDIATE SCHOOL AUDITORIUM • HIGH SCHOOL GYMNASIUM

While the Nursery School is not commonly a part of the public school system, almost five-sixths of the nation's 1,785 are maintained by the Federal Government through its emergency education program. Only the privately operated sixth, however, are especially designed and built for the purpose.

Nursery school procedure is not sufficiently standardized to have produced set planning principles applicable to all types of programs. Individual examples vary as to the age group served and the length of the school "day," which may be from 7 in the morning to 7 at night (for children whose parents both work) or from 9 to 3, or simply during the morning or during the afternoon. This naturally affects the type of "plant" required.

The school on this and the following page is really a combined nursery school and community house. During the day it is used by pre-school children, after school hours by elementary and high school pupils, and at night by adults. It shows, however, the primary requirements of any such unit: plenty of light and air, carefully studied storage facilities, and provision for relaxation and play. Built within the stone walls of an old church, the design is a singularly successful example of the modern style applied to remodeling work.

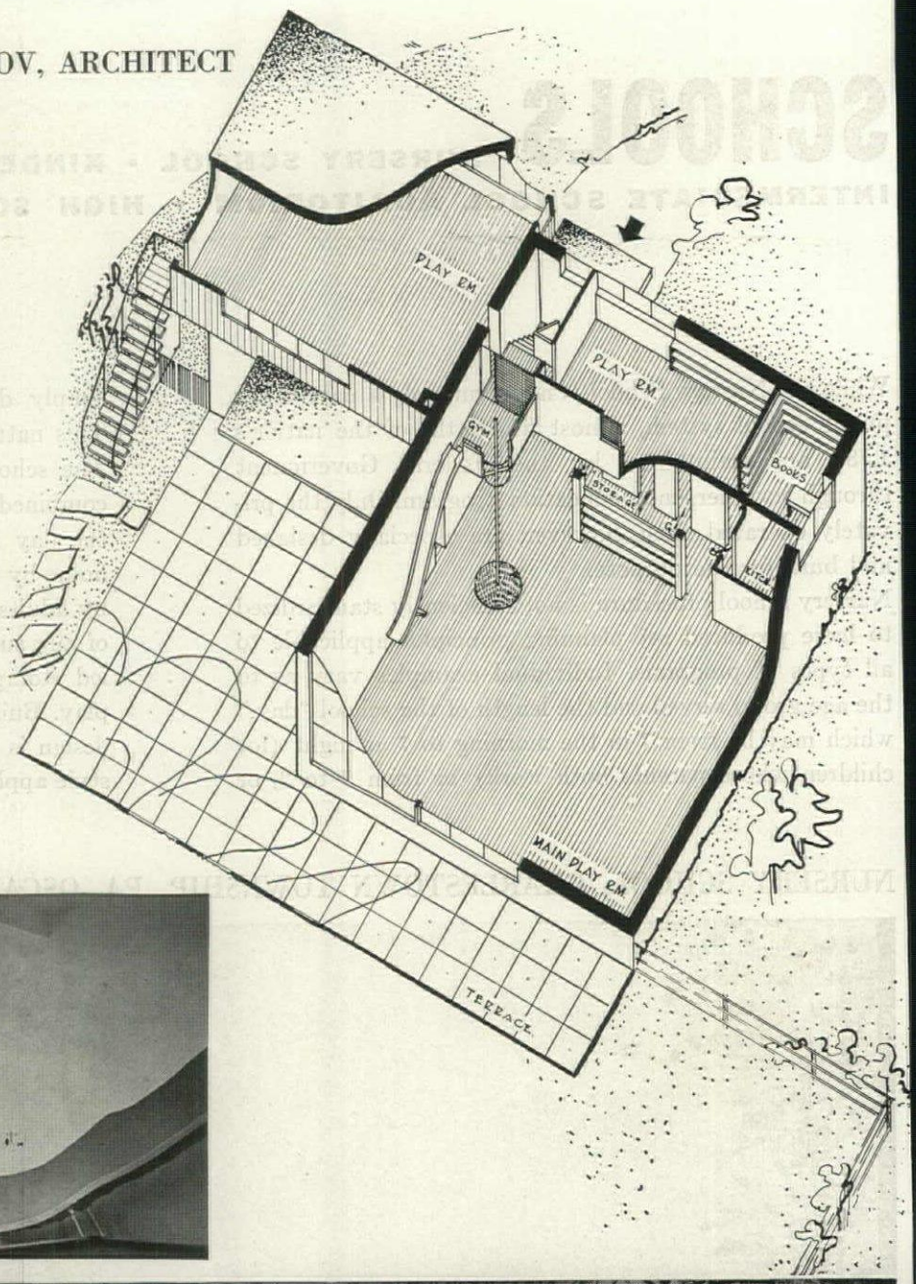
NURSERY SCHOOL, CHARLESTOWN TOWNSHIP, PA. OSCAR STONOROV, ARCHITECT

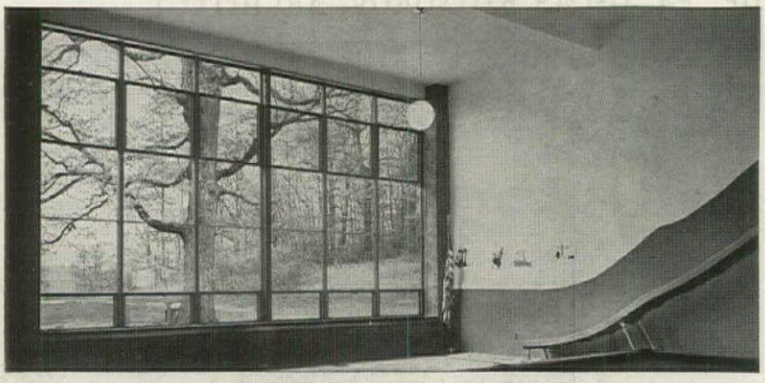
Robert M. Damora

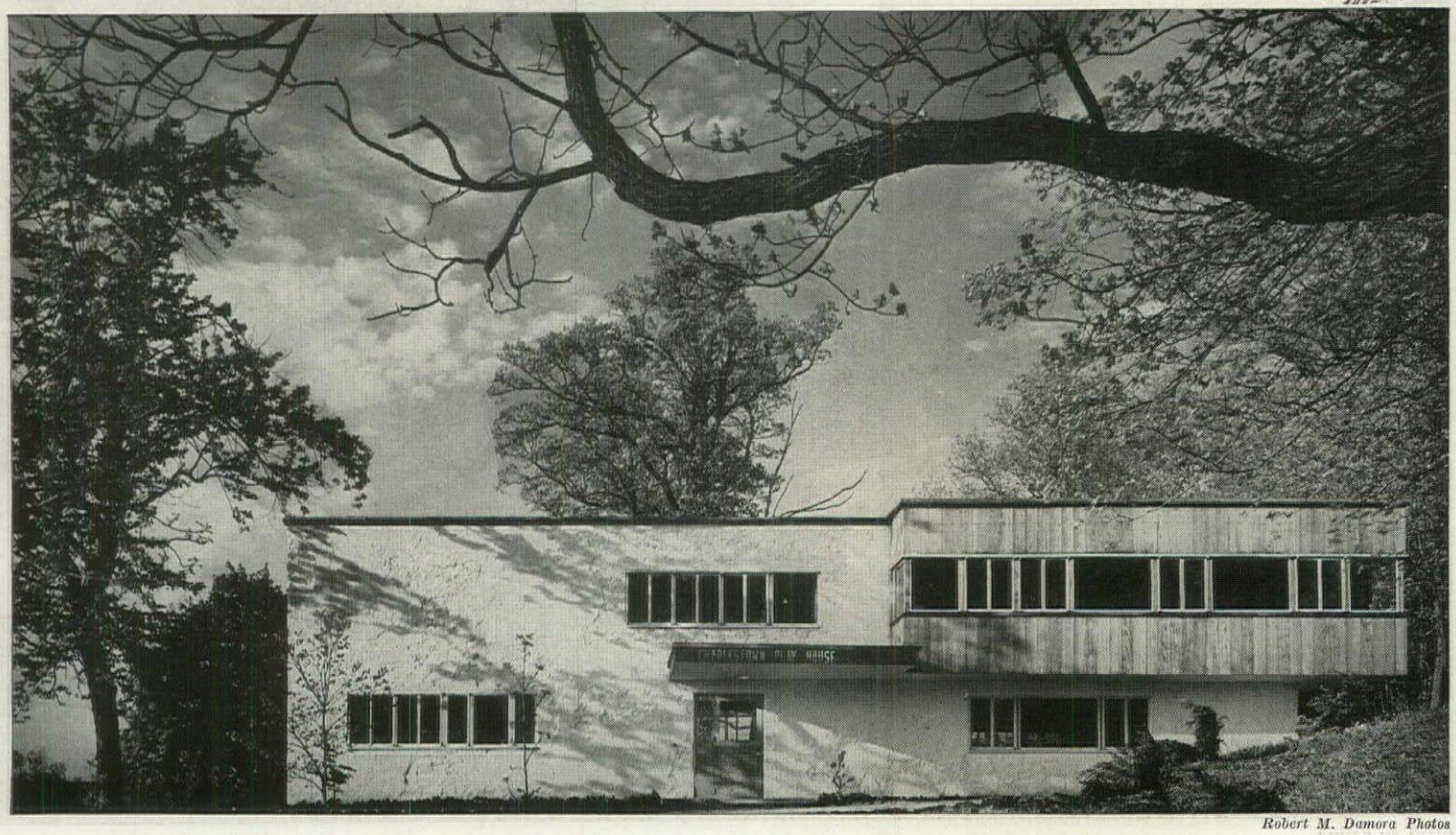
NURSERY SCHOOL, OSCAR STONOROV, ARCHITECT

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—cement plaster on stone; inside—plaster. Frame walls—redwood siding, shiplap, Thermosote sheathing, wood studs, Homasote, Homasote Co. Interior partitions—wood studs and Homasote. Floor cnstruction—maple finish flooring.
ROOF: Main—covered with built-up slag, Philip Carey Co.; remainder—canvas covered.
SHEET METAL WORK: Flashing—Cop-O-Top, Chase Brass & Copper Co. Ducts and slag stops—galvanized iron, Republic Steel Corp.
INSULATION: Walls and roofs—Thermasote, Homasote Co.
WINDOWS: Sash—Steel casement, Michael Flynn Mfg. Co. Glass—double strength, quality B, Pittsburgh Plate Glass Co.
ELECTRICAL INSTALLATION: Wiring system—Romex, General Cable Corp. Fixtures—Kurt Versen, Inc.
HEATING: Forced warm air system with Mueller winter air conditioner, L. J. Mueller Furnace Co. Oil burner—Quiet May Oil Burner Co. Grilles—Hart & Cooley Mfg. Co. Thermostats—Minneapolis-Honeywell Regulator Co.







Robert M. Damora Photos

KINDERGARTEN BENJAMIN FRANKLIN SCHOOL, ANAHEIM, CALIF.

Eaton Photos

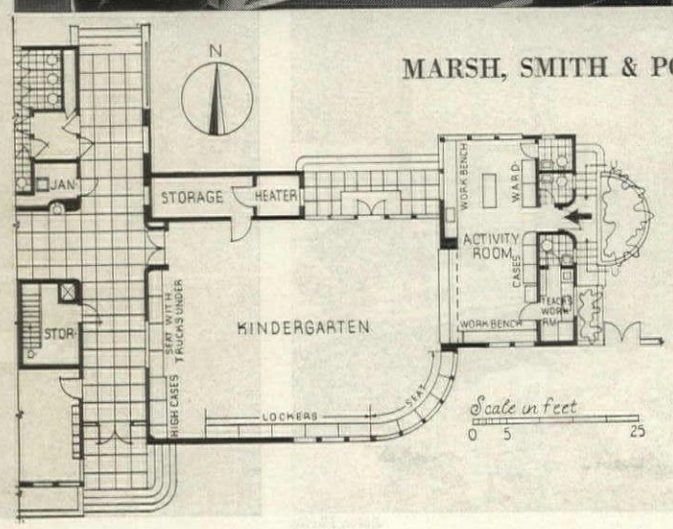
In most larger cities, the kindergarten is now accepted as a regular part of the public school system. Peak enrollment (1930) included about 30 per cent of the country's five-year-olds, and present levels are almost as high despite a marked economy slump about five years ago.

As forerunner of the "activity" trend in education, today's kindergarten differs in fewer respects from the ordinary classroom than was the case in the past. Nevertheless, it still requires special facilities and should be separated from the main school building, in order to segregate starting children from older pupils and prevent interference between programs. Characteristic of such units is the division into play and work space shown in the two examples on this and the following page. In the case of the one at the right, these have been separated by steps

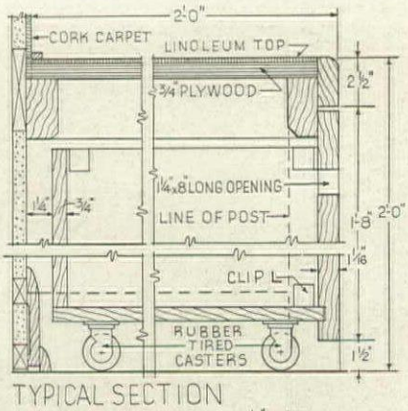
CONSTRUCTION OUTLINE

FOUNDATIONS: Reenforced concrete.
STRUCTURE: Exterior walls—wood frame, metal lath and plaster inside and outside. Floor construction—maple finish flooring.
ROOF: Covered with composition roofing, gravel surfaced.
SHEET METAL WORK: All galvanized sheet metal.
WINDOWS: Glass—double strength, quality A.
FLOOR COVERINGS: Linoleum and Gladding, McBean & Co. tile.
WALL COVERINGS: Toilets—tile, Gladding, McBean & Co.
FURNISHINGS: Blackboards—Austral Sales Corp.
HARDWARE: By Russell & Erwin Mfg. Co.
PAINTING: All material by Lund & Sons.
ELECTRICAL INSTALLATION: Complete in conduit. Public address system—Warren Telechron Co.
PLUMBING: All fixtures by Crane Co.
HEATING: Pacific forced air system, hot air furnaces, U. S. Radiator Co. Thermostats—General Controls Corp.

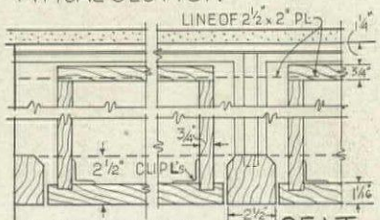
MARSH, SMITH & POWELL, ARCHITECTS



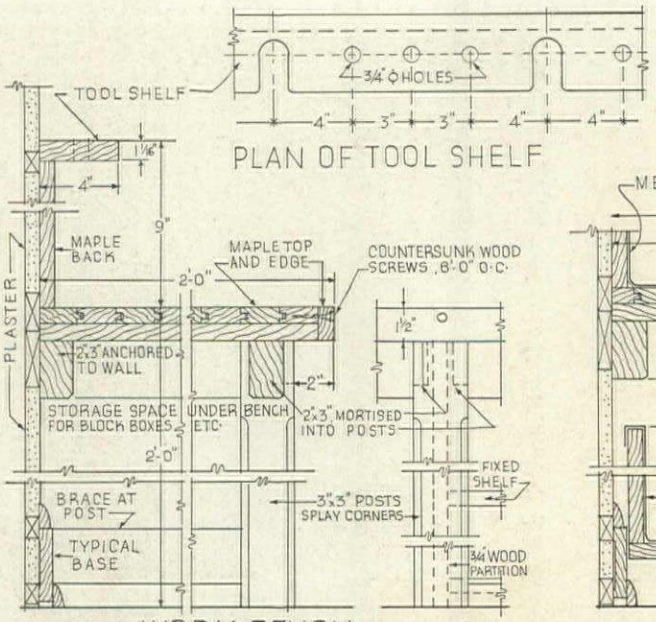
KINDERGARTEN W. L. VALENTINE PRIMARY SCHOOL, SAN MARINO, CALIF.



TYPICAL SECTION



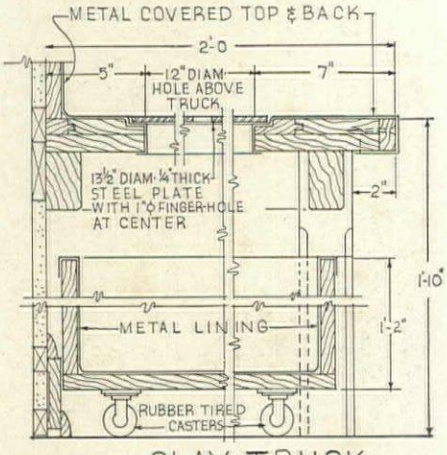
PLAN SECTION SEAT



PLAN OF TOOL SHELF

SECTION WORK BENCH PART ELEV.

SCALE IN INCHES
0 3 6 9 12

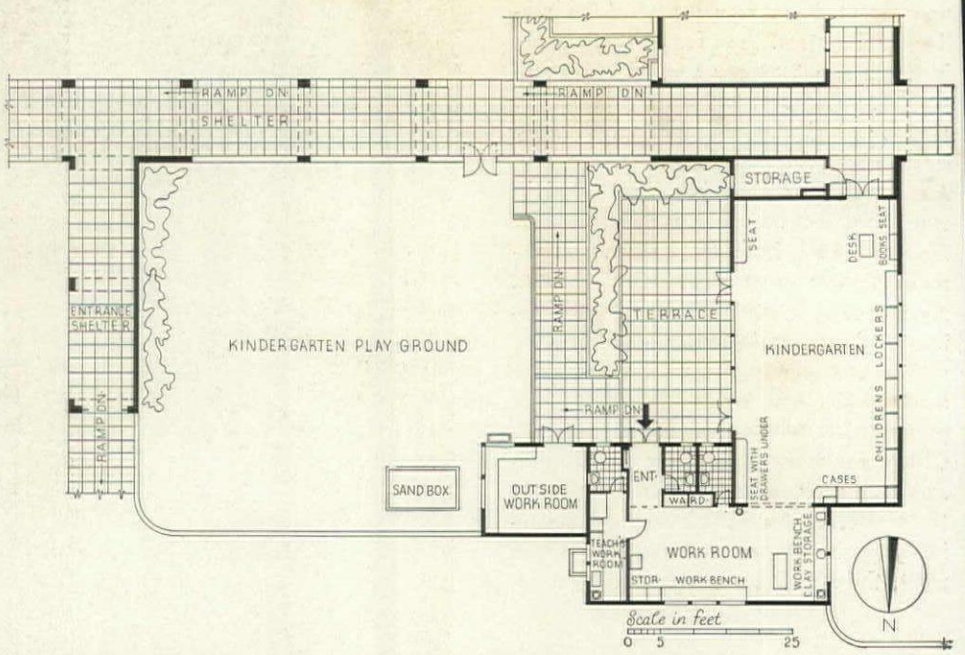


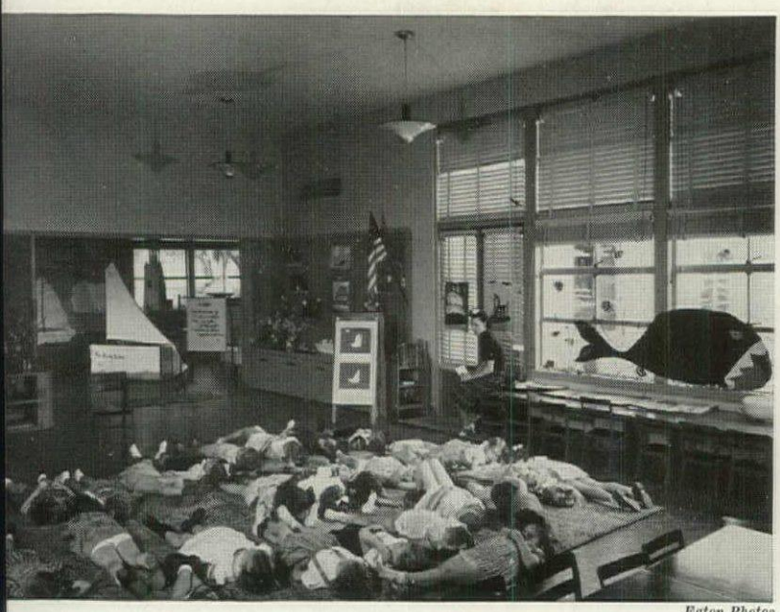
SECTION CLAY TRUCK

MARSH, SMITH & POWELL, ARCHITECTS

in order to provide for dual use as a small assembly room and platform for parent-teacher groups.

Both are generously opened to the outside, with terraces and outdoor play areas. In each case workrooms are carefully planned to provide adequate and convenient counters and storage space for equipment. The details above, from both kindergartens show how rolling storage boxes for clay and blocks have been tucked neatly away under tables and even seats, yet can be moved instantly to any part of the room when equipment is needed or is being collected. Pictures below show the children during a "rest period," and the ramped approach to the outdoor playground, amusingly decorated with the letters of the alphabet.





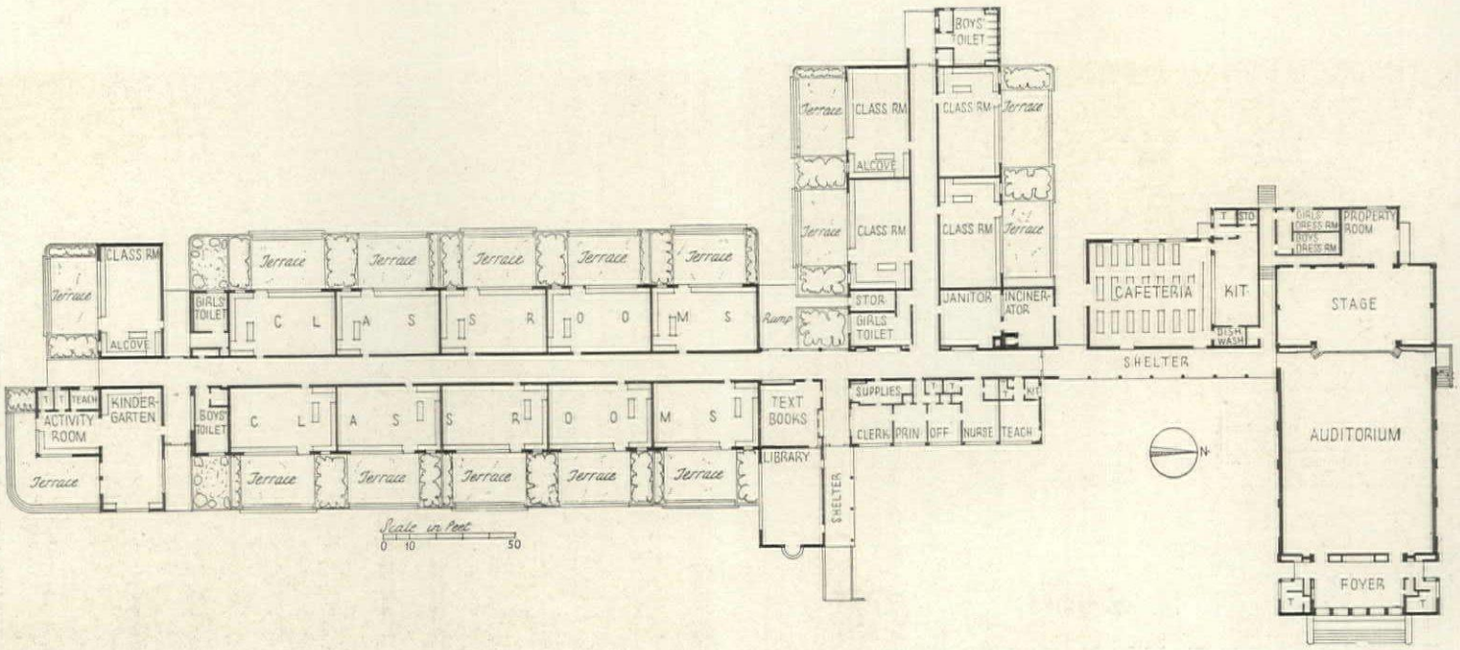
Eaton Photos

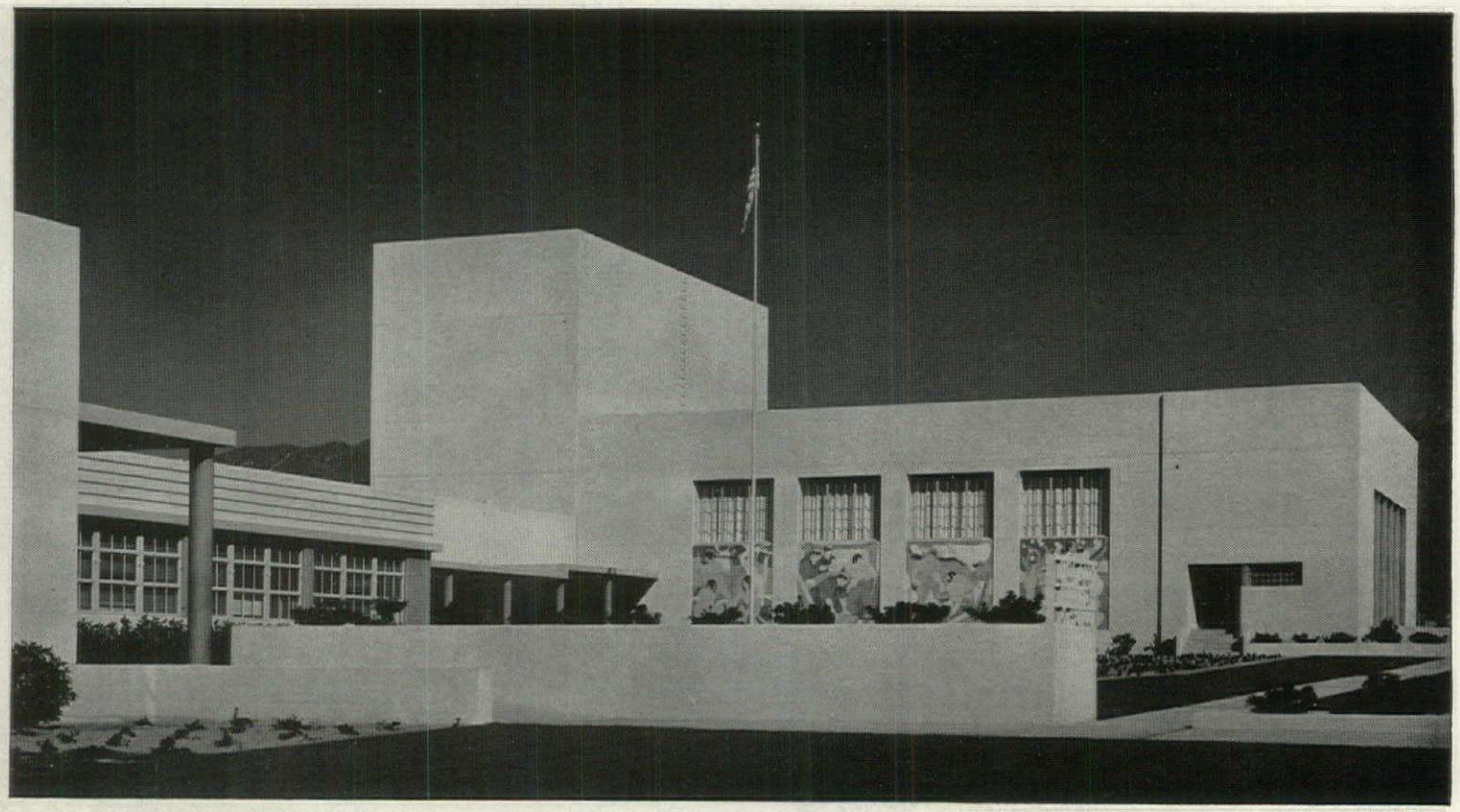
ELEMENTARY SCHOOL UPLAND, CALIF. MARSH, SMITH & POWELL, ARCHITECTS

Eaton

The school building of today is rapidly acquiring a second important function, that of community center. The newly awakened interest in adult education, the spread of officially sponsored community forums, Town Meeting of the Air's 3,700 listening groups, 15,000 womens' clubs, Girl and Boy Scout meetings, and a host of similar activities have created the need; the school building, supported by the taxpayer's dollar and available for evening use, is the logical means to satisfy it. As a result, laws have been changed to permit these uses of school buildings after hours, and the practice of using the school for such purposes is becoming widespread.

The architectural effects of this trend are evidenced by the school shown on this and the following two pages. The auditorium and cafeteria wing has been separated from the rest of the school so that its various uses will not conflict with regular activities. Separate outside entrances are provided for evening functions. The library flanks the main school entrance so as to be handy for community use. Other notable features include the provision of outdoor terraces for each of the classrooms and the location of the kindergarten in a separate wing. Cost $285,000.



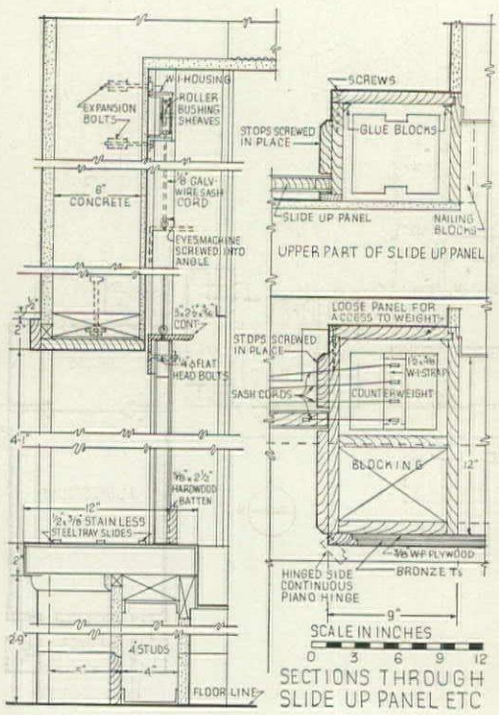


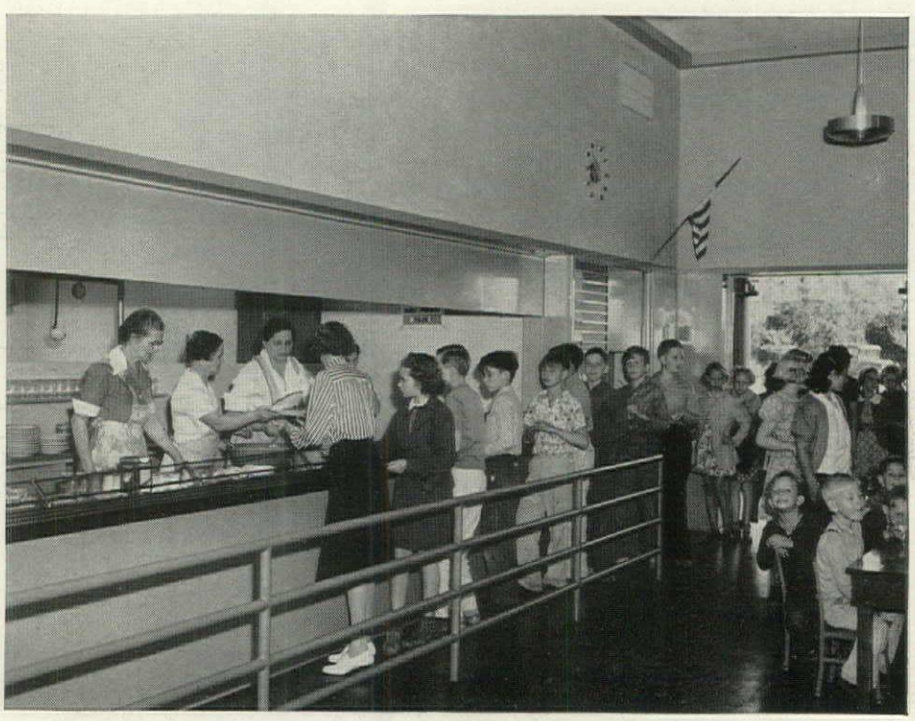
Eaton Photos

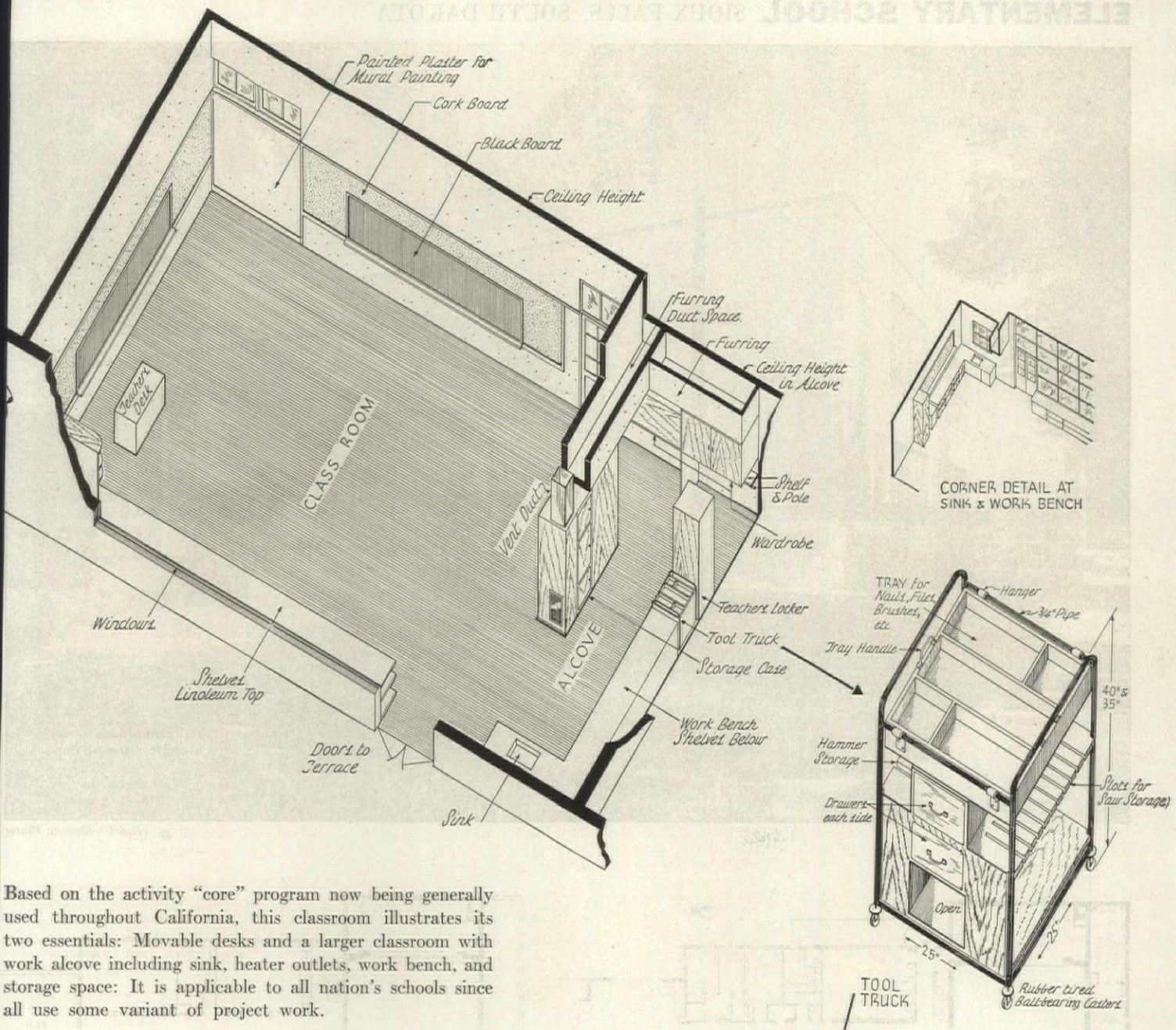
This cafeteria embodies the "musts" of a good school cafeteria. It is centrally located, light and airy; the kitchen can be separated from the dining space by sliding panel (see detail below) so that the latter can be used for other purposes; there is an outside door to the kitchen and storeroom; help's dressing and toilet rooms are provided; soiled dish windows are low enough for small children.

CONSTRUCTION OUTLINE

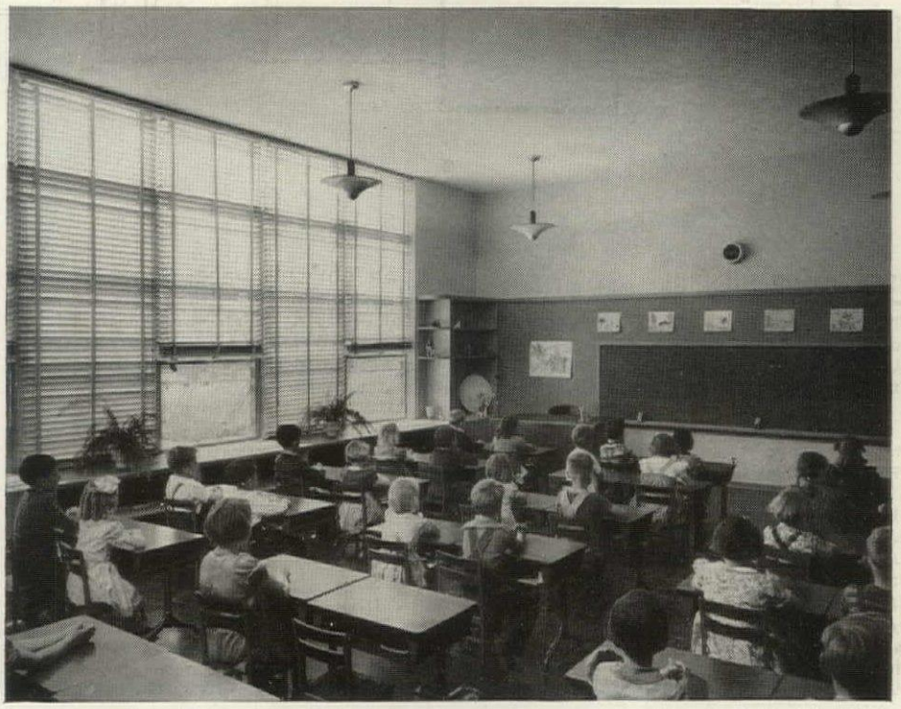
FOUNDATIONS: Concrete.
STRUCTURE: Exterior walls—reenforced concrete; inside—acoustic plaster. Interior partitions—steel studs, wire lath and plaster. Structural steel—Pennsylvania Steel Co. Floor construction—reenforced concrete. Ceilings—steel furring, metal lath and acoustic plaster.
ROOF: Covered with built-up composition with pea gravel finish, Pioneer Roofing Co.
INSULATION: Roofs—rockwool, U. S. Gypsum Co.
WINDOWS: Sash—steel, Truscon Steel Co. Glass blocks—Owens-Illinois Glass Co.
FLOOR COVERINGS: Linoleum—Armstrong Cork Co. Asphalt tile—Thomas Moulding Floor Co.
WALL COVERINGS: Wainscots in halls and toilets—tile, General Tile Co.; remainder—stucco.
HARDWARE: By Russell & Erwin Mfg. Co.
PAINTING: All material by W. P. Fuller Co.
PLUMBING: All fixtures by Washington-Eljer Co. Kitchen equipment—Barker Bros.
HEATING: Gas radiators—Pacific Gas Radiator Co. Fans and blowers—Western Blower Co. Ducts—Cop-R. Loy, Wheeling Steel Corp. Incinerator—Alhambra Foundry Co.



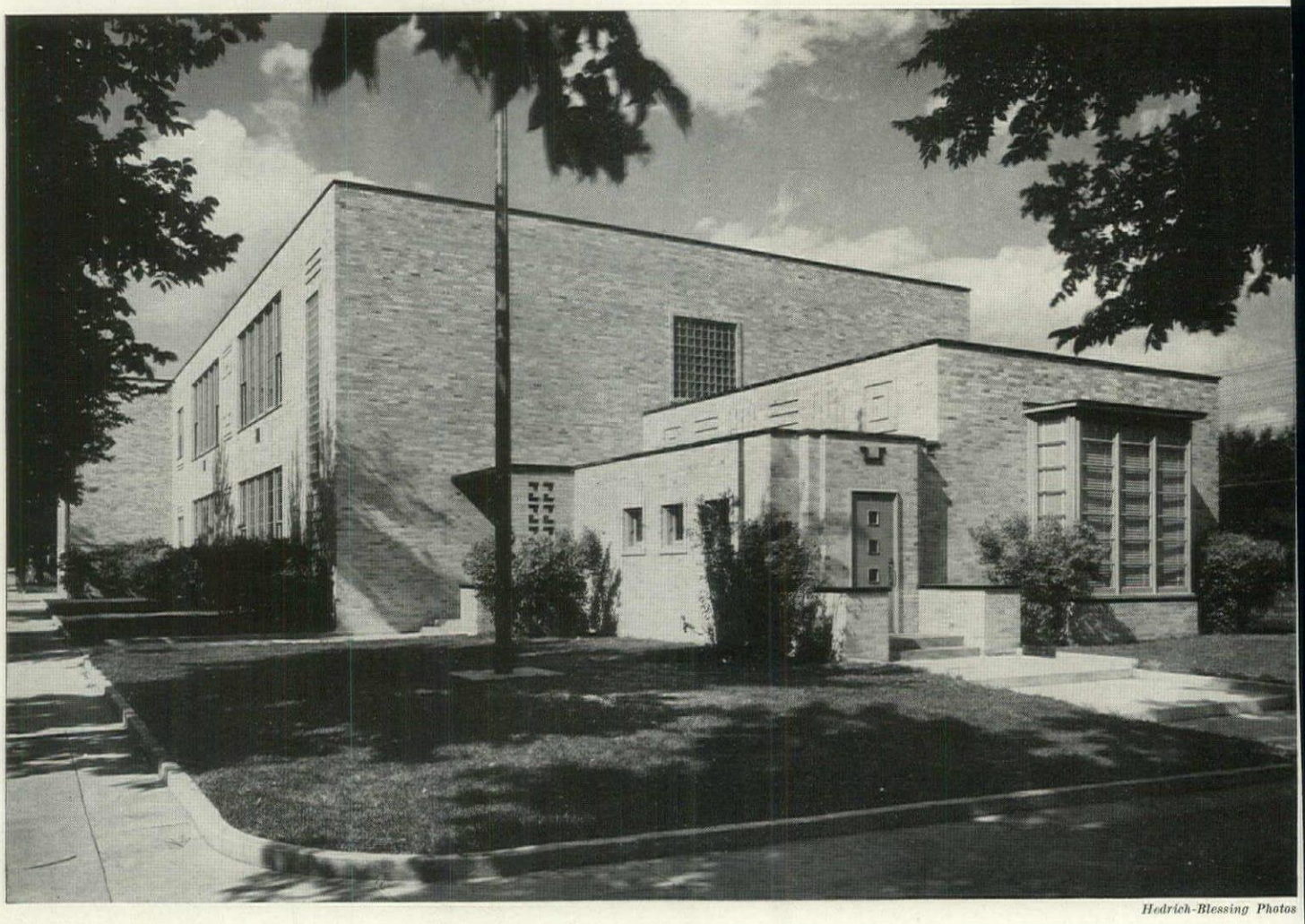




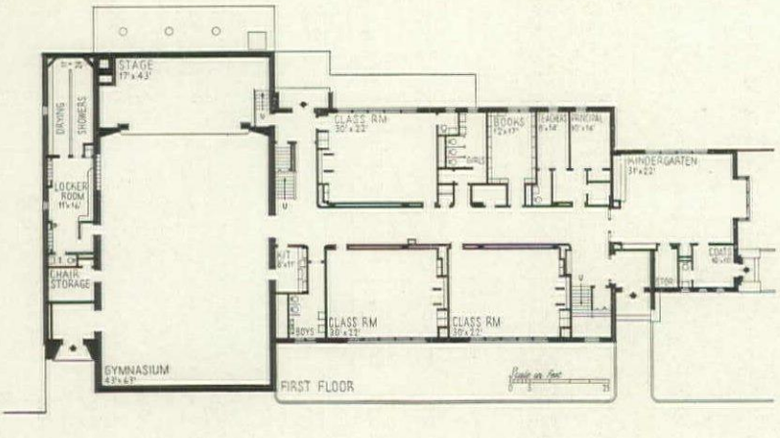
Based on the activity "core" program now being generally used throughout California, this classroom illustrates its two essentials: Movable desks and a larger classroom with work alcove including sink, heater outlets, work bench, and storage space: It is applicable to all nation's schools since all use some variant of project work.

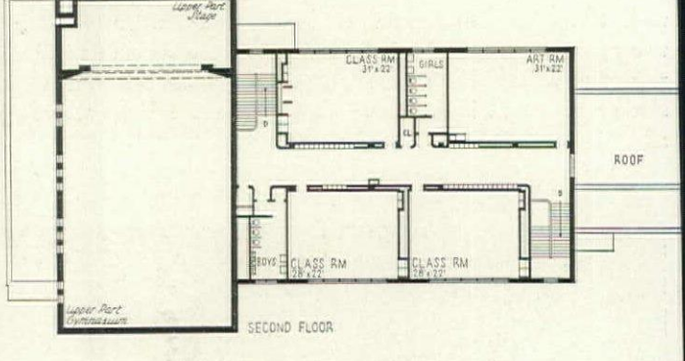


ELEMENTARY SCHOOL SIOUX FALLS, SOUTH DAKOTA



Hedrich-Blessing Photos





Of particular interest in this small (280-pupil) elementary school is the provision of separate entrances for the kindergarten and gymnasium, and the use of the latter for minor community activities—despite the fact that a nearby high school makes similar provision. Typical classroom details on facing page show blackboard construction and storage facilities. Cost $111,000.

CONSTRUCTION OUTLINE

FOUNDATIONS: Concrete. Dampproofing—Toch Bros.

STRUCTURE: Exterior walls—brick, hollow tile, The Carlyle Tile Co., brick backing, and plaster. Interior partitions—4 in. tile, furring, metal lath and plaster. Floor construction—concrete.

ROOF: Covered with Barrett Co. roofing; slate coping by The Structural Slate Co.

SHEET METAL WORK: Flashing—copper. Ducts—galvanized iron.

INSULATION: Roofs—Insulite Co. Sound insulation—Celotex Corp.

WINDOWS: Sash—wood, double hung, Farley & Loetscher Co. Glass—flat drawn. Glass blocks—Owens-Illinois Glass Co.

STAIR: Terrazzo, Sioux City Tile & Mosaic Co. Rail—aluminum.

FLOOR COVERINGS: Corridors and classrooms—linoleum, Armstrong Cork Co. Gymnasium—maple. Toilets—tile, Olean Tile Co.

WOOD AND METAL TRIM: Trim—metal. Doors—oak and Trussbilt metal, Div. of Siems Bros. Inc.

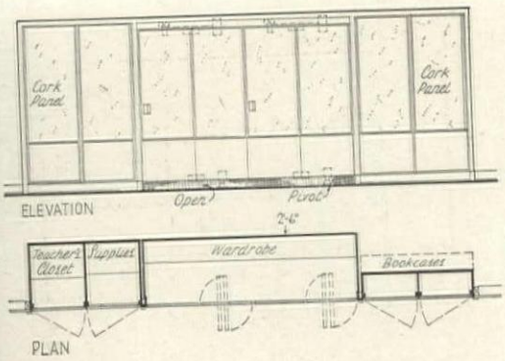
HARDWARE: By Vonnegut Hardware Co., Yale & Towne and Richard-Wilcox Mfg. Co.

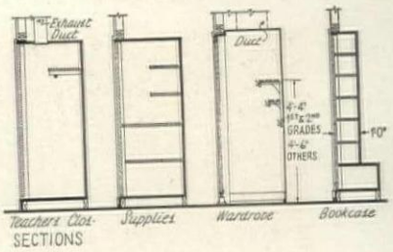
PAINTING: By Pratt & Lambert and Samuel Cabot, Inc.

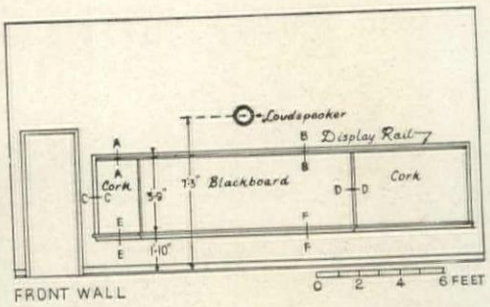
ELECTRICAL INSTALLATION: Wiring system—steel tube. Switches—Pass & Seymour. Fixtures—Gill Glass & Fixture Co. Radio and signal system—Radio Corp. of America.

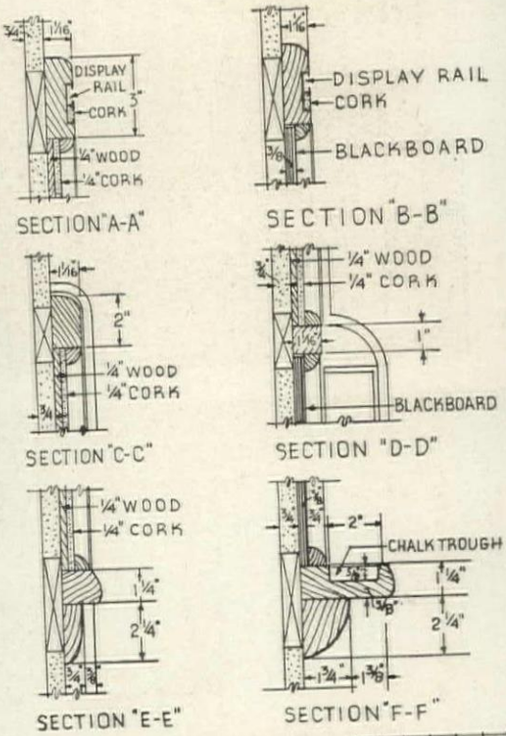
HEATING: Univents—The Herman Nelson Corp. Boiler—Kewanee Boiler Co. Radiators—American Radiator-Standard Sanitary Corp. Thermostats—Johnson Service Co. Valves—C. A. Dunham Co.

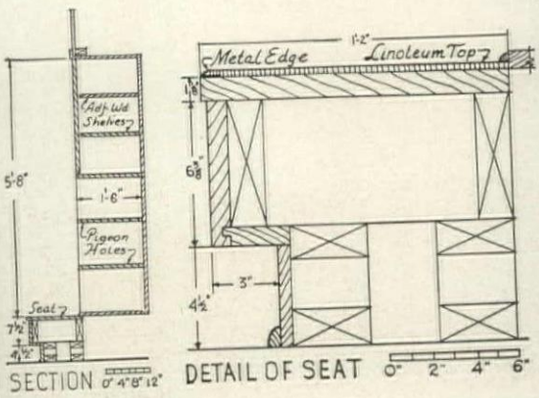
HAROLD SPITZNAGEL, ARCHITECT





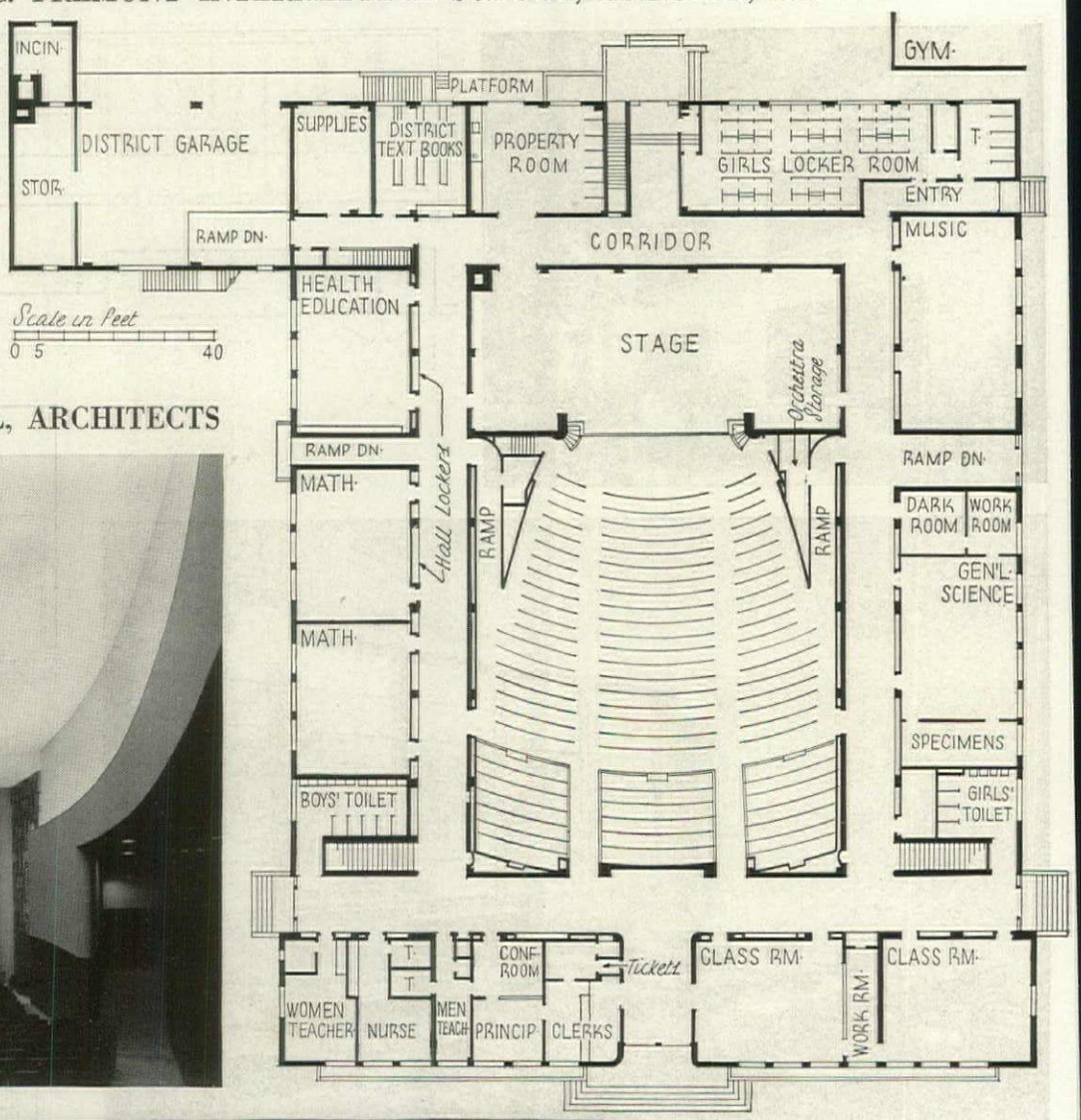




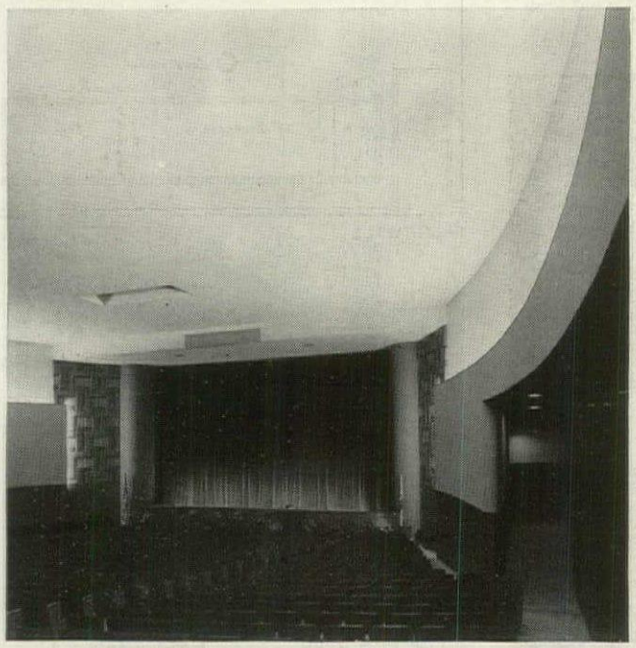


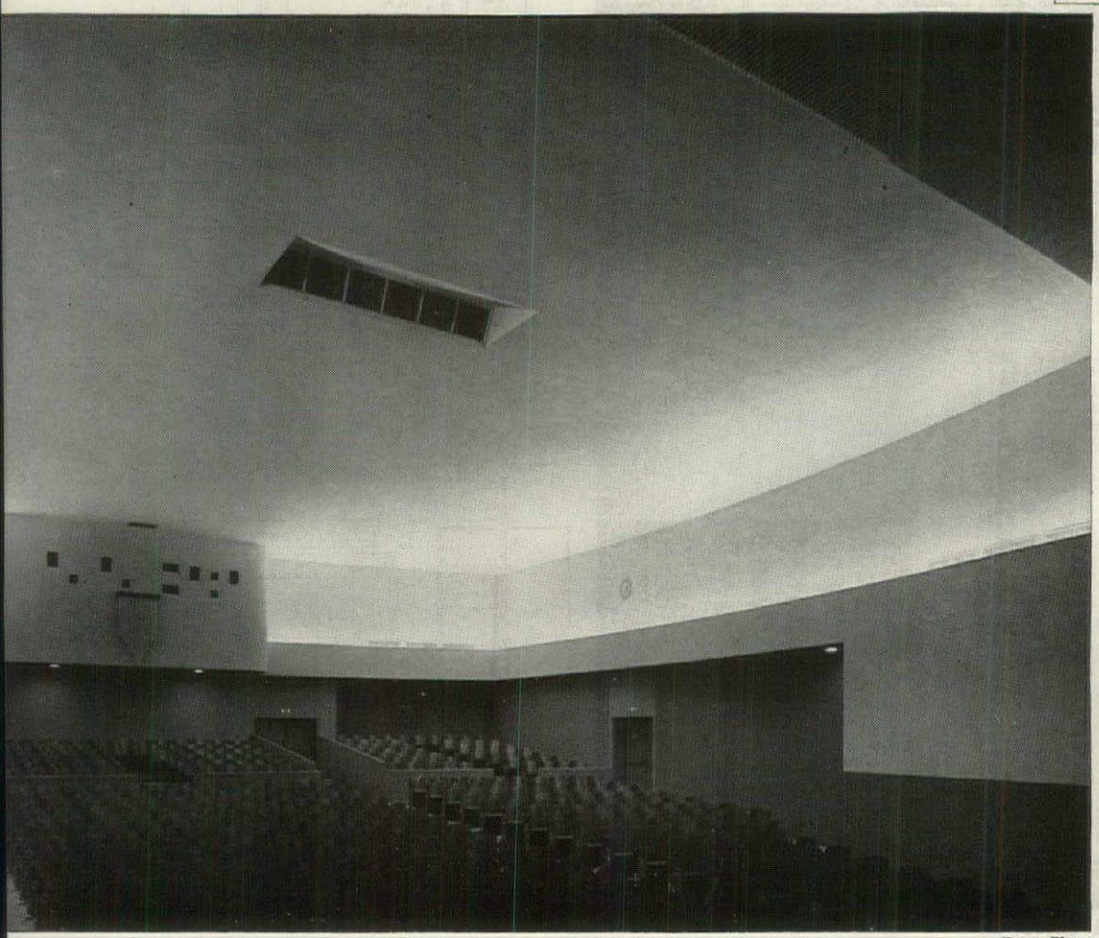
KINDERGARTEN—CLASSROOM above

AUDITORIUM JOHN C. FREMONT INTERMEDIATE SCHOOL, ANAHEIM, CALIF.



MARSH, SMITH & POWELL, ARCHITECTS





Eaton Photos

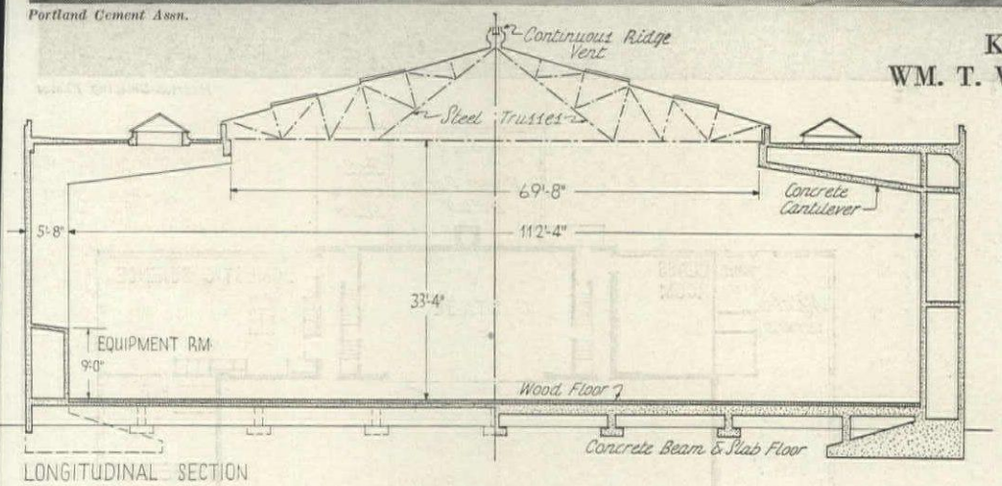
An excellently designed auditorium for 750. Careful consideration has been given to scene and property handling through the rear stage door and property room to an outside loading platform. Also noteworthy are the provision for musical instrument storage and the ramped side exits.

CONSTRUCTION OUTLINE

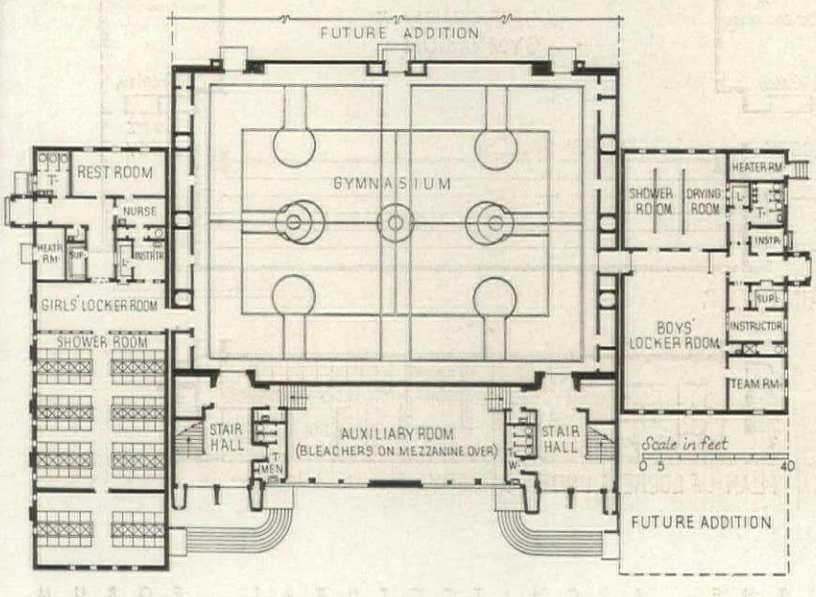
FOUNDATIONS: Reenforced concrete.
STRUCTURE: Exterior walls—frame, wood, stucco. Floor construction—maple finish.
ROOF: Covered with composition and gravel roofing.
SHEET METAL WORK: All galvanized iron.
WINDOWS: Sash—wood, double hung. Glass—double strength, quality A. Glass blocks—Owens-Illinois Glass Co.
FLOORS: Douglas fir.
HARDWARE: By Russell & Erwin Mfg. Co.
PAINTING: Materials by National Lead Co.
ELECTRICAL INSTALLATION: Complete in conduit. Public address system—Warren Telechron Co.
PLUMBING: All fixtures by American Radiator-Standard Sanitary Corp.
HEATING: Radiators—Pacific Gas Radiator Co.

GYMNASIUM, HERBERT HOOVER HIGH SCHOOL, SAN DIEGO, CALIF.

Portland Cement Assn.



LONGITUDINAL SECTION



KISTNER and CURTIS, ARCHITECTS
WM. T. WRIGHT, STRUCTURAL ENGINEER

Interesting for its use of top lighting and unusual structure, this gymnasium employs a combination of concrete cantilevers and steel trusses to span a total length of 112 ft. Framing runs lengthwise of the room in order to make possible a future addition at one end. Cost: $102,000.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—hollow concrete columns with solid concrete panels between. Interior partitions—Bar-Z metal studs, Soulé Steel Co., metal lath and plaster. Floor construction—reenforced concrete slabs.

ROOF: Skylight—H. H. Robertson Co. Decks—concrete covered with composition roofing.

SHEET METAL WORK: All steel galvanized sheet metal, Columbia Steel Co.

INSULATION: Sound insulation—Quietile, U. S. Gypsum Co.

WINDOWS: Sash—steel, Fenestra, Detroit Steel Products Co. Glass—¼ in. solite wire. Glass blocks—Pittsburgh Plate Glass Co.

STAIR: Reenforced concrete.

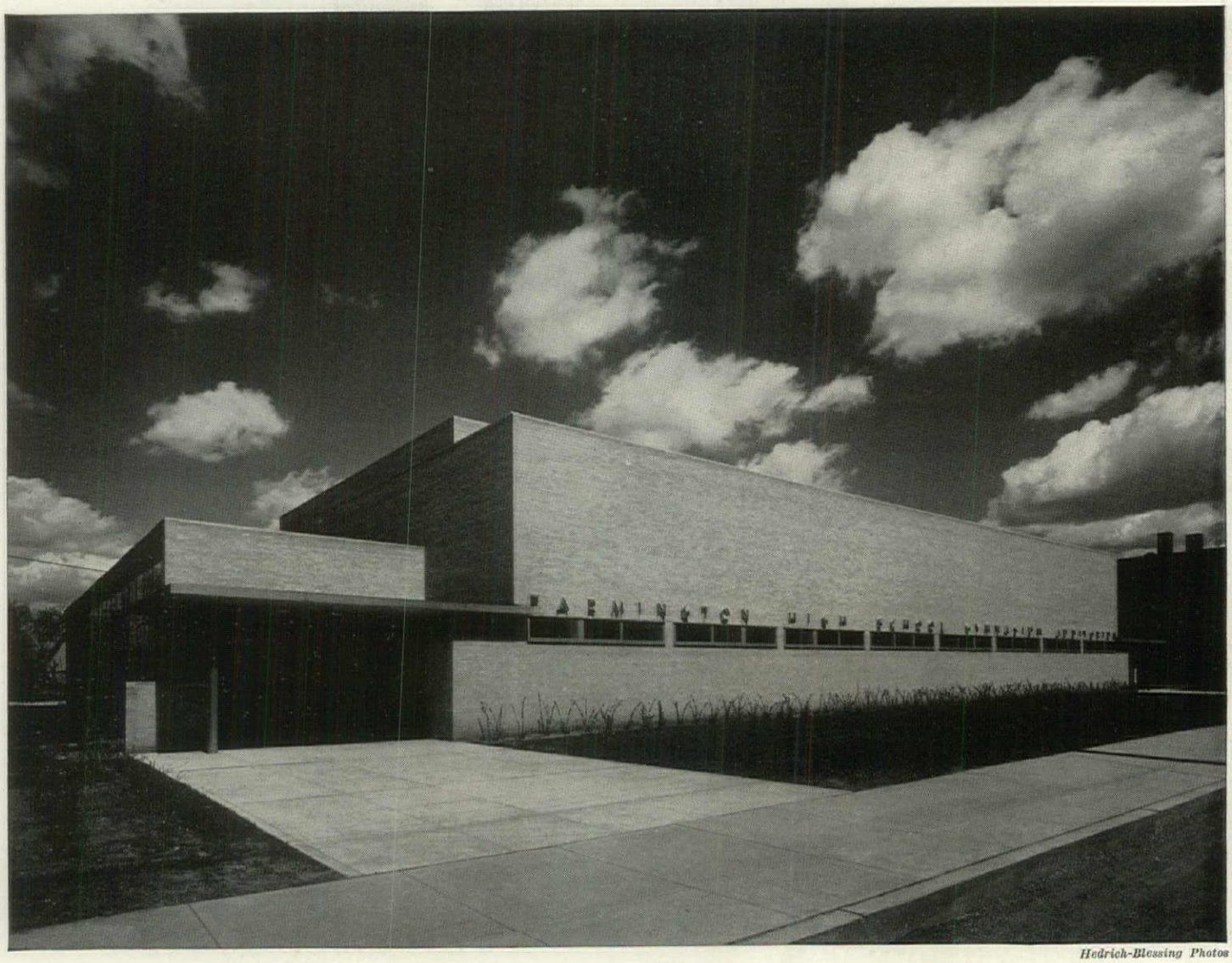
FLOOR COVERINGS: Exercise room—asphalt tile, Armstrong Cork Co. Gymnasium—maple finish flooring on U. S. Gypsum Co. sound resilient metal chairs.

HARDWARE: By Sargent & Co.

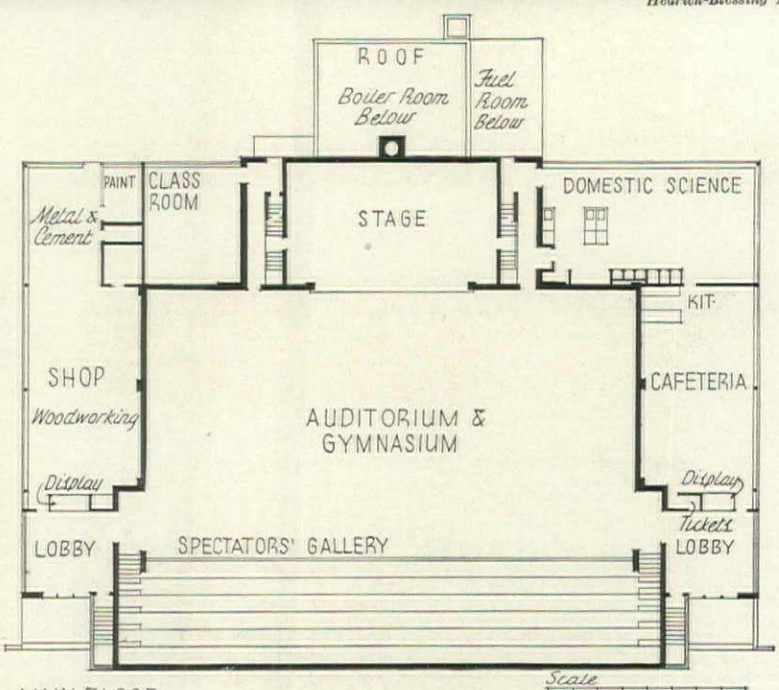
PAINTING: Materials by U. S. Gypsum Co., Hillyard Chemical Co., W. P. Fuller Co. and Super Concrete Emulsion Co.

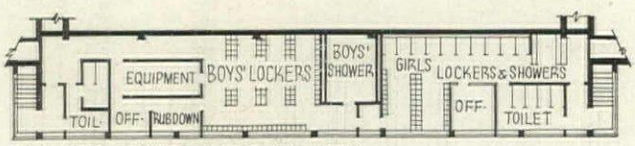
ELECTRICAL INSTALLATION: Wiring system—conduit. Switches—Square D. Co. Fixtures—Benjamin Electric Co.

GYMNASIUM-AUDITORIUM FARMINGTON HIGH SCHOOL, FARMINGTON, MICH.



Hedrich-Blessing Photos





PLAN OF LOCKERS UNDER GALLERY

While the combination gymnasium-auditorium has been a subject of controversy between educational authorities for many years it continues to be used in many localities. Where there is full-time use for both gymnasium and auditorium the best solution is obviously separate units, but where use and funds are limited the combination is more economical in both construction and operation. Another factor in its favor is the provision of maximum spectator space, which it satisfies more readily than the separate gym.

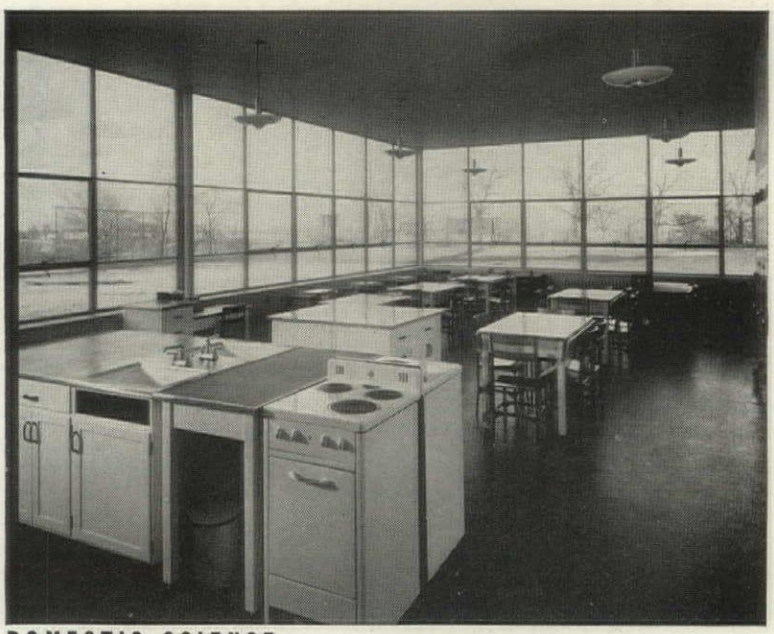
In addition to such a combination, this unit includes an excellent woodworking shop and domestic science department, and a cafeteria for students who bring their own lunches. The architectural treatment, inside and out, is unusually successful. Cost: $104,000.

ENTRANCE

LOBBY

CONSTRUCTION OUTLINE

FOUNDATIONS: Concrete.
STRUCTURE: Exterior walls—face brick, Williamston Brick Co., cement block back-up and inside finish, Boice Bros.
ROOF: Covered with poured gypsum, U. S. Gypsum Co.
SHEET METAL: Flashing and gutters—Anaconda Copper, American Brass Co.
SOUND INSULATION: Acoustic Celotex, Celotex Corp.
WINDOWS: Sash—steel projected, Detroit Products Co. Glass—sheet, American Window Glass Co. Rooflights—Albert Grauer Co. Shades—Athey Shade Co.
FLOOR COVERINGS: Shop—asphalt mastic. Lobbies, shower and locker rooms—terrazzo. Remainder—tile, David E. Kennedy Co.
FURNISHINGS: Home economics equipment—Kewaunee Mfg. Co. Lockers—Berger Mfg. Co.
DOORS: Hollow metal, Neidringhaus Co.
HARDWARE: By Sargent & Co. and McKinney Mfg. Co.
PAINTING: Material by The Sherwin-Williams Co.



DOMESTIC SCIENCE

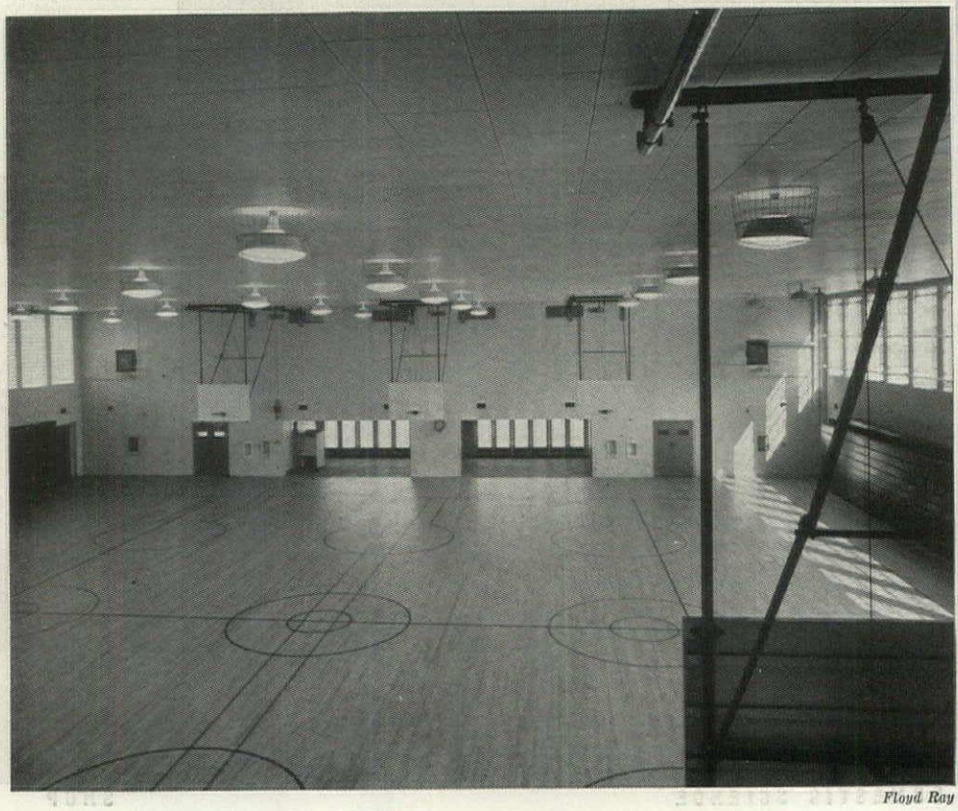
SHOP

Hedrich-Blessing

GYMNASIUM-AUDITORIUM, FARMINGTON HIGH SCHOOL, FARMINGTON, MICH.

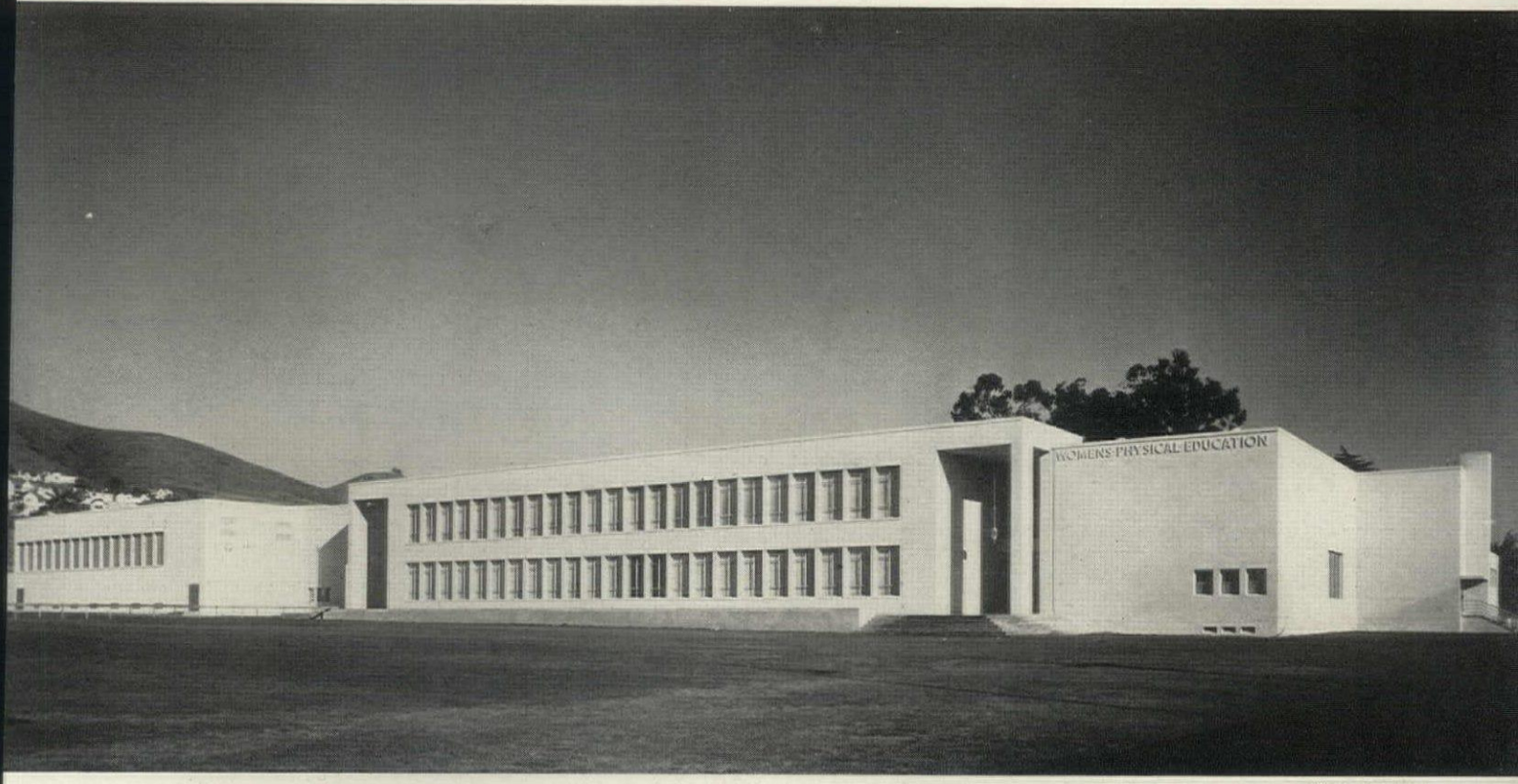
GYMNASIUM, PHYSICAL EDUCATION BUILDING, VENTURA, CALIF.

Provision for spectators and adequate natural lighting are two big problems of gymnasium design. Top lighting, being non-directional, permits practice courts at right angles to exhibition courts as shown above —a compact arrangement with obvious advantages. Where side light is used, practice space may be used for portable bleachers for exhibition games, as in the Ventura gymnasium at the right.



Floyd Ray

YMNASIUM SENIOR HIGH SCHOOL AND JUNIOR COLLEGE, VENTURA, CALIF.

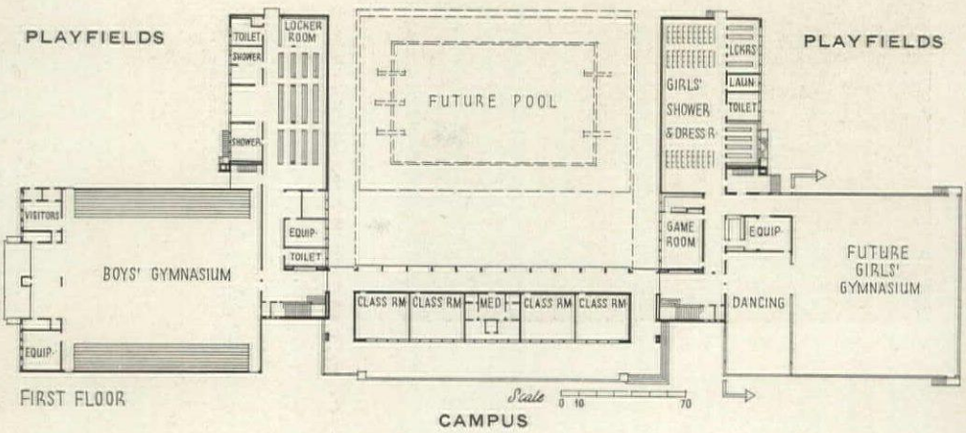


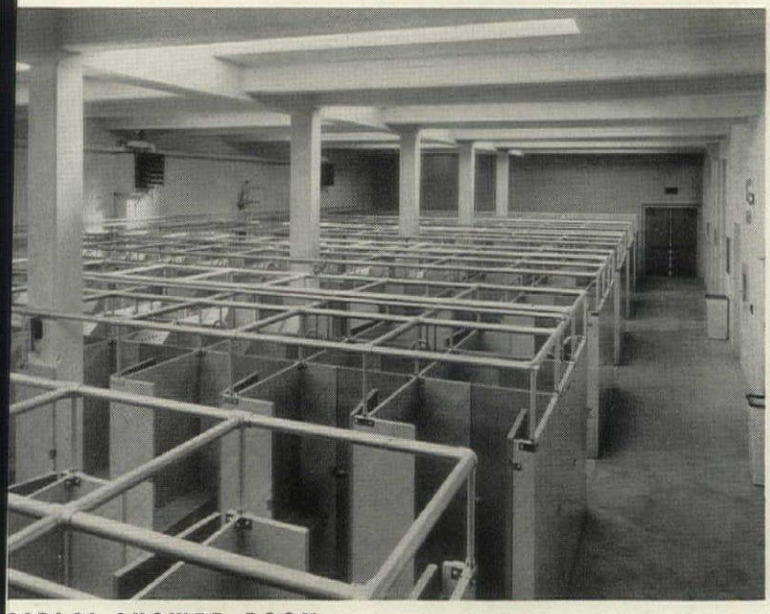
Floyd Ray Photos

OY C. WILSON, GEOFFRY N. LAWFORD, ARCHITECTS

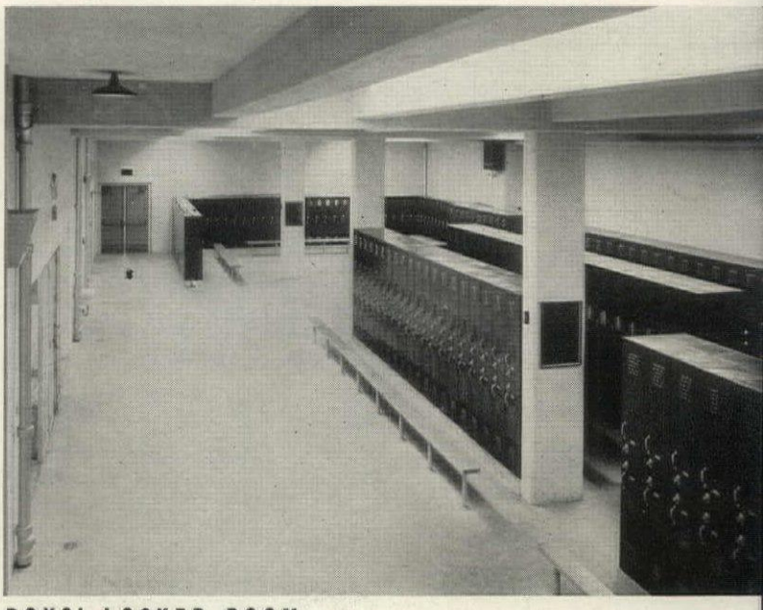
MANLEY W. SAHLBERG, STRUCTURAL ENGINEER

This physical education unit is planned or 1,400 pupils. Except for the Girls' Gymasium to be built later, it provides qual facilities for boys and girls, joined in single building for easy access to a common linic, a future swimming pool, and for interhangeable use of classrooms. A high degree f independence has nevertheless been mainained between the various subdivisions of the lan, and, in accordance with modern practice, separate outside entrance facilities are rovided for each of the parts. Instructors' ffices, located strategically on the second loor, have direct supervision through obserration windows of the gymnasium, locker ooms, the future swimming pool, and the djoining playfields. Cost: approx. $325,000.

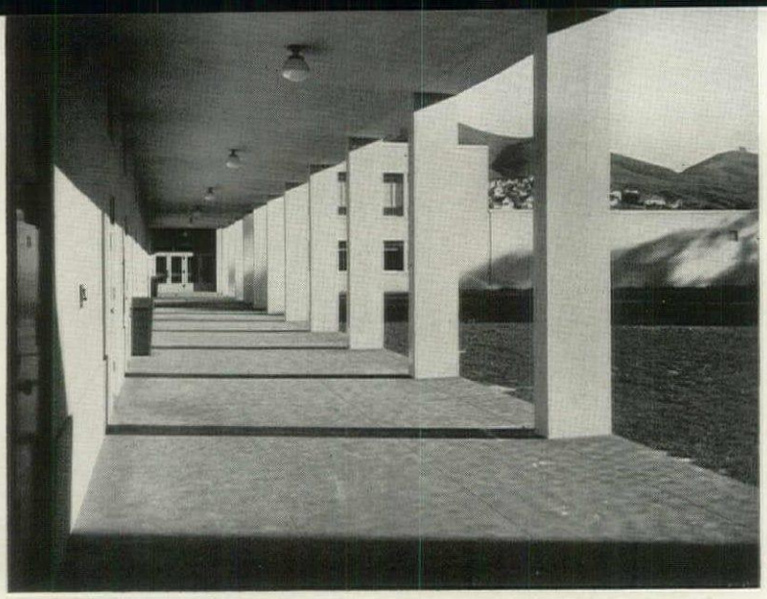


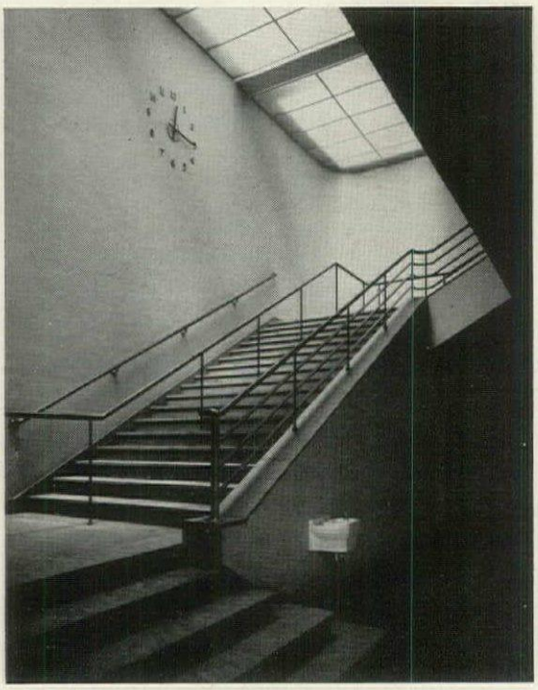


GIRLS' SHOWER ROOM



BOYS' LOCKER ROOM





GYMNASIUM — SENIOR HIGH SCHOOL AND JUNIOR COLLEGE, VENTURA, CALIF.

CONSTRUCTION OUTLINE

FOUNDATIONS: Reenforced concrete. Waterproofing—Pabco, Paraffine Cos.

STRUCTURE: Exterior walls—exposed reenforced concrete; inside—plaster; some exposed concrete. Interior partitions—nonbearing, Truscon Steel Corp. steel studs. Floor construction—concrete slabs and joists. Ceilings—hung plaster, acoustic tile or concrete.

ROOF: Covered with Pabco, Paraffine Cos.

SHEET METAL WORK: Flashing—copper. Vents and skylights—H. H. Robertson Co.

INSULATION: Roofs—Insulite Co. Sound insulation—Acousti-Celotex, Celotex Corp.

WINDOWS: Sash—steel, Truscon Steel Co. Glass—Libbey-Owens-Ford Glass Co. Glass blocks—Pittsburgh Plate Glass Co.

STAIRS: Main—bronze rail, slate treads, risers and stringers; others—concrete, steel pipe rail.

FLOOR COVERINGS: Toilets and showers—ceramic tile, Mosaic Tile Co. Classrooms, kitchen and offices—linoleum, Pabco, Paraffine Cos. Gymnasium—maple. Remainder—cement.

FURNISHINGS: Lockers—steel, Berger Mfg. Co. Folding bleachers—Fred Medart Mfg. Co.

WOOD AND METAL TRIM: Trim—metal. Doors—Wheeler-Osgood Sales Corp.

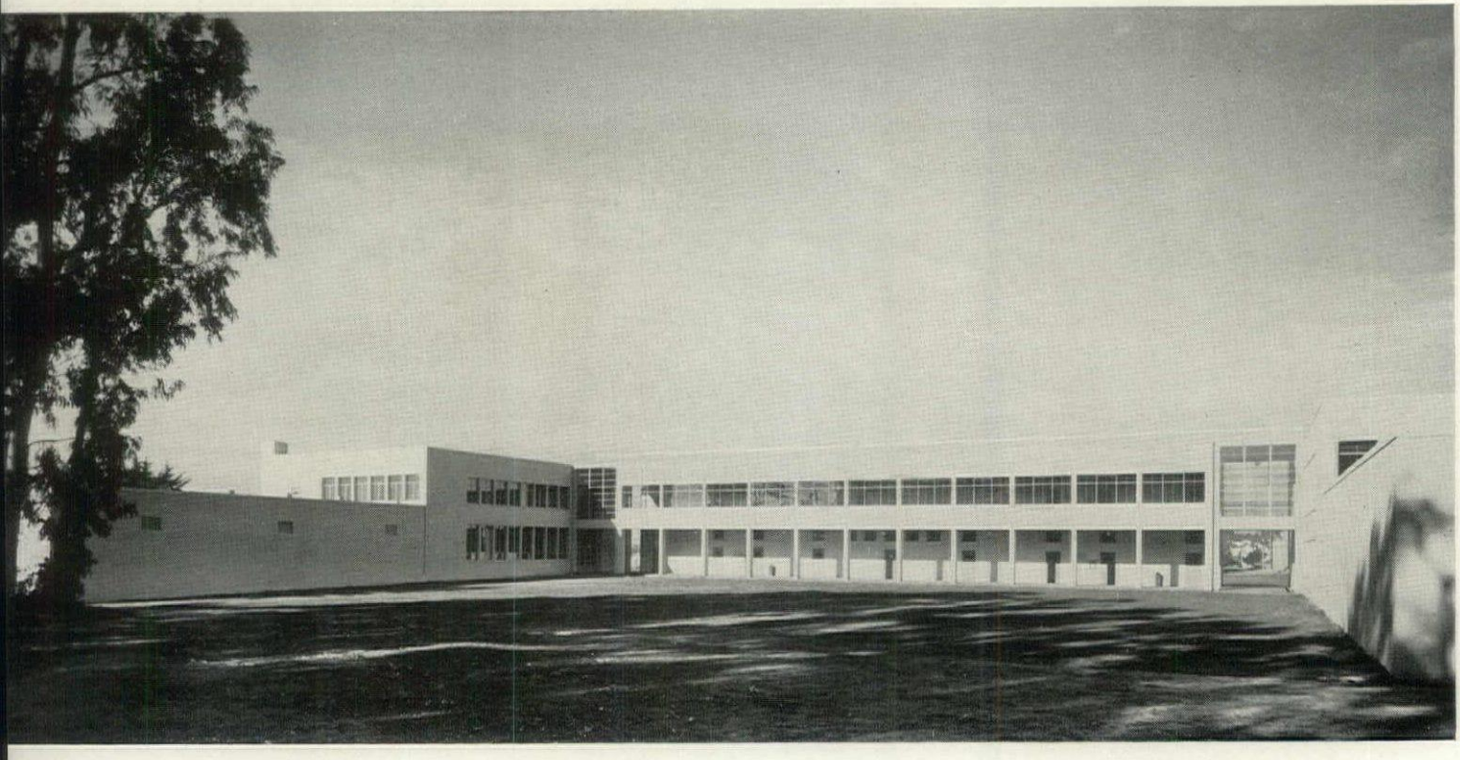
HARDWARE: By Sargent & Co. and Vonnegut Hardware Co.

PAINTING: By National Lead Co., W. P. Fuller Co., Asher Mfg. Co. and Celotex Corp.

ELECTRICAL INSTALLATION: Wiring system—conduit. Switches—Bryant Electric Co. Fixtures—Westinghouse Electric & Mfg. Co. Photo electric cell control of lighting—General Electric Co.

PLUMBING: Fixtures by American Radiator-Standard Sanitary Corp. Water pipes—Anaconda Copper, American Brass Co.

HEATING: Low pressure steam system. Boiler—Bryant Heater Co. Radiators—American-Radiator-Standard Sanitary Corp. Thermostats—Powers Regulator Co. Valves—Crane Co. Water heater—Union Tank & Pipe Co. Pump—Nash Engineering Co. Incinerator—Smith Mfg. Co.



The spirit and genius which has given the world the unexcelled architecture of modern Finland cannot be destroyed by bombs or a change of flags. For his preparation of the following article, the editors are indebted to ALVAR AALTO, now here in connection with his work as chief architect for Finland's reconstruction.

FINLAND

The present moment, with Europe fighting and the war in Finland scarcely over, is hardly the most suitable time for studying problems of architecture. Still, construction is not a far cry from the idea of war. To destroy and to build may be compared to two sisters with opposing characteristics. A good philosophy of architecture must be based on the idea of building as a kind of struggle of humanity against nature. I cannot present a story about Finnish architecture now in the same way that I would have done only a few months ago. Among the countries known as pioneers in modern architecture, Finland is the youngest in the family of nations, yet it has a culture of more than 1,000 years of constant development. This is true of its architecture as well as its literature and music.

The last twenty years in Finland have been a period of social construction, a time of intense activity, particularly in building. Transition from an old-fashioned agricultural economy to that of a modern industrial state naturally presented problems of social adjustment on a very broad scale. While these problems had by no means been fully solved when the war broke out, the process itself was responsible for far-reaching changes in national attitude, which may be briefly described as a shift in emphasis from the individual to society as a whole.

In Finland the revolution in architecture is naturally part of the whole international movement, but, at the same time it is not an isolated phenomenon in the country's internal life. As in other countries with a more or less provincial culture, modern architecture did not appear in Finland as a superficial style trend in imitation of the great European centers. Even though there is today in Finland, as in all countries, a good deal of superficial modernism, the country itself, its climate, resources, topography and ways of living afford a mass of material which forms a good base for the solution of problems of contemporary architecture. Similarly, there exist in the Finnish culture special forms in living which constitute a force for the development of the new architecture. One of these is the native hygienic cult, a custom practiced since the far ages and still a part of everyday life. There is, for example, the Finnish bath "sauna" which is always present, and even the humblest hut has its bath-house. This custom is responsible for the special style of living. The ceremony of the bath in Finland occupies the same central place in the life of the people as the "ceremony of tea" in Japan. While the ceremony of tea in Japan has given the Japanese culture a special sensitiveness for materials, and forms the connection between human beings and the material world, so in the same way the ceremony of the bath has given to Finnish culture its own "architecture," its own arts and crafts, and finally provides the contact between the human being and the special character of Finnish nature.

Other similar factors include the use of wood as almost the only medium of construction in the past. Modern architecture has developed most rapidly in countries where the old construction in wood has paved the way for modern skeleton building.

A very important fact about Finnish architecture is the marked absence of the influence of fortification buildings in the country. In the wide open areas in Finland, where great forests, numerous lakes and rapids always have been the country's "fortifications," the single house and the embryos of city building have grown without the heavy characteristics which fortification buildings lend to architecture.

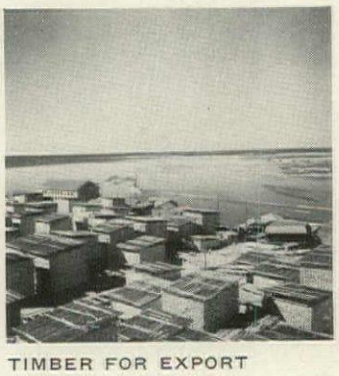
Another factor of importance in the country's development is the decentralization of the population, only about 15 per cent of which lives in cities. This is no new phenomenon in Finnish life, but one which goes back centuries. Obviously we have here an excellent basis for the development of architecture and large scale planning.

The tendency toward decentralization is implicit in the whole of modern architecture, not only in the sense of dispersion of the production apparatus, but also culturally. In Finland, due to the state-owned forests, the industries built in connection with them, and the many harbors spread along the coast, people with good technical and cultural backgrounds are spread over the entire country, and there is no artificial, unhealthy segregation of this group from the main body of the population. Practically all of the large factories have been built in rural districts, leaving the cities unencumbered by unwieldy industrial establishments.

Due to its long tradition of decentralization, Finland can approach contemporary planning problems with far less difficulty and far less dislocation of the population than the older countries, and there is another advantage that might be mentioned here. Combined with the relative lack of fortification buildings, the dispersion of the population has tended to emphasize the importance of the house as a source of architectural development. Here we have a factor whose favorable influence on the development of archi-

LAKE DISTRICT

13TH CENTURY CHURCH



TIMBER FOR EXPORT

THE CAPITOL: HELSINKI

TYPICAL FARM

tecture cannot be stressed too much. A native tradition of frame construction, special ways of living, peculiar climatic conditions—these form a sound beginning for a new architecture.

As in most countries, Finnish architecture has not been spared from the devastating effects of world-wide economic crises. Also, an industry has yet to be developed for the production of standard types of building units which is sufficiently flexible to provide all the products necessary to meet individual requirements and local circumstances.

Consequently a large part of the new architecture in Finland has not yet reached a state of complete harmony with nature and with the life I mentioned above, but a good basis for a growing architecture does exist, and it suggests encouraging possibilities for the future.

Now this future is coming—but what a future! Finland has just ended the war and will be faced with a serious social problem for a number of years. There are about 500,000 people without homes today; some are refugees from the areas ceded to Russia under the terms of the peace treaty, others are people made homeless by air raids. A large number of public buildings were destroyed. Schools, hospitals, factories, bridges, roads, etc., have to be built. Some parts of the country need completely new cultural centers: with the loss of Viipuri, eastern Finland lost its medical, cultural and government center. To carry out all of this new construction the entire economic power of the country will be required.

Concentrated work, carried on under pressure, will show results more quickly and clearly than a process of gradual development; unfortunately there is one thing which is the antithesis of good quality, and that is the necessity of doing things too quickly.

Our immediate need is to have the homes ready as soon as possible. Here we face the same problem as in any process of colonization. Under such circumstances people have first built barracks, or some other quickly constructed form of communal shelter; later these barracks have been replaced by new buildings. Even this "Second Town" has not often had all the qualifications for permanent use, and so a "Third Town" was built. How uneconomical this system of replacement is must be clear to everyone. On the oth hand, we have examples where state has tried to build a complet finished town at once. Cities beg in connection with the first Russi Five Year Plan furnish illustratio of this, and we know that after t Plan fell through they went back the barrack system and that th are using them on a large scale toda To avoid such mistakes, the co munities Finland will need shou be built in the following manner:

1. The cities must be planned a the houses built so that the livi standard of the people may be rais step by step.

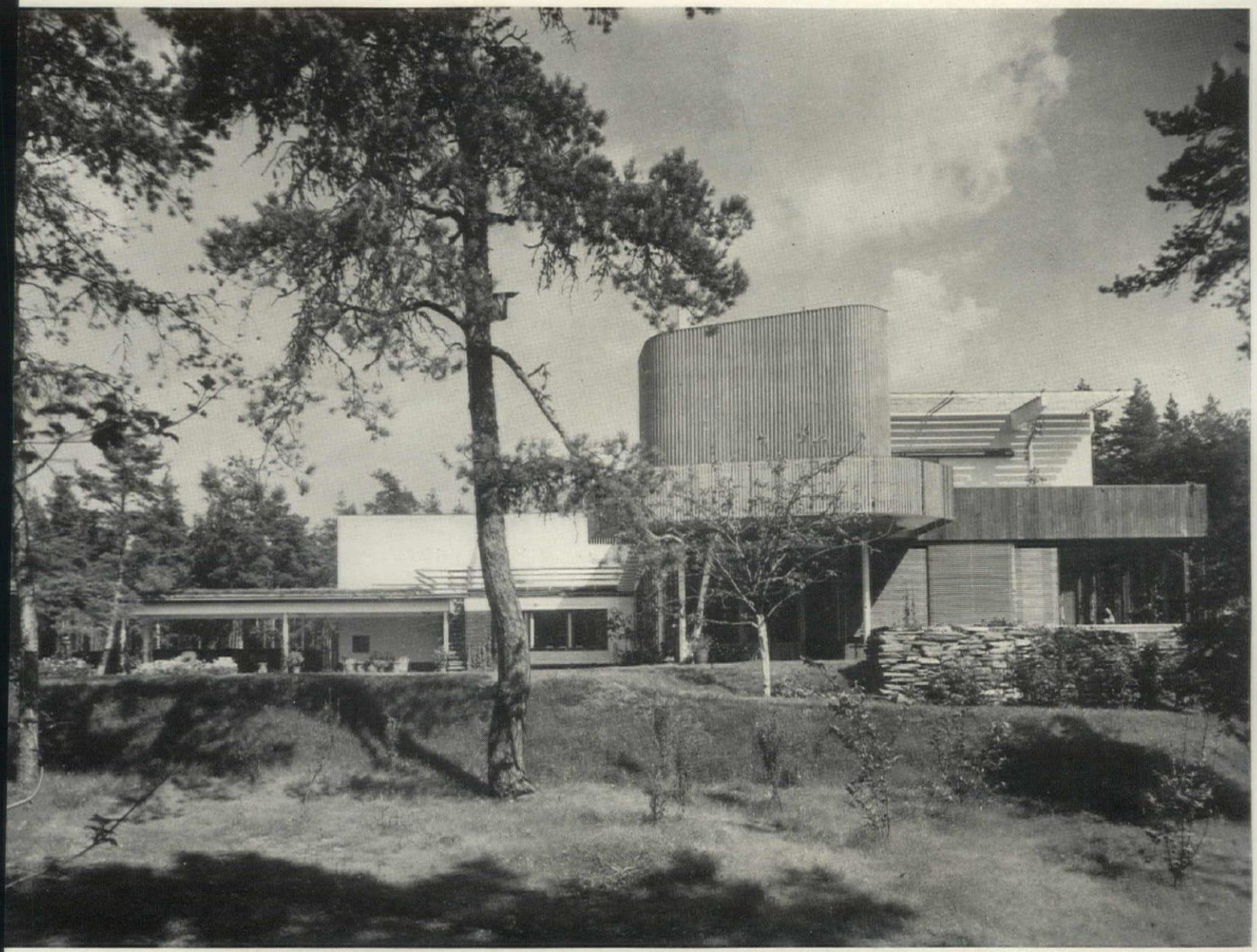
2. Because there is such a great ne for homes, they will be built a equipped in stages: first the roof a walls, then in the next step, heati and lighting, and later plumbing a other equipment. This will ensu the people immediate shelter, an by the third step, a complete equipped house. Later stages wou include better finishing materia and in the end there will be a co plete modern home as a unit in t modern community.

3. At first many conveniences su as water, baths, etc., will be colle tive, and later there will be priva facilities.

4. In the beginning the inhabitan will pay a low rent, and with ea succeeding step the rent will b raised. This would also conform wit the changes in the living standar which have been temporarily lowere by the war, and this level woul rise in proportion to the speed reconstruction.

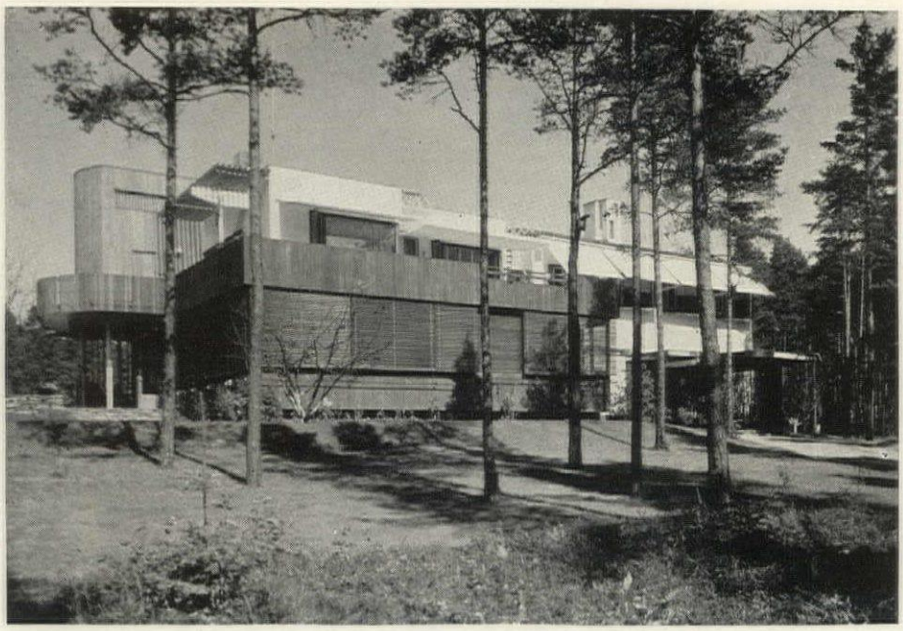
5. To realize this idea we mus elaborate on this program, and de velop a technical system for com prehensive city planning and th construction of houses. The syste will necessarily be coordinated wit the availability of building materials Building step by step is the onl solution from the point of view o obtaining material.

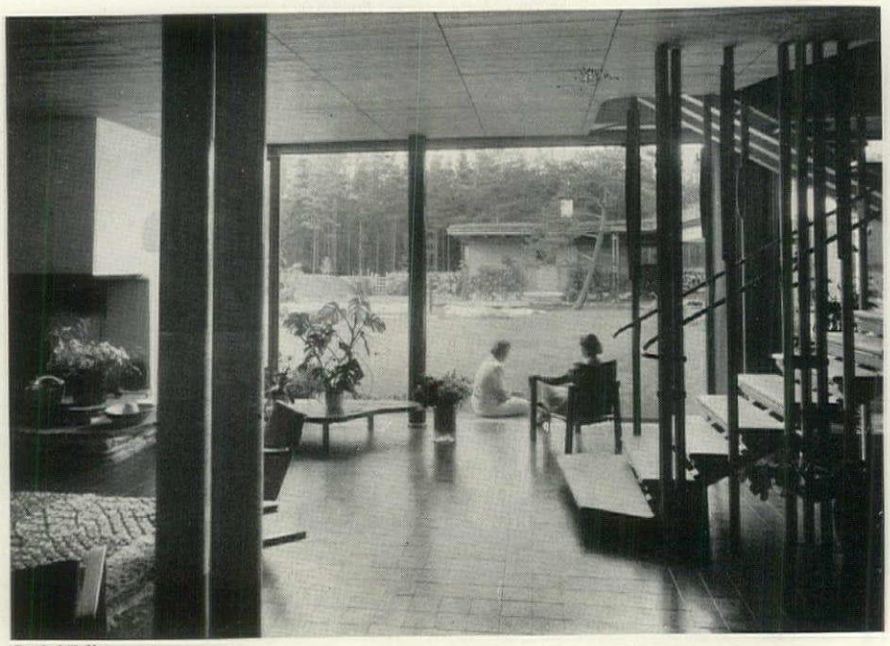
Because Finnish reconstruction ac tivity is to start immediately thi system cannot be made countrywid at once. Therefore it is necessary t set up an organization to tak charge of a number of cities usin this method of building in stages The result would be not only to en sure the economic stability of th houses built in this manner, bu would set a precedent for the years of reconstruction yet to come and it could probably be used as a basis for housing research in other countries.

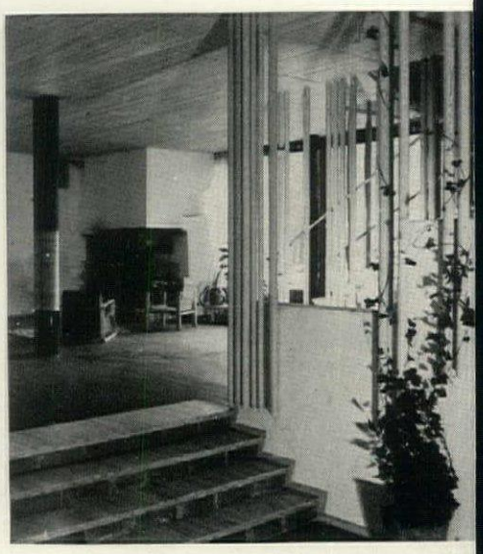


Gustaf Velin Photos

MAIREA": HOUSE IN NORRMARK AINO AND ALVAR AALTO, ARCHITECTS

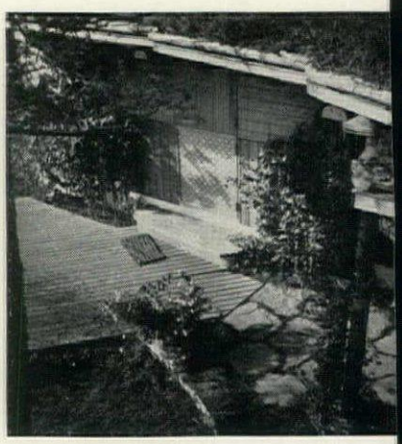


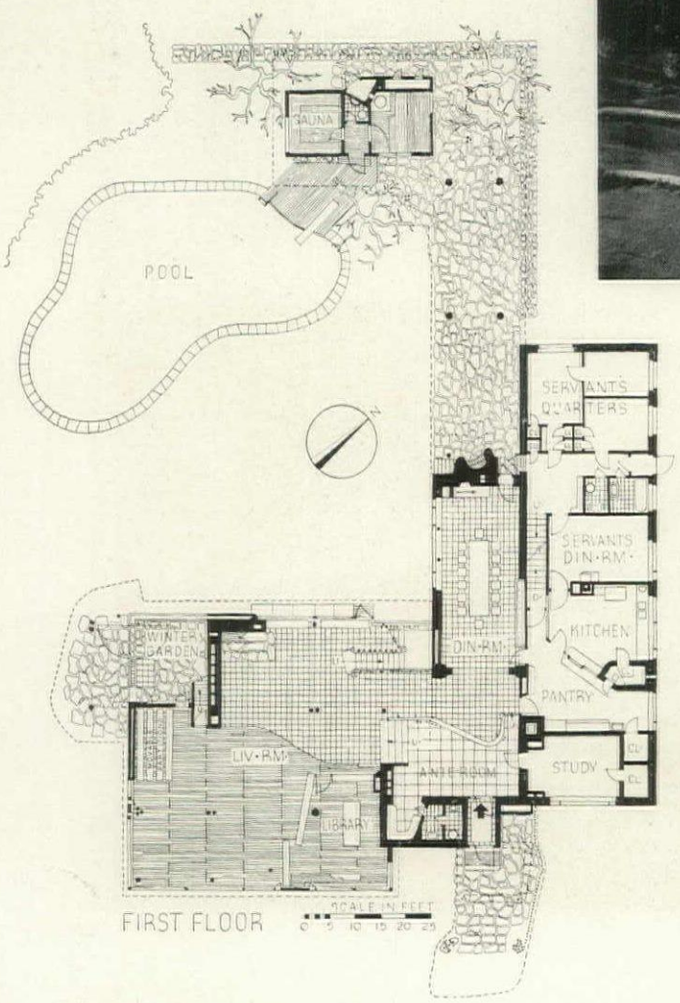




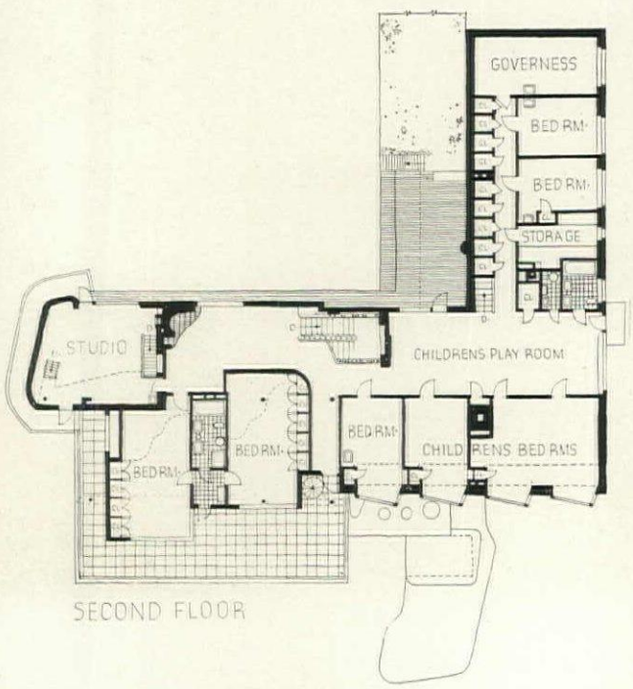
Gustaf Velin

The Gullichsen residence was designed for the owners of a large paper manufacturing concern, and, together with the company's offices, it is located in the country about sixteen miles from the seacoast town of Pori. It occupies a clearing on a hilltop, enclosed by a green curtain of trees; the view can be seen only from the upper terraces. Two structural systems were used in the construction; there is a masonry unit for the serv and steel frame on lally columns for the living and di section. The columns, covered in asbestos and finishe lacquer, provide a revealing illustration of Aalto's abilit give interest to the most matter-of-fact of structural eleme The original program called for a house and an art ga

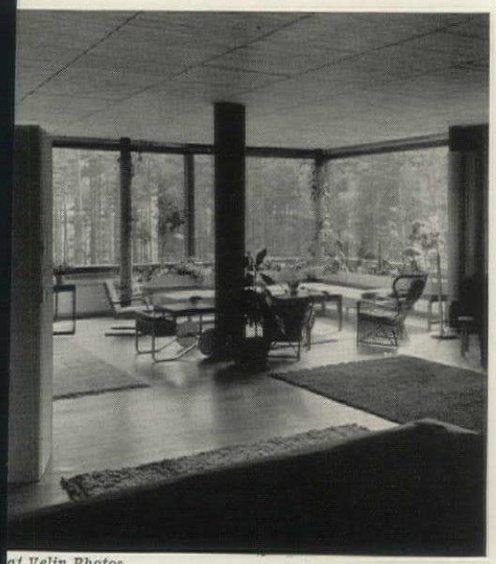


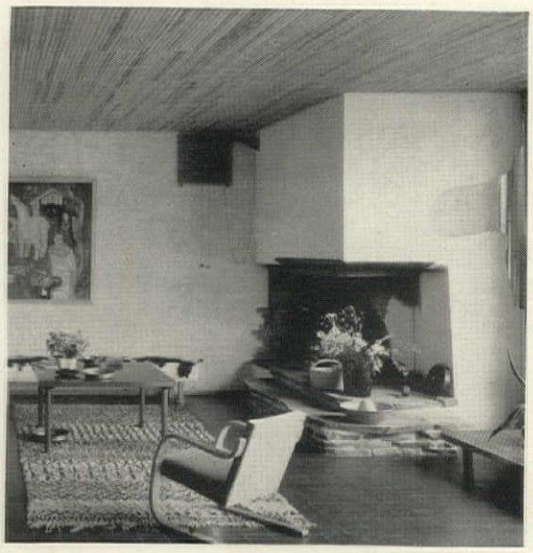


FIRST FLOOR



SECOND FLOOR

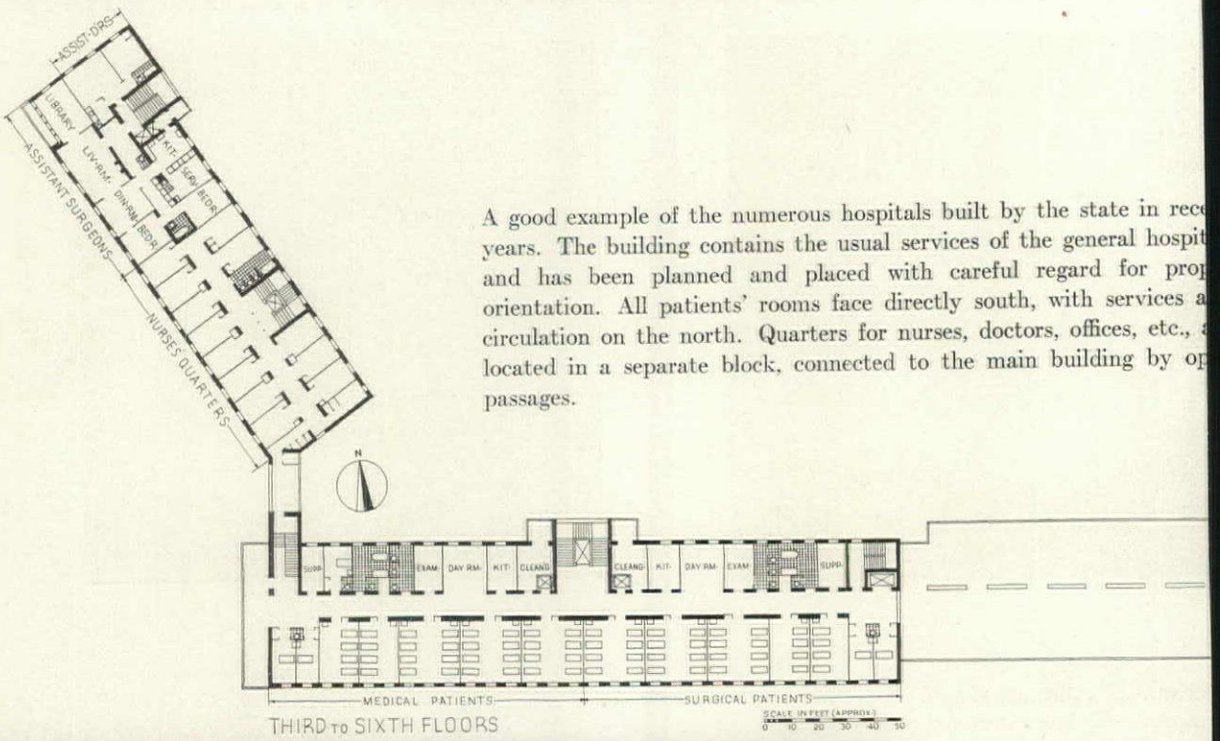




af Velin Photos

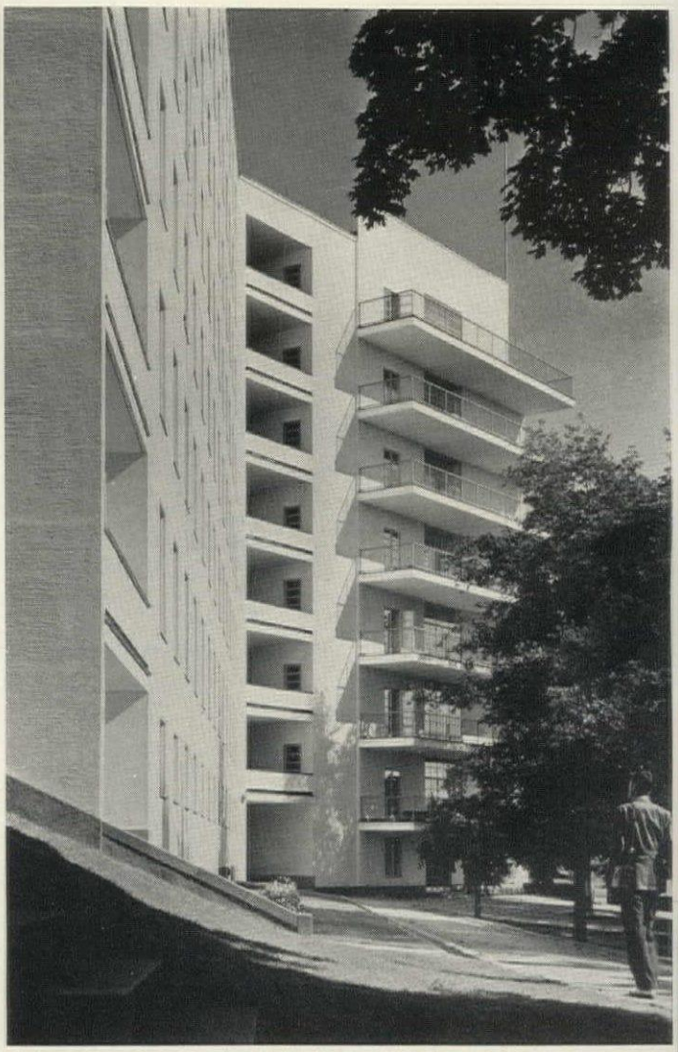
he owners' collection of modern paintings; as built, however, gallery was incorporated in a living room 50 ft. square, uge space subdivided by light movable partitions which serve as storage space for the paintings not on display. The ditional steam bath—"sauna"—is connected to the house by overed passage, and adjoins a reenforced concrete swimming pool which is curved in section as well as plan to eliminate the danger of cracking. The illustrations at the top of these pages and the photograph directly below show views of the living room; those in the middle of the facing page show the pool, bath house, and the sod-covered roof which extends over the terrace to the house.

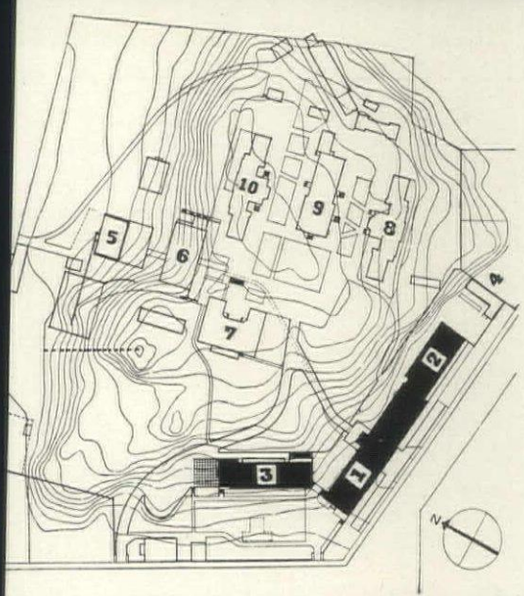
HOSPITAL IN ÅBO E. BRYGGMAN, CONSULTING ARCHITECT



A good example of the numerous hospitals built by the state in rec years. The building contains the usual services of the general hospit and has been planned and placed with careful regard for prop orientation. All patients' rooms face directly south, with services a circulation on the north. Quarters for nurses, doctors, offices, etc., a located in a separate block, connected to the main building by op passages.

Photographs in this portfolio not otherwise credited, were taken by G. E. Kidder Smith on an architectural fellowship given by the American-Scandinavian Foundation.

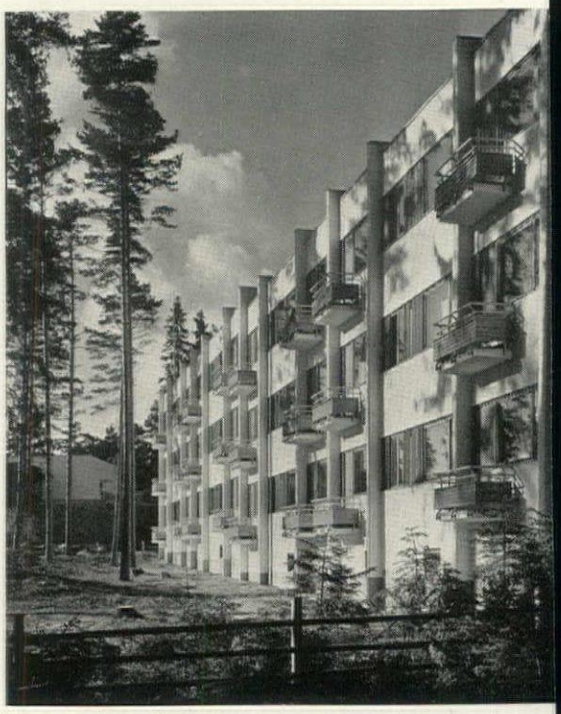




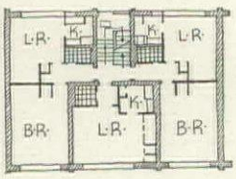
1-2 HOSPITAL BUILDING
3 LIVING QUARTERS FOR STAFF
4 CHAPEL
5 POWER PLANT
6 ADMINISTRATION BUILDING
7 CHILDREN'S SECTION
8 ISOLATION AND VENEREAL DISEASES
9 INTERNES' RESIDENCE
10 GYNECOLOGICAL SECTION

WORKERS' HOUSING, PULP MILL IN SUNILA

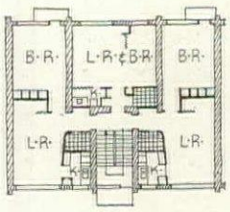
ALVAR AALTO, ARCHITECT



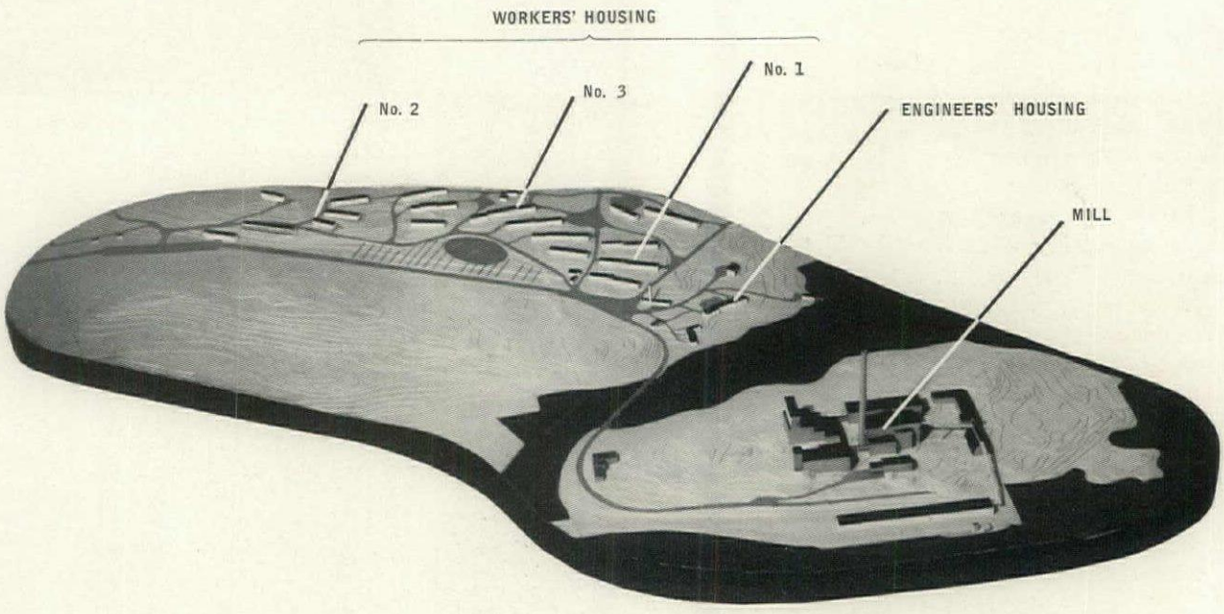
1. → 2. →



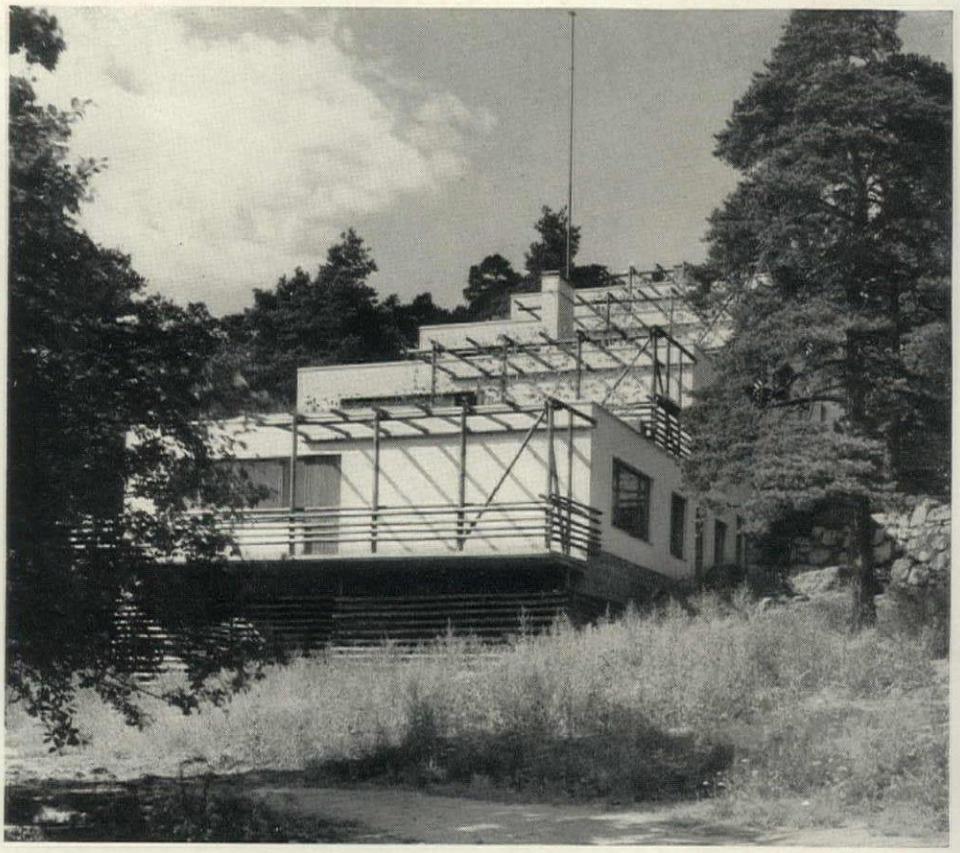
First Stage: three families per floor, two stories. An inexpensive, conventional scheme.



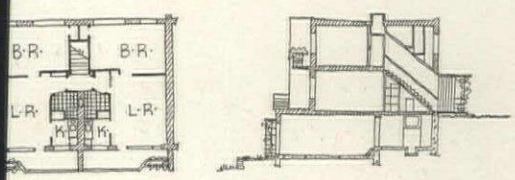
Story height increased, balcon added. Unit costs lower than Stage No. 1.



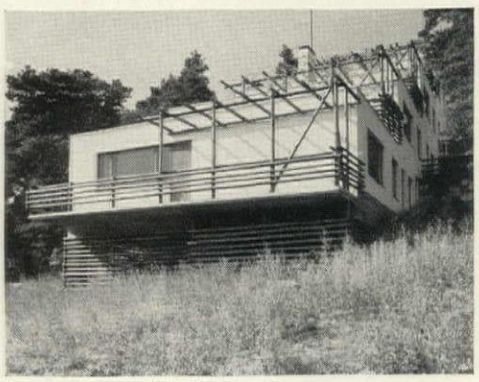
4.



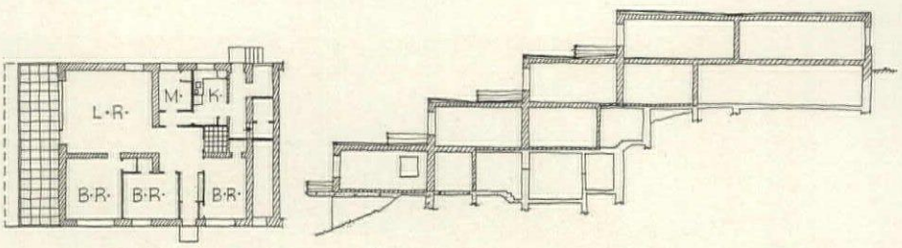
Velin Photos



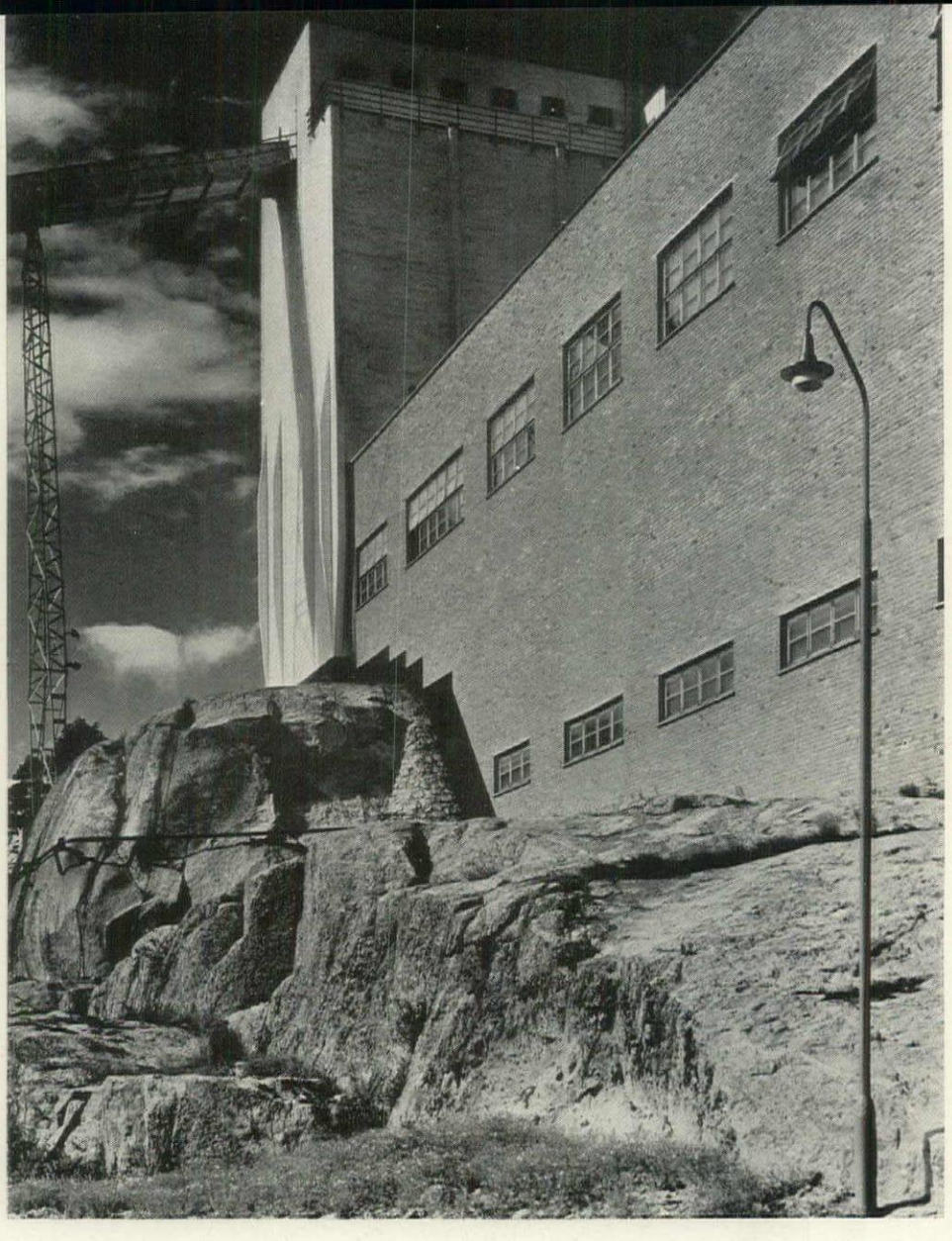
rst set-back scheme. Outdoor living space increased. itial cubic foot cost greater, but reduction of stair lls by use of natural grade lowered rentals.



Final developments of the hillside plan. All dwellings have southern exposure, direct contact with gardens, large terraces.

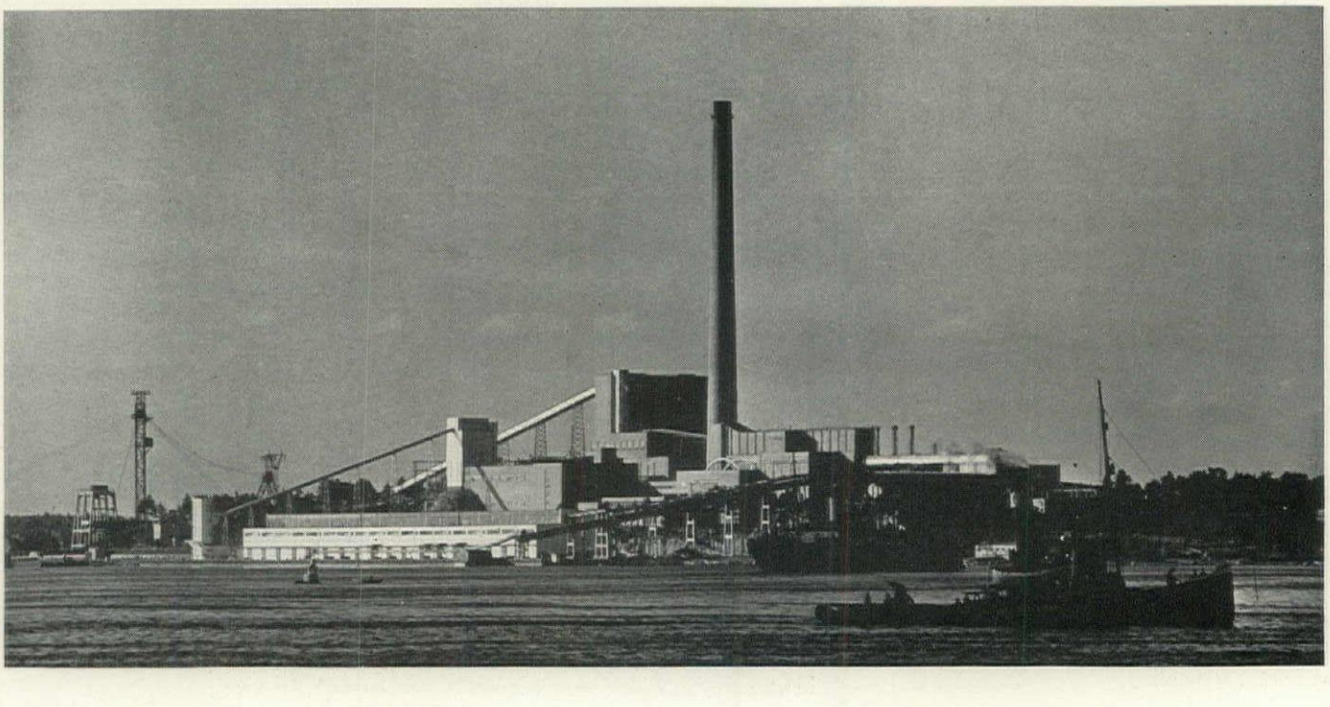


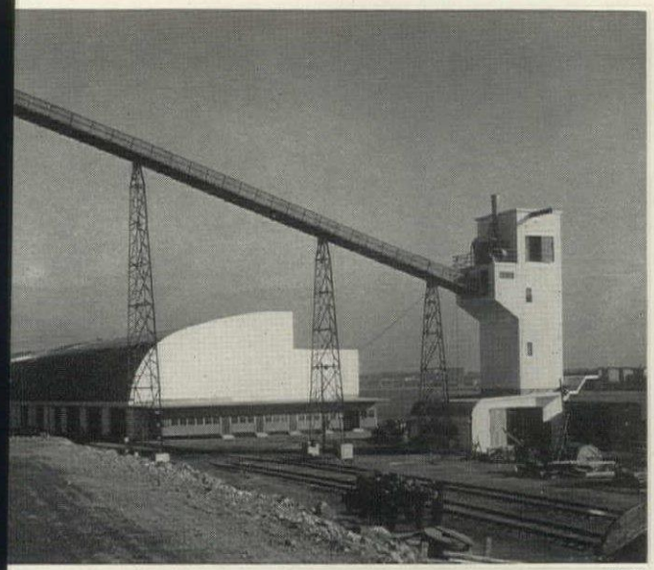
n connection with the erection of the Sunila plant see following page) it was necessary to put up uarters for the workers and engineers. The stages hrough which these houses went are illustrated ere. In the rush of getting the first houses erected he architect and owners decided to use a conven- onal arrangement of flats, with three apartments o a floor. All but one of the buildings in this group llowed this scheme; the one which remained was n experimental design, subsequently adopted as he standard for the second stage. This type has hree floors, thus dividing the cost of the stair mong nine tenants instead of six; balconies were ntroduced as an added amenity. The third stage hows a series of set-backs, adapted to a hillside ite, with larger balconies. In the final stage the et-back technique is carried to its logical con- lusion, with all stair halls eliminated by terraced amps, and with the roof area of one apartment sed as a deck by the one above. Three central eating plants take care of the entire project, which ow houses about 160 families.



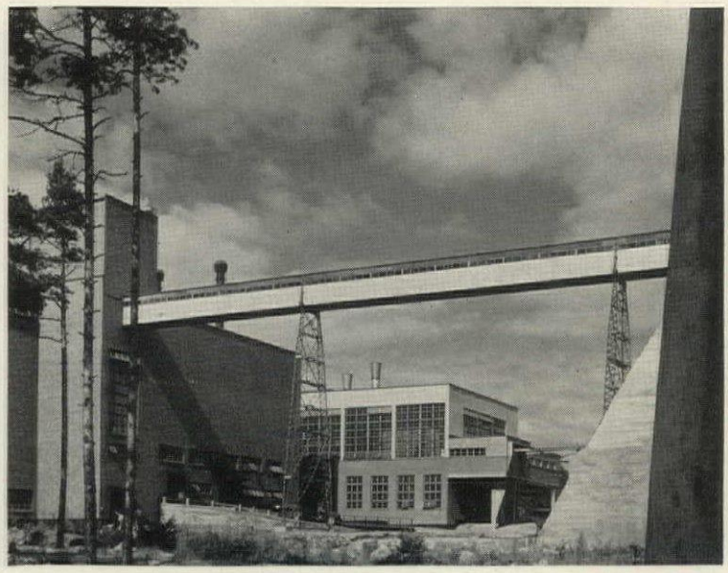
PULP MILL IN SUNI

The Sunila pulp mill, built by five o largest companies in Finland, is locate an island in the Gulf of Finland whe deep-water harbor permits the direct l ing of ocean-going freighters. As sh by the illustration on page 406, the is is connected by a bridge to the mainl where the living quarters of the emplo have been built. Rising up from the s rock, the plant is a magnificent exa of modern industrial architecture, a matic arrangement of forms which h been given the clearest functional exp sion by the architect.

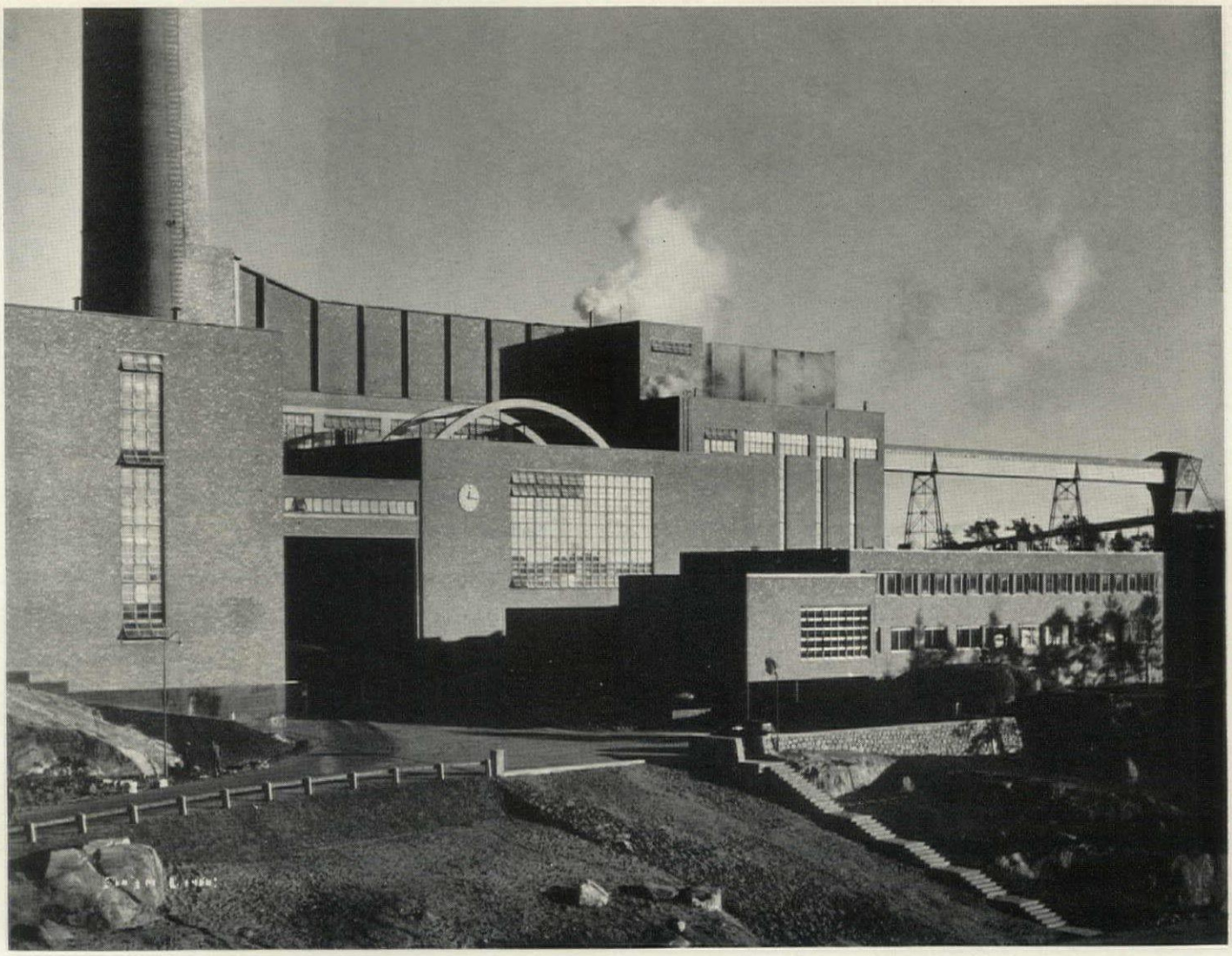




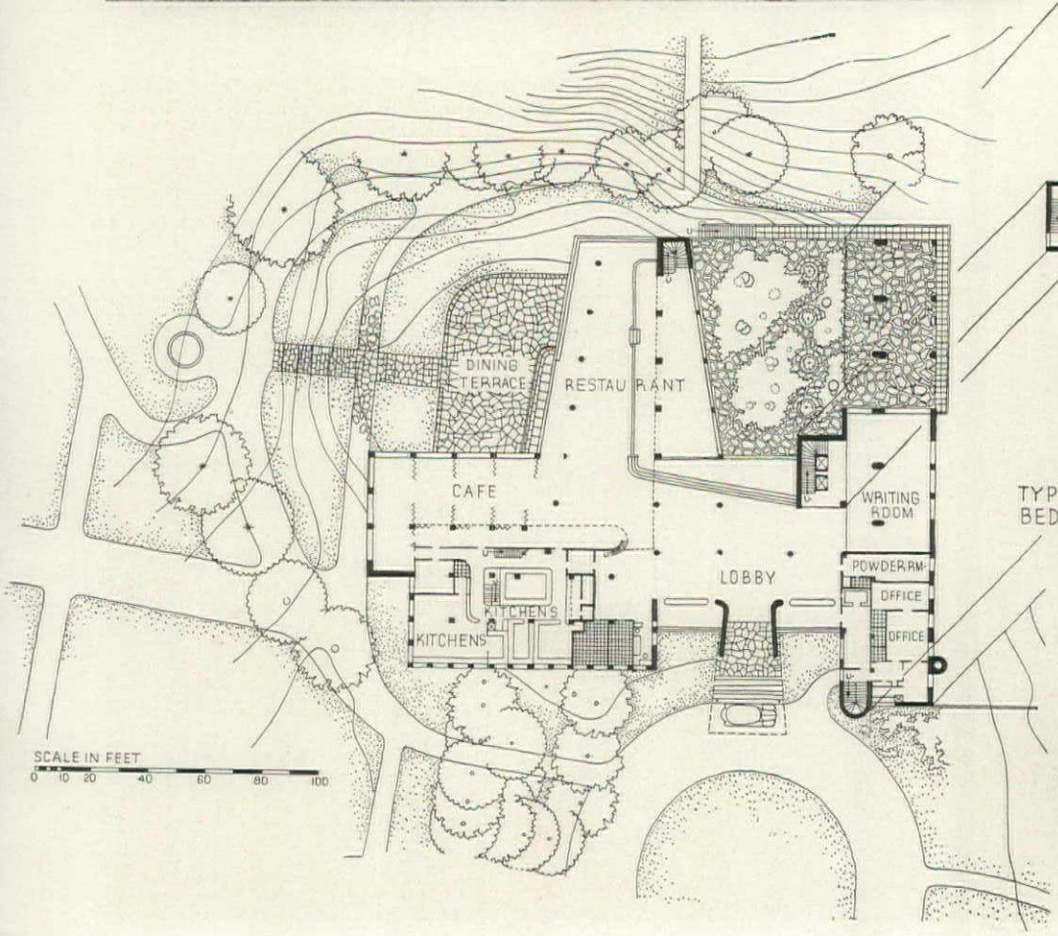
Roos

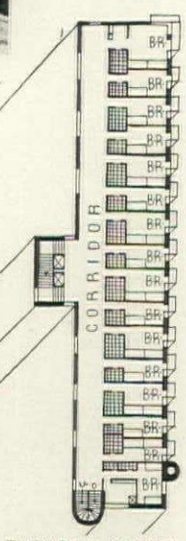


Roos



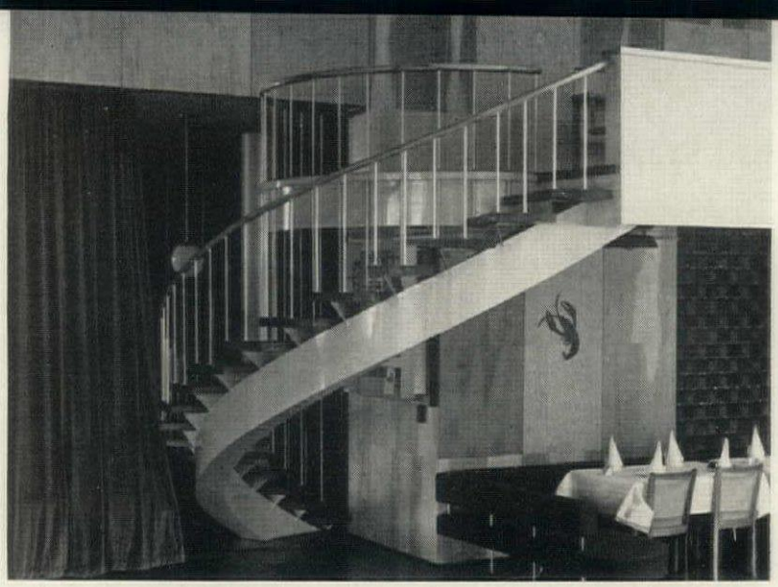
HOTEL NEAR TAVASTEHU



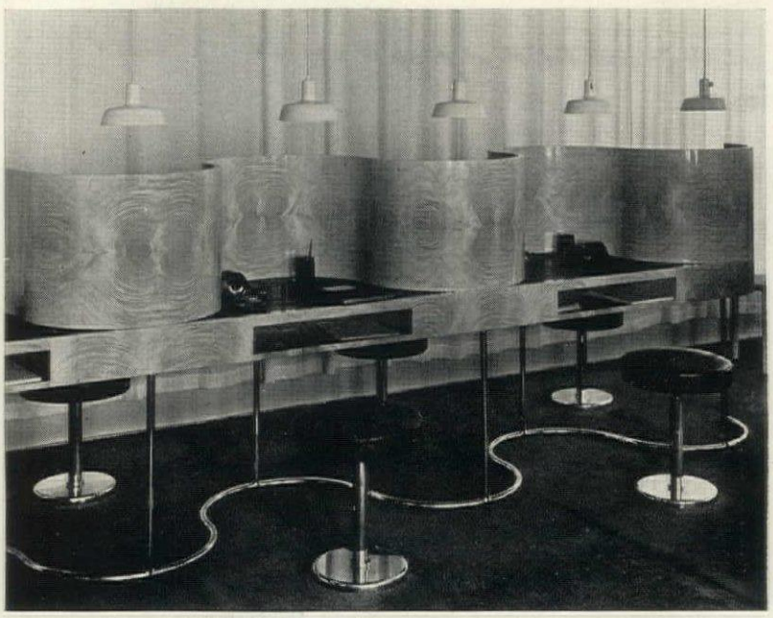


TYPICAL FLOOR
BED ROOM WING

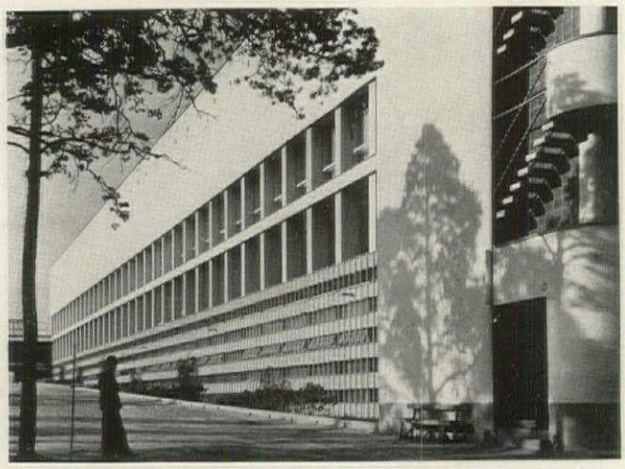
MÄRTA BLOMSTEDT, ARCHITECT
MATTI LAMPÉN, ASSOCIATE



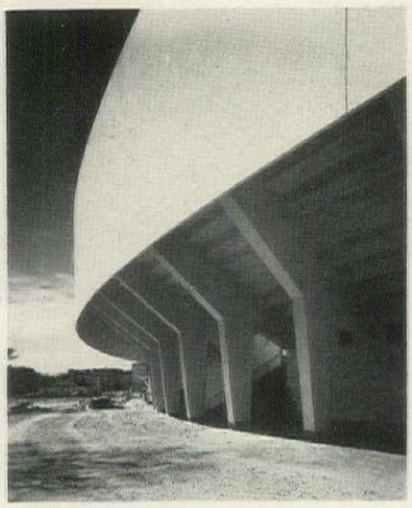
Most resort hotels in Finland are built by a State-owned tourist agency. In the great majority of cases they are designed for year-round use, as their locations are generally suitable for swimming and boating in the summer and for skiing in the winter. While invariably placed in the most picturesque spots, their architecture, as in this example, shows the same direct simplicity characteristic of the urban structures. The plan shows an economical arrangement of bedrooms over a freely handled ground floor. Among the ingenious details of the interior are the writing desk and circular stairway illustrated on the right.

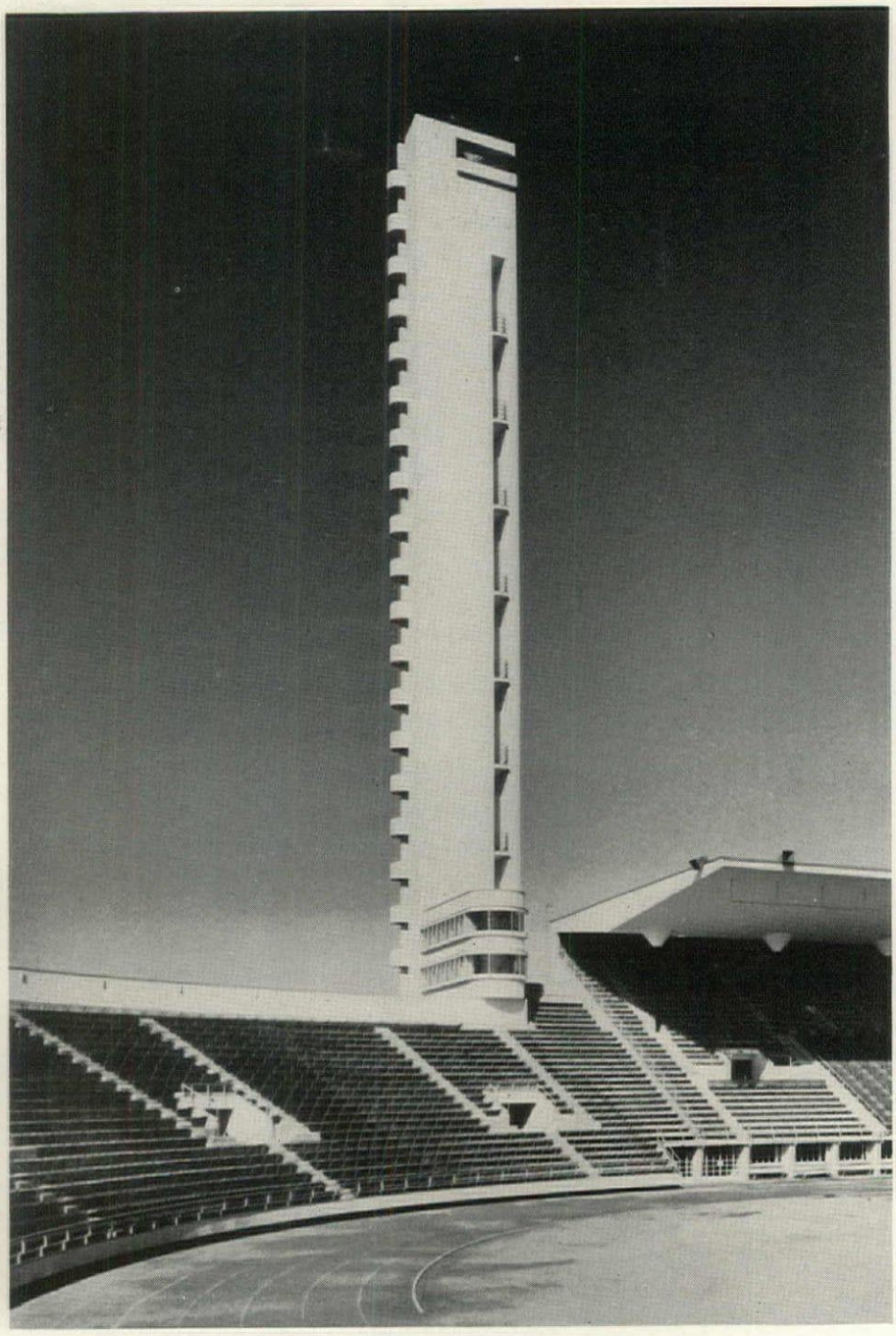


STADIUM IN HELSINKI YRJÖ LINDEGREN, ARCHITECT

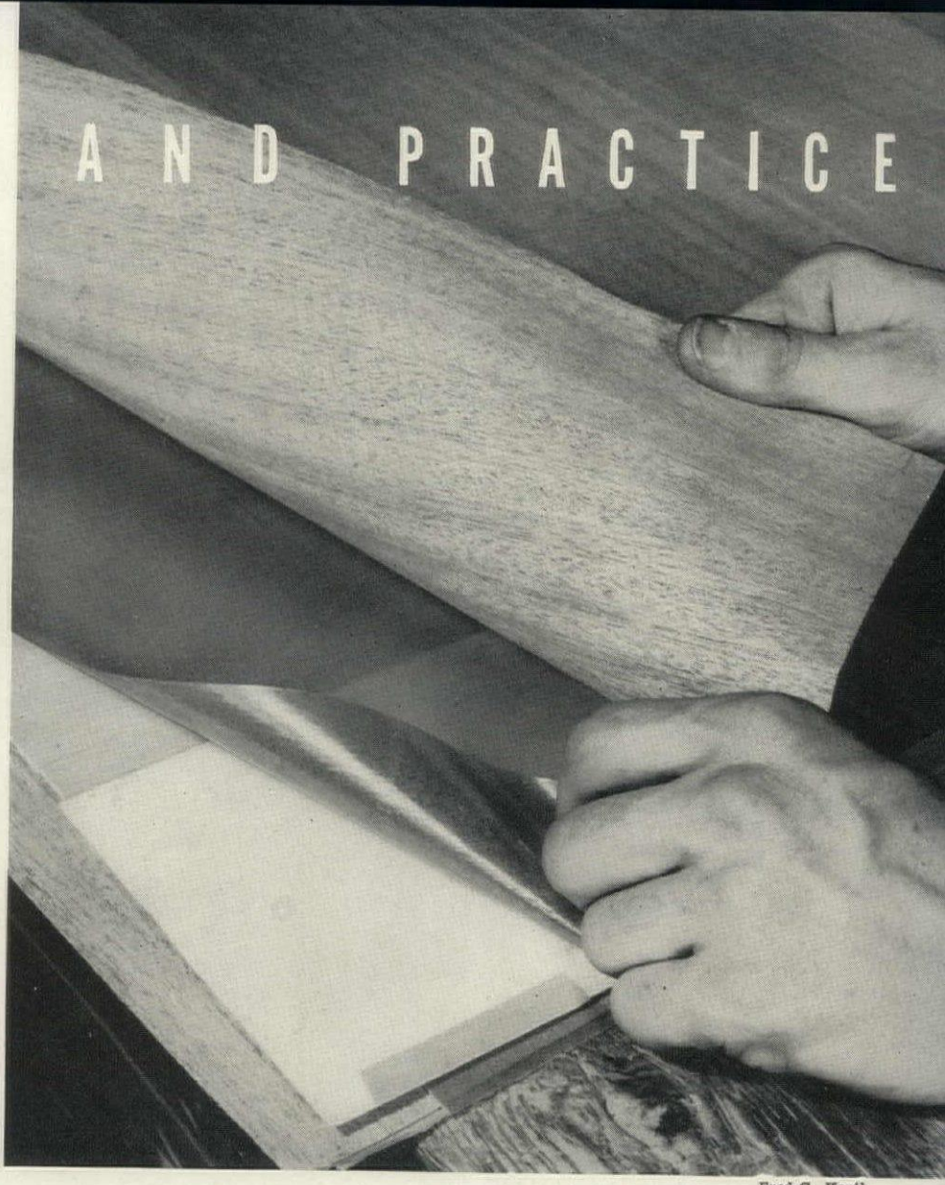


Recent events in Europe have eliminated the use for which Helsinki's Olympic stadium was planned, but the handsome structure in reenforced concrete with its "Marathon Tower" remains as an ornament and useful addition to the community. Shown in the photograph at the lower left are the foundations for the wooden structure which has since doubled the seating capacity of the permanent stadium.





Courtesy Finnish Travel Bureau



BUILDING'S BIGGEST use for plastics is, and will probably remain the laminated form, especially resin-bonded plywood. Photo shows assembly of 3/32 in. plywood used for airplane wings and fuselages, and TEGO resin-film bond. Liquid and powdered bonding agents are also used for this purpose.

Fred G. Korth

PLASTICS IN BUILDING

Most discussions of plastics are peppered with words like "polymerization" and "hydrophobic" whose meanings* are fairly simple, but not very important to the building industry.

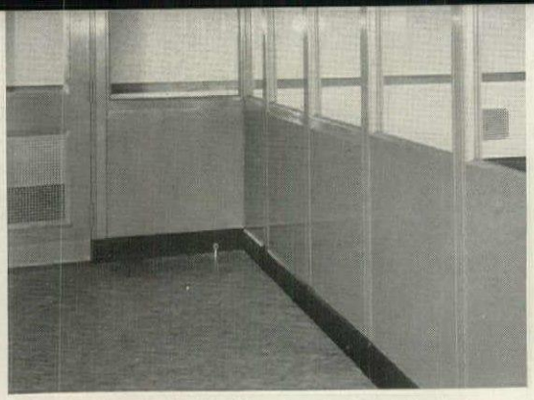
What does concern architects and builders is that modern chemistry has produced a host of new, synthetic materials possessing exceptional properties adapted to use in construction. To say that "esters of methacrylic acid are prepared by converting acetone cyanohydrin into alpha-hydroxyisobutyric acid esters and dehydrating the hydroxy ester" makes little sense to the layman, but to point out that the result is a light, perfectly transparent material which can be cast, molded, sawed, drilled, and bent in hot water is to suggest tremendous possibilities.

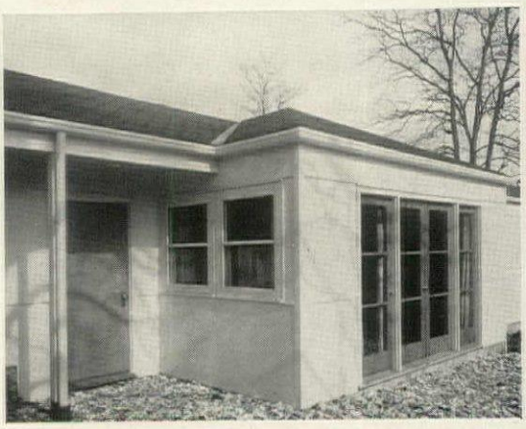
Another purely mental handicap which holds back the application of plastics to Building is their very multiplicity. In the first place, no one seems to know just where the field begins and ends. By any definition, rubber, glass, and putty —to mention only a few "ordinary" plastic materials—are just as much Plastics as cellulose acetate and acrylic resins. Secondly, even the new synthetic materials are so numerous and various that they defy generalization, and discoveries are being made every day which render yesterday's advances partially or wholly obsolete. Unfortunately for the builder, there is no "plastics store" where he may purchase any or all of these materials, and simply to decide which of the kinds on the market is most appropriate to a given purpose can be a man-sized job.

What building professionals need, therefore, is not so much a smattering of Plastics chemistry as a guide to readily available products and their common applications, plus an estimate of the probable effect of present trends and developments on construction technique. To this end, the material on the following pages has been broken-down according to functional rather than chemical classifications. Much that is of interest about the origin and structure of the plastic materials (one, for instance, is a solid formed by combining three gases) has perforce been omitted in order to make room for the data concerning ultimate properties, methods of fabrication, and availability that directly concern builders and architects.

Under these functional headings fall a variety of materials and fabricating techniques almost as broad as Building itself. With very little difficulty, a building could be constructed entirely from plastics now on the market, and it would be in many respects superior to one made of conventional materials. This serves to underline the fact that there are plastics available for almost every building job, capable of doing these jobs in most cases better, and in some cases at lower cost than materials in common use. And besides providing new materials, the Plastics industry has shown itself particularly adept in adding new and remarkable properties to the old. In this respect, and especially in Building, it undoubtedly has a future even more brilliant than its past.

*Polymerization: to form new molecules with higher atomic weight; Hydrophobic: water-repellent.





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1. and **2.** Pioneer use of FORMICA in the Library of Congress Annex, Pierson and Wilson, Architects. FORMICA shelving, panels and trim. **3.** DUREZ resin-bonded plywood used as an exterior facing. **4.** TEXTOLITE table top (Kittinger Co.) of woven wood, with resin lacquer finish which is resistant to alcohol, mild acids, and cigarette burns. **5.** TEXTOLITE used on walls. **6.** Phenolic-bonded WELDWOOD siding, Oscar Fisher, Designer. **7.** Prefinished HASKELITE resin-bonded flooring. *Photos, 2. Hughes Co.; 4. John Beinert; 7. Grignon.*

PLASTICS—DECORATIVE LAMINATES

Plastic **laminates** are made in flat, thin (1/16 to ¼ in.) sheets for use as a decorative, protective veneer, and mounted on fiber board, plywood, and asbestos board (with matching trim and moldings) for structural purposes. They afford a hard, smooth surface which is resistant to water, alcohol, and acids, and which may be made impervious to cigarette burns. A wide range of colors, patterns, certain textures, and—a recent development—genuine decorative woods is available.

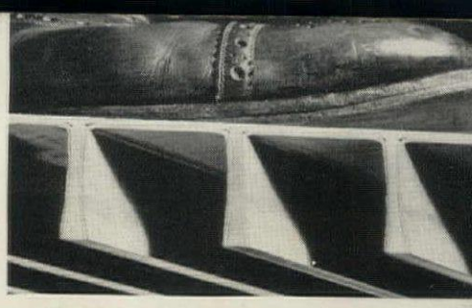
Foundation of the laminated plastic is a multiplicity of layers of phenol- and/or urea-treated paper or fiber combined under heat (350°) and pressure (1100 lbs. per sq. in. and up). Where maximum durability, heat- and acid-resistance are required, phenolic resins are used; where light color or hardness is important, urea resins. The decorative ply may consist of colored or printed paper, cloth, paper-thin wood, or colored resin film. For cigarette-proof material, a thin metal film is added under the finish ply.

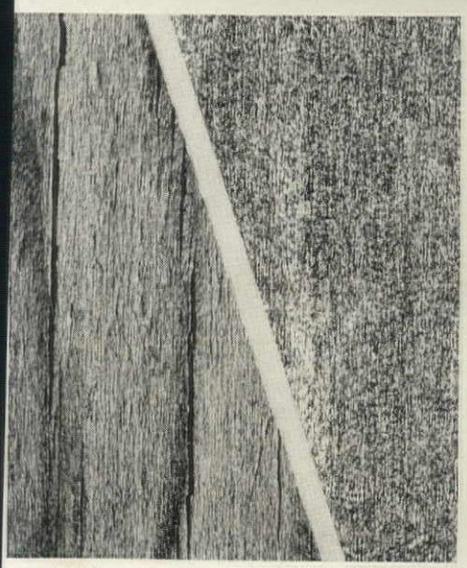
The surface appearance of the laminate may be varied almost endlessly without changing its basic characteristics. Printed designs, patterned or plain cloth, woven wood, overlay designs of colored paper or metal foil—even natural color photographs and designs in fluorescent inks—may be incorporated in the sheet, and satin or textured surfaces achieved by etching the metal plates used in the pressing operation. In addition, since the finished product is usually applied to its support with casein glue in the usual manner, it may be inlaid like ordinary wood veneer.

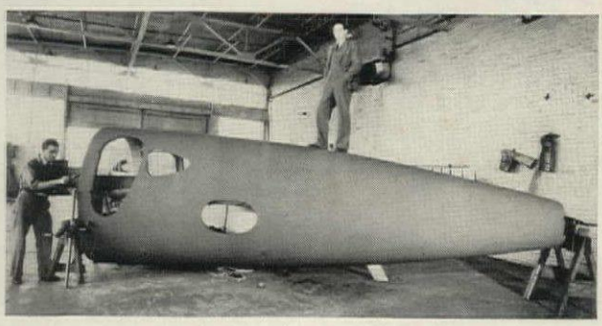
Besides wide use in furniture and bars, laminates are employed as a wall finish, on doors, and for elevator cab interiors. **Translucent** laminates, mostly used for lighting panels and signs, as well as laminated rods and tubes are also available.

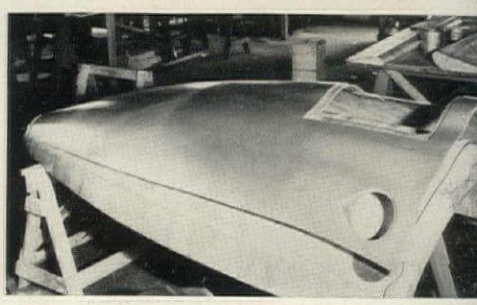
LAMINATED PLASTICS (Opaque and Translucent)

FORMICA	Formica Insulation Co.
INSUROK	The Richardson Co.
LAMICOID	Mica Insulator Co.
MICARTA	Westinghouse Elec. & Mfg. Co.
TEXTOLITE	Parkwood Corp. — General Electric Co.









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1. Gum WELDBORD ceiling, painted. Bayott WELDBORD (urea-bonded) built-in furniture. Carl Koch, Jr. and Edward D. Stone, Architects. **2.** Surface checking of exposed unpainted plywood. Right shows prevention of checking by treating surface plies with synthetic resin,* Forest Products Laboratory. **3.** DURAMOLD fuselage made by forming resin-dipped wood plies under heat and pressure; **4.** Completed plane, light and very strong. **5.** DURAMOLD construction of airplane flooring and **6.** door casing.* **7.** Airplane fuselage showing mold used in VIDAL process. Limp laminations of wood are draped over the mold, which is then placed in a rubber bag and the air exhausted. The whole is then "cooked" under steam pressure.

Photos, 1. Ezra Stoller; 5, 6. Fred G. Korth.

PLASTICS—RESIN-BONDED PLYWOOD

While the development of plywood took place outside the plastics industry, the newer **resin-bonded** type may properly be classified as a plastic laminate of relatively low resin content. It differs from other forms of laminated plastics only in that thicker wood veneers replace the paper or fiber body-sheets ordinarily used; the thinner and more numerous the veneers, the more nearly the characteristics of the finished product approach those of typical laminates.

Biggest advantages of resin-bonded plywood are its greater stability, durability, and resistance to fungi, weather, and fire. Less well known is the fact that the use of resinous bonding materials speed and simplify the manufacturing process, partially or wholly counterbalancing their added cost. Like all plywood, the resin-bonded type offers the advantage of big sheets, equally strong in both directions, and the opportunity for the economical use of rare woods over extended areas.

Most grades are hot-pressed. For the **exterior** grade phenolic resins are used, in liquid or film form; for **interior** use the bonding agent is usually urea-formaldehyde. In addition, cold setting resins are sometimes used, especially for joints where hot-pressing is impracticable.

Current developments which should ultimately prove extremely interesting to Building include **molded** plywood shapes, and resin **impregnation** of the surface ply. Remarkable properties are added by these processes, including greatly increased strength, hardness, stability, and durability. Already they are rapidly being applied to the manufacture of auto and airplane parts, small boats, skiis, and a host of similar products, and it may be expected that products for building will follow in short order.

RESIN BONDED PLYWOOD

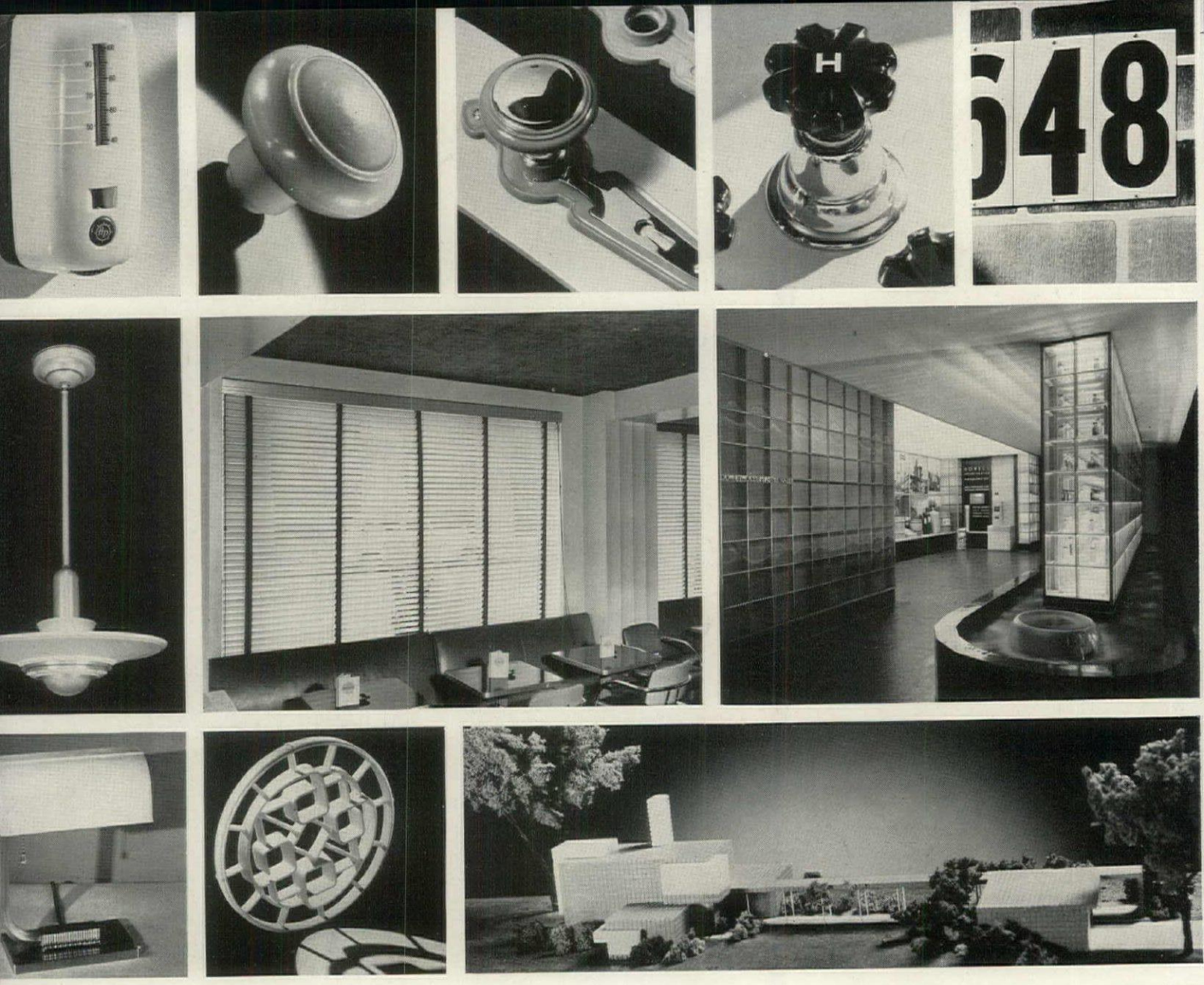
Exterior Grade, Douglas Fir Plywood
Manufacturer Members, Douglas Fir Plywood Association

LAMINEX	Wheeler Osgood Sales Corp.
PHEMALOID	Haskelite Mfg. Co.
WELDWOOD (Exterior) WELDBORD (Interior)	U. S. Plywood Corp.

RESIN BONDS FOR PLYWOODS AND VENEERS

Bakelite Corp.
Durez Plastics & Chemicals, Inc.
Resinous Products & Chemical Co., Inc.
Beetle Products Division, American Cyanamid Corp.
Carbide & Carbon Chemicals Corp.
Catalin Corp.
E. I. du Pont de Nemours & Co., Inc.
Durite Plastics, Inc.
Hercules Powder Co.
Makalot Corp.
Marblette Corp.
Reilly Tar & Chemical Corp.

Products marked thus * are experimental, not yet commercially available.



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1, 2, 3, and **4.** Molded TENITE. Thermostat for Automatic Product Co., doorknob for National Brass Co., escutcheon for Lockwood Hardware Mfg. Co. and valve-handle for Youngstown Pressed Steel Co. **5.** VINYLITE house numbers. **6.** BEETLE shade, Silvray Lighting Fixture Co. Lighter and cheaper than glass, easy to clean, and with excellent diffusing qualities. **7.** Laminated BAKELITE (Lamicoid) venetian blinds by Rex Co. Translucent, available in various colors. **8.** Experimental DOW BLOCK* building units for interior and exterior use, transparent, translucent, and opaque. (**11** shows model of a building covered with these units). **9.** BEETLE lamp shade for Chase Brass & Copper Co. **10.** TENITE lighting grille, translucent.

PLASTICS—MOLDED PRODUCTS

The field of **molded plastics** embraces a great number of synthetic and natural materials and a variety of molding techniques, each having peculiar properties adapted to particular uses. Broadly speaking, the materials may be classified as thermoplastic (those which soften on heating), thermosetting (those which harden after heating, thereafter will not re-soften), and coldmolding compounds. The molding methods most commonly used are injection molding and compression molding. Simply to distinguish between the multitude of combinations of these basic types requires an expert. Fortunately for the architect, this is the job of the manufacturer, since molded plastics are used in Building in the form of finished products employing plastic materials appropriate to the purpose.

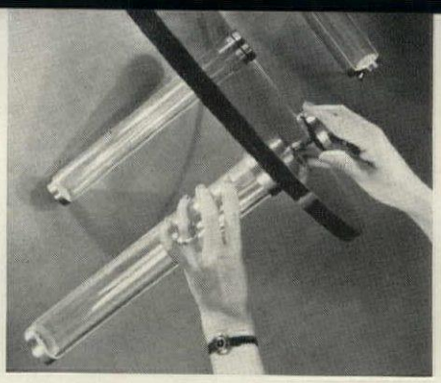
In general, molded parts are used for small and medium-sized mass-produced articles where color and surface are important factors. Commonest uses in Building (of which the collection shown above is merely representative, by no means exhaustive) are for items like hardware, switch plates, shades for lighting fixtures, etc. Properties which recommend plastics for these purposes are ease of fabrication, light weight, good electrical insulation, and smooth, permanent, colorful surfaces. Molded parts may be transparent, translucent, or opaque, in a full range of colors including pastel shades and marbleized effects, and may be varied in strength by the addition of binding agents.

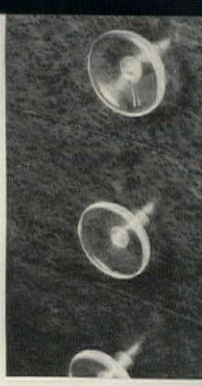
A recent development which takes advantage of all these properties is the plastic building unit* shown above, which may ultimately be used for covering interior and exterior walls, and obscure and transparent windows, with a uniform, tile-like material.

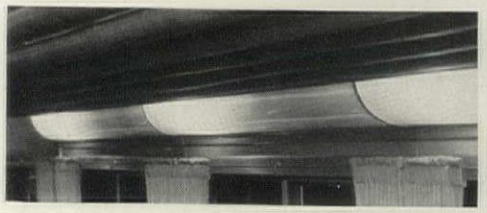
PLASTICS FOR MOLDING

BAKELITE	Bakelite Corp.
BEETLE	Beetle Products Div., American Cyanamid Corp.
CATALIN	Catalin Corp.
CRYSTALITE	Röhm & Haas Co., Inc.
DUREZ	Durez Plastics & Chemicals, Inc.
LUMARITH	Celluloid Corp.
MAKALOT	Makalot Corp.
MARBLETTE	Marblette Corp.
MONSANTO	Monsanto Chemical Co.
PLASTACELE	E. I. duPont de Nemours &
LUCITE	Co., Inc.
PLASKON	Plaskon Co., Inc.
RESINOX	Resinox Corp.
STYRON	Dow Chemical Co.
TENITE	Tennessee Eastman Corp.
TEXTOLITE	Parkwood Corp.—General Electric Co.
VINYLITE	Carbide & Carbon Chemicals Corp.

Products marked thus * are experimental, not yet commercially available.







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1. LUCITE dental lamp showing ability of material to carry light around bends. **2.** Translucent INSUROK sheets used for exterior sign. **3.** LUCITE table legs for table by Gilbert Rohde. **4.** PLEXIGLAS drawer pulls turned from stock sheets, same designer. **5.** Bent LUCITE sheet used in lighting fixture. **6.** Sign, demonstrating "edge lighting." **7.** Cast and molded LUCITE ceiling, designed by Timothy Pflueger. Inner surface of units sandblasted. **8.** Extruded, elastic VINYLITE strips woven for chair seat and back; VINYLITE covering over fabric on couch in background. Designed by Morris B. Sanders. **9.** Extruded LUMARITH chair, FORMICA table top, PLEXIGLAS sculpture in background. Designed by Walter von Nessen.
Photos, 1. Dana B. Merrill; 3. Louis Werner; 5. Robert Flint; 6. Hedrich-Blessing; 7. Ansel Adams; 9. Metropolitan Museum of Art.

PLASTICS—CAST, EXTRUDED, SHEETS, RODS AND TUBES

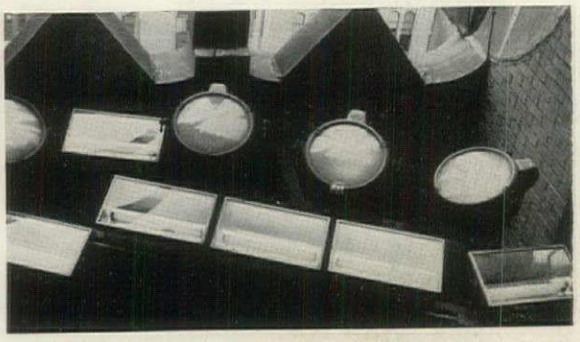
Under this rather unorthodox heading come many of the plastics already listed as laminates and most of those used for molding. The point of the grouping so far as the architect is concerned is that the materials shown on this page can be fabricated by hand. under his direction, with ordinary tools. Most are in this respect even more flexible than conventional materials, since in addition to sawing, cutting, drilling, and threading like a cross between wood and metal, they are available in transparent and translucent form and some may be bent to shape in hot water.

Another remarkable property possessed by some of the transparent plastics is called "edge lighting." Light introduced at the edge of a sheet or at the end of a rod is conducted through any number of convolutions without emerging until it reaches another edge, or end, or until it strikes an etched surface. Due to what is known as "total reflection" by the *inside* of the surface of the material, this property makes it particularly adaptable to signs and decorative work. In such applications, the source of the light may be concealed.

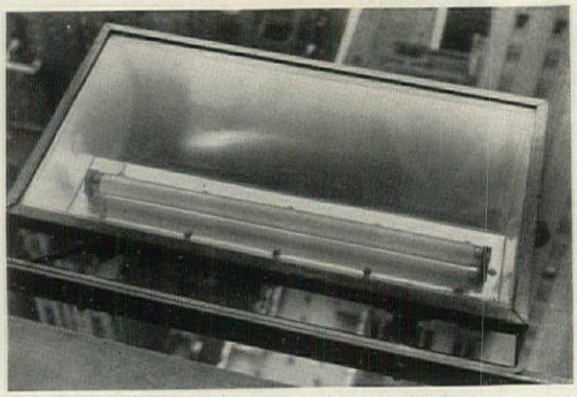
Plastic **sheets** of various thickness, size, color, and degrees of transparency, and matching **rods** and **tubes** are available and may be purchased in small quantities. Recent developments include **extruded** strips, which can be obtained in the form of woven matting (opaque, translucent, or transparent) and similar **elastic** strips, both of which are finding wide use in furniture. In addition, it is possible to coat various fabrics, leather, and even fine lace with a tough, resilient layer of transparent plastic for protection against water, stains, etc. In using transparent plastic sheets, remember that the surface is more easily scratched than glass, and requires waxing and polishing.

EXTRUDED, CAST, Sheets, Rods, and Tubes

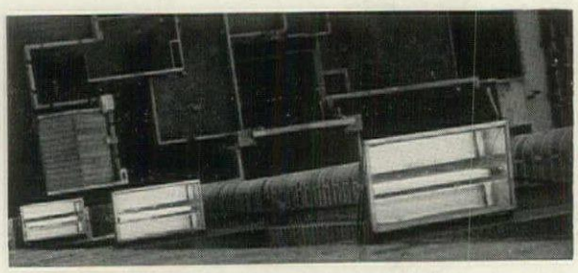
BAKELITE	Bakelite Corp.
BEETLE	Beetle Products Div., American Cyanamid Co.
LUMARITH	Celluloid Corp.
LUCITE PLASTACELE PYRALIN BUTACITE	E. I. duPont de Nemours & Co., Inc.
INSUROK	The Richardson Co.
MONSANTO	Monsanto Chemical Co.
MAKALOT	Makalot Corp.
MARBLETTE	Marblette Corp.
PLEXIGLAS	Röhm & Haas Co., Inc.
TENITE	Tennessee Eastman Corp.
VINYLITE	Carbide & Carbon Chemicals Corp.



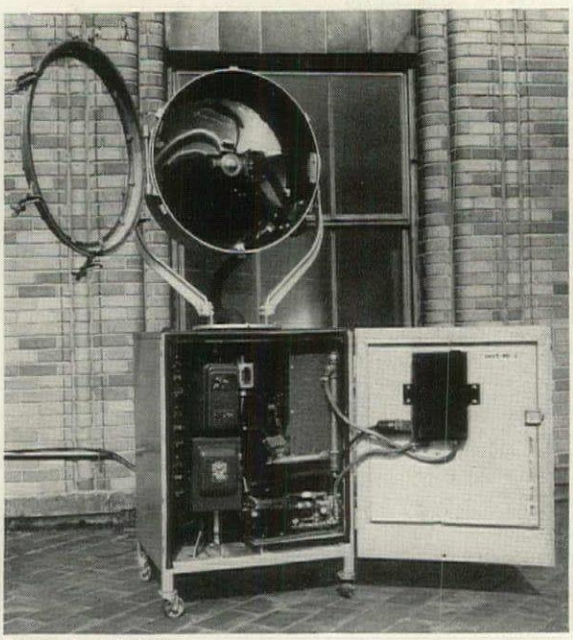
Forty 1000-watt incandescent floodlights, left over from a former installation, alternate with 88 15-watt fluorescent units in lighting the tracery at the top of the building red and blue.



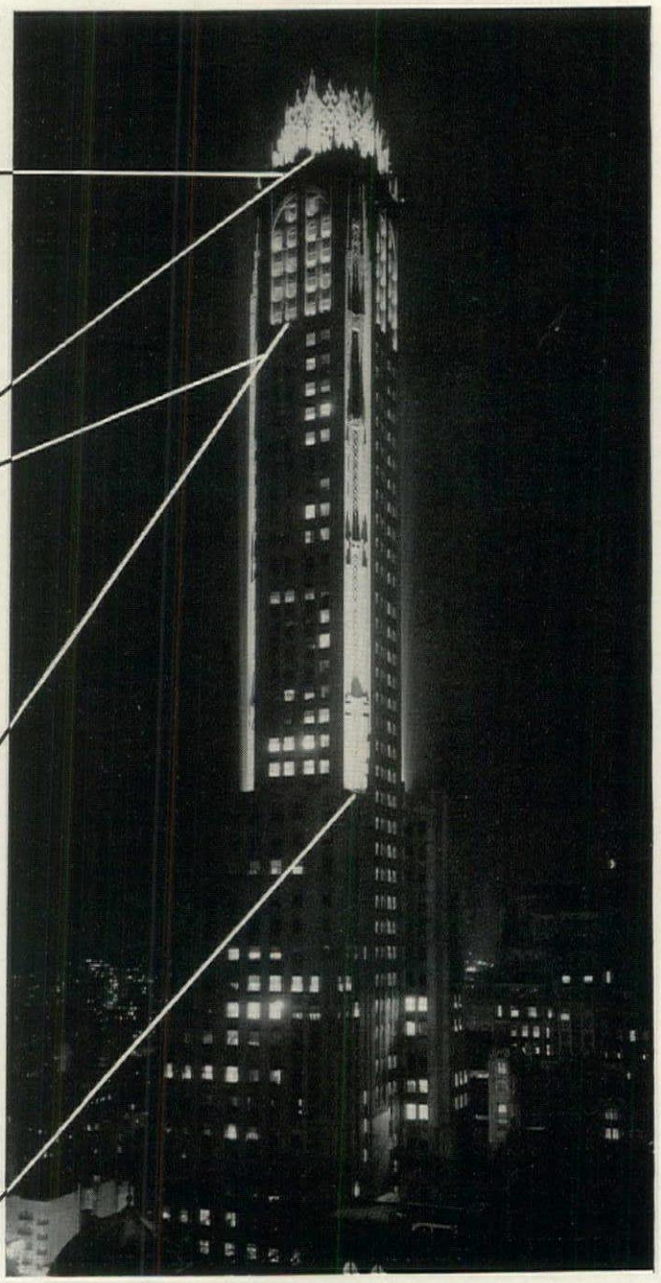
Typical unit for both tracery and window lighting is a simple, glass covered box containing a 15-watt lamp.



Windows are flooded with blue light by units mounted at the level of the window sill, one per window.



Photos, Rolf Tietgens



FLUORESCENT FLOODLIGHTING

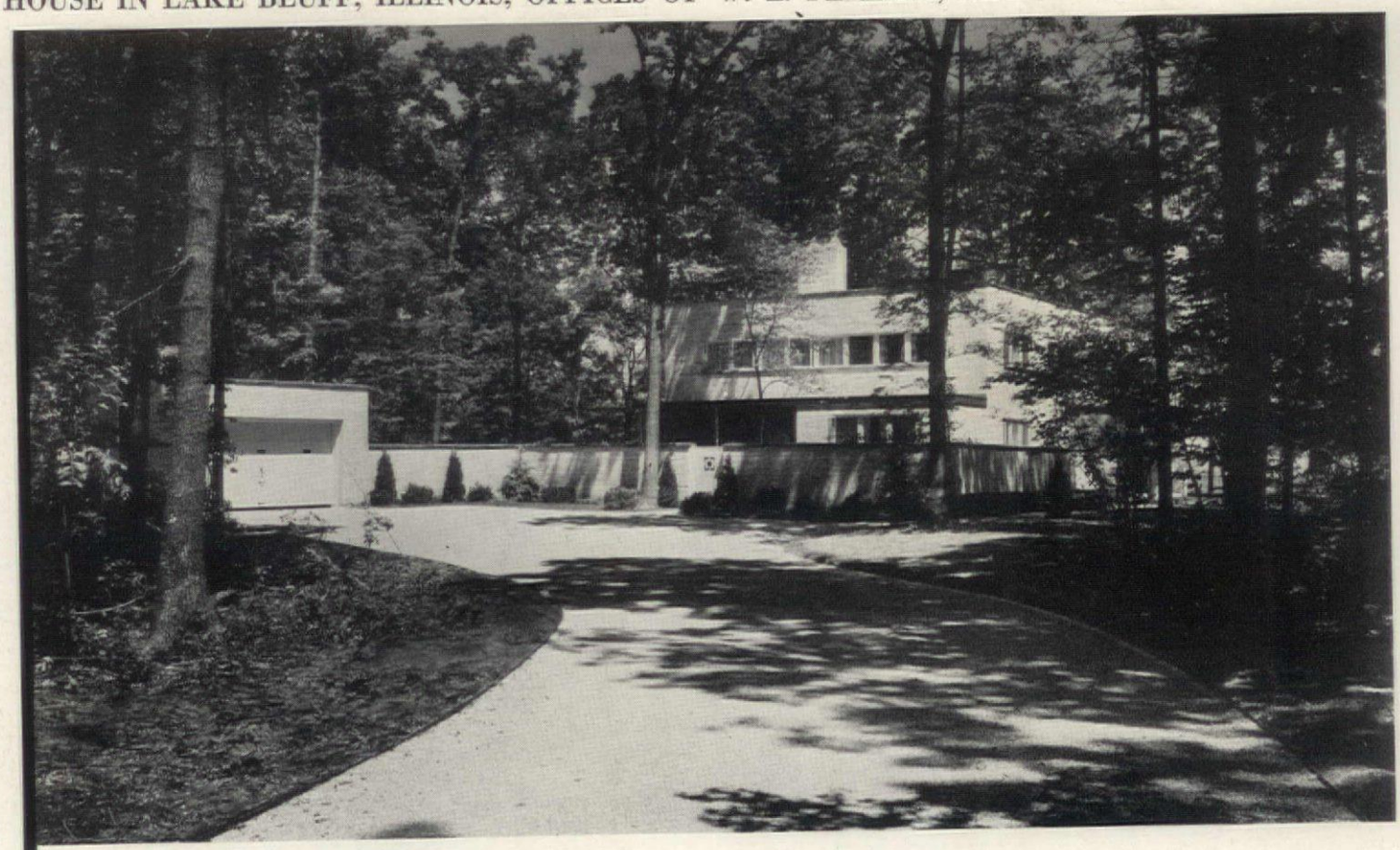
More than any other, the thing which has held back night-lighting of monumental structures is current cost. Floodlighting in color has been at a double disadvantage because color screens over the light source absorb a large part of the light. Fluorescent lamps, with their low current consumption and highly efficient production of colored light, offer a means for overcoming both obstacles. To prove this point, General Electric has recently installed such a system for the night illumination of its 50-story New York office building.

Less than 3 Kw are used by the 162 blue fluorescent floodlights in the new system. Since it is estimated that more than 100 Kw would be needed to accomplish the same results with incandescent lamps, this represents a current-saving of 97 per cent. In addition, the new units are of unusually simple construction, last longer, and require less attention than ordinary floodlights.

(Left) Experimental million-lumen spotlights, located at the four corners of the tower base, each employ three of the new 1,000-watt "peanut tube" high-intensity mercury lamps, about the size of a cigarette, in a cooling jacket through which water is continuously circulated. Besides a pump and radiator for this purpose, the supporting box contains automatic switching equipment.

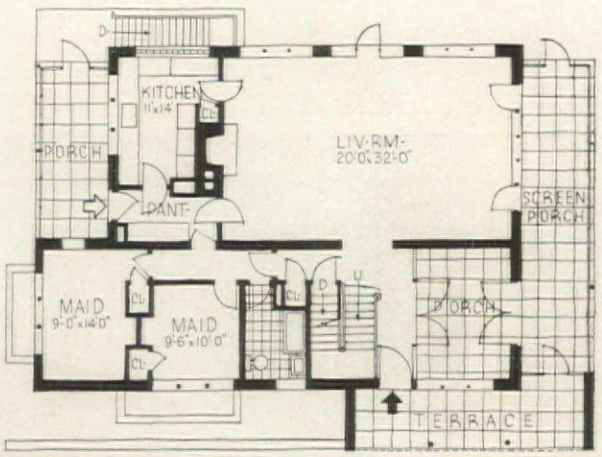
HOUSES

HOUSE IN LAKE BLUFF, ILLINOIS, OFFICES OF W. L. PEREIRA, ARCHITECT

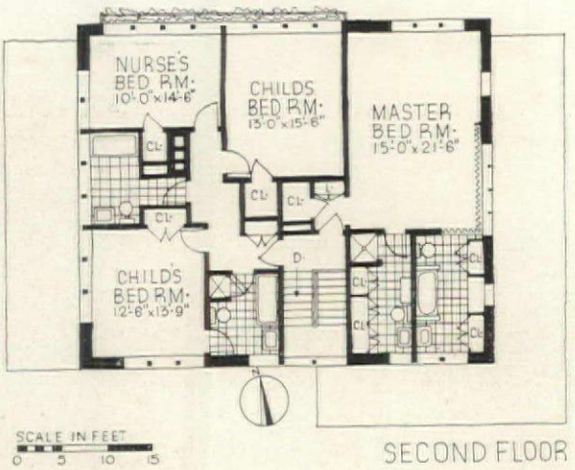


Hedrich-Blessing Photos

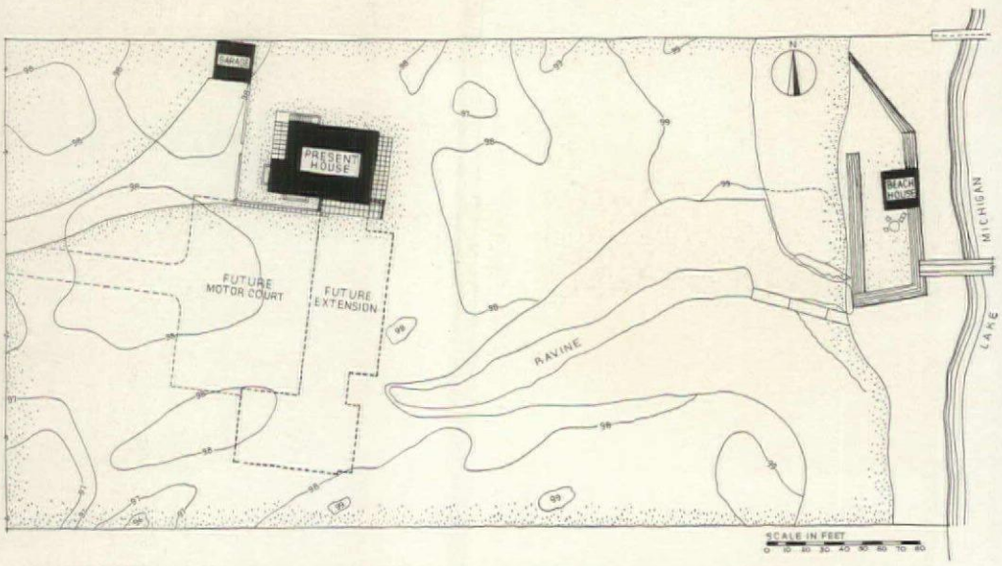
HOUSE AND BEACH HOUSE IN LAKE BLUFF, ILL.



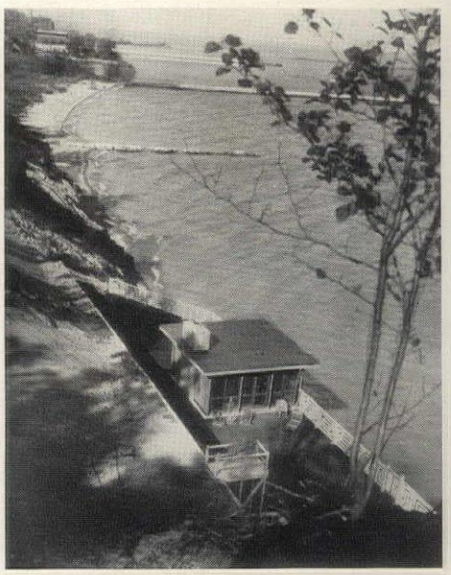
FIRST FLOOR

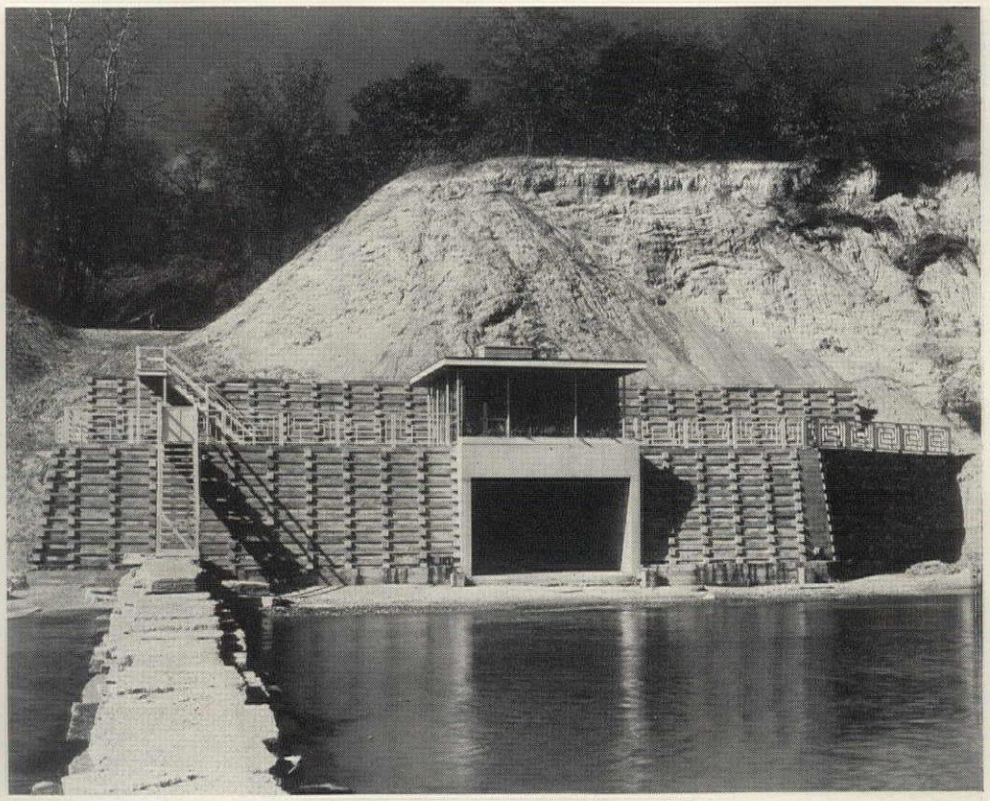


SECOND FLOOR



Hedrich-Blessing Photos





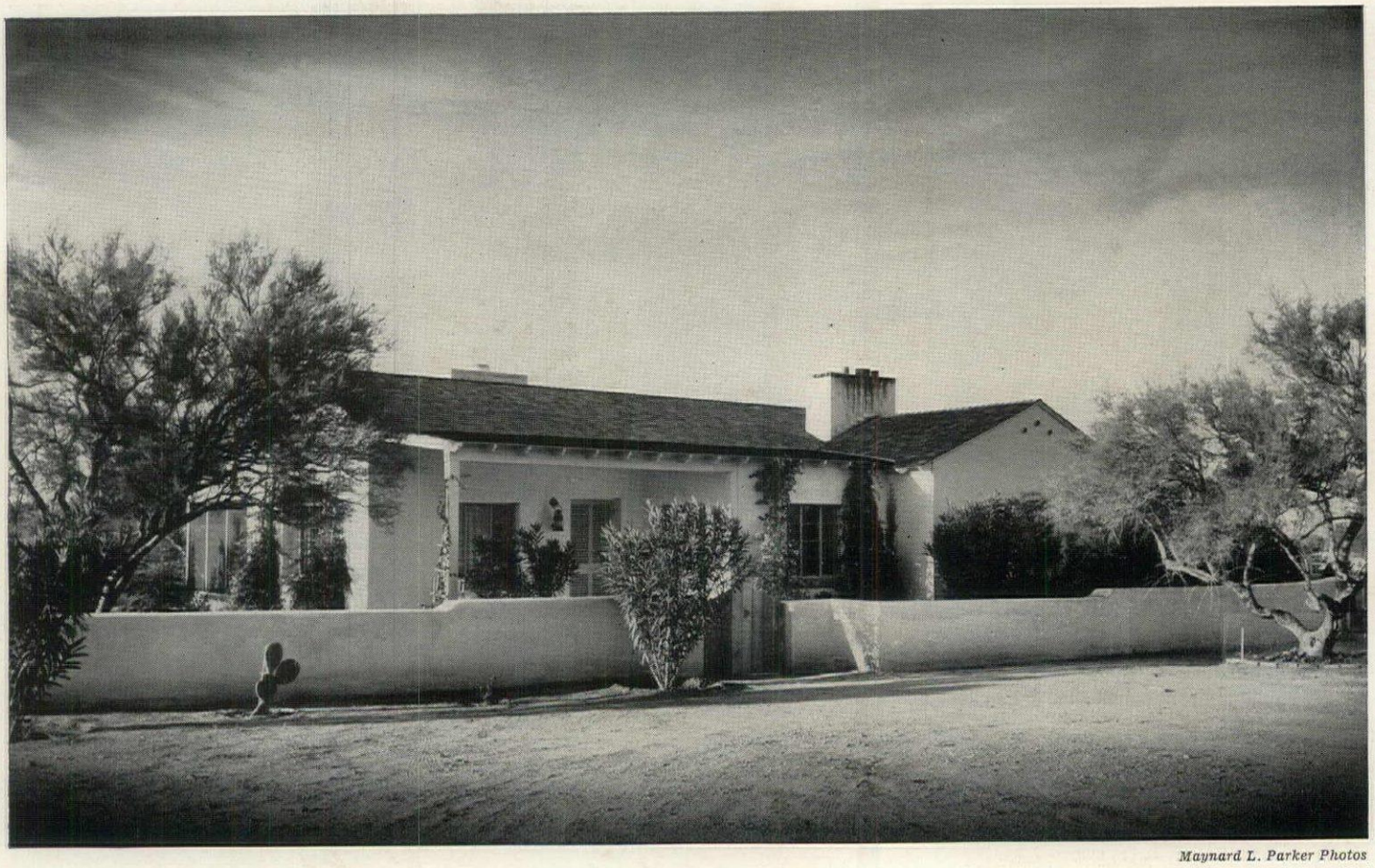
BEACH HOUSE

The house shown on the preceding two pages together with the beach house on this page occupy a high, wooded site on the shore of Lake Michigan. The house, which is planned as part of a much larger unit, nevertheless contains extremely adequate facilities for a small family and several servants. Parents' and children's bedrooms—the latter separated by a room for the nurse—are nicely divided by the compact stair hall; servants' rooms are segregated on the ground floor. Absence of a separate dining space is no doubt accounted for by future plans. The beach house is distinguished by the frank and attractive use of the retaining wall, built from precast concrete units, exceptionally open design, and severely functional treatment of its various elements relieved only by the decorative railing.

CONSTRUCTION OUTLINE

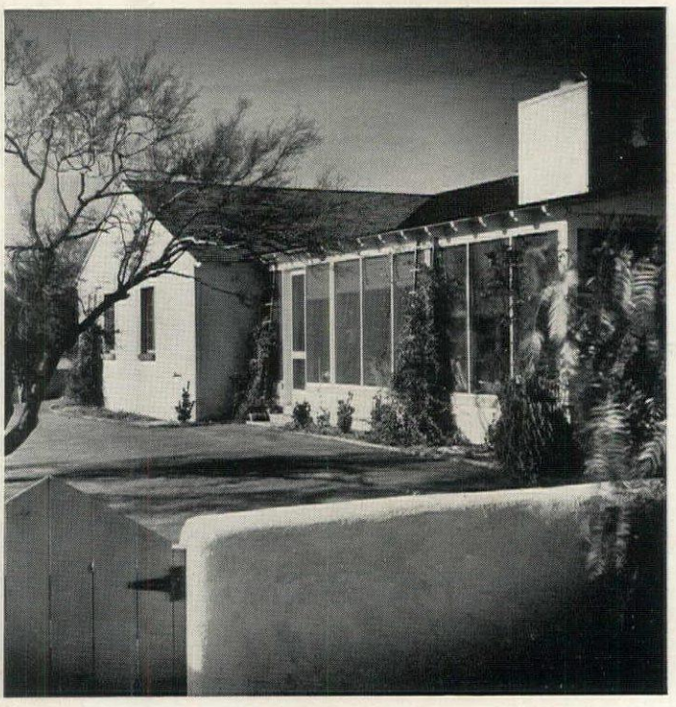
FOUNDATION: Concrete. Waterproofing—Hydratite and Dehydrative, A. C. Horn Co.
STRUCTURE: Exterior walls—common brick, wood furring, U. S. Gypsum Co. rock-lath and plaster, Sprayo-Flake Co. insulation. Interior partitions—wood studs, rock-lath and plaster. Ceilings—metal lath and plaster. Floor construction (1st.)—concrete; (2nd.) wood joists.
ROOF: Covered with asphalt saturated felt, Bird & Sons. Decks—covered with canvas.
FIREPLACE: Damper—Colonial Fireplace Co.
SHEET METAL WORK: Ducts—galvanized iron; remainder—copper.
INSULATION: Outside walls—Sprayo-Flake Co. Roof—rockwool, Johns-Manville Corp. Weather-stripping—Monarch Metal Weather Strip Co.
WINDOWS: Sash—steel, Crittall-Federal, Inc. Glass—Double strength, quality A, and Louvrex, Libbey-Owens-Ford Glass Co. Glass blocks—Pittsburgh Corning Corp. Screens—Ceco Steel Products Co.
FLOOR COVERINGS: All floors—linoleum, Sloane-Blabon Corp.
WOODWORK: Trim—metal. Doors—Roddis Lumber & Veneer Co. Garage doors—Overhead Door Co.
HARDWARE: By Reading Hardware Co.
PAINTING: Material Dutch Boy, National Lead Co.
ELECTRICAL INSTALLATION: Wiring system 3 phase 4 wire. Switches—Bryant Electric Co.
KITCHEN EQUIPMENT: Range—Castleton Electric Range. Refrigerator—General Electric Co. Cabinets—steel, Elgin Stove & Oven Co.
BATHROOM EQUIPMENT: All fixtures by Kohler Co. Shower—Fiat Metal Mfg. Co.
PLUMBING: Soil pipes—cast iron. Water pipes—copper. Deep well pump—Peerless Mfg. Co.
HEATING: Warm air system, filtered and humidified. Boiler—Sunbeam, Fox Furnace Co. Thermostat and regulator—Minneapolis-Honeywell Regulator Co. Water heater—Ray Heat & Power Co.

HOUSE IN TUCSON, ARIZONA

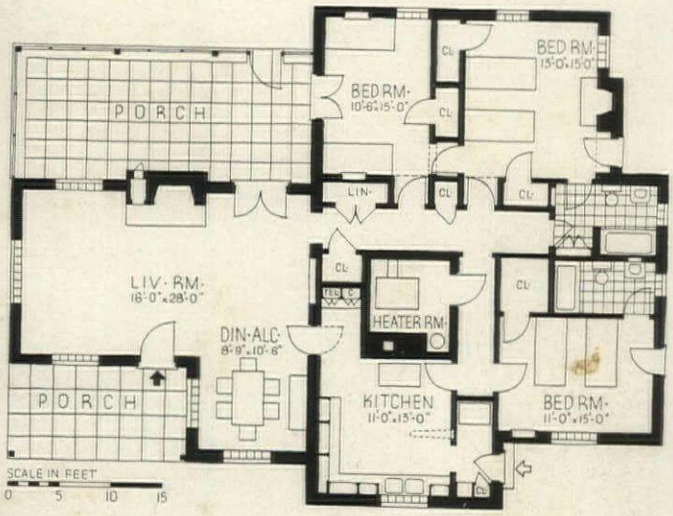


Maynard L. Parker Photos

Adobe brick was used in the construction of this house, thus carrying on a local tradition in the structure as well as exterior treatment; the brick is covered with stucco on the outside and plaster on the interiors. The plan is very compact, with three bedrooms and a kitchen grouped in the main block, and a living-dining space in the adjoining wing. Use of the pitched roof to gain added height inside is a practical as well as an attractive feature. Cost: about 46 cents per cu. ft.



RICHARD A. MORSE, ARCHITECT



LIVING ROOM

CONSTRUCTION OUTLINE

FOUNDATION: Reenforced concrete.

STRUCTURE: Exterior walls—adobe brick and stucco; inside—plaster applied directly to adobe. Interior partitions—Douglas fir and plaster on Johns-Manville Corp. Steeltex. Floor construction—reenforced concrete slab.

ROOF: Covered with red cedar shingles.

FIREPLACE: Superior Fireplace Co.

SHEET METAL WORK: Flashing and ducts—galvanized iron.

INSULATION: Roof—4 in. glass wool, U. S. Gypsum Co. Weatherstripping—Accurate Metal Weatherstripping Co.

WINDOWS: Sash and screens—Fenestra, Detroit Steel Products Co. Glass—double strength, quality A, Pittsburgh Plate Glass Co.

FLOOR COVERINGS: Kitchen and bathrooms—linoleum, Armstrong Cork Co.

WOODWORK: Trim and interior doors—California white pine. Exterior doors—Douglas fir.

HARDWARE: By Lockwood Mfg. Co., Chicago Spring Hinge Co., McKinney Mfg. Co. and Stanley Works.

PAINTING: Materials by Muralo Co., Pittsburgh Plate Glass Co., J. M. Scofield Co., Reardon Co. and Samuel Cabot, Inc.

ELECTRICAL INSTALLATION: Wiring system—rigid conduit and metallic tubing. Switches—tumbler, Bryant Electric Co.

KITCHEN EQUIPMENT: Range—Westinghouse Electric & Mfg. Co. Refrigerator—Stewart-Warner Corp. Sink—Crane Co. Cabinets—Nappanee, Coppes, Inc.

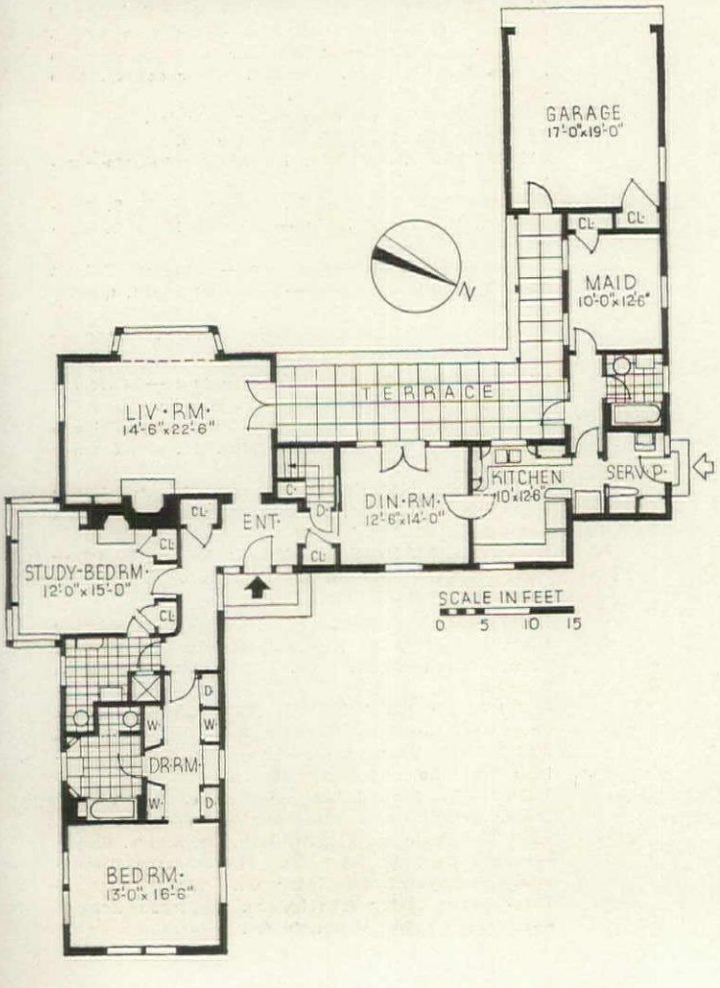
BATHROOM EQUIPMENT: All fixtures by Crane Co. Cabinets—Miami Cabinet Div., Philip Carey Co.

PLUMBING: Water pipes—Anaconda copper, American Brass Co. and galvanized steel.

HEATING: Forced hot air system, Duo-Therm, Motor Wheel Corp. Fuel pump—Cook Automatic with Westinghouse Electric Mfg. Co. motor. Grilles—Independent Register Co. Thermostats—Minneapolis-Honeywell Regulator Co. Water heater—Duo-Therm, Motor Wheel Corp. Bathroom heaters—Markel Electric Products Co.

HOUSE IN ARCADIA, CALIFORNIA

George D. Haight Photos



The one-story Z-plan provides an almost ideal framework for comfortable living when the lot size and budget permit its use. With this scheme, through ventilation is assured in almost every room and the plan facilitates the development of house and land as an integral unit. Here it has been handled with skill and charm, making good use of the site and of the existing trees on it. For all its apparent size the house is not a large one: there is only one bedroom and a study-guest room. The use of the bedroom corridor for all closets and dressing facilities is excellent.

H. ROY KELLEY, ARCHITECT

LIVING ROOM

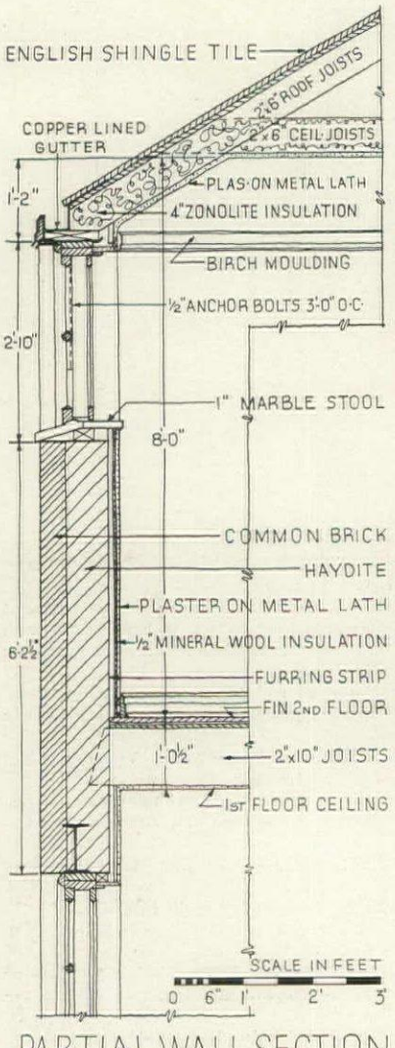
STUDY

CONSTRUCTION OUTLINE

FOUNDATION: Concrete.
STRUCTURE: Exterior walls—frame and cement plaster; inside—gypsum plaster. Den walls finished with Douglas fir plywood. Floor construction—oak strip finish flooring.
ROOF: Covered with red cedar shingles.
SHEET METAL WORK: All galvanized copper bearing steel.
WINDOWS: Sash—steel casement, Truscon Steel Co. Glass—double strength.
FLOOR COVERINGS: Main rooms—oak strip. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WOODWORK: Interior—white pine. Exterior doors—redwood.
HARDWARE: By Russell & Erwin Mfg. Co.
PAINTING: Materials by Sherwin-Williams Co. and Reardon Co.
ELECTRICAL INSTALLATION: Wiring system—conduit. Switches—Bryant Electric Co. Fixtures—Luminaire Co.
KITCHEN EQUIPMENT: Range—Tappan Stove Co. Refrigerator—Electrolux, Servel, Inc.
BATHROOM EQUIPMENT: All fixtures by American Radiator-Standard Sanitary Corp.
PLUMBING: Pipes—galvanized steel.
HEATING: Payne forced air furnaces, gas fired, Payne Furnace & Supply Co.

ENTRANCE SIDE

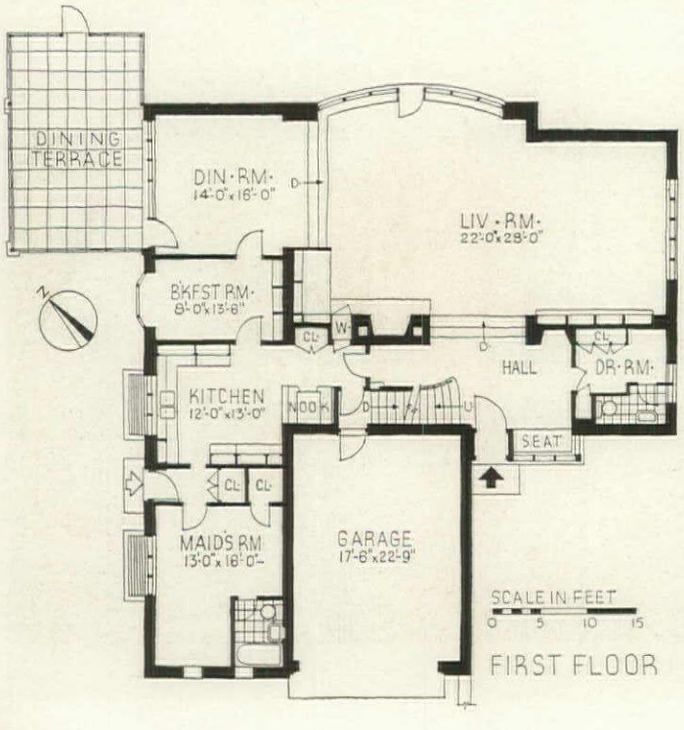
HOUSE IN HIGHLAND PARK, ILLINOIS



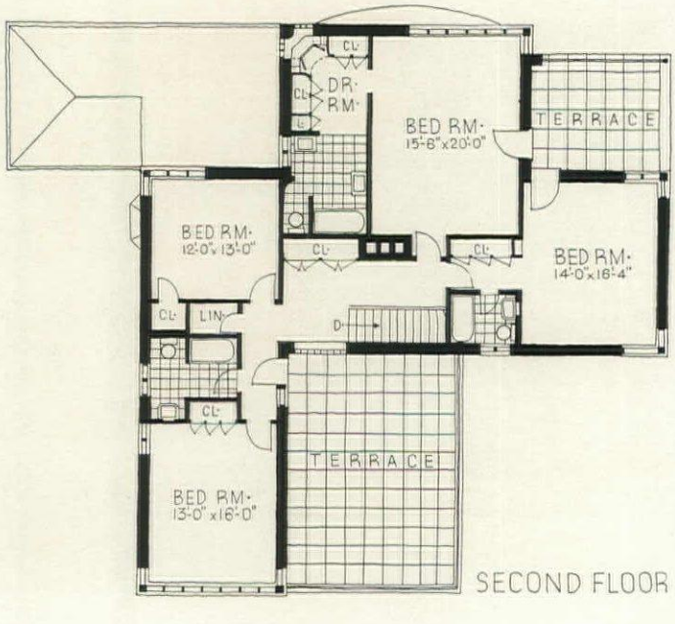
PARTIAL WALL SECTION

Hedrich-Blessing Photos

An interesting approach to the problem of the modern house, in which the architects have avoided a repetition of the usual tags by means of which much contemporary work seeks to assert its modernity. The house is built of common brick, painted white, with fenestration clearly determined by the interior requirements. The roof is pitched, save where decks were needed; in connection with the decks it should be noted that the most common drawback—loss of privacy for the rooms adjoining them—has been largely eliminated. The plan shows a workable scheme, with well-lighted rooms of generous dimensions.



FIRST FLOOR



SECOND FLOOR

LIVING ROOM

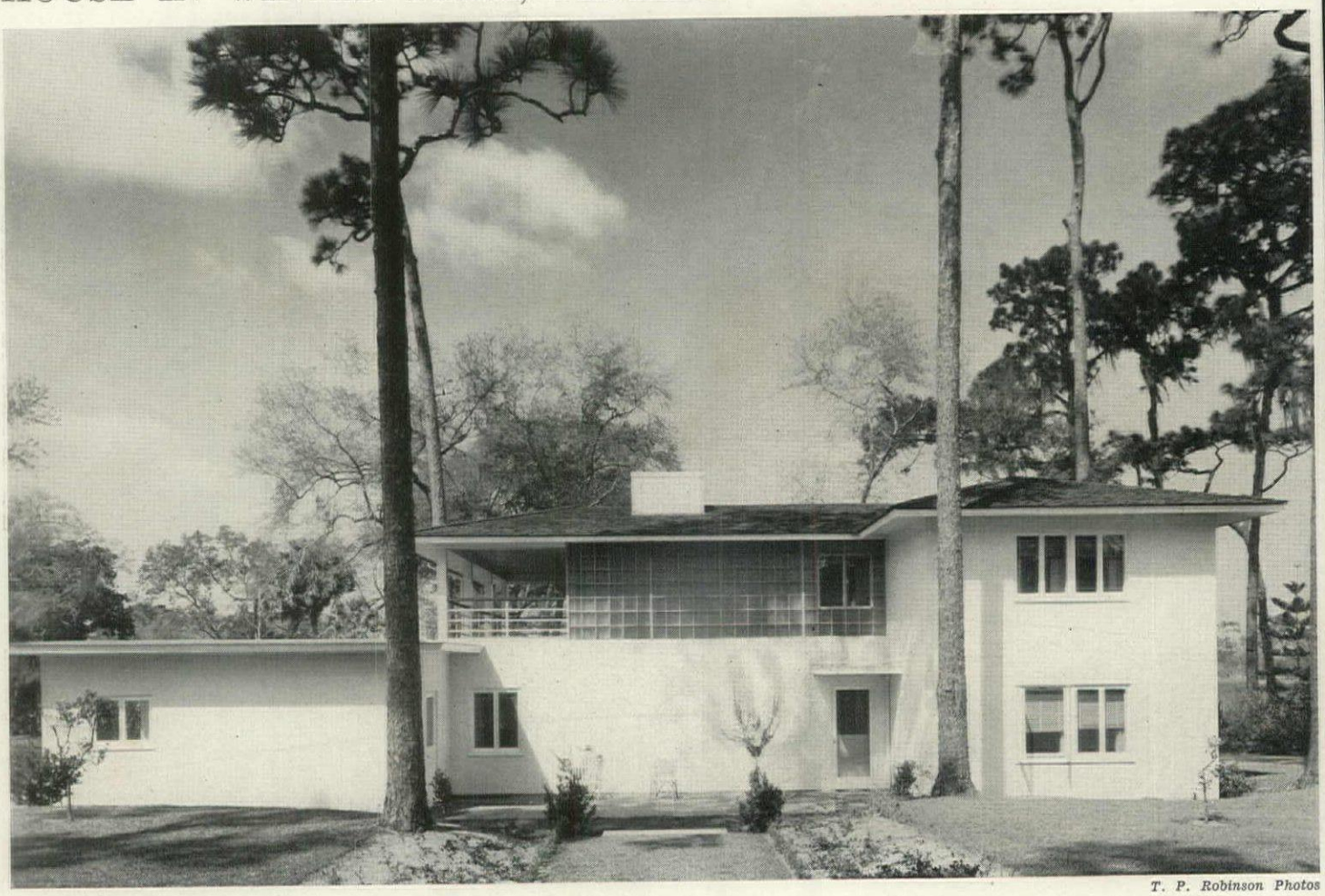
LIVING-DINING

ENTRANCE HALL

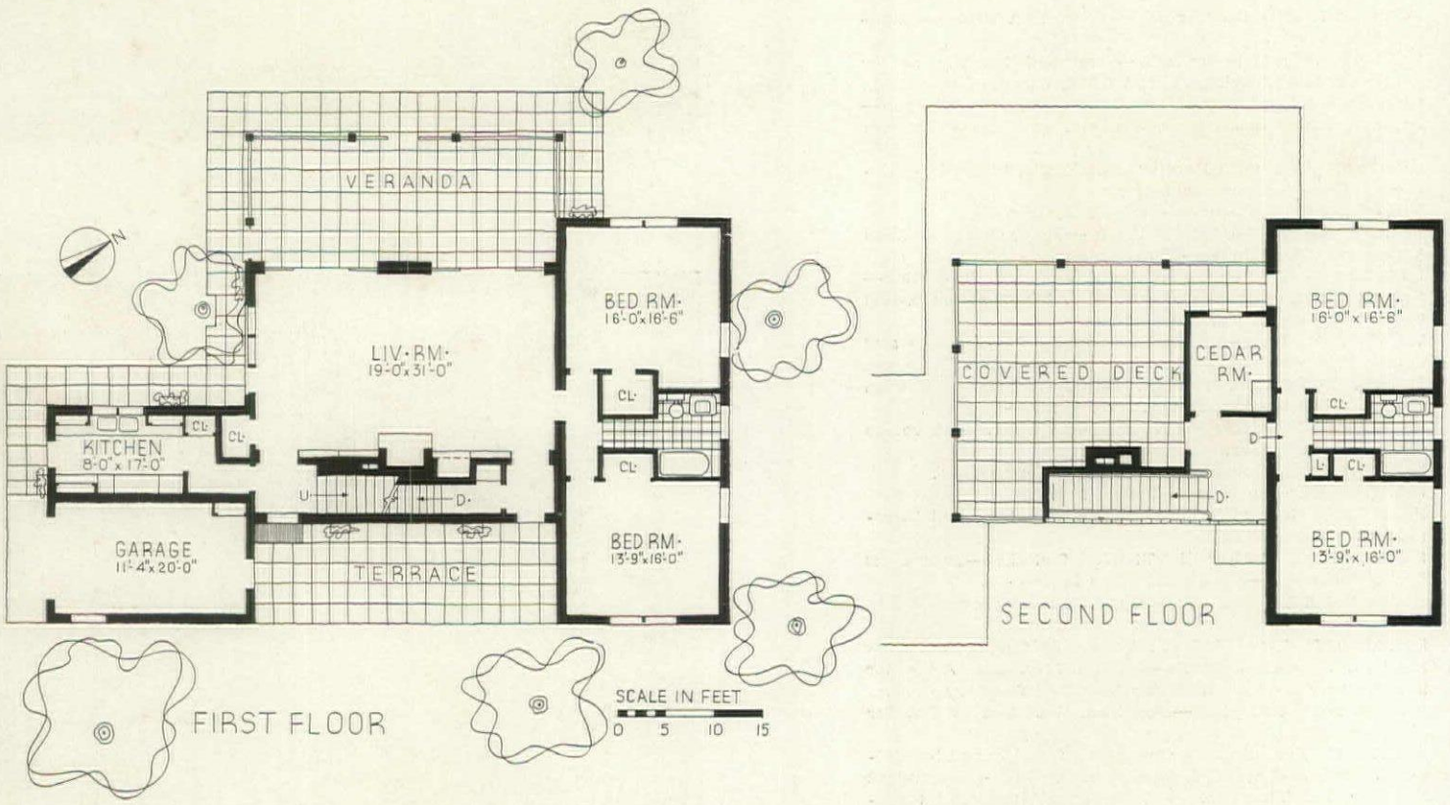
CONSTRUCTION OUTLINE

FOUNDATION: Reenforced concrete. Waterproofing—asphalt emulsion.
STRUCTURE: Exterior walls—common brick, 8 in. hollow cinder concrete blocks, Cabot's Quilt, Samuel Cabot, Inc., furring; inside—plaster on metal lath. Floor construction—Jones & Laughlin Junior beams and reenforced concrete slab.
ROOF: Covered with English shingle tile, Ludowici-Celadon Co. Deck—covered with 16 oz. copper.
FIREPLACE: Damper—Colonial Fireplace Co.
SHEET METAL WORK: Ducts—copper bearing steel galvanized. Remainder—16 oz. copper.
INSULATION: Outside walls and sound insulation—Cabot's Quilt, Samuel Cabot, Inc. Attic floor—rockwool bats. Roof—hard board insulation.
WINDOWS: Sash—redwood casement. Glass—plate and double strength, quality A, Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Main rooms—oak covered with carpet. Kitchen—rubber tile. Bathrooms—clay tile.
WALL COVERINGS: Bedrooms—wallpaper. Bathrooms—tile and wallpaper.
WOODWORK: Garage doors—Barber-Colman Co.
HARDWARE: By Yale & Towne Mfg. Co.
PAINTING: Materials by Samuel Cabot, Inc., and International Chemical Co.
ELECTRICAL INSTALLATION: Switches—Square D Co. Kitchen fan—Ilg Electric Ventilating Co.
KITCHEN EQUIPMENT: Range and refrigerator—Sears, Roebuck.
BATHROOM EQUIPMENT: Toilet—Briggs Beautyware, Briggs Mfg. Co. Cabinets—Morton Mfg. Co. All other fixtures by American Radiator-Standard Sanitary Corp.
PLUMBING: Soil pipes—cast iron. Hot and cold water pipes—copper.
HEATING: Forced warm air system, filtering and humidifying. Boiler—Bryant Electric Co. Grilles—Independent Register Co. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—American Gas Products Corp.

HOUSE IN WINTER PARK, FLORIDA



T. P. Robinson Photos



PHILIP L. GOODWIN, ARCHITECT

WEST ELEVATION

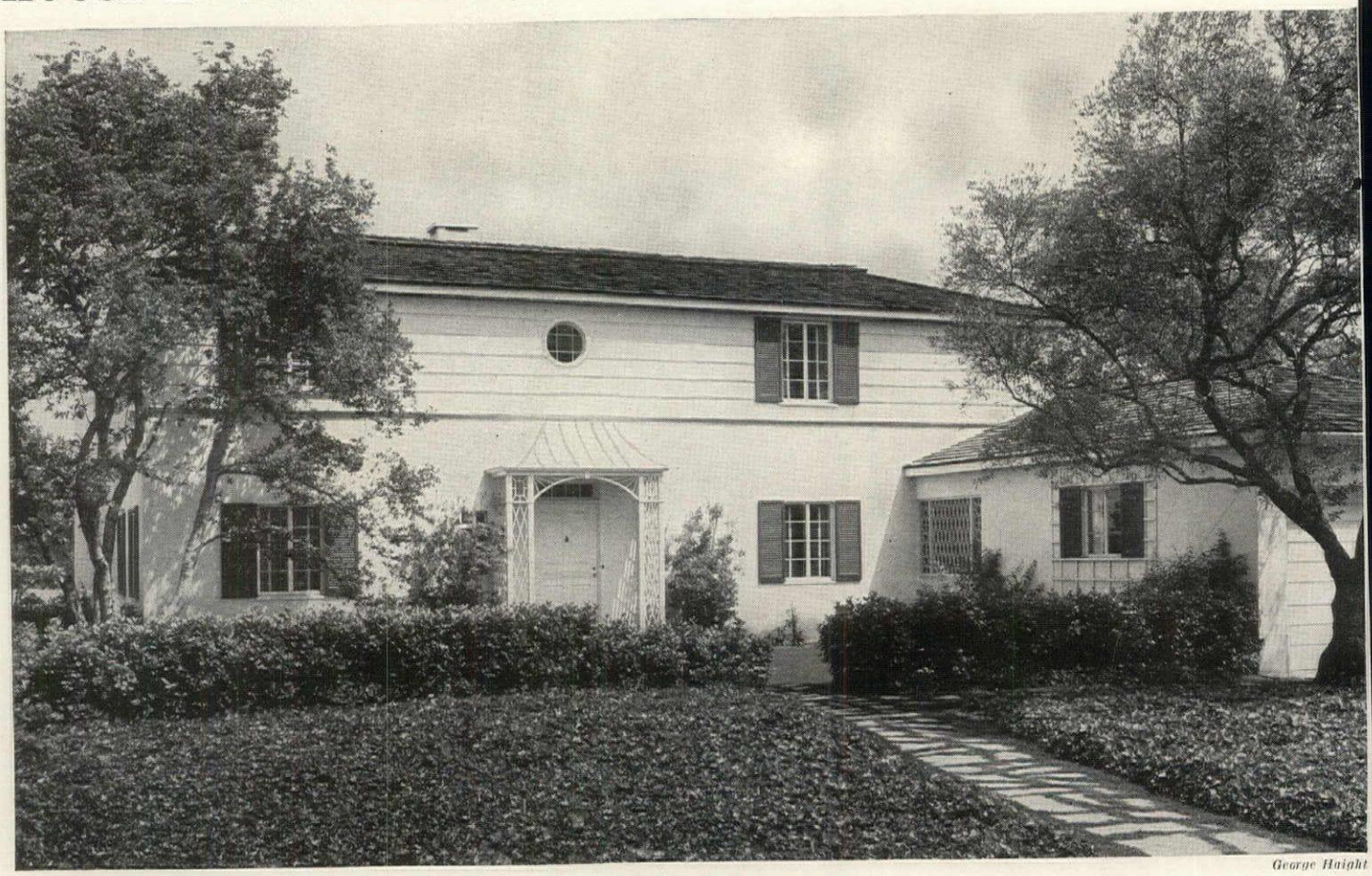
LIVING ROOM

This residence in Florida is an excellent example of the growing tendency toward regional expression in contemporary work. The character is established by the large covered porches, and by the overhangs which protect the windows from the sun. An abundance of light made the use of large glass areas unnecessary. Bedrooms are divided equally between the two floors, an arrangement giving the plan a most desirable flexibility. The dining room has been eliminated, the kitchen being so located that it can serve the living room, veranda or upstairs deck.

CONSTRUCTION OUTLINE

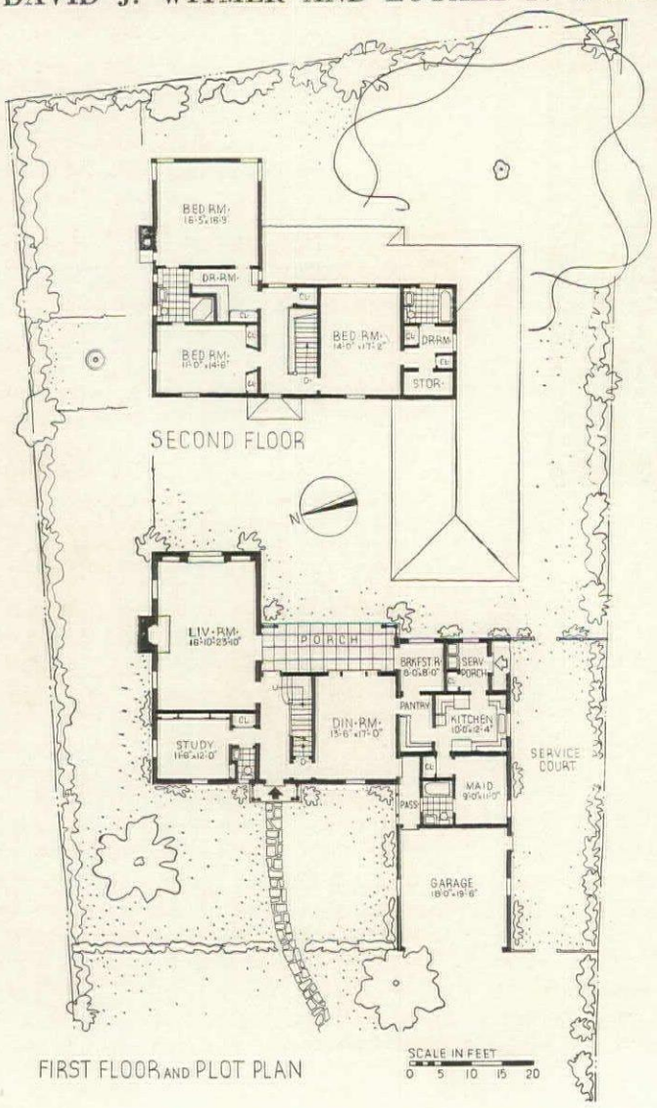
FOUNDATION: Cement block. Cellar floor—concrete, cement finish. Waterproofing—integral.
STRUCTURE: Exterior walls—cement block, stucco; inside—wood furring. Interior partitions—studs, metal lath and plaster. Floor construction—oak finish flooring. Ceilings—plaster.
ROOF: Covered with tile, Ludowici-Celadon Co. Deck—covered with canvas.
FIREPLACE: Damper—H. W. Covert Co.
SHEET METAL WORK: All copper.
INSULATION: Attic floor—4 in. rock wool. Weatherstripping—Chamberlin Metal Weatherstrip Co.
WINDOWS: Sash—wood casement; Mutual Millwork Co. Glass—plate. Glass blocks—Insulux, Owens-Illinois Glass Co.
FLOOR COVERINGS: Main rooms—oak. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—tile.
HARDWARE: By Russell & Irwin.
PAINTING: By Pratt & Lambert, Inc.
ELECTRICAL INSULATION: Wiring system—BX. Switches—toggle.
KITCHEN EQUIPMENT: Range—Westinghouse Electric & Mfg. Co. Refrigerator—Frigidaire Corp.
BATHROOM EQUIPMENT: All fixtures by Crane Co. Accessories by Hoegger, Inc.
PLUMBING: Soil pipes—cast and wrought iron. Water pipes—brass.
HEATING: Warm air system, humidifying, with Comfortrol-Oil-O-Matic conditioner, Waterman-Waterbury Co. Thermostat—Minneapolis-Honeywell Regulator Co. Water heater—Williams-Oil-O-Matic Heating Corp.

HOUSE IN SAN MARINO, CALIF.



George Haight

DAVID J. WITMER AND LOYALL F. WATSON, ARCHITECTS



FIRST FLOOR AND PLOT PLAN

Projecting wings at each end of the house show a practical arrangement for placing a large number of required elements on a somewhat limited site; further advantages of this plan are the good light and ventilation provided. Services are grouped in the south wing, facing a service court which extends along the lot line; from the viewpoint of privacy for the living quarters and rear garden the handling of the service rooms is admirable. Three bedrooms of generous dimensions occupy the second floor. The exterior is conventional in treatment, a simple and adequate expression of the plan.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—stucco, Sisalkraft Co. paper, studs, plasterboard lath; inside—metal lath and plaster. Floors—sub-flooring and oak finish flooring.
ROOF: Covered with red cedar shingles.
SHEET METAL WORK: All Armco Iron, American Rolling Mill Co.
INSULATION: Sound insulation—Johns-Manville Corp. Celite in floors under bathrooms; Celotex Corp. lath in walls.
WINDOWS: Sash—steel casement, Truscon Steel Co. Glass—quality B, Libbey-Owens-Ford Glass Co. Screens—Automatic Tension Roller Screen Co.
STAIR: Treads—oak. Risers and stringers—Douglas fir.
FLOOR COVERINGS: Main rooms—oak. Kitchen and bathrooms—tile, Gladding, McBean & Co. and American Encaustic Tile Co.
HARDWARE: By Sargent & Co.
PAINTING: Materials by W. P. Fuller Co., Pratt & Lambert and Samuel Cabot, Inc.
ELECTRICAL INSTALLATION: Wiring system—rigid conduit. Switches—Arrow, Hart & Hegeman Electric Co. Fixtures—B. B. Bell & Co.
BATHROOM EQUIPMENT: All fixtures by American Radiator-Standard Sanitary Corp.
PLUMBING: Hot and cold water pipes—steel tubing, National Steel Co.
HEATING: Gravity warm air system, gas fired furnaces, electrically controlled, Payne Furnace & Supply Co.

HOUSING AND THE GOVERNMENT

By Bruce Barton

MEMBER OF CONGRESS FROM THE 17TH DISTRICT, NEW YORK

Excerpts from an address before the New York Building Congress, April 23, 1940

You gentlemen not only represent important organizations and influences in my district, but you are the best informed group in the country on a national problem that is as difficult as it is vital. I refer to Government-subsidized housing, and particularly that part of it which is termed "slum clearance." Of all the headaches that come before the Congress none is more plaguing to the member who wants to be social minded and yet feels a sense of personal responsibility for the national credit.

What is such a representative to do? Shall he shut his eyes and vote blind approval and thus achieve the title of "liberal" in the easiest of all ways—by being liberal with the public money? Or shall he fix his eyes on the three billion annual deficit, decide that even the most needed public improvements must wait until we have some sort of national budget and plan, and thereby lose votes and be stamped by his opponents as a heartless reactionary?

This is a tough dilemma.

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On one side is a most persuasive social appeal. Mr. Edward Weinfeld, the State Commissioner of Housing, in a recent report cited a study made four or five years ago in a blighted area of Cleveland. Although the section housed only 2.5 per cent of the city's population, it supplied 21.3 per cent of the murders, 12.5 per cent of the tuberculosis deaths, and 54.5 per cent of the families on relief. It contributed only $225,000 in local and school taxes, but cost the city and various social agencies $2,165,000 for necessary municipal and welfare activities, a net annual deficit of $1,940,000.

Of course, any such analysis of the effects of bad housing attempts to prove too much. People are not on relief just because they live in bad houses; too often they live in bad houses because they are the less efficient part of the population and, hence, the first to lose their jobs and the last to be re-absorbed from the relief rolls into industry. Nor are all the people in bad houses inescapably condemned to failures. Abraham Lincoln was born and grew up in a rural slum. The same was true of a number of our Presidents. . . .

Having said all this by way of qualification, however, the fact remains that slums *are* a financial as well as a social liability, even though the exact figures are impossible to determine. Moreover, slums stand condemned by the social conscience of our generation. We want no American citizen to be ill-housed, any more than we want him to be ill-fed or ill-clothed. Congresssmen being just average men with average hearts, neither better nor worse than their constituents, share the universal hatred of slums and would like to vote to rid our country of every slum area. This is the pull on one side.

On the other hand, we are staggered by the vast amounts of money involved, and unsatisfied that the present administration of the funds in Washington is either as efficient or as free from bureaucratic rigidities and red-tape as it ought to be. You will recall that the first amendment to the slum clearance bill swept through the House of Representatives with hardly a dissenting vote. It boosted the amount to be loaned from five hundred million to eight hundred million. There perhaps would have been more questioning, and more votes in the negative, if emphasis had been laid on the annual subsidy of twenty-eight million guaranteed for 60 years. But those were days when the spirit of social experimentation ran high . . .

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Less than two years later, in the summer of 1939, the U. S. Housing Authority came before us with a request for an additional eight hundred million, and for subsidies which would increase the total yearly charge against the Treasury to seventy-three million, or, in 60 years, more than four billion dollars.

When this second bill reached the floor of the House an amazing thing happened. Not a single Democratic member of the Committee on Banking and Currency, which had reported the bill out in response to White House pressure, spoke in favor of it. The only Democrat to take the floor at all was a young member from Tennessee who delivered a blistering attack on the whole USHA program and its administrator. By an overwhelming majority the House voted down the rule, thus refusing even to consider the bill.

What had happened in less than two years to change enthusiastic approval into overwhelming disapproval?

First, a belated and anxious realization of the terrific expense of the program. With the construction costs and subsidies, approved and proposed, we were being asked to commit the taxpayers of the U. S. to total loans and subsidies of between five and six billion dollars. And this would be only a drop in the ultimate bucket. Figures were submitted to show that to remove all slums in the land, on the same basis, would involve a sum so astronomical as to make the present national debt look like chicken feed.

Second, a disturbing doubt as to whether these slum clearance projects with their subsidies really were low-priced housing, and whether we as members of Congress had a right to tax the hardworking humble citizen who had struggled to pay for his own home—the average value of which, according to the 1930 census, is $2,300—in order to provide much better homes for people certainly no more deserving.

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Third, unpleasant as it may be to report, the fact is that no new Federal bureaucracy is less popular with the members of Congress than the USHA. Its officials seem to have their own peculiar definition of the term "self-liquidating;" at least, the testimony on this point before the Congressional committees was highly confused and contradictory. Congress is growing more critical of bureaucrats in general, and there is a strong suspicion that no private enterprise, engaged in erecting and operating hotels or apartment buildings, could possibly carry the administrative load which the USHA has piled up. The appropriation for administrative expenses, as you know, is $4,500,000 per annum, a total of $11,750,000 to date. And this is not the whole story. The salaries and expenses of USHA supervisors, travelling auditors, and clerical staff in the field are charged against the local housing authorities. So, in the case of the USHA, as with so many of these New Deal bureaus, no one can find out just what the overhead figure would be if the books were kept on the basis required

of a private enterprise. But one thing is sure on the face of it— four and a half or five million dollars a year is a very fancy price for management.

So, as trustees of the savings of the people of the U. S., we members of Congress who had voted so willingly for the first slum clearance bill voted with equal emphasis against the second. We felt we simply had no right to toss another eight hundred million, plus total subsidies of billions, into an experiment that had not yet proved its soundness either in conception or administration.

Like every other decent American, I want to get rid of slums. . . But I do not feel that I have the moral right to vote further billions to an operation in Washington which has proved its shortcomings in so many ways. . . .

Having confessed my difficulties, let me briefly set forth my convictions. The problem interests me as much as any question before Congress. I am interested not merely as a citizen, but as a Republican. I am persuaded that the Republican Party must have a constructive attitude toward housing and must embody its program in its national platform. I believe, too, that the program will be unsound and unworkable unless it finds a way to link together in the fullest possible measure the resources, efforts, and good will of both Government and private industry; in other words, the whole-hearted enthusiasm and talent of men like yourselves. . . .

If Government alone could perform that gigantic task it would be undesirable. The responsibility belongs ultimately to private enterprise. Just now the general conditions, and those in the building industry in particular, are such that Government aid is needed as much to reach toward a solution and show the way as to provide actual shelter for the needy. But that aid should be withdrawn as rapidly as private enterprise can bear the burden. At present, private enterprise cannot build profitably and operate new buildings and receive as income the rentals which the lowest income groups are capable of paying.

It has occurred to me that it would be worth while to experiment with a part of the present Federal subsidy, and modify the existing law, to the end that private enterprise could build a project, using its own capital, but obtaining from the Government a rent subsidy for certain tenants which the Government might select. Of course, the plans and site would have to be approved by Washington. But a risk to the landlord would be eliminated because the structure would be virtually a fully rented building. The uneconomic 10 to 15 per cent vacancy, which so many buildings carry and consider not unfavorable, should make the difference between a meager profit and a handsome one, or the difference between a low rent and one too high. If in the rent now charged at Queensbridge and Red Hook were included the subsidy given by the Federal Government, the tax exemption by the city, and debt service on donations by the city, the rent would average $11.33 instead of $5.41 per room per month. On other projects, where the cost of land was greater than at Queensbridge, its equivalent rent would be in the neighborhood of $12.50. Such rents approach the terms required by private enterprise. With no vacancies, and rent collections virtually assured, favorable financing should be available.

I do not suggest that great sums of money be used for this experiment in the beginning, but I do feel that some such effort should be attempted, with proper Government supervision, in order, at an early date, to obtain a technique for shifting to private enterprise this obligation of properly housing the lowest income group. With it must go a number of reforms in the building industry in order to reduce costs. These, I believe, are in the air and, with research methods and modern ingenuity, are attainable. . . .

I hold that an administration in Washington which wants to encourage private industry, and understands how to work with private industry, can blaze the way for real slum clearance in this country. And do it without wrecking the Federal Treasury.

By Robert F. Wagner, Jr.

ASSEMBLYMAN, NEW YORK STATE

Excerpts from a letter to the Editor of *The New York Times*, published May 5, 1940

Mr. Barton seems to forget that the problems of slum clearance and low cost housing are not of recent origin. More than 50 years have passed since Jacob Riis focused public attention on our tremendous slum problem. With great passion and learning, Riis pointed out that slums increase for the community the cost of protection against fire, crime and delinquency; that slums take a heavy toll of life, health, property and moral values. Yet during this entire period slums were permitted to spread wider and wider their misery and blight.

The Republican party had ample opportunity to demonstrate its concern for and interest in the ill-housed. Yet an examination of the record of the Republicans, who were in control of the National Administration during the Twenties, fails to reveal even the germ of a long-range, comprehensive, slum clearance and low rent housing program. It was only after the USHA pointed the way that the Republicans boarded the bandwagon.

Essentially there are two reasons why the challenge of the slums went unanswered. On the one hand, private industry could not afford to construct dwellings at a price within the income of present slum dwellers. On the other hand, our Government had not yet become responsive to the immediate and fundamental needs of our people. Today, private industry still cannot with profit build decent homes for the ill-housed. Even where private capital has embarked upon large scale construction projects, such as Knickerbocker Village and Parkchester, it has been unable to fix rentals within reach of persons of low income, despite the fact that the return on the investment in those projects is limited by law. . . .

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A consideration of the specific objections of Mr. Barton to the USHA is enlightening. First he charged that the expenditures made by the USHA were too high. He spoke in terms of five and six billion dollars. Yet an examination of the President's budget message to Congress reveals that the only appropriations for USHA are an item of $15,000,000 for annual contributions to public housing agencies, and an item of $4,550,000 for administrative expenses, most of which is chargeable to the local housing projects.

These contributions are necessary as a subsidy to provide the difference between the cost of operation and maintenance of the premises and the amount which these poor people can afford to pay for them. This amounts to less than one-fifth of one per cent of the total proposed Federal budget for the fiscal year 1940, and is the only burden housing imposes on the taxpayer. It is, indeed, a large sum of money, but it pales into relative insignificance when compared to the hidden subsidy we pay year in and year out for our slums. . . .

Second, Representative Barton doubted "whether these slum clearance projects with their subsidies really were low priced housing." The fact is that 21 USHA projects will serve families with average annual incomes ranging from $450 to $649, and 105 projects will serve families with average annual incomes ranging from $650 to $949, and in no case may the annual family income exceed $1,399. The rent per room, as Mr. Barton points out, is between $5 and $6 a room in New York City. If that is not low rent housing I should like to have Representative Barton define the term and to state more clearly how he could achieve lower rent housing.

Criticism has been made regarding the cost of construction of USHA projects. However, an examination into the costs of fourteen USHA assisted projects shows that the average amount by which USHA

net construction costs were lower than private net construction costs was $1,010 per unit. . . .

Third, Mr. Barton points out that the evils of the slums have been exaggerated, since Abraham Lincoln and a number of our Presidents were born in slums. That is, of course, true, but in honoring those few who have risen above their environment, let us not lose sight of the thousands who get lost on the way. . . .

Fourth, Mr. Barton states that slum clearance can best be achieved by cooperation between the National Administration and industry. The fact is that this cooperation has been fully achieved. As *The New York Times* editorially pointed out, "private capital takes part by investing, private owners by selling land, private architects and contractors by designing and erecting buildings, private manufacturers by making and selling materials, private artisans by doing the work. Government steps in only to lend money, to see that the work is well done and to contribute a large enough subsidy to guarantee low rents."

★

The USHA is authorized to issue bonds amounting to $800,000,000, which is to be used for loans to public housing agencies for the construction of the various projects. These loans plus interest will eventually be repaid to the USHA out of rents earned by the project, without the cost of one cent to the taxpayer. The only burdens imposed on the taxpayer are the subsidy and the small cost of administration already discussed.

The present housing program is yet in its infancy and is by no means a perfect one. From time to time it may be necessary to amend the law, and fair criticism of the present program is both desirable and necessary. But any changes should retain the spirit of the present law—a spirit which has brought health and happiness to thousands of underprivileged slum-dwellers.

THE DEAD PAST AND THE DEAD PRESENT

By Lewis Mumford

Excerpt by permission from "The Sky Line" in *The New Yorker* for March 23, 1940

The "Versus" show at The Architectural League is supposed to dramatize the clash between the old and the new in architectural design. On one floor are depicted the monuments of the past: the railroad stations that were modeled after public baths, the suburban country houses that were modeled after palaces, the libraries that were built to resemble pantheons; in short, the dead buildings that were built to resemble other dead buildings. On the upper floor is a vivid array of fresh buildings, evolved freely—with new plans, new methods of construction, often new materials—out of the needs and tastes of our own day. One floor is a cemetery, the other is a delivery ward. How can they clash? How can there be any question of choice?

It was a kindly thought on the part of the committee which designed this show to keep the two kinds of architecture separated by a whole flight of stairs, but it revealed the fatal open-mindedness which prevents so many good American architects from reaching positive conclusions about their art. To make the exhibition really exciting, the new and the old should have been contrasted side by side, detail by detail. There should have been a picture of our "noble" Public Library when it left Mr. Thomas Hastings' hands, and next to it there should have been a few deadly shots of the Library's interior 25 years later, the entrails of its special departments spilling out in the halls, its crowded and cluttered rooms incapable of expansion or alteration.

Alongside the library there should have been a picture of the new Museum of Modern Art—no perfect building either. But the advantage of its steel-cage construction would have been obvious in the facility with which the inept design of the Museum's entrance floor was corrected after the building was opened. Whatever merits the New York Public Library had esthetically, even as a corpse, have been effectively ruined by the mere transformations of maturity. A similar demonstration might have been made with other pairs of buildings, and it would have shown that the older order is no order at all.

Even on purely esthetic grounds, of course, the conservatives have no defense. For in architecture, one of the prime marks of good form is coherence; if a building is to have its full meaning for the eye, the street plan and the formal approach, the utilities within the building, the habits and dispositions of the spectator should all speak the same language. If we are to have a harmonious environment, no one can arbitrarily choose the style of his building, making it look like some perfect form of the past, any more than one can arbitrarily choose to speak Ciceronian Latin instead of plain American. The classic renaissance was alive only so long as the rich and the educated peppered their speech with classic allusions, when they read Latin in preference to their own barbarous tongue. That there is still any debate about these matters in architectural circles is a sign of curious intellectual innocence. I suspect that Rip van Winkle was an architect.

By Edwin Bateman Morris

There was a certain phrase which appeared on the panel of lettering at the entrance to the Modern or Contemporary section of the so-called "Versus" exhibition. The panel was apparently intended to build up what might be called a set of by-laws for Modern architecture. The phrase:

"It (Modern architecture) looks to past architecture for its meaning rather than its mannerisms."

"It looks to past architecture for its meaning." The words were the most important feature of the exhibition, as they have been the most important precept in architecture through the ages. The urge, the desire, the necessity to hold on to progress is, in the architectural profession, as in all other professions, the capital, the cash reserve, the money in the bank with which each generation starts out its little epoch.

Not the mannerisms! The trouble is that the current generation does not in its hot-blooded analyses of the past, distinguish between meaning and mannerisms. It fiercely and contemptuously throws down mannerisms. In that fury, does it stop to look among the ruins for meaning?

The evidence is that it does not.

In the "Versus" exhibit, to explain, they procured, after what must have been considerable difficulty, and set up as a symbol and focal point of their exhibit, a *tree!*

I examined the tree closely. It was a regular tree, an ordinary tree, a traditional tree. It was the kind of tree we all climbed when we were ten years old. Christopher Columbus climbed one like it, and Moses after emerging from the bulrushes. The very essence of tradition, standing there in the center with the show built around it, it did more to emphasize the chaos and confusion of architecture of today than any word or other gesture could have. Putting the other side's witness on the stand!

One may say, of course, that this confusion will clear up, when the hysteria

subsides. But is no leader to arise? Is there to be no one who can make the words "the meaning of the past" anything more than just a pretty phrase?

If Modern is, for the present at least, architecture, the proponents for it should provide more direction, more study, more leadership than appeared in the exhibition. Their architectural style, as they have said without perhaps meaning it, needs more delving into the past—in order to get wise to themselves, if for nothing else. And, in that delving, it would be advisable not to omit the study of the great similar period.

The architectural period between 1865 and 1895 was so very similar. It followed a great war, in which the minds of the youth, disillusioned by bloodshed, carried that disillusion to all tenets and established procedure of the world. The slogans of 1865 and 1920 are the same—"The hell with it!"

In each period there was a great and bitter depression. Eighteen-seventy and 1929! Young men became, in each era, bitterly indignant at the efforts and the wisdom of the previous eras. They blamed the thinking of their fathers and grandfathers (whom they never considered as having been young or fired with enthusiasm) for the chaos. Their theory in every case was "Anything is better than what has been."

It would be very irksome—perhaps the thought would carry with it a certain sense of insult—to think of the present glamorous contemporary movement as in any way comparable to the great awakening that brought the haircloth sofa.

Yet the stage is similarly set. The revolt against McKim, Mead & White is like the revolt against the Greek Revival. It is, as this Versus show indicates, similarly directionless, except for the urge to be different.

The Haircloth Contemporary was overornamented because the Greek Revival was sparsely ornamented. The present Contemporary is sparsely ornamented because the preceding architecture was overornamented. It is the antithesis motif in each case.

In each case they strive for new expression motives—glass block, cast iron stags, aluminum grilles, scroll-saw grilles—things expressive of new craftsmanship. They also revolt from strong arrises. In the latter era they like the semicircular sweep growing out of straight surfaces. In the Haircloth, they liked cylindrical towers, curved glass windows, curved bay windows. In each case, they like to indicate that their materials are plastic and can be smoothed into new shapes. They both like pipes for columns.

The spirit of the Versus show is not uplifting. It is too little, too bickering. Discussions as to whether Greek architecture is better than Roman, whether the linemen do more work than the backs, whether a novel written in the first person is better than one written in the third, are of necessity tiring and for small minds.

Why do we talk about the style we are working in as compared with styles of yesteryear? If we are doing something noble and good, the brick and stone will speak about it. There is no need to tell the world in words.

★

The idea is: Draw. Don't talk. Shut your lips, draw, with sincerity, with determination, with the sweat of inspiration on your brow, with hot emotion beneath the ribs. Don't stop after each line to explain that you are not as other men.

Maybe that would get direction to this Modern movement. The man that talks a good game seldom helps any movement. It is the fellow who feels something stirring within him that leaves architecture to be admired and loved by coming generations.

Some of the buildings in the Modern part of the exhibit did have that quality. The New York Hospital, which was modern in that it contained none of the forms of the past which make the Modernist nervous, had a deathless quality of fine mass and of movement which was Gothic in its effect, though not enough apparently to disqualify it.

There was little else of that quality. The exhibition has that blood-curdling precision; that three-decimal-place exactitude, as if there had been always a slide rule or a structural engineer at the elbow. Inspiration to go only so far, and then the dread question, "Is my hot enthusiasm carrying me to too great extremes?" This Modern architecture looks so cautious, as if the architect might always be pursued by the fear of drawing a line he could not later explain with a logarithm or a formula.

In my aunt's 1890 house were many chairs, set at exact angles. There were many doilies, precisely pinned. There were window shades adjusted at the same level throughout the house. There was no article under that roof whose position could not be explained or justified by a tape measure. The shepherdess on the mantel was nine inches from the left end of the shelf, the shepherd was, by measure, nine inches from the right end.

How could anyone who went through that as a child look at contemporary architecture without his teeth being set on edge? For the love of Pete, can't any of these architects do something—just one thing, pray God, on each building—as though he *wanted* to do it! And not in that cowed, defeated way, expecting some structural engineer to come along and give him a slap on the wrist if the design wasn't perfectly exact and wasn't carefully sterilized to remove any mere inspirational result.

May one speak of the case of a beautiful woman? There is in her that evanescent, that delicate, that lovely thing, which we do not always define but which we call one of the treasures of the earth. It is the quality of charm, appeal. Could the infinite poetry of her be preserved, if we considered her only as a thesis in bone structure and as an example of the arrangement and function of an interior piping system?

Is there any high priest in this Modern movement to whom one could appeal to dispel this tightness in the contemporary architects? Is there any architectural Moses or John L. Lewis who could persuade them to relax, get away from their glass block catalogues and their engineering ball and chains? Is there anyone who can persuade them into the full realization that they are in architecture, which is an inspirational profession, and not in some scientific field concerned merely with logarithms and formulae?

In the same panel of lettering setting forth the by-laws of the Modern movement appeared the phrase, "It was left to the Engineer to produce significant structures." Written by an engineer, that would have been pardonable propaganda. Written by architects, it is indecent, immoral.

Had it said *stable* structures, that would have been a mere truism. But significant structures! Structures, that is, expressive of purpose, environment, national aspiration, historical association and all that the term significant means! The heart of the architectural profession. And that was first produced by the engineer!

True the engineer makes the thing stand up. But should we forget that the architect's responsibility is to furnish a reason why it *should* stand up? And if the mere expression of the cold structural frame is enough for that—why architects?

THEY SAY—

"Public architectural control is needed to improve design and check financial waste: public authority should be clothed with power to reject plans artistically unsatisfactory rather than, as at present, for purely technical reasons only."—CHARLES H. CHENEY.

"Better base design on models which have lived for two or three thousand years than to make the capital a museum of short-lived designs which may be as funny in the year 2000 as the atrocities of the Seventies and Eighties are today."—HORACE M. ALBRIGHT.

"Most architectural forms are constructional forms glorified, though they seldom have attained to their full beauty before their constructional significance has become obsolete. The Greek triglyph was in origin the end of a beam, but it probably had been a block of marble for some time before it became a really nice-looking triglyph."—H. S. GOODHART-RENDEL.

THE DIARY

Henry S. Saylor

Tuesday, April 16.—The Federal Home Building Service is warming up its motor. For the present, intensive effort in establishing the plan will be confined to six regions in the East, Southeast, Middle West and South, though information and advice are available for those who would establish Service Plan groups anywhere in the U. S. The groups are to have the broadest autonomy in every detail except the following mandatory requirements: No sale of designs without working drawings and specifications; supervision is an essential; the Service is limited tentatively to houses costing $5,000 or less but this figure is subject to revision up or down in agreement with the architects of each locality; all designs must be approved by a competent jury as to esthetics, equipment and construction, and designs so approved are assembled in local and national plan libraries; on completion of a house, the local Service Group shall issue a Certificate of Compliance for official recording.

Through an orderly collaboration of lending agency, architect, producer, builder, there is a nearer approach to the "complete package at a known price"—acknowledged by all merchandising authorities as the prime essential in developing the small house market.

Friday, April 19.—California reached across the continent today in the person of Gordon Kaufmann, and Richmond Shreve asked some of us to meet him at the Union League Club during the cocktail hour. Having had numerous opportunities of the sort myself of late, both on the visiting and the receiving end, I should say that these little touch-and-go meetings are mighty effective steps toward a greater solidarity of the profession. Too frequently the visitor lands in town unannounced and is out again before his presence is discovered.

Monday, April 22.—The President honored the nation as well as the profession today in appointing as a member of the National Fine Arts Commission Paul Philippe Cret.

Tuesday, April 23.—Serge Chermayeff, whose own house was one of the London *Architectural Review's* most spectacular offerings of last year, has come over here to live and to practice. We gathered a few of his friends-by-correspondence and some other sympathetic souls atop the R.C.A. Building this afternoon to meet him and Mrs. Chermayeff. The plans for that amazing house of his in Sussex were rejected by the District Council as "unsuitable in the particular position chosen," even though it was to be well isolated by its landscape setting and with no close neighbors. Appeal was made to the Minister of Health who, after a formal inquiry, compelled the Council to pass the plans. After the house had been built the chairman acknowledged that the Council's fears had been unfounded. Epilogue: The day before England declared war, Chermayeff sold the house to a speculative builder and moved to America.

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Washington, Thursday, April 25.—The world is overfull of argument, propaganda, crusades for this and that, and feverish efforts of puny individuals to give personal direction to the march of civilization. We see a little group of serious thinkers laboring furiously to change the tastes and life habits of a nation—or of the world. It is a serious business with them; on their individual efforts, they think, depends the future of the world. Once in a while it becomes possible to dissociate oneself from it all and see the anthill in its proper scale. The furious running to and fro of any one ant is so utterly futile under the shadow of a giant foot that may crush it and all its little achievements in the passing tread of forces that march unconcernedly down the years.

Take, for instance, the structures that man builds. One might think, after the talk, the teaching, the written word of the architectural profession during the past decade, that the world might almost have destroyed its earlier mistaken efforts and have rebuilded itself. Yet, to the occasional visitor from Mars, who would know nothing of all this ferment, man's building would appear to be moving slowly forward in its age-long progress—a little better than a century ago, perhaps, but changing slowly and unhurriedly, very much as the glaciers do. Perhaps, after all, it is just as well not to excite oneself unduly about Versus shows, or strip windows, or flat roofs, or even function.

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Saturday, April 27.—Looking sharply down from our offices atop the Time & Life Building, one sees a ribbon of street cutting the long blocks lying between Fifth and Sixth Avenues. It gives us one of our three addresses—9 Rockefeller Plaza. The street is three short blocks in length—only 600 feet—between 48th St. and 51st St. It wasn't there before Rockefeller Center, and at the end of the Center's 99-year lease of the land, it may go back whence it came. Unlike its neighboring thoroughfares, it does not belong to the City of New York; its title is held by Columbia University. On some quiet Sunday next July, there will be a chain across its ends, reminding the public that it is private property. The third of it on which our own building fronts is carried on the City's tax books as having a valuation of $700,000. The three blocks and the adjoining sunken plaza in which Paul Manship's bronze "Prometheus" watches the ice skaters, have a listed valuation of $3,925,000. For the privilege of operating and maintaining these three blocks of thoroughfare the Center pays Columbia a fat rental and pays the City about $60,000 yearly in realty taxes. All of which indicates that a broadminded view of what makes land use profitable does not load every usable inch of it with buildings.

Monday, April 29.—The Metropolitan Museum opened today its 15th Exhibition of Contemporary American Industrial Art. I had heard much of the fevered charette under which it was assembled, so probably was expecting too much. My first impression was disappointment, and I'm afraid I aggravated that feeling by noting successively the things I didn't like. An exhibition of this kind attempts as part of its chief purpose the recording of achievement in new materials, new ways of using them in design. Earlier efforts in the series, seen in retrospect, have been really stimulating in this regard. Saarinen's dining room of 1929, Ralph Walker's study in a country house that same year—these are still vivid memories of vigorous and refreshing designs. That forward movement seems to have halted, even lost ground this year. Why would anyone use glass block as a container for a potted plant? Why, in trying to recover the texture of handrived wood—for an interior wall surface—should one put plywood under the toothed knife of a planing machine? Why design a children's dining table with a trefoil top about which the chairs alternate with the legs and also with the only spaces capable of holding the china?—has the "one-armed cafeteria" made this dent in our civilization? Why, in an entrance hall for a country house, park a saddle? Where I live we take our saddle odor in the tack room.

Wednesday, May 1.—Thomas Pym Cope, J. Roy Carroll, Jr., Edmund R. Purves and some of their Philadelphia contemporaries have had a hankering for a new local professional journal for lo these many months. The *Journal* of the Pennsylvania Association of Architects, born in 1936, never got to be the real husky child visioned by its parents, even after its name was changed in 1938 to the *Pennsylvania Architect*. But now the architects and engineers have come together, and with the collaboration of the publisher of *Daily Building News* and *Builders' Guide*, have brought out Volume 1, Number 1 of *The Pennsylvania Architect and Engineer*. It goes to the 3,000 members—1,200 architects and 1,800 engineers—of the Pennsylvania State associations, and costs non-members $1.50 per year. Its illustrations, thus far, are in the advertisements only.

Thursday, May 2.—Dean Gilmore D. Clarke outlined the policy of Cornell's College of Architecture today at The League, continuing the series in which the schools have been telling their side of educational progress. As in several other public addresses, the Dean put the brakes on the tendency to sudden change in our architecture. "Our architecture has already shown a movement away from traditional forms. That is a good sign. We are beginning to strive to express in our buildings a closer harmony with the recent changes in our social and economic systems. But frequently these changes in our architecture are not based upon sound principles. While we are thoroughly justified in changing, the changes should be made only after a careful and thorough examination of the past. A gradual transition would seem to result in more sound policies; on the other hand, a rapid departure from past precedent is likely, in the long run, to result in a loss of ground gained."

And he quotes Paul Cret's pertinent remarks, which have been printed in these columns before and are well worth repeating: "The abandonment of classical disciplines is neither new nor without its price. Regardless of the use made later on of the forms they proposed as examples, these disciplines had an unquestionable educational value. What is to be substituted for their proved efficacy in training the eye to proportion, to rhythm, to composition, is not as yet divulged, and those who condemn them as stifling to originality forget that an originality so easily stifled must not be very robust. Of the men doing original work in this country at the present time, by far the greater number have been classically trained by our schools."

Friday, May 3.—Two particularly interesting exhibitions beckoned today, and their appeal, to me at least, lay as much in the exhibitors as in the things exhibited. Arden Gallery was showing some sculpture by Sylvia Shaw Judson. Most of it consisted of pieces one would covet for his garden. Not surprising, when it is discovered that Mrs. Judson is a daughter of the late Howard Van Doren Shaw and must have enjoyed from early childhood the lovely gardens which were almost always integral parts of the country estates Mr. Shaw created in the Chicago environs.

The Marie Sterner Gallery showed some decorative panels of needlework by Maginel Wright Barney. "Long point" she calls the medium, and it had the usually calm Austin Strong—dramatist, landscape architect and master of many arts—almost in a dither over what Mrs. Barney had done with it. Again not surprising, for the artist is a sister of Frank Lloyd Wright.

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Saturday, May 4.—Noguchi's ten-ton panel of stainless steel, "News," which was unveiled last week as a huge overdoor symbol on the Associated Press Building, Rockefeller Center, seems not to have thrilled some of the newspaper men themselves, to judge by editorial comment in the New York *Herald-Tribune* for May 2: "There is something about these five stainless steel A. P. men, colossal of shoulder, obviously subhuman in intelligence and minus their pants, which gives us an uneasy feeling. One is shrieking through a telephone, another scribbling on copy paper without looking at it (he seems to be in a sort of anthropoid trance, anyway), a third, negligently clad in an eyeshade, is rattling a typewriter by the touch system, a fourth is getting a camera angle shot and the fifth, apparently, getting inspiration. Surely, these heroic coal heavers cannot symbolize the souls within the seemingly cultivated breasts of the A.P.'s news gatherers—not unless there is a lot which our friends in the A. P. haven't been telling us. Are they just news in the abstract? It is a horrid thought."

Tuesday, May 7.—In this job of acquainting the public with the architect's function we seem to be getting nowhere fast. Gladstone Evans, writing in the *Journal* of the Royal Architectural Institute of Canada, says:

"The problem of publicity for architecture and architects continues to be, apparently, almost insoluble. Some time ago, the Council of the Ontario Architectural Association secured the services of a firm of publicity specialists; but the results were so inadequate that the arrangement has been terminated. The trouble seems to be that our professional activities have comparatively little 'news value'—as the press understands that term."

Wednesday, May 8.—Still no architect in the Hall of Fame. Nominations at each balloting (held every five years) for the last quarter century have included Charles Bulfinch, but he never pulled enough votes. This year he is joined in the nominations by McKim and Richardson, both names perhaps better known to the 112 members of the College of Electors.

Thursday, May 9.—It seems easier today to get an architectural education than to get an architectural job. The list of traveling scholarships adds up to an impressive array of opportunity, and if one cannot go to Europe these days one can see a lot and learn much in Mexico or South America. And these endowed aids to the student keep multiplying. J. Clawson Mills, a New York interior decorator who died April 15, left his residuary estate to The Metropolitan Museum of Art and The Architectural League, to be used in providing scholarships in music, architecture, painting, sculpture or fine arts.

Friday, May 10.—Robert Frantz in from Saginaw by way of Washington, Fredericksburg and Williamsburg. We went up to the Metropolitan Museum, he to cull a few ideas on the contemporary arts, I to check my first impressions of some days ago. The show had not improved; in fact I had missed seeing some things which now added to my gloom—in particular some "plastic frescoes with glass relief" set against a cylinder of stainless steel and suggesting something that one might see under a microscope in water from an abandoned well.

Saturday, May 11.—Nearly everyone has a pet cure for the ills which afflict architecture. Antonin Raymond's is farming plus. He has 150 acres at New Hope, Pa., which he cultivates and on which he maintains a dairy herd of pure-bred Jerseys. He offers a six-week course to designers to give "experience which schools, for natural reasons are unable to give." The course includes daily round-table discussions on architecture; practical problems in design, construction, mechanical equipment and building economics; apprenticeship to the building trades supervised by contractors while building farm structures and other work; with haying, harvesting of wheat, and storage of silage thrown in for the stimulation of body as well as mind. Tuition, board and room, $120. That's getting down to earth!

Wednesday, May 15.—The virus of the advertising urge is finding its way into architectural bloodstreams. I came upon a professional letterhead today that bore the slogan, "New York experience and efficiency guaranteed at Maine prices." Which suggests a number of questions. Is New York experience and efficiency better in Maine than Maine experience and efficiency? Does the professional ban against guaranteeing costs prompt the guarantee of efficiency instead? Are architectural services in Maine in the bargain basement?

BUILDING MONEY

CONTENTS:

Risk Rater Frederick Morrison Babcock

ANALYSIS OF MORTGAGE SECURITY

benefits builders and borrowers, protects financiers and FHA. A close-up of the near-science of mortgage risk rating and a prologue to 95 per cent Title II loans.

Lustiest and best behaved of all young New Deal children, FHA last week puffed out six candles on its birthday cake, puffed up with pride over its 1940 record —about 20 per cent more business than during last year's first five months. New house mortgages selected for appraisal in April rang the $100 million gong for the first time, and the May total is expected to ring it again. Besides being bullish for building, these statistics indicate that FHA is becoming increasingly popular with builders, borrowers and lenders, is insuring an increasing percentage of all home building loans. Not far wrong is the estimate that the FHA program today includes every other house abuilding in the entire urban U. S.

More than a record-breaking, Depression-born insurance agency, FHA has proved to be one of the Thirties' important contributions to Building and the home buying public. If the case for home ownership is stronger today than ever before, thanks in large measure are due FHA's mortgage risk rating system sired by its Assistant Administrator Frederick Morrison Babcock. Thus, since the characteristics of mortgage loans and mortgaged properties which make them sound investments are the same for both borrowers and lenders, FHA's risk rating machinery, although directly geared to self protection through protection of mortgagees, incidentally safeguards borrowers. Under the FHA program, no one may undertake home ownership unless 1) his proposed house, 2) its neighborhood, and 3) the mortgage pattern pass the agency's searching examinations and 4) unless he himself is considered capable of easily carrying the load.

A comparatively new implement in Building's hands, risk rating has been refined substantially since FHA's 1934 debut (ARCH. FORUM, Sept. 1935, p. 212). In addition to many mechanical changes, the whole system has been perfected to the extent that mortgages covering 90 per cent of appraised value are accomplished facts today, that FHA officials are already considering 95 per cent Title II mortgages for tomorrow. Architects, builders and financiers will do well to follow this development and study FHA's present risk rating mechanics. In them they will find what phases of house design and construction count most toward acceptance of mortgages for insurance, what pulls ratings up, what knocks them down.

While FHA's signal success is attributable, in part, to improving economic conditions and its careful selection of only comparatively high grade mortgages, it cannot be denied that this Government agency has placed the whole business of home finance on a sounder basis to the benefit of Building and Public alike. Herein, THE FORUM *examines the machinery behind this improvement, explains how FHA's mortgage risk rating system affects builders, borrowers and lenders.*

And, if FHA heeds the recent wave of suggestions from all parts of the country, THE FORUM *may soon examine some new FHA machinery—property standards and an appraisal system adapted to the peculiar problems of low cost housing.*

ACCEPTED HOUSE

Analysis—$5,129 replacement cost; 898 sq. ft. area; full basement; no garage; 50 x 135 ft. lot; 13% lot coverage. Plan: Triple exposure in living-dining room; cross ventilation in both bedrooms; good orientation for sun and breeze; provision for expansion; ample closet space. Exterior treatment: dignified, simple with attractive landscaping. Construction: 10 in. concrete foundation walls; exterior walls of studs, wood sheathing, brick veneer; interior walls finished with plaster on sheet lath; stained wood shingle roof; tile bathroom floor and bathroom and kitchen wainscot; BX cable wiring; 4 in. bat insulation in roof, blanket insulation in walls; complete weather-stripping. Heating: gas fired winter air conditioning system. Workmanship and material qualities: excellent throughout; solid bridging; structural members exceed minimum requirements. Operating estimates: annual cost of fuel, $90; maintenance, $65; life of building, 65 years.

PHYSICAL SECURITY FEATURES		REJECT	1	2	3	4	5	RATING
Durability	Structural soundness		5	10	15	20	25 X	25
	Resistance to elements		2	4	6	8 X	10	8
	Resistance to use		1	2	3	4	5 X	5
Function	Livability and functional plan		4	8	12	16 X	20	16
	Mechanical and convenience equipment		2	4	6	8	10 X	10
	Natural light and ventilation		2	4	6	8	10 X	10
Architectural attractiveness			4	8	12	16	20 X	20
ESTABLISHED RATING OF PHYSICAL SECURITY								94

Development. When the National Housing Act was passed, home ownership was suffering from the follies of the Twenties. Against a background of speculation, cost inflation and over-expansion, high-powered salesmanship had saddled thousands of families with poorly planned houses, undesirably located, unsuited to their needs and too big to carry. Financing was frenzied; high interest, top-heavy first mortgages were capped with higher interest junior liens. And, if this set-up did not collapse of its own weight, an unexpectedly heavy tax bill or special assessment was frequently the knock-out blow. To prevent recurrence of this sad sequence was the reason for the FHA. If it did happen again, FHA would find itself holding a bag of foreclosed real estate which might make HOLC's look like peanuts.

No one realized this more than FHA itself. Therefore, to place home financing on a sounder basis (i.e.: to eliminate, as far as possible, the dangers of home ownership) was FHA's general goal. First objective was elimination of second mortgage financing via extension of first mortgages to cover a percentage of appraised property value much higher than the 60-66 per cent average of the Twenties. This meant that FHA had to establish a more accurate and uniform appraisal system than was then in general use.

To build this foundation for its entire program, FHA hired Frederick Babcock away from the Prudential Life Insurance Co.'s loan staff. A practical economist and hard-driving executive, Babcock already had behind him nine years of training in his father's (William H.) widely known Chicago firm of real estate valuators and consultants, two best sellers in the fields of property appraisal and valuation and positions on the faculties of Michigan and Northwestern, his alma mater. During his fourteen years of experience, his appraisals of individual properties had totaled more than $1.5 billion—ample qualification to head FHA's Underwriting Division which in the past six years has supervised appraisals of old and new houses involving some $3.6 billion.

Appraiser Babcock was behind FHA's early decision to ignore the real estate fraternity's generally accepted definition of appraised value—a weighted average of a property's cost, capitalized value and current market price—to rely instead on the lowest of these three figures. Equally conservative was his order to FHA field underwriters to supplement their common sense (which is tested and rated annually by FHA examinations) with two mathematical aids to accurate appraising: the integrated square foot cost and the in-place unit price methods of cost estimation. Speaking well for the accuracy of Babcock's appraisal system and his appraisers is the fact that properties which FHA had acquired through foreclosure and sold up to May 1940 (total: 867) involved an average net loss to FHA of only about $534 including sales commissions and advertising expenses. Moreover, the average loss has dropped each year; on December 31, 1938 it stood at $692.

It was success such as this that finally influenced FHA (after considerable outside prodding) to boost its maximum mortgage-to-value ratio from 80 to 90 per cent. Despite the predictions of calamity howlers, these 90 per cent loans, limited to under-$6,000 properties, have stood the gaff. Since their introduction two years ago, only about 40 have gone sour.

Logical in the face of this experience is the question whether or not the limit will be upped again. Chances are that it will—to 95 per cent for properties valued at about $3,000 and less. Evolution of the whole FHA program points in this direction, and FHA brass hats already recognize the force of arguments favoring the move. Six years of mortgage insurance has proved to FHA the elemental truth on which Building's economists have long harped: that the lower the cost of a house, the broader the market and the greater the margin of mortgage safety. In really low cost brackets the market is so broad that a 95 per cent loan on a $3,000 property may be as sound as a 90 per cent loan on a higher valuation.

ACCEPTED FAMILY

Case—Applicant: public utility company plant superintendent, aged 41, with 35-year-old wife, 9-year-old daughter, 7-year-old son. Proposed house: six rooms to cost $6,000 with lot. Proposed mortgage: $5,400, 25-year term. Employment status: 15 years with company; present annual salary, $2,400; wife not employed. Assets: lot which cost $700; $800 checking account; $200 savings account; $750 of stock at market value, pays $30 annual dividends; $7,500 life insurance with $775 cash surrender value, requires $20 monthly premiums; personal property. Obligations: none except current accounts. Present housing expense: $55 per month rent for 5-room apartment, including heat and utilities. Proposed housing expenses: $44 monthly mortgage payment; $7 for heat, $5 maintenance; $10 utilities; total $66.

Qualifications—Applicants are above-average with respect to character, family life, relationships, associates and attitude toward obligations and have attained a state of maturity which indicates continuance of satisfactory past performance. (Hence, column 5 rating after first feature of grid, right.) Explanation of second feature's rating: family needs more living space and, while proposed housing expense is higher than current rent, it is equal to or lower than probable expense for comparable rental quarters. Third feature: consideration is given to applicant's risk of occupational impairment, versatility, personality, employment, reemployment possibilities, age, health and presence of reserves and contributions. Applicant falls down slightly on the first count. Fourth feature: Only obligation of applicants prior to mortgage payments is family responsibility which should tie them more closely to their proposed house. Fifth feature: Proposed house costs less than 2½ times applicants' annual income, will require only 21% for monthly mortgage payments. Total monthly housing expense at $66 is only 32% of income. Applicants' fixed charges, including life insurance premium, will consume only 42% of monthly income and will be devoted largely to investment purposes. Remaining 58%, or $117 per month, would be sufficient to meet family's other necessary living expenses.

	FEATURE	REJECT	1	2	3	4	5	RATING
Attitudes	Social and economic characteristics		3	6	9	12	15 X	15
	Motivation in relation to transaction		5	10	15	20 X	25	20
Ability to Pay	Employability and earning stability		4	8	12	16 X	20	16
	Relation of obligations to transaction		3	6	9	12	15 X	15
	Relation of income to transaction		5	10	15 X	20	25	15
TOTAL RATING OF BORROWER								81

Still other tell-tales point toward Congressional authorization of 95 per cent. mortgage insurance—but probably not before next year's session when extension of certain FHA activities must be voted upon. It is already permitted under FHA's Title I program, but the maximum $2,500 loans may be applied only toward construction costs, not toward the cost of a lot. Consequently, unless an improved lot may be picked up for a $125 song, the purchaser is required to make more than the minimum 5 per cent down payment. Title II loans, however, may cover land as well as construction costs, so a boost in the maximum coverage ratio to 95 per cent would make the 5 per cent down payment a reality. Moreover, this change would simplify the entire FHA program by concentrating all new house construction under one heading—Title II. (At present about 200 low cost houses are being built each week under Title I which was intended primarily to foster modernization and repair work.)

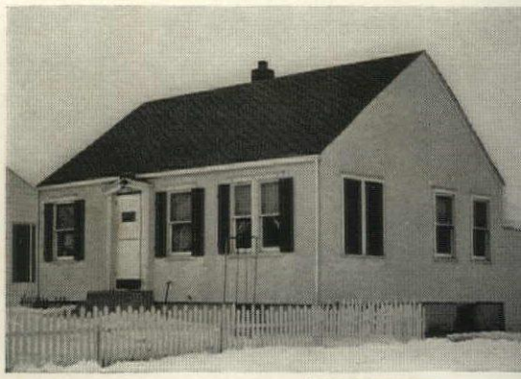
Mechanics. If anything justifies FHA's past and anticipated increases in the maximum loan-to-value ratio, it is the thoroughness of its mortgage risk rating system. Developed almost single-handedly by Assistant Administrator Babcock, risk rating is more than an accurate appraisal of property value which, prior to FHA's existence, was supplemented only by rule-of-thumb estimates of the other factors entering into the long-term security of a mortgage. Following a uniform, almost mathematical pattern, underwriters in FHA's 63 field offices carefully rate all four factors (see below), refuse an application for mortgage insurance if any one of them flunks its tests or if the total rating of all four factors falls below the passing mark—50 per cent.

Risk rating serves two broad purposes. First, it facilitates the handling of FHA's Mutual Mortgage Insurance Fund, which now totals some $26 million. All mortgages are divided into three groups according to their risk rating, and the insurance premiums from each group are dumped into an individual pot. Reason: being a mutual organization, FHA (if all goes well) will some day apply what is left in its insurance fund after payment of losses toward the reduction of principal of non-delinquent mortgages; and by dividing the fund into three pots, FHA does not force good risk mortgagors to share the losses which are more apt to result from the foreclosures of lower grade mortgages. (To accomplish the same thing, FHA originally proposed to vary its insurance premium rate in accordance with mortgage ratings, but vetoed the idea to avoid public confusion and to forestall the selling of mortgages at different premiums in the secondary market.)

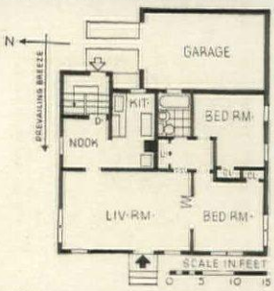
Second broad purpose of risk rating is to keep lemons out of the FHA-insured mortgage portfolios of the nation's lending institutions and incidentally to discourage the construction of poorly planned, poorly specified houses, the development of unsuitable neighborhoods, the assumption of home ownership by unqualified families and the writing of weakly secured mortgages. For these are the four aspects of mortgage lending the FHA's underwriters probe and rate.

Property. Lifted from FHA's records, the case histories presented on these pages illustrate two extremes in house design and construction: left above, a house which is above average in both respects and commands a total risk rating of 94—6 points shy of perfect; right above, a rejected unit whose poor plan and lack of structural soundness and resistance to elements pulled its rating down to 44—6 points below the passing grade. Outlines of the houses' design and construction which accompany the case histories amply explain and justify FHA's ratings. Noteworthy, however, is the possibility that the total rating in each case might have been further adjusted for non-conformity of the property with the design, function and lot characteristics of typical properties in the immediate neighborhoods. If a property does not measure up

(*Continued on page 58*)



REJECTED HOUSE



Analysis—$2,895 replacement cost; 820 sq. ft. area; full basement; one-car garage; 50 x 115 ft. lot; 17% lot coverage. Plan: only one exposure for rear bedroom; poor natural lighting in cramped kitchen, bathroom and rear bedroom; principal rooms suffer from bad orientation; only three closets. Exterior treatment: lacks design character; poor fenestration; clumsy details. Construction: 8 in. concrete and brick foundation walls; exterior walls of studs, 1 x 12 in. boxing, paper and stucco; interior walls finished with plaster on wood lath or low grade wall board; light asphalt shingle roof (composition roll garage roof); wood floors in kitchen and bath; knob and tube wiring; no insulation; no weather-stripping. Heating: gas fired hot air system of low grade. Workmanship and material qualities: low grade concrete, stucco, hardware, mill work, plumbing, lighting fixtures and general workmanship. Annual cost of fuel, $50; maintenance, $30; life of building, 35 years.

	PHYSICAL SECURITY FEATURES	REJECT	1	2	3	4	5	RATING
Durability	Structural soundness		5 X	10	15	20	25	5
	Resistance to elements		2	4 X	6	8	10	4
	Resistance to use		1	2	3 X	4	5	3
Function	Livability and functional plan		4	8 X	12	16	20	8
	Mechanical and convenience equipment		2	4	6 X	8	10	6
	Natural light and ventilation		2	4	6 X	8	10	6
Architectural attractiveness			4	8	12 X	16	20	12
ESTABLISHED RATING OF PHYSICAL SECURITY								44

REJECTED FAMILY

Case—Applicant: public utility company mechanical engineer, aged 26, with 24-year-old wife, no dependents. Proposed house: six rooms to cost $6,000 with lot. Proposed mortgage: $5,400, 25-year term. Employment status: 4 years with company; present annual salary, $1,740; wife not regularly employed but earned $300 last year as substitute teacher. Assets: lot which cost $700; $200 bank account; $2,500 life insurance with $240 cash surrender value, requires $6 monthly premiums; personal property. Obligations: 15 monthly payments of $24 to finance automobile purchase; current accounts. Present housing expense: $50 per month apartment rent, including heat and utilities. Proposed housing expense: $44 monthly mortgage payment; $7 for heat; $5, maintenance; $10, utilities; total, $66.

Disqualifications—While there is no adverse reflection on the applicants' "social and economic characteristics", their lack of maturity, experience and proper judgment in the management of their affairs (obvious in their attempted over-purchase) injects considerable risk into the proposed mortgage transaction. (Hence, column 3 rating—average—after first feature of grid, right.) Explanation of second feature's rating: Applicants intend to make only the minimum cash investment to acquire a property which is apt to burden them. Six-room house unnecessary for a two-person family. Proposed transaction would up their housing cost 30%. Should they suffer financial reverses, a rental apartment would save them money. Third feature: see case history on page 438. Fourth feature: There is some risk that the indebtedness for the applicant's automobile might be placed before the unduly high cost of shelter in this particular case. Fifth feature: Proposed house costs about 3½ times applicants' annual income; will require 30% for monthly mortgage payments. Total monthly housing expense at $66 is more than 45% of their income. Applicants' total fixed charges, including life insurance premium and automobile purchase payment, will consume 65% of monthly income. Remaining 35%, or $50 per month, is insufficient to meet family's other necessary living expenses.

	FEATURE	REJECT	1	2	3	4	5	RATING
Attitudes	Social and economic characteristics		3	6	9 X	12	15	9
	Motivation in relation to transaction		5	10 X	15	20	25	10
Ability to Pay	Employability and earning stability		4	8	12	16 X	20	16
	Relation of obligations to transaction		3	6	9	12 X	15	12
	Relation of income to transaction	X	5	10	15	20	25	reject
TOTAL RATING OF BORROWER								reject

QUADRUPLET HOUSES SOLD WITH TENANTS yield investors

a fancy 14 per cent return, take preferred positions in Columbus mortgage portfolios.

Marketwise, the operative builder of rental housing faces a twofold problem. His buildings must not only attract tenants able to pay the rent, but must also attract investors who will take them off his hands, permit him to go on to other jobs. In cracking this puzzle, Columbus' 41-year-old Builder-Realtor Samuel Roessler has found an effective solution in the comparatively rare four-family house, is currently demonstrating its versatility both as a renting unit and as an investment unit in an expanding suburban area.

To prospective tenants seeking quarters somewhat more intimate than those found in large apartment houses but minus the maintenance cares of detached dwellings, Roessler offers three-and-one-half to five-and-one-half room accommodations at rents ranging from $42.50 to $50. To prospective investors seeking a profitable return on surplus funds, he offers an annual net yield of roughly 12 to 14 per cent on a cash outlay of $7,500 for a $20,000 building, $10,500 for a $20,000 building, including lot. (See detailed income analysis, opposite.) How effectively the four-family house balances the equation between renters and buyers, with a quick turnover for the builder, is shown by Roessler's proud statistics: since last June fifteen buildings have been constructed in the present development, filled with tenants and sold to investors.

While most builders have been thinking only in terms of single-family houses, Roessler has long pioneered the four-family structure as a profitable unit of operation. A veteran of World War I, he returned to Columbus to take up his interrupted career as a builder-realtor, found conditions ripe for the promotion of quadruplet dwellings. Outstanding factor: ample financial aid. Columbus boasted a larger per capita investment in building and loan associations than any other city in the nation. Unable to find sufficient outlets for these funds in the construction of one-family houses and unwilling to lend in other cities, the associations encouraged the building of durable four-family brick houses. Thus, even before the depressed Thirties, a pattern for this type of investment was set locally. And, with the resumption of building activities since Depression, four-family houses have again taken a preferred position in the portfolios of local lending institutions. For this, no little credit goes to Roessler; chalked up on his scoreboard of accomplishments to date are 76 four-family buildings.*

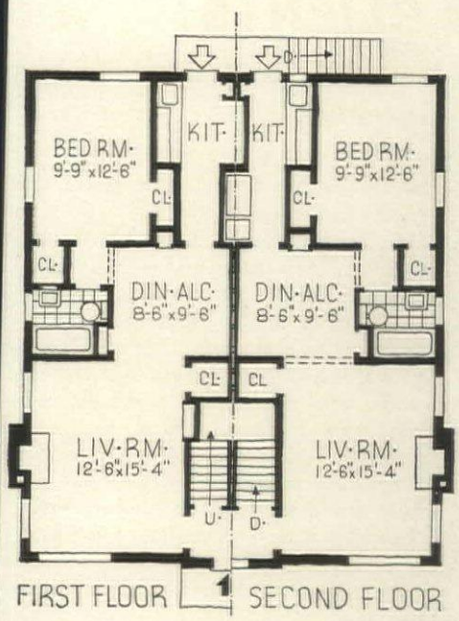
Site. Convinced that the rental demand for four-family houses would continue to increase, Roessler and associates last year optioned a large area in the fast-growing northwest section of Columbus, have since been buying the land in convenient parcels as their building program proceeds. Bulking large among the families attracted to this suburban district are young married couples, chiefly white collar workers employed by the State in its administrative offices and by national business concerns with central offices in Columbus. Few have children, so the lack of public schools in the district is no great detriment to a rental housing project. Proof: apartment vacancies in this area, according to a recent post office survey, total only 7/10 per cent.

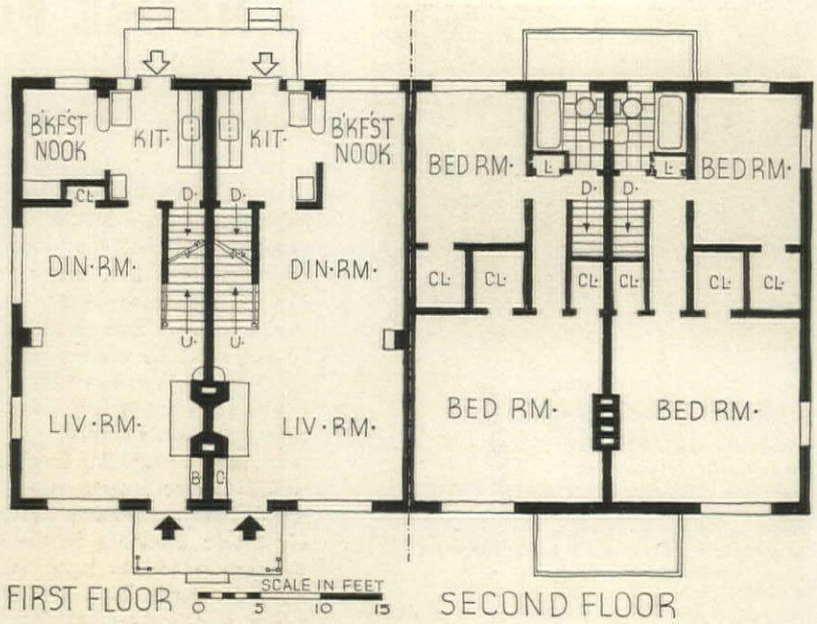
Three wide, high speed boulevards put the area within a ten-minute drive of the downtown business district. A crosstown bus line parallels Roessler's development, connects with a nearby downtown line. Most transportation, however, is by private car. Hence, the decision to include with each four-family house a four-car garage with individual stalls, reached by an alley at the rear of the lots.

From earlier experience came also the decision to standardize the buildings around two basic plans: 1) a two-story flat with two single-bedroom dwelling units on each floor, all opening on a common entrance stair-hall; 2) a row combination of four duplex apartments, each with a separate ground floor entrance and two upper floor bedrooms. Roessler's use of either type depends as much on available site frontages as on the demand for

(*Continued on page 56*)

* Also on the scoreboard: 184 single family houses, 81 two-family buildings, making a grand total of 650 dwelling units in a little more than 20 years.





Typical floor plans in Builder-Realtor Samuel Roessler's current development: left, the four-family flat; right, the four-family duplex. Designed by Architect Todd Tibbals, the buildings are intended to meet the exacting demands of a white-collar clientele. Privacy begins at the front door of each dwelling unit. Party walls are sound-proofed, and in the flats a floating ceiling under the second floor provides additional insulation against sound. Other design features meet buyer demands by cutting maintenance costs: Windows have steel sash, stone sills, interior copper screens, are easily cleaned. Hot air heat in the duplexes and first floor flats is supplied by tenant operated coal-fired furnaces in the basement. Second floor flats are heated with gas-fired units also located in the basement. Gas and electricity are metered to each tenant, but the landlords foot the water bills. Duplexes have no public halls, require only infrequent services of landlords' yard-boys to cut lawns and shovel snow.

INCOME ANALYSIS

		4-Family Flats		4-Family Duplexes
Selling price, including land		$20,000		$24,000
Mortgage		12,500		13,500
Owner's investment or equity		$ 7,500		$10,500
Annual rental income		$ 2,100*		$ 2,400**
Interest on loan at 5%	$625		$675	
Estimated taxes ($2 on ⅔ value)	267		320	
Water and sewer charges at $.70 monthly	34		34	
Insurance	25		25	
Estimated cost of incidentals	100		100	
Total annual expenses		$ 1,051		$ 1,154
Net annual profit		$ 1,049		$ 1,246
Yield on investment		14%		11.9%

*Two apartments at $45 per month plus two at $42.50.

**Four apartments at $50 per month.

CONSTRUCTION OUTLINE

FOUNDATION: Concrete block.

STRUCTURE: Exterior walls—brick, tile backup, furring strips; inside—rocklath and plaster, Texolite finish, U. S. Gypsum Co. Floor construction—sub-floor, 15 lb. felt, oak finish floor.

ROOF: Covered with slate shingles. Deck (on garages)—yellow pine covered with built-up roofing.

SHEET METAL WORK: All Armco Iron, American Rolling Mill Co.

INSULATION: Outside walls—hollow tile. Roof—Kimsul, Kimberly-Clark Co. Sound insulation—U. S. Gypsum Co.

WINDOWS: Sash and screens—Truscon Steel Co. Glass—double strength.

FLOOR COVERINGS: Kitchen and bathrooms—linoleum, Armstrong Cork Co.

WOODWORK: Interior doors—"Sturdibilt", M. & M. Woodworking Co.; remainder—sap gum or white pine.

HARDWARE: By Russell & Erwin Mfg. Co.

PAINTING: Materials by U. S. Gypsum Co. and Benjamin Moore & Co.

ELECTRICAL INSTALLATION: Wiring system and switches—Westinghouse Electric & Mfg. Co. and Bryant Electric Co. Fixtures—Chase Brass & Copper Co.

KITCHEN EQUIPMENT: Range and refrigerator—Norge Corp.

BATHROOM EQUIPMENT: All fixtures by American Radiator-Standard Sanitary Corp. Cabinets—F. H. Lawson Co.

PLUMBING: Soil pipes—cast iron. Water pipes—galvanized iron.

HEATING: Gas and coal fired gravity systems—Rybolt Heater Co.

A HOUSE FOR 300 CLIENTS

gives the architect a headache, California a design signpost, Building a pattern for effective promotion.

300 WOMEN want:

One-story Colonial house
Comparatively level lot
Attached garage with overhead doors
Patio or enclosed garden
Sheltered front entrance
Wood siding painted white, green trim
Front entrance hall
Powder room near entrance hall
Access from garage to kitchen and other parts of the house
Separate dining and breakfast rooms
Space suitable for arranging flowers
Sliding door without glass between living and dining rooms
Two bathrooms; both a stall shower and a tub in master bathroom
Guest room convertible into study or servant's quarters
Ground floor laundry with space for sewing machine
Abundant closet space—individual closets for coats (near entry), clothes (two in master bedroom), playthings, garden tools, sports equipment, trunks, fire wood and canned goods
Package delivery door
Numerous electric outlets
Central heating system
Wallpaper and bay window in dining room
Paneling for living room fireplace wall, paper elsewhere
Random plank floor in hall, living and dining rooms
Ample blank wall space for furniture

. . . don't want:

Steep driveway
Proximity to neighbors
Changes in floor levels
Circulation through living and dining rooms
Drafts and noisy plumbing
Dark entrance and circulation halls
Low, swinging electric fixtures
Cupboards with triangular floor plans
Corner and round windows
Telephone in comparatively dark corner
Paneling on all four walls of any room
Functional shutters

Many a speculative builder would give his shiniest saw for a look inside the public's mind to see what the "ideal" house is—and what it is not. Better yet, he would like to see these ideals translated into studs, shingles and shutters. This spring he got what he wanted when the Berkeley (Calif.) Women's City Club officially warmed a $10,850 house which 300 members had been planning and building for more than a year. For California Building, which follows a pattern all its own but which last year produced one out of every eight new dwellings in the entire U. S., this group-planned house is a significant signpost. For builders and architects elsewhere it offers several design tips worth taking.

Sponsor of Berkeley's noteworthy project is Publisher Lawrence William Lane's *Sunset* magazine, which boasts the largest circulation of all West Coast monthlies, admirably covers a quartette of western fronts: gardens, homes, foods and travel. As a promotional venture to bounce its circulation higher and as an interesting subject for its chatty editorial copy, *Sunset* in early 1939 invited the Women's Club to cooperate in building a model house. Since 300 of the Club's 5,000 membership were already enrolled in a home-planning course and since Publisher Lane agreed to foot all bills, the invitation was promptly accepted.

Forthwith, the lady home-planners under their decorator-director, Mrs. Arthur C. Mauerhan, went into semimonthly huddles to debate the house's design. It was agreed that their majority vote would represent complete approval or veto of design elements, but that specifications of all materials and equipment would be entrusted to a *Sunset*-selected board of design: 1) Architect Clarence W. W. Mayhew, a prominent San Francisco residential authority who had been honorably mentioned in *House Beautiful's* 1939 competition and who was considered enough like Solomon to cope with the demands of 300 women "clients." 2) Landscape Architect H. L. Vaughan. 3) Interior Decorator Mauerhan, and her partner-husband, Arthur. 4) Builder J. M. Walker.

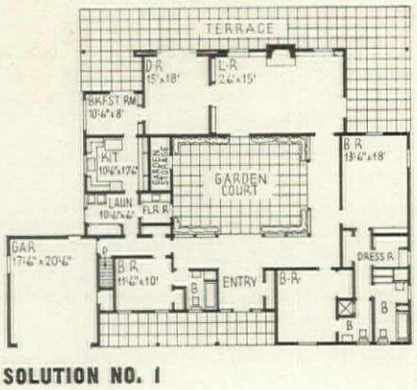
Problem. By the time this roster of local bigwigs was complete, the 300 women had held three pow-wows, had tabulated their pet design preferences and peeves (col. 1). Answer to the "clients' " site requirements was found in one of seven wedge-shaped lots in a circular tract of Park Hills, a new residential development behind Berkeley. Its 128 ft. frontage overlooks a regional park to the northeast, and one of its 117 ft. sides is bordered by a 10 ft. path leading to a small interior-block park which abuts the 40 ft. rear dimension.

In addition to specific plan requirements, the women listed four "musts" for exterior design: one-story height, California-Colonial style, shake roof and wood siding. With these marks to toe, Architect Mayhew set about designing a house to fit inside a $11,500 budget (construction cost plus architect's fee) and to serve a hypothetical, flexible family of three or four—father, mother, college-age daughter and a frequently visiting mother-in-law.

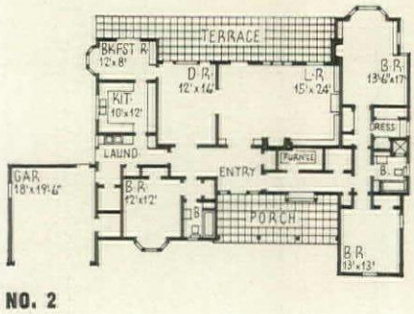
Solution No. 1 (left, below) pleased Mayhew—but not his clients. They shot it full of holes with such comments as: "There's no sun in that court . . . . who's going to wash the windows in that long glazed gallery? . . . we'd need roller skates to get around that house." The architect had been misled by the requisite "patio or enclosed garden" which was subsequently translated to mean a rear garden enclosed for privacy by a fence or wall.

Replacing the interior court with the dining and living rooms and reshuffling the bedroom wing resulted in Solution No. 2. The plan in general was approved, but some of its details were seriously questioned: the numerous living room doors, the dining room door directly opposite the bathroom door, the obviously expensive master bedroom, the distance between this room and the bath and the necessity for a dressing room. Again, the architect sharpened his pencil, incorporated these and other suggestions in Solution No. 3.

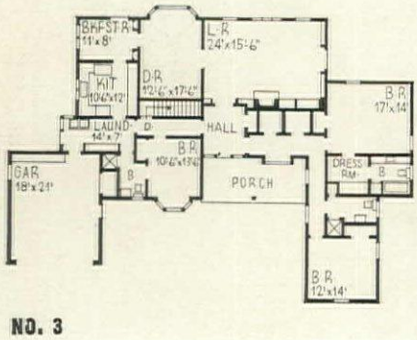
Finally, the women approved, and Architect Mayhew drew up working drawings and specifications, submitted them for bids. Pleased with the progress, *Sunset* in late May still hoped to complete the



SOLUTION NO. 1



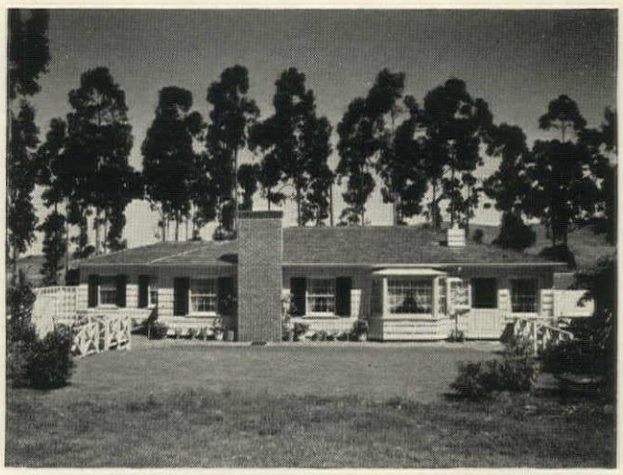
NO. 2

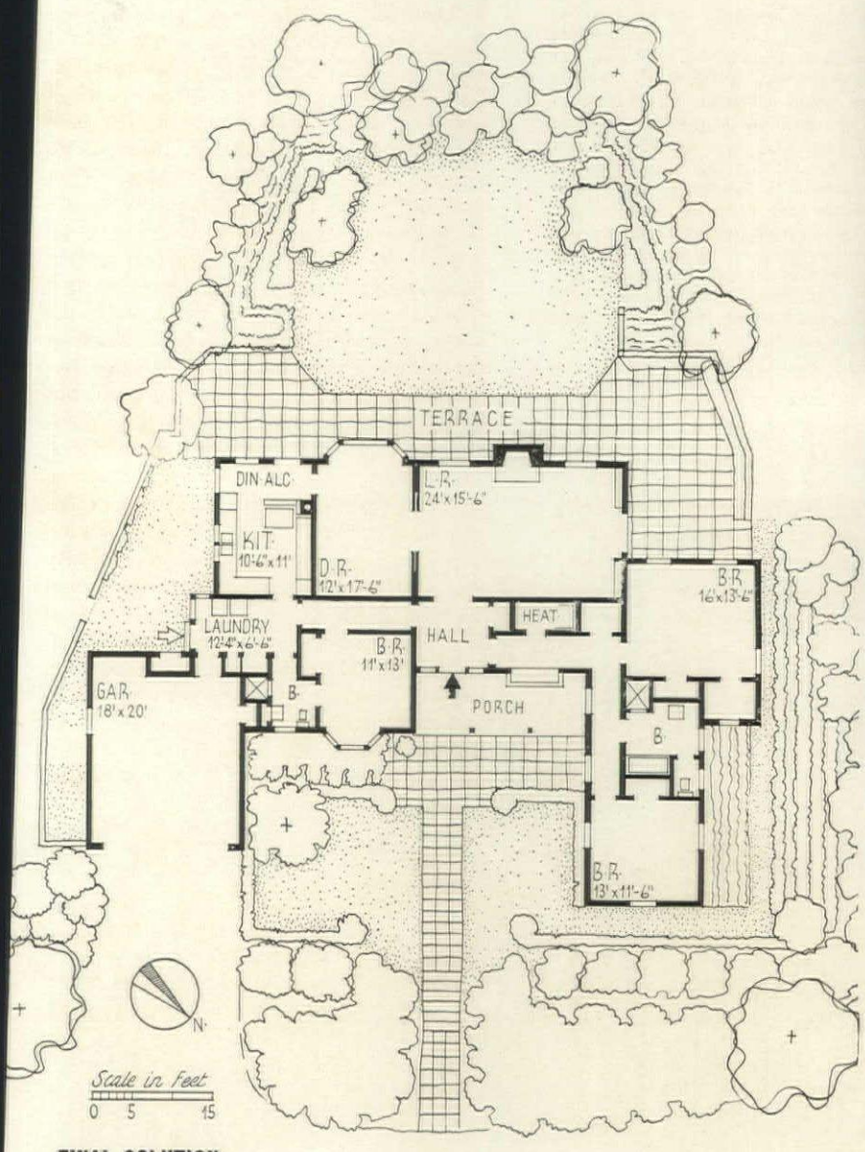


NO. 3

house in time for inclusion in the World's Fair's "Model Homes Tour," thus increase its promotional value. But, when construction bids were opened, the lowest was $16,000—$4,500 over the budget.

Undaunted, the sponsor decided against going ahead with the house at any cost, favored following the average family's probable procedure. Thus, the architect consulted his "clients," revised the designs and specifications, produced the final solution shown on this page. Major alterations: 1) Substitution of a ground floor heater-closet for a basement furnace room and shifting of the living room fireplace. Resultant savings: excavation, masonry, waterproofing, 6 ft. of chimney, a staircase and lighting equipment. 2) Combination of the breakfast room and kitchen. 3) Sacrifice of the dressing room and one bathroom for a large window-lighted closet and a stall shower (as well as a tub) in the other bathroom. Minor alterations: simplification of details, use of stock moldings, windows and doors and squeezing of some room dimensions. All told, these and other small changes meant a





FINAL SOLUTION

Evolution of the group-planned house produced four interesting floor plans (left): No. 1—Architect Mayhew's answer to the 300 women's written "wants" and "don't wants." No. 2—Revision in accordance with verbal suggestions that the garden court be eliminated, the plan compressed. No. 3—Further perfected, this plan is actually what the women wanted, but the lowest construction bid at $16,000 was $4,500 over the budget. Final solution was trimmed down in size and appointments to a construction cost of $10,850, including architect's fee. Above—front and rear elevations and close-up of dining terrace opening conveniently off the small dining alcove. Landscaping cost about $1,000.

saving of $5,250, for Builder Albert S. Haskell in August bid $10,850 on the revised plans and specifications—$650 under the budget.

Delayed for several weeks by a labor strike which tied up building activity within the entire subdivision, *Sunset's* house was finished two months ago, furnished and opened to the public.

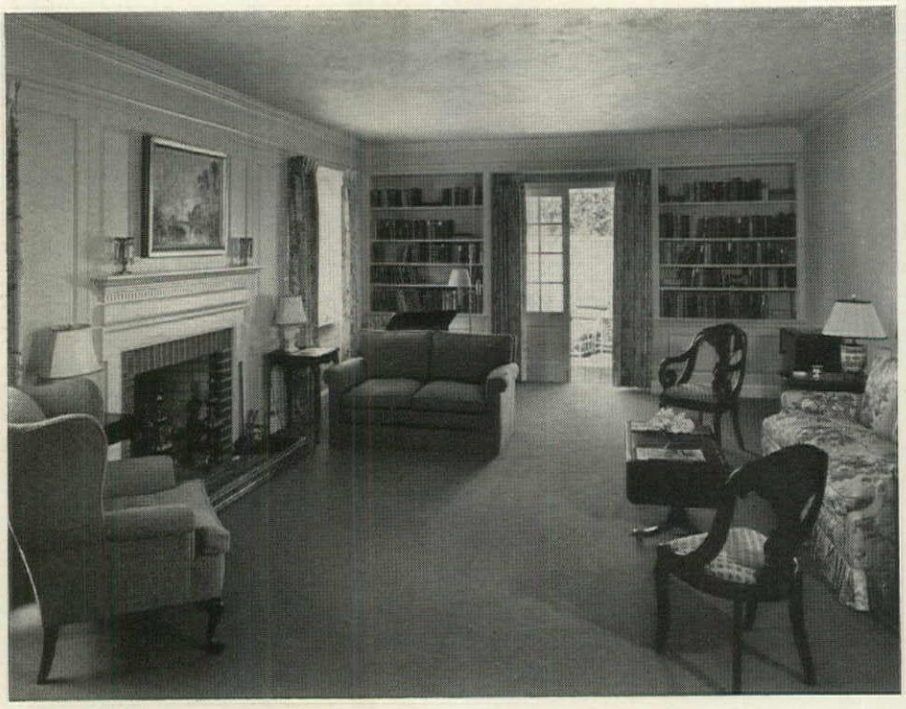
Significance. Undoubtedly the most accurate reflection to date of what average well-to-do Californians desire in a house, this group-planned project features several design details which would help sell any house anywhere: 1) Abundant storage space—twelve closets, half of them oversize, one of them with an exterior door for the storage of garden tools. 2) A master bathroom with an enclosed water closet, a recessed lavatory. 3) Well-lighted central and circulation halls. 4) A functionally planned kitchen-dining alcove subdivided by a glass spur wall. 5) A third bedroom with bath which may be converted readily into a study or servant's quarters. 6) Ample terrace space.

To be sold at cost next fall, *Sunset's* project has already proved a profitable promotional venture. Evidence: hundreds of letters commending and criticizing the house, dozens of requests for permission to duplicate it.

Local publishers the country over with an interest in real estate (and this includes almost every sizable newspaper), if prodded by local building factors and chambers of commerce, may find in *Sunset's* experience incentive to sponsor similar houses in their communities. Valuable for building would be a dozen group-planned houses reflecting regional consumer preferences and climatic conditions.

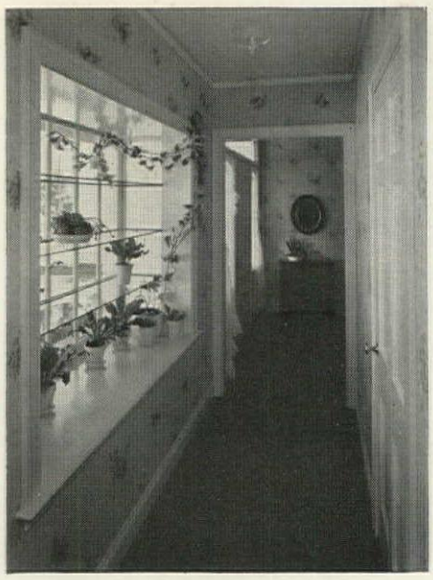
CONSTRUCTION OUTLINE

FOUNDATION: Reenforced concrete.
STRUCTURE: Exterior walls—red cedar shingles, studs, sheathing, 15 lb. felt; inside—canvas and plaster. Floor construction—white oak plank.
ROOF: Covered with red cedar shingles.
SHEET METAL WORK: Flashing, leaders and ducts—Armco galvanized iron, American Rolling Mill Co. Gutters—redwood.
INSULATION — Furnace room — rockwool, Johns-Manville Corp.
WINDOWS: Sash—double hung, sugar pine. Glass—Libbey-Owens-Ford Glass Co.
FLOOR COVERINGS: Kitchen — linoleum, Congoleum Nairn, Inc. Bathrooms — tile, Kraftile Co.
WOODWORK: Doors: Oregon pine and sugar pine. Garage doors—Overhead Door Co.
HARDWARE: By Schlage Lock Co.
PAINTING: By W. P. Fuller Co.
ELECTRICAL INSTALLATION: Wiring system—knob and tube. Switches—General Electric Co.
KITCHEN EQUIPMENT: Range—Gaffers & Sattler. Refrigerator—General Electric Co. Sink—Crane Co.
LAUNDRY EQUIPMENT: Washing machine—Bendix Home Appliance Co.
BATHROOM EQUIPMENT: Crane Co.
PLUMBING: Soil pipes—cast iron. Cold water pipes—galvanized iron. Hot water pipe—copper, Mueller Brass Co.
HEATING: Warm air system with filtering, Payne Furnace & Supply Co. Water heater—Day & Night Water Heater Co.



LIVING ROOM

Interior of the Sunset-Berkeley Women's City Club house features ample natural light, pre-studied furniture arrangement and convenient circulation. Unusual is any California house which is so planned that every room may be reached without passing through other rooms (see floor plan, page 443). Bay window in hall (right) serves as a small conservatory; door opposite is to insulated closet containing warm air heating equipment. Note easily cleaned glass panel behind kitchen stove (below), small dining alcove beyond and recessed lighting fixture over sink. Women demanded that kitchen storage space be ample and within easy reach.



HALL

KITCHEN

HOUSE BUILDING MADE "EASIER THAN YOU THINK"

ith knock-down rooms and icture shows at a Hartford umber dealer's House Party. romotion with a pull beats tock plans, sells architects nd 175 houses per year.

Invitation to Capitol City's weekly House Party appeared last month on the center spread of its magazine "Homeward Bound" (above). Ordinarily, President Adolph Korper selects names from the subscription list, mails them personal invitations to the party, receives half a dozen acceptances.

Most of the 280,000 people in Greater Hartford, Conn. know the phrase: "It's asier than you think." Most of them now that it refers to the building and nancing of a house, and most of them ssociate it with the local Capitol City umber Co. They should. This slogan is ainted on the green sides of Capitol ity's eleven delivery trucks, is printed in ach of its weekly newspaper advertisements and is illustrated in its quarterly agazine which goes to some 4,600 potenial house builders. Furthermore, it is lways the subject of discussion at Capitol ity's "House Parties" where groups of rospects may, among other things, preview the rooms of their proposed houses ia movable wall panels. Finally, this logan is the title of a motion picture—a eature attraction which the lumber company last month added to its already long ine of effective promotional activities.

Although notable on its own account, allyhoo is not alone responsible for Capitol City's leading position in the local building material business; the company is the kingpin in a complete house building service which has brought architectural service (at 6 per cent) to the small house field, better looking buildings to Hartford and, as advertised, has helped make house building and financing "easier than you think."

Company. Back in the Twenties, Capitol City was like most other U. S. lumber companies, except that it was bigger. It used to sell nothing but lumber—as much as 250,000 board feet per day would move out of its 10-15 million ft. capacity yards. And, as many as 50 freight cars would stand on the company's seven railroad sidings to replenish the yards. Bulk of this big business was attracted by Capitol City's state-wide reputation and by its sheer size—only a little resulted from the stock house plans which its salesmen passed out right and left.

During Depression and Recovery, however, Capitol City underwent many changes. In step with construction activity, business volume sagged. To bolster it, the company broadened its field, organized new sales offices (it now has four), and filled its shelves with all kinds of building materials and equipment. Then, because the stock plan books were benefitting neither the company nor its consumers, Capitol City junked them in 1930, began scratching its head for a more productive promotional substitute.

Most of this scratching was done by towering (6 ft. 3 in.) young President Adolph Korper. He sounded out local architects, found that but few were participating in the small house business, that most of them wanted to. Forthwith, Korper collected from them a portfolio of house plans and renderings, agreed to publicize the collection and swing their way any business that developed. It did develop and, as houses were built, their photographs were added to the portfolio. Eager to lend on architect-designed and supervised houses, local financial institutions promptly fell in line, helped boost the program.

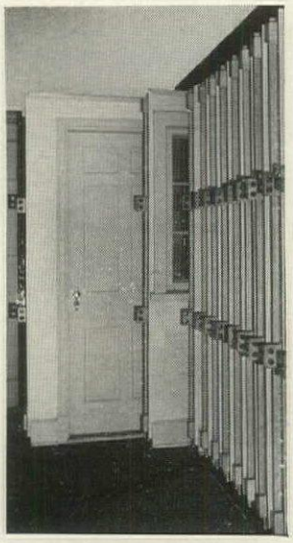
In 1935 President Korper pumped new blood into his design portfolio via a small house competition among Hartford architects. Result: more publicity for Capitol City, fifteen new designs for its house portfolio, a cash prize for Winner Robert H. Lienhard (ARCH. FORUM, July 1935, p. 72). Today, the design library includes 141 designs, represents the work of seven Hartford and four out-of-town architectural offices.

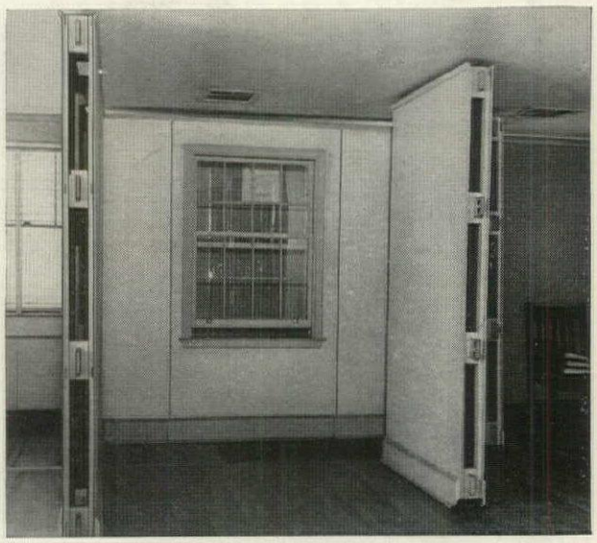
Atop this foundation of architect cooperation, Korper in the past four years has built a series of unique promotional programs that would do any public relations expert proud. They have swelled Capitol City's business, made it the recognized hub of the local custom-built house business.

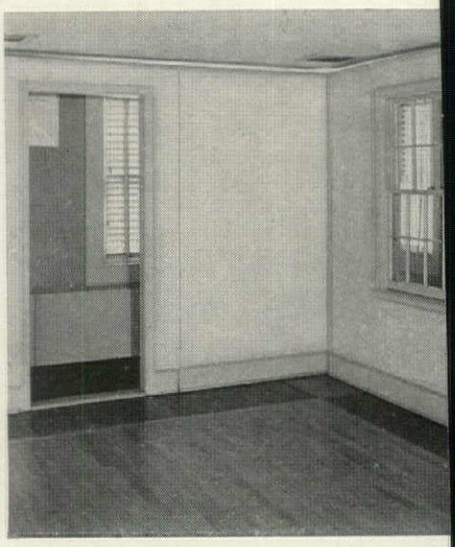
Shavings. While competitor material dealers aim their advertising at builders, contractors and subdividers, Capitol City's Korper goes directly to the consumer once a week on the first page of the local newspaper's Sunday real estate section. And, his advertisements are pleasantly different

Picture show at the House Party includes colored slides of recently completed Hartford houses and a 32-minute motion picture illustrating every step in the building of a house. A Capitol City salesman points out design details while Radio Announcer Milton J. Cross speaks from sound track.

Design portfolio is divided into volumes according to house costs, boasts 141 plans and elevations from eleven local architectural offices. Prospects browse through designs, decide which of the architects has produced work most appealing to them, and an appointment is arranged.







Movable wall panels stored in Capitol City's air conditioned show room (left), are moved out on their casters to show clients the size and design of rooms appearing on floor plans. Panels are finished on one side with wall paper, on the other side with paint; both sides are fitted with base and cove moldings. Built-in stock windows, doors and fireplaces are displayed to good advantage, help clients to visualize proposed rooms. With two dozen panels company salesmen can build a room of almost any size, shape and design.

from run-of-the-mill material dealer ads. Thus, under a one-column cut illustrated with a carpenter's plane and bearing the title "Shavings," Korper writes twelve to fifteen inches of folksy real estate and building gossip. Typical items: building cost trends, bird houses, new building materials, household hints to wives, questions and answers, names of people who are building and remodeling, what war means to real estate, etc. Occasionally he plugs local builders and contractors by mentioning their names. And, of course, Capitol City's services are frequently blurbed amid the gossip. At the column's bottom, immediately above Adolph Korper's signature there is always an invitation for prospective home builders to add their names to the company's mailing list and thus receive without cost a quarterly magazine.

Homeward Bound. Composed of sixteen (sometimes twenty) smartly styled pages and titled *Homeward Bound*, this magazine is the joint product of the lumber company and its advertising agency. Through its colored cut-away cover, readers see on page one a photograph of the most recent house completed under the Capitol City plan. Inside a typical issue are other illustrated case histories covering new construction and remodeling, a page of housekeeping short-cuts, answers to house building problems, pictures of well-planned kitchens, recreation rooms, attic bedrooms, dark rooms, work shops, etc., an address list of Hartford's new houses and, of course, a page or two illustrating Capitol City's products and services (see illustration, page 445).

Today, *Homeward Bound* boasts a circulation of 4,600, and thanks to periodic weeding out of curiosity seekers, its "subscription" list is probably Hartford's best roster of new house prospects. While the magazine builds up valuable good will, its prime function is that of a springboard for other promotional activities.

Direct Mail. Each week President Korper addresses a personal letter to about 150 of *Homeward Bound's* "subscribers," invites them to attend the next Wednesday evening House Party at Capitol City's main office, offers to pick them up in one of the company's automobiles. On the average, a half dozen couples accept this invitation, the maximum number which the company's ten salesmen can comfortably handle. (Record attendance: eighteen couples.)

House Party. Scene of the weekly House Party is a large (24 x 26 ft.) air conditioned second floor room in the company office building. One wall is covered top to bottom with exterior and interior photographs of houses built with Capitol City materials, and the floor is finished with thirteen different samples of wood flooring. Three adjacent rooms, finished in various kinds of wood paneling and divided in one instance with a glass block partition, serve as company offices during the day, material displays on Wednesday nights. A fourth room is a modern operating kitchen where meals are prepared on special occasions and where prospects may view the latest developments in kitchen planning and equipment. Connecting this suite of rooms is a wide corridor whose walls are finished with various linoleum and tile patterns and fitted with towel racks, medicine cabinets, lighting fixtures and other bathroom accessories.

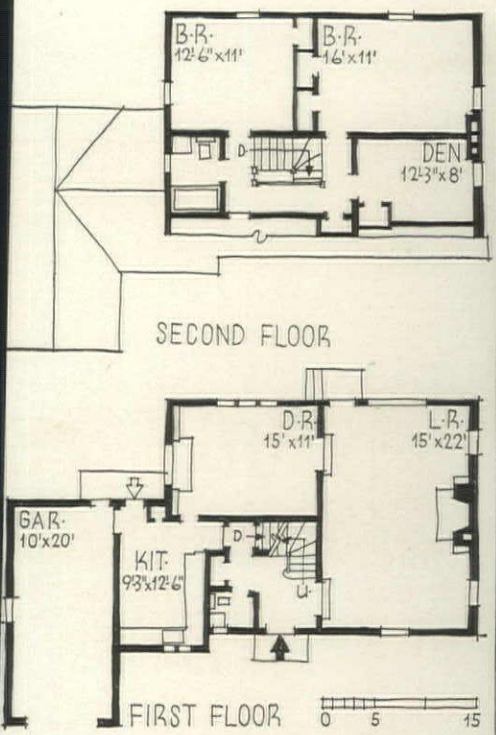
These effective material and equipment displays are side shows for the major House Party attraction, a battery of 24 4 x 7 ft. wall panels which are fitted with casters and may be moved around at will. Most of them are sections of solid wall painted on one side, papered on the other; the remaining panels contain stock double hung and casement windows, exterior and partition doors and fireplaces. With them it is possible to set up a proposed hall and a living, dining or bedroom of almost any size, shape and design.

Originally, Capitol City intended that these panels be used: 1) By builders to show the use of materials in remodeling jobs and to assist in the selling of unfinished, speculatively built houses by showing how big finished rooms would look. 2) By architects to illustrate room sizes and to assist clients in the selection of materials and equipment. 3) By consumers to see materials in use, to visualize more clearly room sizes shown on floor plans, to experiment with furniture arrangement and to be shown by Capitol City salesmen how much room they could expect for their money.

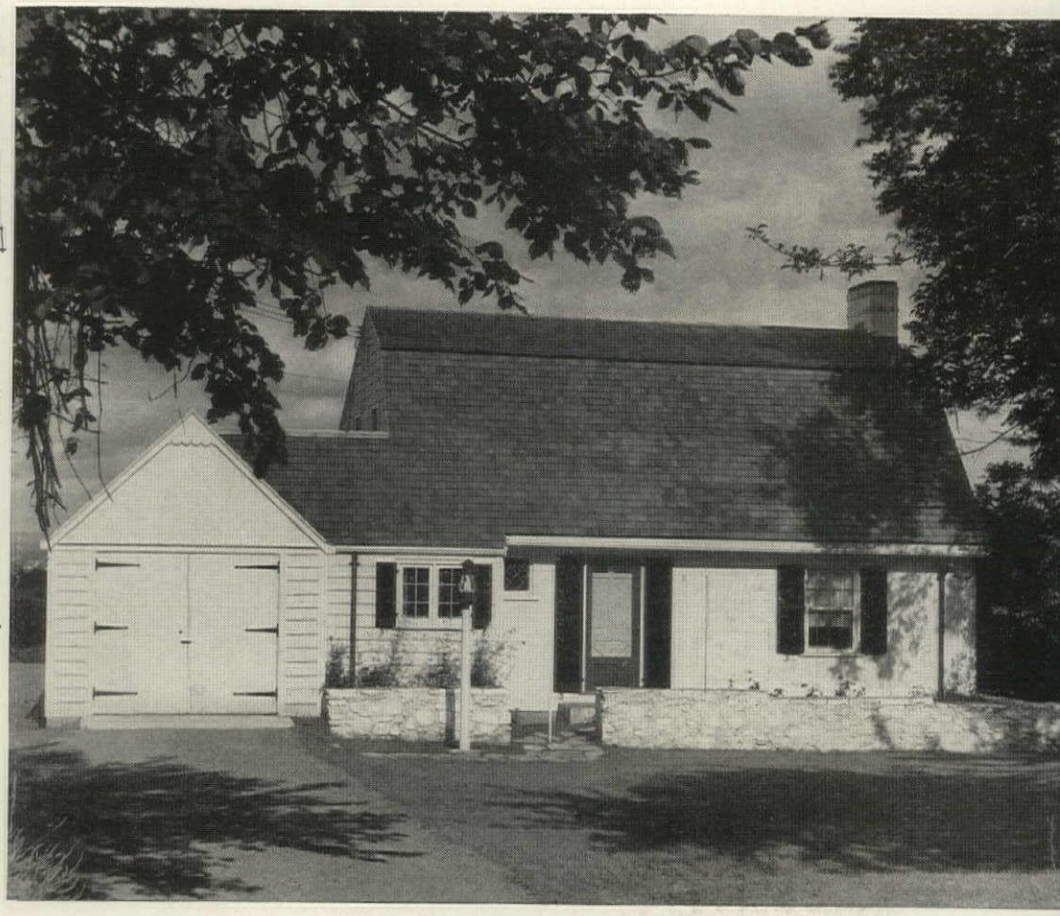
During its four years of operation, this wall panel act has served all its original purposes, except one: it has not helped sell partially completed speculative houses —no speculative builders have taken advantage of the machinery. But, it has also served an unanticipated purpose: to build up attendance at the parties, permitting salesmen to concentrate their work in one evening and do a more thorough job than is possible by individual outside calling.

Beside these wall panels, which are wheeled out to solve specific problems, the House Party program includes the projection of colored slides showing exteriors and interiors of new houses. During the show a salesman points out interesting design details, comments on construction costs, answers questions from the audience. (Last month Capitol City augmented this part of the program with a motion picture—see p. 54). When the lights are turned on, the couples are divided among the salesmen and browse through the company's design portfolio which is bound in volumes according to house costs.

Service. A brief discussion of these designs and the couples' current housing problems soon betrays to the salesmen their attitude toward building. Experience has shown that about one-third of the House Party guests come only to see the show, are not even remotely interested in a new home.



Products of Capitol City's complete building service are these three houses designed by Architect M. H. Lincoln. First house completed (above, right), was added to lumber company's design portfolio, whereupon two House Party guests asked Lincoln to design different houses around similar plans.



Another third is comprised of likely prospects who will require follow-up calls with the most intensive brand of Capitol City's low pressure salesmanship. Couples in the remaining third are definitely interested in building, and before them Capitol City immediately unfurls its unique house building service.

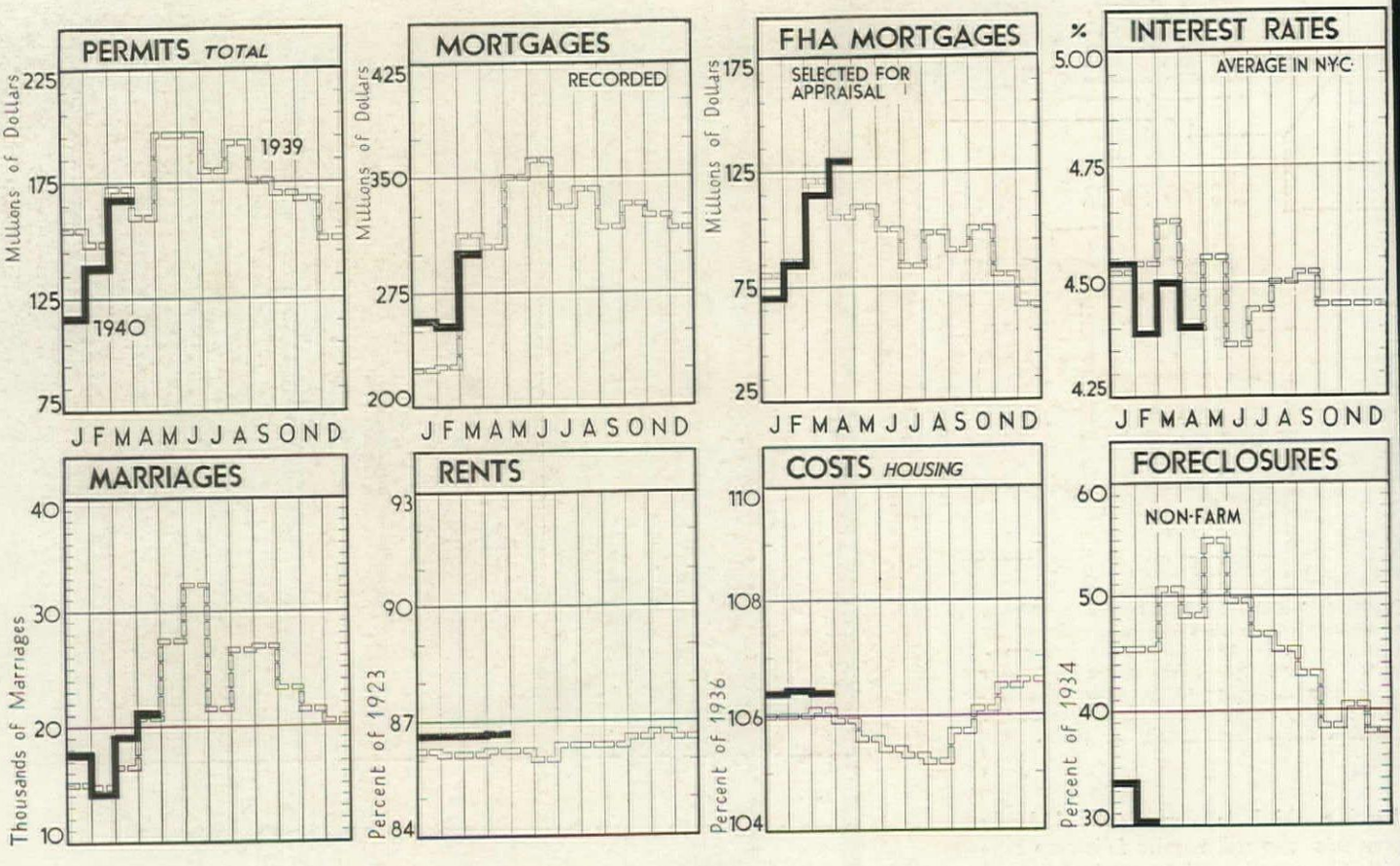
Study of the design portfolio indicates which of the eleven cooperating architects has produced work most appealing to the couple, and an appointment is arranged. Meanwhile the salesman enters on the company's printed "Cost Finder" the prospect's monthly housing budget, then works backward through land cost, taxes, architect's fee, mortgage interest and amortization, fire insurance, commutation and a "margin of safety" to determine for the architect how costly the house may be. Along with the salesman, a recommended realtor and the architect, the client then selects a lot whose price jibes with the Cost Finder allowance. As design of the house progresses—with the aid, perhaps, of the movable wall panels—Capitol City's so-called "Gold Digging Department" handles all financing details through one of the cooperating lending institutions, relieves the client of considerable footwork. (To date, these Gold Diggers have uncovered $1,301,000 of mortgage money for new houses.) On the basis of its knowledge of building materials and equipment, Capitol City also reviews the architects' specifications, makes cost-saving recommendations where warranted. (Most frequent suggestions: substitution of locally

(Continued on page 54)

CONSTRUCTION OUTLINE

FOUNDATION: Poured concrete.
STRUCTURE: Exterior walls—flush siding or shingles, pine roofers; inside—studs, U. S. Gypsum Co. aluminum back rock lath and plaster. Floor construction—pine sub-floor, red oak finish. Ceilings—rock lath and plaster.
ROOF: Covered with 'Perfection red cedar shingles.
SHEET METAL WORK: Flashing and leaders—16 oz. copper. Gutters—fir.
INSULATION: Outside walls—aluminum foil back rock lath, U. S. Gypsum Co. Attic floor—rockwool.
WINDOWS: Sash and screens—Curtis Cos.
FLOOR COVERINGS: Main rooms—oak. Kitchen and bathrooms—linoleum, Armstrong Cork Co.
WOODWORK: All by Curtis Cos.
HARDWARE: By Yale & Towne Manufacturing Co.
PAINTING: By Sherwin-Williams Co. and Minwax Co.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—Arrow, Hart & Hegeman Electric Co.
BATHROOM EQUIPMENT: All fixtures by Kohler Co.
PLUMBING: Soil pipes—cast iron and lead. Vent pipes—galvanized iron. Water pipes—brass.
HEATING: Hot water system. Boiler—H. B. Smith Mfg. Co. Radiators—American Radiator-Standard Sanitary Corp. Valves—Hoffman Specialty Co. Thermostats—Minneapolis-Honeywell Regulator Co. Water heater—Taco Heaters, Inc.

STATISTICS: mortgage volume betters 1939; costs inch down, rents up.



		LATEST MONTH*	PRECEDING MONTH	CORRES. MO. 1939	CUMULATIVE 1940	CUMULATIVE 1939
PERMITS—residential	(000,000)[1]	$ 99.6mr	$78.3	$94.6	$240.5	$252.8
non-residential	"	41.5	36.4	50.0	111.3	144.9
alterations	"	25.8	23.7	28.6	69.7	78.1
total	"	166.9	138.4	173.2	421.5	475.8
CONTRACTS—residential	(000,000)[2]	$ 74.9f	$77.4	$79.0	$152.3	$159.2
non-residential	"	70.6	52.5	69.6	123.1	154.5
engineering	"	55.1	66.3	71.6	121.4	158.1
total	"	200.6	196.2	220.2	396.8	471.8
DWELLING UNITS—total	(000)[3]	27.8mr	22.5	25.7	67.3	71.3
FHA—mortgage selections	(000,000)[4]	$128.2a	$113.9	$105.7	$397.6	$391.2
mortgage acceptances	" [5]	76.9	63.6	64.9	224.3	211.8
rental housing mtgs.	" [6]	1.8	1.4	3.8	4.6	26.8
moderization loans	" [7]	15.9	10.7	17.2	65.1	60.5
MORTGAGES—						
savings & loan assns.	(000,000)[8]	$ 96.2mr	$77.2	$83.3	$247.9	$205.2
insurance cos.	"	23.1	21.4	23.1	66.4	60.5
bank and trust cos.	"	75.7	61.7	74.1	204.1	193.2
mutual savings bks.	"	10.5	9.5	9.3	30.5	24.9
individuals	"	51.6	44.7	50.6	145.0	135.2
other mortgagees	"	43.3	39.2	43.2	124.8	110.8
total	"	300.4	253.7	283.6	818.7	729.8
MARRIAGES—34 cities	(000)[9]	21.1a	19.0	20.8	72.0	67.3

	LATEST MONTH*	PRECEDING MONTH	CORRES. MO. 1939
INSURANCE CO.—real estate held	(000,000)[10]	$1,720.0f	$1,722.0	$1,740.0
COSTS—wholesale materials	(% of 1926)[11]	92.5a	93.3	89.6
housing—labor	(% of 1936)[12]	110.3mr	110.3	112.4
materials	"	104.4	104.5	103.0
total	"	106.4	106.5	106.1
RENTS—new leases	(% of 1923)[13]	86.7a	86.6	86.2
FORECLOSURES—non-farm	(% of 1934)[14]	33.2mr	30.3	50.6
metropolitan	(% of 1926)[15]	104.0	99.0	157.0
BOND PRICES—real estate	[16]	$317.0a	$317.0	$324.0
STOCK PRICES—bldg. materials	(% of 1926)[17]	82.8a	82.1	85.7
WAGE RATES—common bldg. labor	(per hr.)[18]	$0.690ma	$0.685	$0.682
skilled bldg. labor	(per hr.)	1.467	1.467	1.438
INTEREST RATES—N.Y.C. mortgages	(%)[19]	4.40a	4.50	4.40
COST OF LIVING—(% of 1923)[20]		85.9a	85.5	85.0
PAYROLLS—factory	(% of 1923-25)[21]	97.8f	98.3	86.0
PRODUCTION—industrial	(% of 1923-25)[22]	106.0mr	110.0	100.0

*Designation of latest month: ma-May; a-April; mr-March; f-February

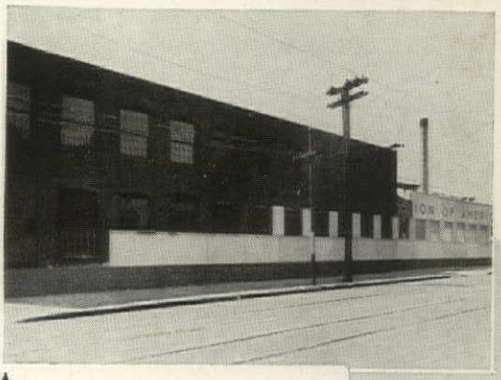
FOOTNOTES:

1—Valuation of building permits in some 2,100 communities; source, U. S. Department of Labor.
2—Valuation of contracts awarded in 37 States; source, F. W. Dodge Corp. via U. S. Dept. of Commerce.
3—Number of dwelling units covered by permits. See footnote No. 1.
4—Home mortgages selected for FHA appraisal under Title II, Section 203; source, FHA.
5—Home mortgages accepted for insurance under Title II, Section 203; source, FHA.
6—Large scale rental housing mortgages becoming premium paying under Title II, Section 207; source, FHA.
7—Property improvement loans insured under Title I; source, FHA.
8—Non-farm mortgage recordings of $20,000 or less based on 500 counties (48 States); source, FHLBB.
9—Number of marriages recorded in 34 largest U. S. cities; source, ARCHITECTURAL FORUM.
10—Total real estate holdings by member companies of the Assn. of Life Ins. Presidents.
11—Composite index of wholesale building material prices; source, U. S. Department of Labor.
12—National averages based on six-room house of 24,000 cu. ft. unfinished; source, FHLBB.
13—Rates at which new rental contracts are made; source, National Industrial Conference Board.
14—Foreclosures in some 1,500 non-farm communities; source, FHLBB.
15—Foreclosures in metropolitan communities with population in excess of 100,000; source, FHLBB.
16—Average price of 200 hotel, office building and theater bonds; source, Amott-Baker & Co.
17—Average price of twelve building material manufacturers' stocks; source, Standard Statistics Co.
18—Source, Engineering News-Record.
19—Average interest rate on all recorded New York City mortgages of $10,000 or more; source, N. Y. Mortgage Conference.
20—Covers clothing, food, fuel and light, housing and sundries; source, NICB.
21—Source, U. S. Dept. of Labor.
22—Combined unadjusted index; source, Federal Reserve Board.

From old brick to . . .

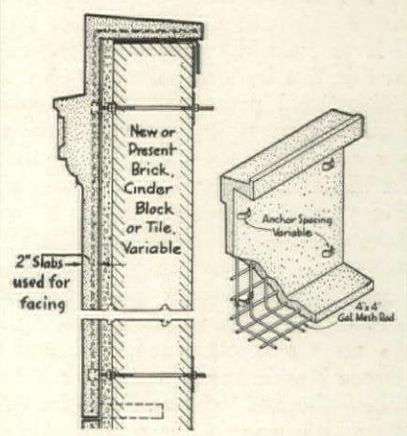
MODERN CONCRETE

with ARCHITECTURAL CONCRETE SLABS!



OLD BRICK WALL of the Wire Rope Corp. of America plant in New Haven, Conn., begins to disappear under new modern facing of Architectural Concrete Slabs. The slabs, *only two inches thick*, made it unnecessary to tear down the old wall.

EXTERIOR TRANSFORMATION COMPLETE. Architectural Concrete Slabs were easily and quickly lifted into position. Bolts through old masonry gave permanent anchorage. Appearance of whole building greatly improved. Architect, Leo F. Caproni, New Haven. Slabs made with crushed quartz and Atlas White portland cement by The Dextone Company, New Haven, Conn.



LEFT: This detail shows how parapet and coping are cast monolithically with the slab and how slabs are anchored to masonry walls by tie rods.

RIGHT: Typical spandrel unit with returns cast monolithically with the slab. Note anchors fastened to embedded reinforcing mesh for bolting to tie rods.

MANY modernization jobs are today simpler, faster and less expensive.

A new building material—Architectural Concrete Slabs—gives to old walls a modern facing that combines the strength of steel and concrete with the permanent beauty of exposed crushed stone. The Wire Rope Corporation transformation shown here, and similar jobs for chain stores, factories, theatres, office buildings—prove the practicability of these thin slabs for almost any modernization job. They offer a greater latitude in structural and decorative design.

What are Architectural Concrete Slabs? Factory-made units of reinforced concrete made with selected aggregates exposed in a matrix of Atlas White portland cement. Slabs are precast in sizes up to 100 square feet or more, and 20 feet or more in length, yet are only 2 inches thick. In selecting and arranging the aggregates, infinite new variations in colors, patterns and surface textures are available and give you remarkable freedom in design.

These slabs bring new economies to modernization. They are quickly and economically anchored in place to old masonry walls. Their large size and varied shapes—curves, angle, channels, spandrels that include window head and window sill—reduce flashing, danger of leakage, and erection costs. They improve property appearance and values.

It will pay to know more about these thin Architectural Concrete Slabs for interiors and exteriors of new and old buildings. For information on remarkable structural and decorative uses, on wide adaptability and unusual economies of these slabs made with Atlas White cement—see SWEET'S CATALOG, Section 4, or write to Universal Atlas Cement Co. (United States Steel Corp. Subsidiary), Dept. A4, Chrysler Building, N. Y. C.

AF-ACS-23

ARCHITECTURAL CONCRETE SLABS

MADE WITH ATLAS WHITE CEMENT

MONTH IN BUILDING

(*Continued from page 4*)

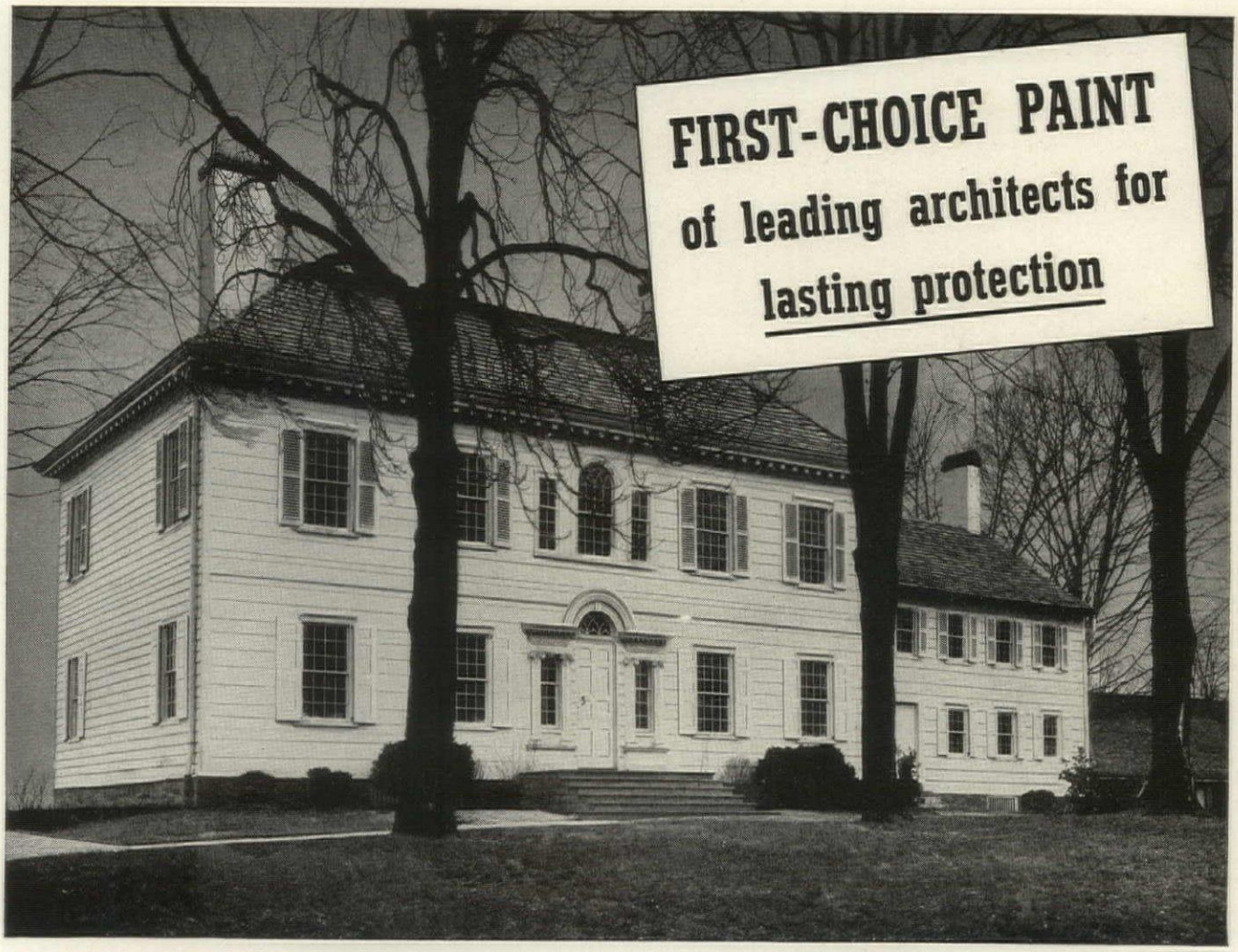
the lack of red tape which usually ties up the appraisal procedure. Other advantage is the 95 per cent loan-to-value ratio. Finding it difficult to market improved lots at $125 each (the maximum if a 5 per cent down payment is to be achieved), large scale low cost builders have been forced to do stunts with the law. They have been under-valuing the lots to get them inside the maximum $125 and have been over-valuing the houses up to $2,500, thus preserving the 5 to 95 per cent ratio but giving the buyer more lot and less house for his money. Needless to say, these acrobatics will no longer be permitted if the properties are to be subject to the FHA appraisal demanded by RFC Mortgage Co. as a prerequisite to its discounting of the loans.

At present, low cost house builders may still skip the appraisal red tape by dealing with financial institutions which hold their Title I loans rather than sell them in the secondary market. Two other solutions are in the offing: In the first place, FHA is dispatching special agents from Washington to educate its regional offices in the economics of low cost housing—many do not yet realize that low cost houses must be built on cheap land and that cheap land cannot be expected to meet all the requirements of the higher priced properties to which they have become accustomed. While the work of this flying squadron has already rescued several large scale low cost house projects from rejection by local offices and while its educational program should improve the chances for really low cost housing, many a building man still argues that FHA should liberalize its standards for low cost houses (see p. 2, col. 2).

Second prospective solution of the low cost houser's problems may come when Congress convenes next year. Several phases of the FHA program must then come up for consideration, and smart money in Washington is betting that FHA will be authorized to insure Title II mortgages which cover *95 per cent* of appraised value for properties in the low cost brackets (see p. 437).

BRITISH BUILDING. Unless air raids destroy more English property than is anticipated, a shrinkage of even 40 per cent in the dimensions of British building will present no serious problem, according to the editors of *The Economist*, eminent pulse-feeler of British business. They hint that the shift of building to wartime activities may even be a blessing in disguise. Thus, the housing shortage following World War I has been largely overcome and before the outbreak of World War II the building industry was confronted with the necessity of stepping down production.

(*Continued on page 52*)



A CASE IN POINT — Old Ford Mansion, Morristown, N. J., erected in 1772 — Washington's headquarters winter of 1779-80 — Preserved and protected for the future both inside and out by pure white lead paint, which made it easily possible to duplicate the original colors.

THERE is just one reason why so many architects specify pure white lead paint for exterior work — and for much interior decoration, too.

Pure white lead paint wears longer and more evenly — doesn't crack and scale — keeps its looks better!

As you know, white lead pigment is made from the metal lead. Lead is one of the toughest and most enduring of metals. And white lead is a great weather-resister, too. It armors paint against rain and sun, protects the construction beneath.

And when it comes to styling interiors, white lead paint is preferable, not only for its velvet-smooth finish and the many lovely colors obtainable by tinting, but also for the ease with which it is safely cleaned by washing.

This is strikingly illustrated by the beautiful interior decorative effects obtained with white lead paint in Washington's Morristown headquarters — just as the excellent preservation of the exterior of this 168-year-old building lends emphasis to the rule: *the higher the lead content, the better the paint.* You can't, for example, get a more durable paint than one containing a hundred per cent white lead. This is the kind good painters mix from lead-in-oil. In many places it is also being sold now in prepared ready-to-use form in white and colors.

• • •

LEAD INDUSTRIES ASSOCIATION
420 Lexington Avenue, New York, N. Y.

HOW MANY SQUARE YARDS IN A GALLON OF PAINT?

This is only one of the many helpful money-saving questions you'll find answered in the informative booklet "WHAT TO EXPECT FROM WHITE LEAD PAINT." Send postcard for your free copy.

MONTH IN BUILDING

(*Continued from page 50*)

More significant, however, is the emergence of a new paradox in warring England. Despite the severe slump in building, there is a severe shortage of building labor. Reason: shifts in construction activity from 1) large cities to the country, 2) small houses to larger units of work, 3) small firms to large building organizations. *The Economist* observes that the pre-World-War-II building industry is virtually ceasing to exist, is being replaced by a new industry, half the size of the old. From this new industry comes the demand for labor. Left stranded by the shift, architects may find employment on government jobs, but small contractors, rooted to their localities, have only one hope: "If there is intensive air raiding, there will be an immediate need for repair work."

EARNINGS

Quarter ending Mar. 31	1940	1939
Acme Steel	$384,254	$339,671
Air Reduction	1,442,990	1,027,255
Allegheny-Ludlum Steel	1,000,297	206,582
Allis-Chalmers	969,869	710,277
American Radiator-Standard Sanitary	440,754	307,042*
American Rolling Mill	1,105,094	793,479
Babcock and Wilcox	829,565	512,690*
Belden Mfg.	100,178	118,972
Bethlehem Steel	10,891,139	2,409,059
Bridgeport Brass	361,374	7,159
Briggs Mfg.[1]	2,151,143	840,459
Celotex[2]	194,865*	12,136*
Detroit Steel	114,532	92,407
Electrolux	521,424	443,913
Ferro-Enamel	123,409	148,689
Florence Stove	198,030	106,333
Holland Furnace	119,241*	158,644*
Inland Steel	3,059,844	2,024,601
Johns-Manville	781,681	125,118
Jones & Laughlin	1,134,611	376,525*
Midland Steel Products	597,682	540,966
Minneapolis-Honeywell	294,704	67,289
National Gypsum	90,545	190,198
National Steel	4,009,193	2,426,669
Otis Elevator	1,121,000	957,627
Otis Steel	165,513*	180,326
Owens-Illinois Glass[3]	8,884,066	5,948,561
Paraffine Cos.	361,874	336,398
Penn-Dixie Cement[3]	399,888	205,199
Pittsburgh Steel	203,008	377,159*
Republic Steel	3,111,723	532,899
Reynolds Metals	671,666	193,993
Revere Copper & Brass	720,196	156,201
Ruberoid	60,723*	94,427*
Stone & Webster	312,216	210,707
U. S. Gypsum	1,062,921	990,696
U. S. Radiator[4]	215,328	71,185*
U. S. Steel	17,113,995	660,551
Westinghouse Elec. & Mfg.	4,041,428	2,356,150
Wheeling Steel	644,652	728,661
Yale & Towne	214,022	6,605
Youngstown Sheet & Tube	1,253,929	217,107

[1] Year ending Dec. 31.
[2] Quarter ending Jan. 31
[3] Year ending Mar 31
[4] Year ending Jan. 31
* Net loss

GIVE YOUR CLIENT

LIFE LINE

PROTECTION

APARTMENT HOUSE—In this Jacksonville, Florida, apartment house Wolmanized Lumber was used for first floor sleepers, plates, furring strips, and subfloor. This puts protection at the "life line," safeguarding the whole structure. W. W. Cummer was the architect. Ask us to send you the file folder (with A.I.A. index number) of data and diagrams showing how Wolmanized Lumber is used in various types of construction.

All buildings are alike in having a "life line," the area where serious deterioration first begins.

Used at this "life line," Wolmanized Lumber* prolongs the life of the structure, and protects its owner from expensive maintenance and repair.

Wolmanized Lumber gives this protection at surprisingly low cost. For the average dwelling it is used for sills, joists, and subfloor, providing a dependable safeguard against decay and termite damage, at less than 2% increase in the total cost of the house. In other types of construction it pays to use Wolmanized Lumber wherever moisture presents a hazard; common applications are for roof decking, sleepers and subfloors, and nailing strips. It is particularly useful when industrial processes or air conditioning cause condensation.

Specify Wolmanized Lumber by name. It is the only material of the kind which is always treated according to one standard set of specifications, and sold under one brand, from coast to coast. You can depend on it. AMERICAN LUMBER & TREATING COMPANY, 1647 McCormick Building, Chicago.

*Registered Trade-Mark

WOLMANIZED LUMBER

LUMBER FOR ENDURING, ECONOMICAL CONSTRUCTION

WOLMANIZED CERTIFIED — PROTECTED AGAINST DECAY & TERMITES — A.L.&T. CO.

PROMOTION WITH PULL

(*Continued from page 447*)

manufactured products for out-of-state competitive items.) Finally, Capitol City draws on its experience with contractors, advises the client and architect concerning the acceptance of the low construction bids.

Movie. Such are the ramifications of Capitol City's unique service which to date has convinced some 500 Hartfordites that house building is easier than they thought. To convince still others, the company recently produced with the aid of local actors a 32-minute motion picture whose title is the familiar Capitol City slogan. Accompanied by a lively commentary by famed Radio Announcer Milton J. Cross, the camera follows a typical family from their twelve-year-old poorly planned residence through each step of the lumber company's building service into an architect-designed house tailored to meet its every requirement. Last month it was added to the House Party program where it has already proved to be a powerful drawing card. (Secondary use: to teach new salesmen the company's unusual merchandising methods.) And, like the movable wall panels, the "talkie" has served another purpose not originally planned: it has focused public attention on Capitol City's name and services in its showings

Built-in displays help clients select details. Stock windows between stock fireplaces.

Finale of show comes when "Gold Diggers" secure mortgage money, clients sign contract.

before school classes, civic groups and (several times a day) before the two-week Home Building Material Show recently sponsored by the enterprising Hartford *Times*.

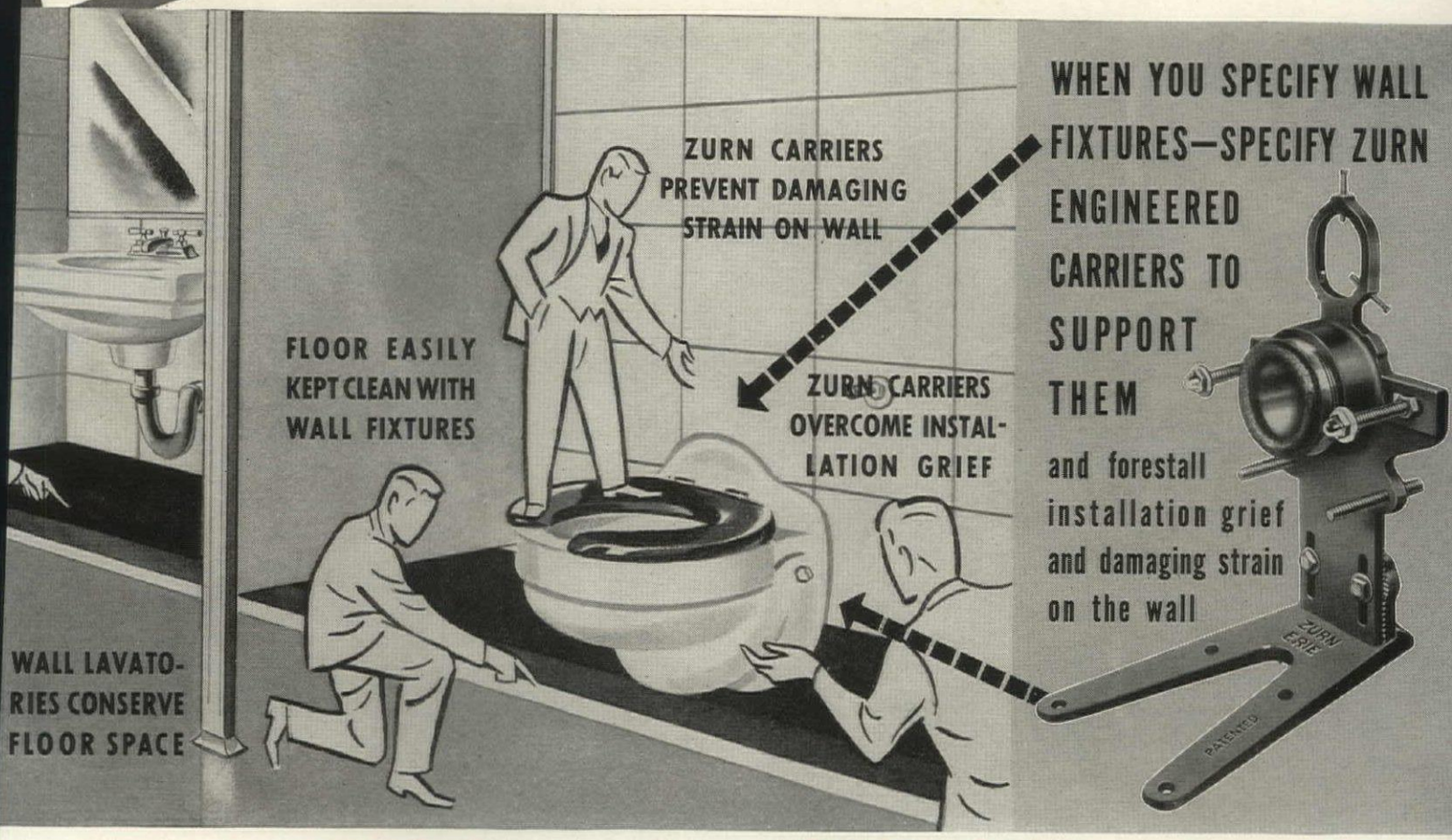
Results. Capitol City's many and varied promotional schemes have cost big money, but, according to President Korper, they have more than paid for themselves. Besides getting a sizable share of speculative builders' material orders, his company now has a corner on most of the local contract house market. (This proved to be a particularly fortunate corner in late 1937 and 1938 when rising material costs put the damper on most of Hartford's speculative building.) Last year Capitol City supplied materials for about 125 of the 500 houses which went up in the immediate metropolitan area and about 70 per cent of them were for jobs which resulted from its House Parties and building service.

While it is probable that Capitol City will continue to corner the lion's share of the contract business this year, chances are that it will participate in a smaller proportion of the city's total house building activity. Like its insurance, aircraft and machine tool industries, Hartford's residential building is booming (1940 guesstimate: more than 2,000 new houses), but much of this work will be done by large speculative builders who moved up this spring from the notorious Long Island (N. Y.) training school.

To stem this tide, shrewd Adolph Korper last week expanded his house building service, announced that local builders and contractors would join the ranks of cooperating architects and mortgage lenders. Thus, Capitol City Lumber Co. hopes to meet competition, to give Hartford building back to Hartford builders.

ON YOUR WALL FIXTURE INSTALLATIONS

Be wary of "half-way" specifications that may "queer" the job . . .



● In fairness to yourself and to your client, be wary of "half-way" specifications that leave the selection of an important element—the carriers for supporting the wall fixtures—completely to chance. Go all the way. When you specify wall fixtures, specify the Carriers to support them, too—specify Zurn Engineered Carriers.

Zurn Engineered Carriers have a functional identity of their own . . . one as distinct and essential as that of the fixtures themselves. Zurn Engineered Carriers are worthy of specification. Only Zurn Engineered Carriers offer these tested mechanical features that put an end to the risk and deficiencies of ordinary carriers and common contrivances for supporting wall fixtures: (1) Cantilever construction; (2) Positive vertical and horizontal adjustment; (3) Quick, grief-free installation; (4) Permanent perfect fixture alignment.

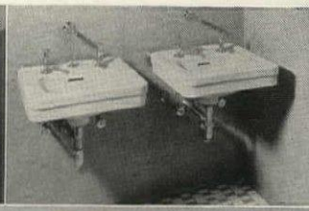
You can utilize the sanitation, convenience, and beauty of wall fixtures in a wider range of applications without the mental reservations that have attended their use in the past. Zurn Engineered Carriers have made this possible. Specify them to support all wall fixtures.

The basic line of Zurn Engineered Carriers offers 25 different styles—a style for supporting every type and make of wall fixture. Each style is completely described and illustrated in the Zurn Carrier Catalog. If you haven't a copy —use the coupon and get yours now.

J. A. ZURN MFG. CO. • *Sales Office and Factory,* **ERIE, PA.**

THERE IS A ZURN ENGINEERED CARRIER FOR SUPPORTING EVERY TYPE AND MAKE OF WALL FIXTURE

Zurn Carriers Forestall Damaging Strain on the Wall.



Wall Fixtures Release Additional Floor Space You Can Use.

Zurn Carriers end Installation Grief.

Wall Fixtures Aid Sanitation.

ZURN

BUILDING DRAINAGE PRODUCTS
ROOF TO BASEMENT

J. A. ZURN MFG. CO., Erie, Pa.

Please send me a copy of the new Zurn Carrier Catalog.

NAME

ADDRESS

CITY AND STATE

P.S. Please attach to your business letterhead.

FOUR-FAMILY HOUSES

(*Continued from page 440*)

one or two bedroom accommodations. The flats require a lot frontage of 46 ft., the duplex combination a lot frontage of 81 ft. All lots have a depth of about 120 ft. Their cost—$1,000 to $2,400—is included in the selling price of the buildings.

Buildings. All construction is handled or supervised by Roessler's own organization. By using standardized building designs, it is possible to gear the work of subcontractors (masonry, plumbing, electrical, plastering) to a fixed schedule, thereby obtaining an increased production volume with a minimum of supervision. As proof of the construction values offered by his buildings, Roessler points with pride to the fact that the first purchaser of a quadruplet dwelling in the current development was a prominent local contractor who specializes in commercial building construction. Another satisfied customer has acquired 30 Roessler buildings for investment in recent years.

In selling the four-family houses Roessler guarantees "seasoned" tenants, which means that he manages the buildings for purchasers without charge for one year after sale—the period when minor apartment adjustments may be necessary.

Monthly rents in all duplex apartments are set at $50. Although end apartments offer more window area, the demand for inside units is equally great. Reason: prospective tenants believe the interior apartments are more easily heated, give greater privacy, permit a more flexible furniture arrangement. Ground floor apartments in the flats rent for $42.50, while the upper floor units, boasting studio living rooms with raised ceilings, fetch $45 a month. Rents set by the builder are usually kept by the new landlords.

To the investing public the four-family flats are listed for sale at $20,000 with a $12,500 first mortgage, the four-family duplexes at $24,000 with a $13,500 mortgage. Since purchasers may trade in property toward the equity, cash on the line may be even less than indicated. All loans are financed by the Buckeye State Building and Loan Co. (largest in Ohio, sixth largest in the U. S.) at 5 per cent for sixteen years.

Sales are handled by Roessler's own brokerage department as well as by other brokers. Using no promotional fanfare, salesmen rely on three substantial selling points: 1) a handsome annual return on a durable investment; 2) a profitable hedge against inflation; 3) an opportunity to improve realty holdings by trading in unproductive property.

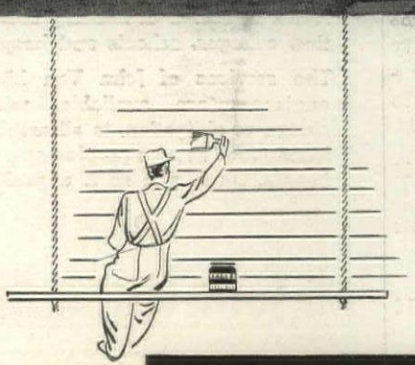
With a long string of rented buildings on continuous display, Roessler has recently found it possible to market new quadruplets before they are tenanted. Last month he sold one from blueprints.

"Do you know why it's the best-looking house in the block?"

SHE: Because it was designed by a good architect, of course.

HE: That's only part of it. That house owes a lot of its beauty to the fact that it has always been painted with Eagle White Lead!

BERTRAM A. WEBER, ARCHITECT



Since 1843 this weather-resisting paint has preserved the beauty of American homes. Eagle White Lead in oil creates an elastic paint film. Doesn't crack. Doesn't scale. Play safe — specify Eagle.

EAGLE PICHER

Makers of Eagle Home Insulation —Fireproof, Water-Repellent Mineral Wool

EAGLE WHITE LEAD

"You're money ahead when you paint with white lead"

● *Do you specify two-coat paint jobs?* If you do, you'll want this new booklet, "Quick Facts About Two-Coat Painting." Write for free copy.

THE EAGLE-PICHER LEAD COMPANY
CINCINNATI, OHIO

MORTGAGE RISK RATING

(*Continued from page 439*)

to the neighborhood average, as many as 12 points may be subtracted from its rating. If it does conform, nothing is subtracted; in no case are points added for conformity.

Figures shown in column 5 of the rating grids are the full weights assigned to the various features. Were a property perfect in all respects, its total rating would be the sum of all these column 5 figures—100. Weights shown in the other four columns are used when qualities of the various features are less than perfect, as is usually the case. For example: "column 3" weights are for average qualities; "column 1" weights for qualities a hair's breadth above passing. Where a feature flunks, the "reject" column is checked, and the property as a whole automatically becomes ineligible for mortgage insurance. The same is true when (although each of the features may be of passing quality) the total of their assigned weights comes to less than 50.

Of interest to architects and builders should be FHA's recent shifting of maximum weights among two of these property features. "Livability and functional plan" was once assigned 25 points while "natural light and ventilation" was allotted only 5. (Current weights: 20 and 10 points, respectively—see grids.) Apparently FHA risk raters are paying increasing attention to adequate fenestration and proper orientation.

Location. In addition to the property itself, FHA rates the long-term mortgage risk attributable to its immediate surroundings and their economic background and future. On a grid similar in form to that used for the property analysis, an expert summarizes his opinions on the quality of eight individual features whose "column 5" weights range from 40 down to 5 points:

1. Relative economic stability—40 points
2. Protection from adverse influences—20 points
3. Appeal—10 points
4. Adequacy of transportation—10 points
5. Sufficiency of utilities and conveniences—5 points
6. Level of taxes and special assessments—5 points
7. Adequacy of civic, social and commercial centers—5 points
8. Freedom from topographical and special hazards—5 points.

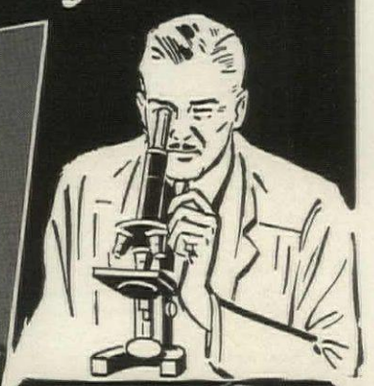
While the relative weights of all these neighborhood features should serve as pointed reminders for subdividers, their evolution underlines heavily the impor-

(*Continued on page 60*)

Charles Stores Co., Richmond, typical of the many prominent Chain installations of Brasco Store Front Construction.

Crawford Store, Chicago, with modern, brilliant Brasco Alumilited Aluminum Store Front Construction. Architect: Frederick Stanton, Chicago.

"There's more to this than meets the eye"



Modern Brasco Shadow Line Sash, shown with complete sill covering.

WHEN you marvel at the beautifully brilliant, smooth and trim appearance of a Brasco Store Front, after years of service, you may be sure that it is not just happenstance.

A store front is just as much a construction job as the foundation or walls, and requires the same degree of engineering ability, judgment, and above all, *experience.*

Brasco started to "major" in experience some thirty years ago, pioneering and developing our designs and constructions, and leading the trend to the present, modern, advanced ideas in store fronts, interpreted in all metals.

Thus, Brasco today represents the highest degree of practical perfection—amply proven by years of service on thousands of stores, everywhere—sound construction built for lasting beauty and assured glass safety—complete and unified—priced to fit any budget.

BRASCO MANUFACTURING CO.
HARVEY (Suburb of Chicago) — ILLINOIS
National Distribution for Your Convenience

Brasco
MODERN
STORE FRONTS

Solid Stainless Steel, Aluminum, Bronze, Copper, Extruded Bronze or Extruded Aluminum, in Any Finish.

BRASCO MFG. CO., Harvey, Ill.
Send Samples and Details of Brasco Modern Store Front Construction.

Firm .....

Address .....

Individual .....

F640

MORTGAGE RISK RATING

(*Continued from page 58*)

tance of a residential development's economic background. Thus, six years of experience has seen FHA subtract 5 points from the weights of features Nos. 4, 5, and 6, and reassign the 15 points to "relative economic stability."

The "column 5" weights do not, however, reflect entirely the relative importance of the several features. Certain features such as "architectural attractiveness" are readily ratable through a wide range of degress of quality. Others such as "resistance to use" are not; the walls and floors of a house will either resist door-slamming and other wear and tear, or they will not. Consequently features falling in the former classification have, in general, been given higher weights than the latter.

Borrower. Actual case histories briefed at the bottom of pages 438 and 439 clearly illustrate the mechanics and reasoning behind the ratings of would-be home owners.

Mortgage pattern, the fourth and last division of FHA's risk rating system, is the relationship between the mortgage security, the borrower and the provisions and conditions of the mortgage transaction. Totaling 100 points as in the preceding three categories, the "column 5" weights on the mortgage pattern rating grid are divided among six features:

1. Ratio of loan to value—20 points
2. Ratio of debt service to rental value —10 points
3. Ratio of life of mortgage to economic life of building—5 points
4. Lowest category rating—27 points
5. Intermediate category rating—22 points
6. Highest category rating—16 points

When a proposed loan covers less than 60 per cent of the FHA's property valuation, it is accorded a full "column 5" rating for the first feature on the list; if the ratio falls between 74 per cent and the maximum authorized (90 per cent for under-$6,000 properties), it barely passes with a "column 1" rating. Second feature in the list reflects the ability of the property itself to pay, via rent, the debt service on the proposed mortgage. The maximum rating is assigned if the monthly mortgage payment is less than 60 per cent of the property's estimated monthly rental value; at the other extreme, if it exceeds 110 per cent of the rental value, the whole mortgage insurance application is promptly rejected.

Limited by law to a maximum of 25 years, term of the mortgage is covered in the third feature. If it is less than half as long as the estimated economic life of the house, this feature of the mortgage pattern rates the full "column 5" weight; if the amortization period runs between 80 and 100 per cent of the house's life, the "column 1" rating is assigned; and, of course, a higher ratio means rejection.

Last three features on the mortgage pattern rating grid cover again the security of the mortgage, refer back to the three above-mentioned elements of mortgage risk: property, location and borrower. Following the axiom that "a chain is no stronger than its weakest link," FHA assigns the heaviest weight of all mortgage pattern features to the weakest of these three elements. For example: if on their individual grids property, location and borrower have been given total ratings of, say, 73, 85 and 54, respectively, the borrower's rating (being the lowest) would be entered as the fourth feature which is more heavily weighted (27 points) than any other item on the grid. Carrying the example further, the property rating would come next; the location rating last, because it is the highest.

Weight of each of these three features on the mortgage pattern grid is dictated by their originally assigned ratings. Thus, if the original rating of a property falls between 80 and 100, the feature commands the maximum "column 5" weight; between 60 and 70, "column 3"; between 50 and 55, "column 1"; under 50, rejection.

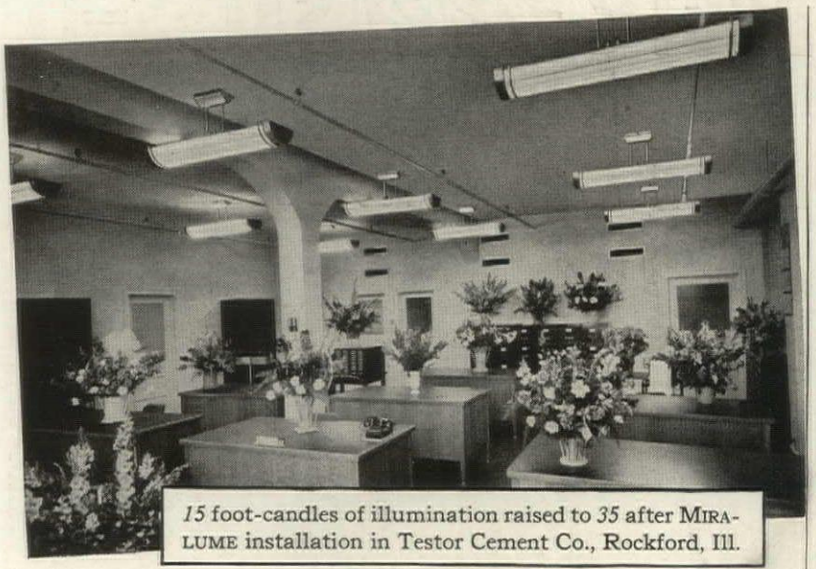
Experience. From the foregoing analysis of the mechanics of risk rating, it is abundantly clear that FHA spares few details when considering a mortgage for insurance—a fact which is apt to be obscured by the vast volume of business (22,000 mortgages) it handles each month.

That more than 320,000 mortgages covering new construction have to date passed FHA's rigorous examinations is a credit to Building. That some 87,000 have been rejected is a credit to FHA's integrity—and, to some extent, a debit for Building. About 21 per cent of all rejected new construction mortgages fall short of FHA's passing mark due to the design and construction of the house. (Borrowers take most of the blame, account for about 57 per cent of all these rejections: neighborhoods, 19 per cent; mortgage patterns, only 3 per cent.)

Also a credit to FHA, its Frederick Morrison Babcock and its mortgage risk rating system is the performance record of all insured mortgages. As of April 1, only 1,579 loans had been foreclosed—about 3/10 per cent of the total number of premium paying mortgages on the books. Thus far risk rating has withstood all tests, even a marked business recession in 1937. Its acid test will come with the next major depression. Meanwhile, the FHA's near-science of mortgage risk rating serves house builders, buyers and financiers as do few other government services.

AMAZING HYGRADE MIRALUMES* MAKE FLUORESCENT BIG NEWS!

Sensational indoor DAYLIGHT High lighting intensities of cool daylight practical and ready now!



15 foot-candles of illumination raised to *35* after MIRALUME installation in Testor Cement Co., Rockford, Ill.

***MIRALUMES are complete fixtures of Hygrade Fluorescent Light—wired and ready to install without costly re-wiring! They provide—(1) several times the light; (2) light without harsh glare or shadows; (3) COOL light—75% less radiant heat for equal light intensity!**

NOTE—Extraordinary lighting efficiencies are obtained in fluorescent lamps by tuning the electric discharge to concentrate its ultra-violet energy at the precise 2537 Angstrom Unit wavelength most effective in causing the porous film (Hygrade Patent 2,096,693) to generate light. This achievement, so important to the efficiency of HYGRADE MIRALUMES, is described in Patent No. 2,126,787, now controlled in this field by HYGRADE.

Architects achieve revolutionary results with these "packages" of daylight—easy to specify because made complete by HYGRADE!

TODAY you can accomplish what no architect ever before *dreamed of* in modernizing lighting in stores, office buildings, factories, hotels, schools, theatres and buildings of every kind! For with Hygrade Fluorescent Light, high levels of illumination on desks, tables, counters and benches is now practical, economical and comfortable!

Yet this amazing new *daylight* can be installed at low cost, overnight. For MIRALUMES are *complete* units of Hygrade Fluorescent Light—designed, engineered, built and *guaranteed* by HYGRADE!

Your Electrical Contractor can install HYGRADE MIRALUMES, and they're eligible for F.H.A. financing!

SHOWN BELOW are two of many MIRALUMES ready now! Every MIRALUME is corrected for power factor and stroboscopic effect (flicker), and starters are easily accessible.

FOR COMMERCIAL USE—MIRALUME HF-201: *200-watt unit; 4 40-watt tubes; approximate length, 50".*

INDUSTRIAL MIRALUME F-100: *100 watts; 2 40-watt tubes; approximate length, 54".*

Fluorescent at its Finest—

Hygrade Miralumes

Hygrade Sylvania Corp., Est. 1901. Makers of Hygrade Incandescent Lamps and Sylvania Radio Tubes

WRITE TODAY for complete information, prices and discounts on MIRALUMES to: Hygrade Sylvania Corp., Miralume Dept. AF6, Ipswich, Mass. —or call your HYGRADE dealer.

PROTECTED BY **Bonderite** HOLDS PAINT TO STEEL FOR RUST RESISTANCE

This LABEL ON YOUR PRODUCT *Closes* SALES—IT MEANS DEPENDABLE FINISH *to* MILLIONS

YOUR prospective customer may be in the market for motor cars or steel windows—washing machines or kitchen equipment—air conditioning or electrical devices—wherever he sees this label it means extra service to him.

For nearly a quarter of a century your customers have been educated to the value of Parker Processes. This year millions will read Parker advertising in the nation's leading publications—Life, Collier's and Saturday Evening Post—plus a top flight group of trade papers. Add this to the first hand experience of other millions who are living with Bonderized products every day and you have an informed market, with a full appreciation of the extra finish service that Bonderizing assures.

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If your product is of iron or steel, and subjected to corrosive conditions, you should send for this book. It will give you the meaning of the Bonderite Label and how it may help your sales.

PARKER *Processes* **CONQUER RUST**
BONDERIZING • PARKERIZING

HERE'S A WOOD FLOOR YOU CAN LAY

While PLASTER DRIES!

Illustration shows Haskelite Wood Block being laid in mastic directly over concrete subfloor. Can be laid on wood or concrete subfloors without unsightly expansion joints.

● Lay Haskelite wood floors without worrying about damp walls, green concrete subfloors or wet weather. Save the time usually lost waiting for plaster or concrete to dry out or for weather to clear up. Specify Haskelite Wood Block or Plank, the flooring that protects you against the hazards of warping, buckling, or shrinkage and is backed by a two year guarantee.

This scientific "successor to solid wood floors" consists of three waterproof bonded laminations. That's the key to its practical immunity from the effects of even greatly varying humidities. That's why it permanently retains its shape and size—doesn't warp with exceptional moisture—doesn't open up as the structure dries out.

Furnished in beautifully grained selected elm, Haskelite is accurately sanded and finished at the factory in medium or dark—can be supplied sanded but unfinished on order. The installed cost is no greater than that of other good floors.

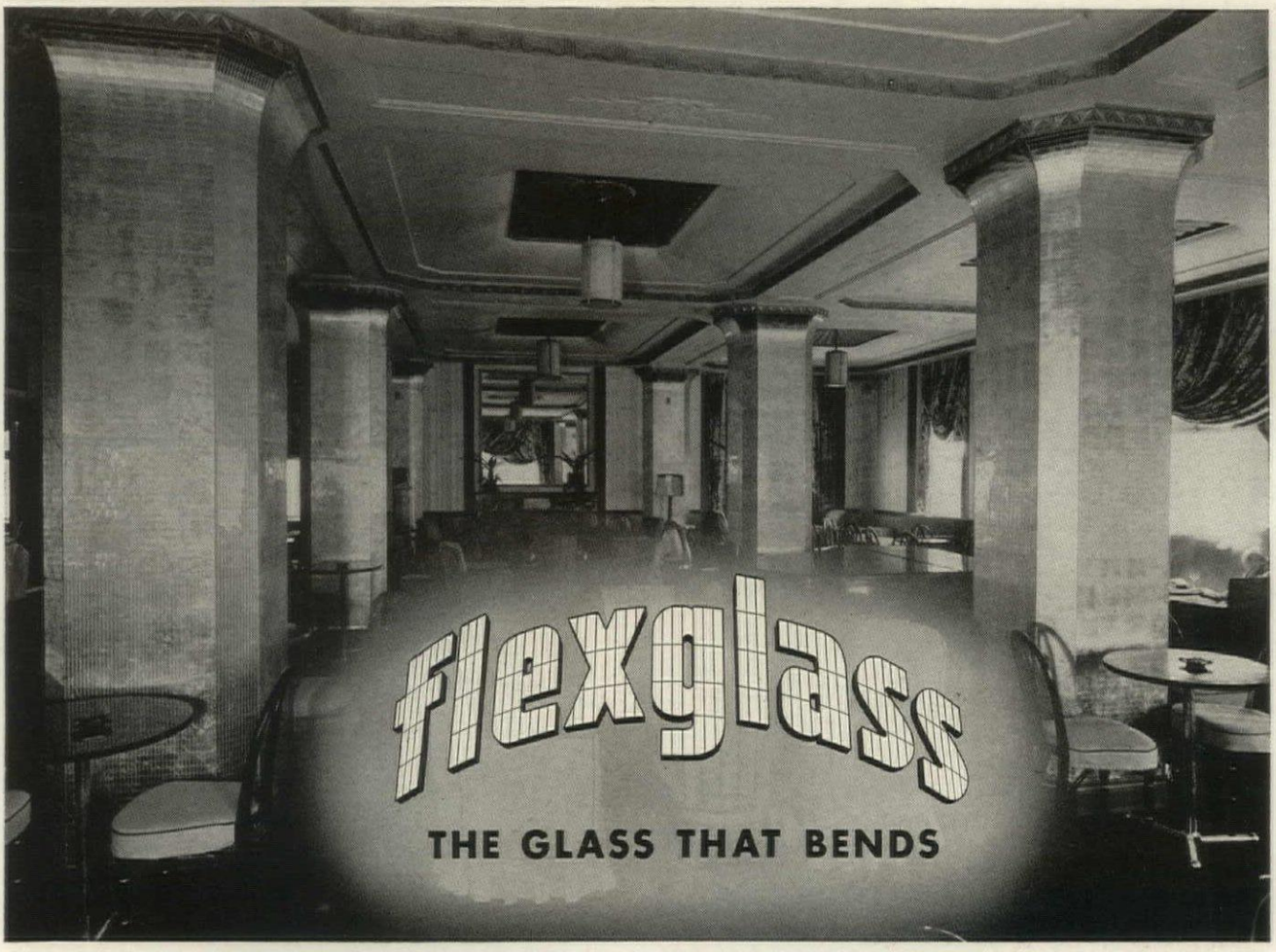
You'll find full details on Haskelite in Sweets, Sec. 11, Catalog No. 76. Or write for complete information and FREE samples, to:

HASKELITE MANUFACTURING CORPORATION
DEPT. A-6 • FLOORING DIVISION
208 W. WASHINGTON STREET CHICAGO, ILLINOIS

HASKELITE *Compound Lumber* Flooring

THE PALM ROOM, WALDORF-ASTORIA HOTEL, NEW YORK, N. Y.

Executed by W & J Sloane; F. W. Ficinus, Designer



Bends concavely and convexly . . . easily cemented to any hard, smooth surface . . . for indoor or outdoor use.

TO create a feeling of spaciousness, and to dress up the octagonal plaster columns while making them as inconspicuous as possible, W. & J. Sloane treated them with Dutch Leaf Flexglass. The Palm Room is an adjunct to the famous Starlight Roof, so that its lively, lustrous decor is in keeping with its function. Gold stars on specially made silver-striped paper pick up the gold of the Flexglass, and the ceiling is also decorated with gold. The flared tops of the columns and of the half and quarter-column pilasters resulted in a series of interesting mitres. One thousand sq. ft. of Flexglass was used for the columns, and for decorating the foyer and bar. Flexglass is real glass in 30 different colors and patterns in four types . . . opaque, flat mirror, rolled pattern mirror, and metallics. Exciting, exotic . . . unlimited in design and decorative possibilities. Write for sample and information.

UNITED STATES PLYWOOD CORPORATION, 103 PARK AVENUE, NEW YORK

U.S. Patents — Re. 21313 and 21285 DESAGNAT Other patents pending. See our Catalog in SWEET'S.

Don't depend too much on the bond when you specify a built-up roof! Such coverage extends only to the *roof* itself. To give your clients *full* protection against damage to structures and equipment, you must specify a roof that's *engineered* like steelwork or foundations.

YOUR CLIENT GETS PROTECTION NO BOND PROVIDES when you specify a J-M Asbestos Built-Up Roof

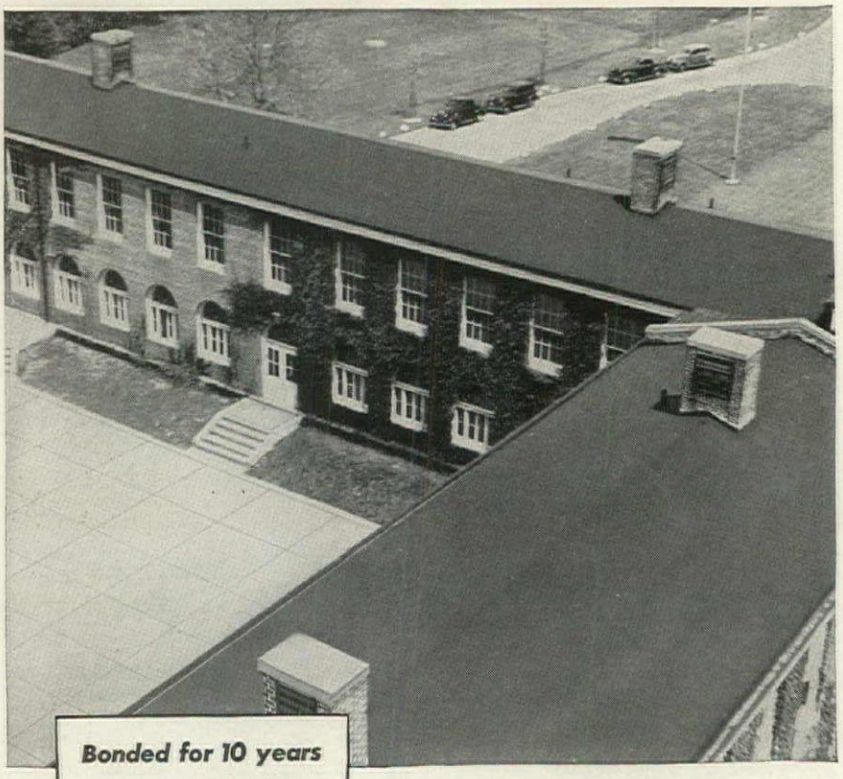
LOOK at the problem of specifying a built-up roof this way:

If leaks develop at flashings or other vulnerable points, roof repairs are covered by the bond. But *no bond covers damage that such failures can cause to structure or equipment!*

The only sure way to protect clients against failures at these critical areas is to specify a roof that's as carefully engineered as the building. And that's why specifications for J-M Roofs are far more exacting than might be considered necessary. At every vital point, they have a "factor of safety" that gives far greater protection than any bond.

This engineering is backed by the finest materials that 60 years of roofing manufacture can produce. J-M Smooth-Surfaced Roofs are built of *asbestos* felts . . . can't burn, rot or dry out.

No wonder J-M Roofs consistently outlast their bonds . . . that scores are still in service after 25 and 30 years! For details and specifications, write Johns-Manville, 22 E. 40th St., N. Y. C.



Bonded for 10 years

23 YEARS OLD . . .

and still in its prime!

Typical of the long service given by J-M Smooth-Surfaced Asbestos Built-Up Roofs is this one protecting the Poly Prep Country Day School, Brooklyn, N. Y. It's just one of scores of J-M Roofs that are still in excellent condition long after the bonding period has elapsed.

JM JOHNS-MANVILLE

***Smooth-Surfaced* ASBESTOS BUILT-UP ROOFS**

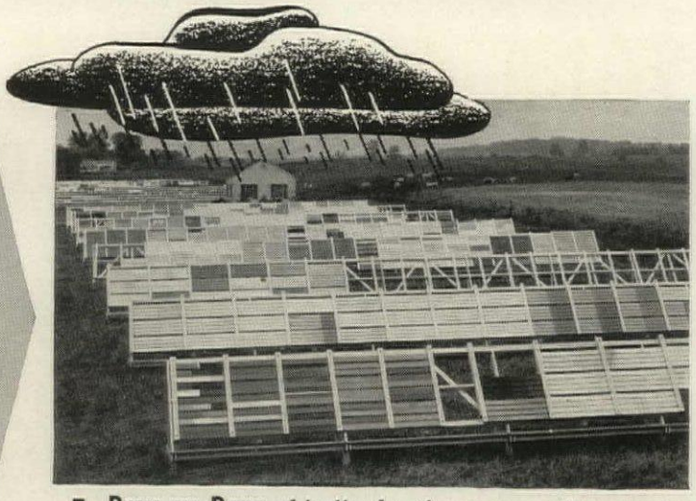
THE ROOF WITH THE SAFETY FACTOR

Blazing Sun—Icy Cold—Torrential Rains Attack Constantly—BUT

PITTSBURGH PAINTS

MEASURE UP TO HIGHEST PERFORMANCE STANDARDS

HERE'S WHY architects who specify "Pittsburgh" KNOW that they will get Field-Tested Finishes of proved high quality and uniformity!



1. Row on Row of inclined racks at our various proving grounds throughout the country subject Pittsburgh Paints to the severest extremes of climate. Each finish *must* measure up to certain preconceived standards before it is passed on to you. Above is pictured Proving Ground No. 1 at Milwaukee, Wis.

2. Destructive industrial fumes in crowded factory areas —icy sleet and wind—carry on a never-ending attack on these sturdy Pittsburgh coatings in Proving Ground No. 2 located at Newark, New Jersey. A history of each test panel is carefully charted to determine exact characteristics of finish.

3. Hot tropical sun and salt sea air combine to blister and break down ordinary paint finishes. But Pittsburgh Paints prove they can take it here, too, at Proving Ground No. 3 in Fort Lauderdale, Florida, by measuring up to or exceeding definite, rigid performance standards.

SUBJECTED to the most severe mechanical tests as well as actual exposure tests, Pittsburgh Paints are constantly proving their toughness, elasticity and long life. Nothing is left to guesswork in Pittsburgh's most modern paint factories. Spreading, hiding, wearing, chalking—every quality of good paint is checked and rechecked. These fine finishes must measure up to the very highest qualifications. That's the reason architects have been specifying "Pittsburgh" for more than 80 years—why *you* will be assured of greater client satisfaction when *your* specifications include such famous names as Wallhide, Florhide, Waterspar Enamels and Sun-Proof Paints. Pittsburgh Plate Glass Company, Paint Division, Pittsburgh, Pa.

SEE SWEET'S CATALOGUE FOR FURTHER INFORMATION

FORUM OF EVENTS

AWARDS

Fifth Pan American Congress of Architects' awards will be found on page 80.

To JOHN GULIAS, New York, the annual Fellowship in Sculpture of the American Academy in Rome, for a term of two years beginning October 1, 1940. Estimated value of the Fellowship is more than $4,000. Honorable Mentions to H. Richard Duhme, Jr., Pennsylvania Academy of the Fine Arts; Abbott L. Pattison, Chicago, a graduate of Yale University; and to Frederick Jean Thalinger, School of Fine Arts, Washington University, St. Louis. The Jury: James E. Fraser, chairman, Gaetano Cecere, Lee Lawrie, Paul Manship and Bruce Moore.

To TRUMAN E. PHILLIPS, Portland, first award in the sixth U. S. Regional Competition, Federal Office Building for Tacoma, Wash. Sixty-seven designs were entered by architects who were residents of Region No. 10, including the States of Colorado, Idaho, Montana, Oregon, Utah, Washington and Wyoming. Honorable Mentions: Whitehouse & Church, Portland; Ashton & Evans, Salt Lake City; and Paul Gordon Carlson, Seattle. The winner receives a fee of $3,000 immediately, and an additional fee of $3,000 when he is called upon to serve as consultant during the preparation of working drawings and specifications by the Public Buildings Administration. Jury: Roland E. Coate, Los Angeles; Henry F. Hoit, Kansas City; and Alfred Shaw, Chicago.

To MAXWELL MAYHEW UPSON, New York, the Edward Longstreth Medal, among the 1940 awards of the Franklin Institute of the State of Pennsylvania, "in consideration of his contributions to the scientific development of foundation engineering and construction, characterized by genius for invention and technical skill."

To LAURENS HAMMOND, Chicago, the John Price Wetherill Medal, also by the Franklin Institute, "in consideration of the inventive skill displayed in the development of the Hammond Organ . . ."

To LEO HENDRIK BAEKELAND, New York, the Franklin Medal, also by the Franklin Institute, "in recognition of his inventions and his contributions to the improvement of the industrial arts, and, in particular, of his invention and manufacture of the synthetic product, Bakelite."

To GEORGE ROBERT MCCLELLAN, Hyde Park, Mass., the 53rd Rotch Scholarship for six to eight months of travel and study in Mexico. Mr. McClellan studied at the Boston Architectural Club, and last year won the Special Student Prize, giving him a year at M. I. T. The Jury: W. Pope Barney, Israel P. Lord and C. Clark Zantzinger, Jr.

To WILLIAM W. LYMAN, JR., Harvard Graduate School, the Booth Traveling Fellowship in Architecture. Placed second, Arthur Witt Brewer, Owosso, Mich.; third, Rufus H. Roys, University of Michigan. The Jury: Roger Bailey, Wells I. Bennett, George B. Brigham, Jr., Robert B. Frantz, Branson V. Gamber, Jean Hebrard, William E. Kapp, Emil Lorch, George M. McConkey, Henry F. Stanton and Malcolm R. Stirton.

To VINCENT G. KLING, East Orange, N. J., fourth year student at Columbia University, the School Medal of the A. I. A. "for excellence of scholastic record throughout the four-year architectural course." Also the Henry Wright Memorial

(*Continued on page 72*)

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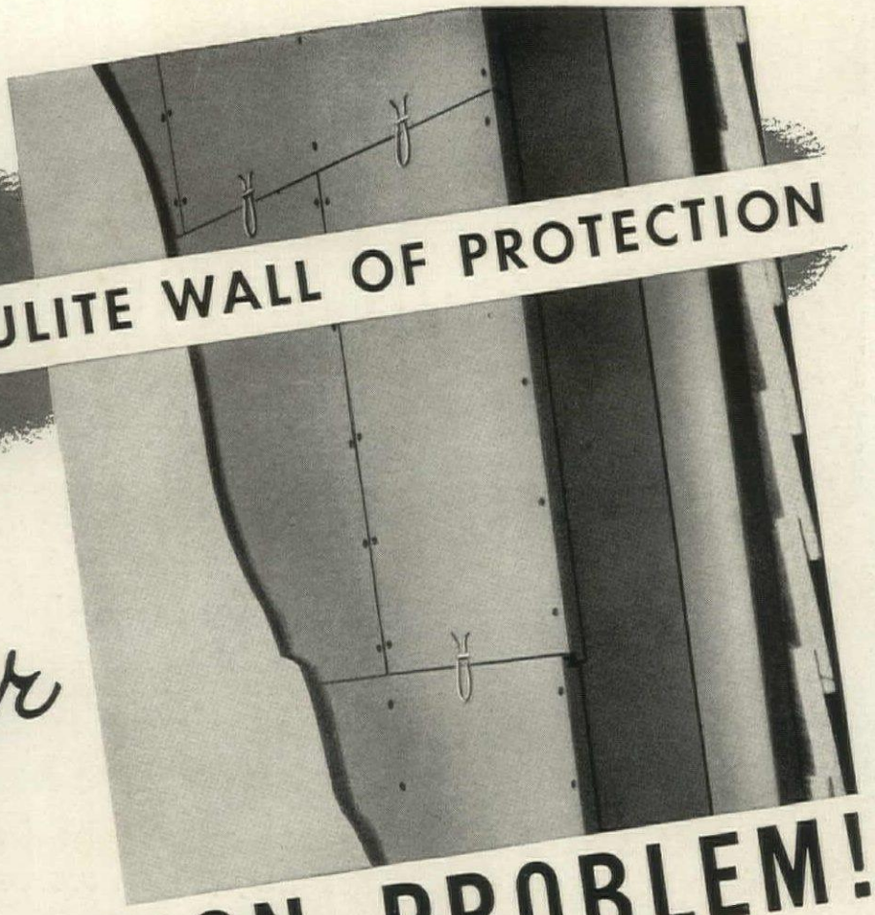
THE NEW INSULITE WALL OF PROTECTION



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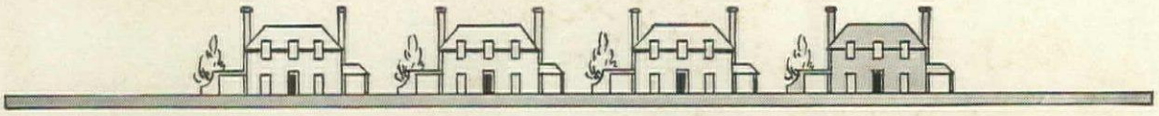

3 out of every 4 U. S. homes are heated with COAL —a 3 to 1 choice over all other fuels combined!

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Over 3,700,000 urban homes were studied . . . 76.9% of them were heated with COAL. Reasons? Many of them—and here are five fundamentals that make coal the preferred modern fuel:

1 ECONOMY. Coal, burned by modern methods, wins on comparisons of heating cost.

2 SATISFACTION. Modern prepared coals can provide more even, more controllable temperatures.

3 RELIABILITY. Coal heating means fewer worries about fluctuations in price, availability and performance.

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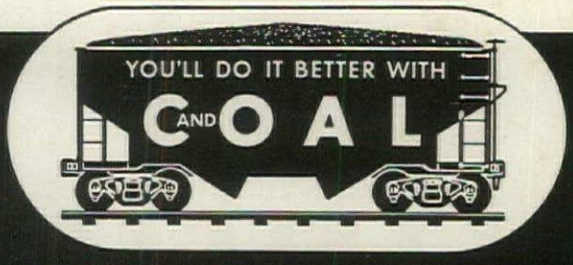
Have *you* made comparison of heating costs? Coal often shows a 30% to 50% saving over other fuels. . . . If you want to check up on coal savings and other coal advantages, Chesapeake and Ohio's Fuel Service Engineers are available—at no cost —to help you solve your fuel problems.

For information or assistance on your fuel problems, write GEORGE H. REINBRECHT, Coal Traffic Manager, Chesapeake and Ohio Lines, 2909 Terminal Tower, Cleveland, O.



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For generations Barrett Roofs have been applied over true-level surfaces. It is not uncommon to keep roofs of this type continuously flooded for air conditioning and insulating purposes.

(Continued from page 68)

Prize "for the best solution of a housing problem." Also the Construction Medal of the New York Society of Architects, as the outstanding member of the class in construction.

To Miss Carman Renard, Buenos Aires, the Kimball Fellowship award from Barnard College—an annual award valued at $1,200 "to a student from Spain or a Spanish-American country for graduate study at Columbia University." Miss Renard has a bachelor's degree in architecture from the University of Buenos Aires.

To Loren Russell Fisher, Needham, Ind., the Jacob H. Lazarus Fellowship in Painting provided by the Metropolitan Museum of Art, and awarded by the American Academy in Rome, for a term of two years. Estimated value of the Fellowship is more than $4,000. Honorable Mention: Sidney Simon, Pennsylvania Academy of the Fine Arts. The Jury: Barry Faulkner, chairman, Gifford Beal, Jon Corbino, Dean Cornwell and Allyn Cox.

To John Augur Holabird, Chicago, appointment by the President to the National Commission of Fine Arts.

To Edward Bruce, Washington, Chief of the Section of Fine Arts, Public Buildings Administration, appointment by the President to the National Commission of Fine Arts.

National Academy of Design. To the following associate members, elevation to the rank of Academician: Grosvenor Atterbury, architect; painters, Hugo Ballin, Robert Brackman, Jon Corbino, Dean Cornwell, Guy Pene DuBois, Roy Mason, Ogden M. Pleissner, Francis Speight and Theodore Van Soelen; sculptors, Gertrude Lathrop and Wheeler Williams; worker in the graphic arts, Thomas W. Nason.

To Constance Ortmayer, Winter Park, Fla., one of the two Avery Prizes for sculpture by The Architectural League of New York for her terra cotta statuette, "The Bather."

To Adlai S. Hardin, Rowayton, Conn., the other Avery Prize for his bronze statuette, "Nova Scotia Fisherman." The Jury: Wheeler Williams, chairman, Gaetano Cecere and Paul Jennewein.

COMPETITIONS

LeBrun Traveling Scholarship of the New York Chapter, A.I.A. In the final stage are: John J. Brady, Washington, D. C.; James Breed, Richmond, Va.; Joseph Caponnetto, Brooklyn, N. Y.; John Louis Rochon, Gainesville, Fla.; Spencer Ringgold Smith, Flushing, N. Y.; Eugene Wasserman, Dept. of Architecture, Kansas State College. George W. Edwards, Frankfort, Ky. and Arthur A. Carrara, Chicago, were named alternates. The winner will receive $1,400 for six months in travel and in the study of architecture. The Jury: Francis Keally, chairman, William Adams Delano, Otto Eggers, John Theodore Haneman, Wallace K. Harrison, Otto Langmann and John V. Van Pelt.

Certificates of Merit. A judgment will be conducted by the New York Chapter, A.I.A., in cooperation with other professional architectural bodies in the New York region, for the purpose of applauding good design, planning, construction, and site planning by the architect in the small house field, and to publicize the important contribution of the architect's

(Continued on page 76)

Simplicity——

design and construction problems are both simplified with CONCRETE

Concrete's plasticity, its ready adaptability to the wishes of the architect, greatly simplifies design problems—whether plans call for severe surfaces with modest ornamentation, or elaborate form and decoration.

And construction procedure is likewise simplified when walls, frame, floors and detail are cast as a unit in one material. Costs are low because concrete is "structure and architecture" in one; low maintenance is assured, as well as firesafety and long life.

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● Excellent formwork is evident in this architectural concrete courthouse, Cedar County, Mo. Marshall & Brown of Kansas City, Mo., architects and engineers; W. F. Edgell & Son, Leavenworth, Kan., general contractors.

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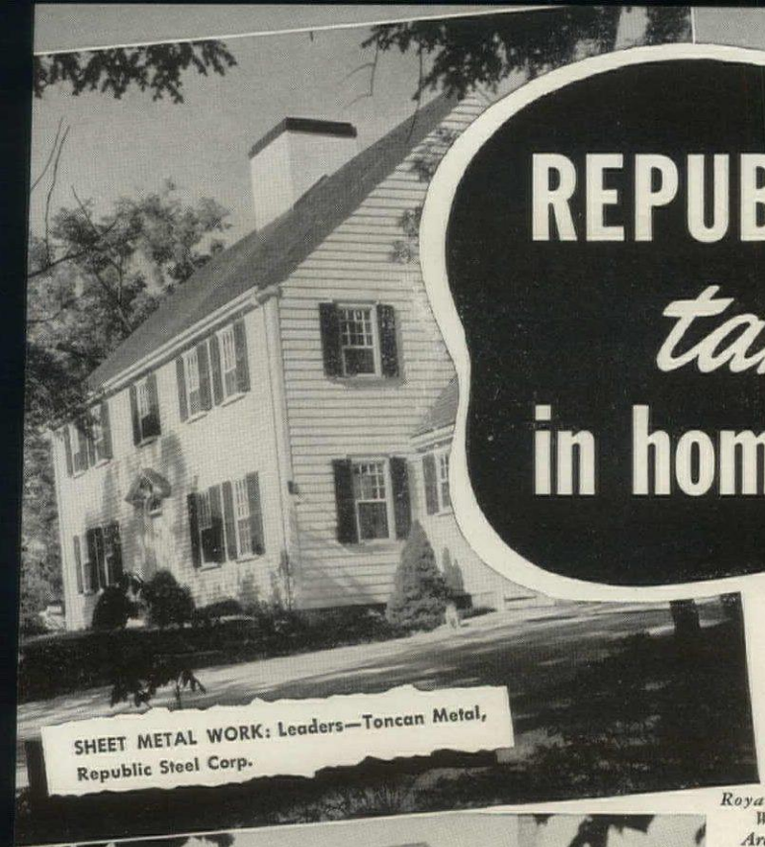
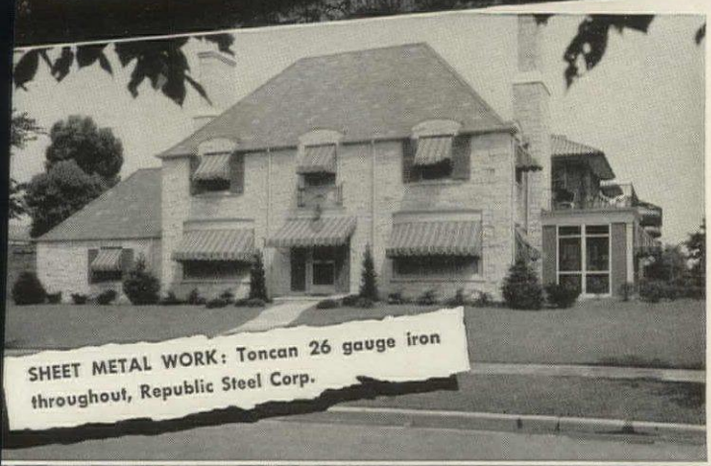
REPUBLIC TONCAN IRON *takes a bow...* in homes cited for honors



SHEET METAL WORK: Leaders—Toncan Metal, Republic Steel Corp.

Royal Barry Wills Architect



SHEET METAL WORK: Toncan 26 gauge iron throughout, Republic Steel Corp.

R. W. Bramberg and Co. Builders

Perkins, Wheeler & Will Architects

SHEET METAL WORK: Leaders—Toncan Metal, Republic Steel Corp.

Perkins, Wheeler & Will Architects

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SHEET METAL WORK: Flashing, gutters and leaders —26 gauge, Toncan iron, Republic Steel Corp.

FORUM OF EVENTS

(*Continued from page 72*)

service to this field of practice. The houses must have been built within approximately 50 miles radius of New York City Hall, between January 1, 1938 and January 1, 1940, must have not more than six rooms, and must have cost no more than $7,000 exclusive of land and furnishings. Entry dates, June 1 to September 1. Duplicate awards will be made to the client and to the architect. Further details are being distributed through the cooperating organizations.

BRIDGE DESIGN. American Institute of Steel Construction has announced its Jury for the 12th Annual Award for the most beautiful bridge of steel built during the past year. The Jury: J. K. Finch, Louis E. Jallade, Francis Keally, Roger W. Sherman, Hale Sutherland. Submissions were invited for not later than June 1.

INDUSTRIAL PROGRESS PROGRAM, sponsored by the Lincoln Arc Welding Foundation, provides a number of awards for reports describing advances and improvements made before June 1, 1942 by application of arc welding. Further details may be had by addressing the Foundation at Cleveland, Ohio.

SAN SALVADOR GOVERNMENT OFFICE BUILDING. A three-story building of reenforced concrete, total cost to be $600,000. Closing date, noon of July 15, 1940 in San Salvador. Further details of the problem and drawings required may be obtained from any of the Salvadoran consular offices in the U. S.

EDUCATIONAL

HARVARD UNIVERSITY. The Department of Fine Arts offers a new course in its summer school on Regional Planning, which it defines broadly as the techniques of preparing programs for the utilization of resources. Further details may be had from Oscar Sutermeister, Instructor in Fine Arts, Straus Hall D-21, Cambridge, Mass.

CALENDAR

June 17-20. 1940 Semiannual Meeting of the American Society of Mechanical Engineers, Hotel Pfister, Milwaukee, Wis.; also at Ann Arbor, Mich., June 20-21; and at Berkeley-Carteret Hotel, Asbury Park, N. J., June 19-22.

June 24-28, Forty-third Annual Meeting, American Society for Testing Materials, Chalfonte-Haddon Hall, Atlantic City, N. J.

July 10-13. Biennial Convention of Alpha Alpha Gamma, the national fraternity of women architects, at Beekman Towers, New York.

December 2-7. 14th National Exposition of Power and Mechanical Engineering, Grand Central Palace, New York.

MISCELLANEOUS

TRENDS OF URBAN LAND. To assist American cities in their problems of planning, replanning, construction and reconstruction there has been formed the Urban Land Institute, sponsored by the National Association of Real Estate Boards. Its first major work will be the study of urban decentralization. Consultants thus far selected include Harland Bartholomew, St. Louis; E. O. Griffenhagen, Chicago; Miller McClintock, Yale University; J. C. Nichols, Kansas

(*Continued on page 80*)

The new Bethlehem Elevator Rope deserves a place in the specifications for your most ambitious projects. The result of a long period of research and development, of the installation of entirely new and improved machinery and of the intensive training of all the men connected with its manufacture, Bethlehem Elevator Rope is more than just an improved cable.

It has been stepped up in quality until it is entirely different from ordinary wire rope, yet it meets all standard specifications for construction and breaking strength.

The outstanding characteristic of this new Bethlehem Elevator Rope is uniformity—a quality that is desired by every operating and maintenance man. In the same service, under the same working conditions, rope after rope will deliver substantially the same life in thousands of car-miles.

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GALLI BROS. HOMES
San Francisco, Calif.

SCARSDALE MANOR
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RIVER OAKS
Dallas, Tex.

HUNTINGTON PALMS
Pasadena, Calif.

LUCAS HUNT VILLAGE
St. Louis, Mo.

HIGHLAND TERRACE
New York City

PARKLANE
Houston, Tex.

KEW GARDENS
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PORCELAIN ENAMEL ON ARMCO

BRIGGS
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PLUMBING FIXTURES

FORUM OF EVENTS

(*Continued from page 76*)

City; and C. P. Wood, New York. The Institute is a non-profit organization to be supported by membership dues, by endowments and gifts.

Fifth Pan American Congress

Eleven countries were represented at Montevideo early last March in this international gathering of architects, with a total attendance of 586. George Harwell Bond of Philadelphia and Julian Clarence Levi were architect delegates from the U. S. under the chairmanship of the Hon. Edwin C. Wilson, U. S. Minister to Uruguay.

Seven themes had been set down in the agenda for study, and these were referred to committees for round table discussion: 1) Problems of Growth of American Cities; 2) Middle Class Housing; 3) Public Competitions (Mr. Levi presiding); 4) The Auxiliary Specialties of Architectural Work (Mr. Bond, vice chairman); 5) Complementary Studies of Specialization in the Architectural Schools; 6) Systematizing the Study of the History of American Architecture; and 7) Unassigned Subjects.

Through our delegation the A.I.A. presented to Architect Alfredo Baldemir, President of the Republic of Uruguay, the Architects' Tea Set; to Architect Horacio Acosta y Lara, Mayor of Montevideo, the two volumes of "Great Georgian Houses of American"; and to Architect Daniel Rocco, President of the Congress, another set of the same work.

The U. S. joined in an exhibition of architecture and town planning held in the new Municipal Building of Montevideo, sending material gathered by the A.I.A. and various Federal Departments. When our delegates left, the surprising attendance of 4,000 persons daily was being recorded, with the closing date indefinitely postponed.

Due to the fact that the U. S. Exhibit had been formed primarily as an educational exhibit for circulation among architectural schools, etc., in this country, no one building and the work of no one architect or firm of architects was shown in sufficient detail to be eligible for the Grand Prize of Honor of the entire exhibition. This honor went to Mauricio Cravette, architect of the new Municipal Building and author of a most comprehensive plan for the city of Montevideo.

To the U. S. were given 70 awards out of a total of 145 for which she was eligible. The list follows:

PRIZE OF HONOR

Perry, Shaw & Hepburn for the Williamsburg Restoration.

Coolidge, Shepley, Bulfinch & Abbott for the New York Hospital, Cornell Medical Center.

Paul Philippe Cret for the Federal Reserve Board Building, Washington.

Reinhard & Hofmeister; Corbett, Harrison & MacMurray; Hood & Fouilhoux for Rockefeller Center.

GOLD MEDAL AND DIPLOMA

Arthur Loomis Harmon for the Shelton Hotel, New York.

Thomas Harlan Ellett for the Cosmopolitan Club, New York.

Herbert A. Magoon for Jones Beach State Park, Long Island, N. Y.

Karcher & Smith for the U. S. Naval Hospital, Philadelphia.

Zantzinger & Borie for the Department of Justice Building, Washington.

Shreve, Lamb & Harmon for the Empire State Building, New York.

(*Continued on page 84*)

Concrete stack and rotary-kiln supports at one of Lone Star's plants.

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Specify 'Incor'* for dependable high-early strength and strong durable concrete. Write for copy of "Cutting Concrete Costs." Lone Star Cement Corporation, Room 2292, 342 Madison Avenue, New York. *Reg. U. S. Pat. Off.

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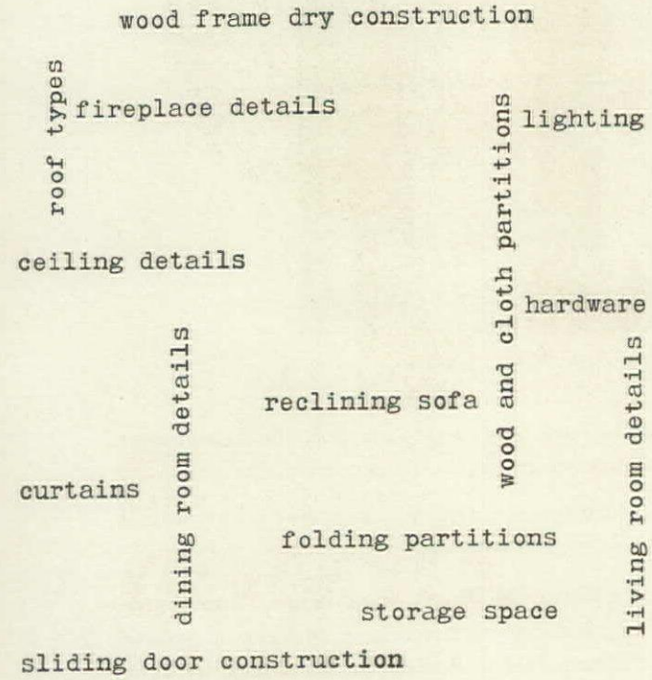
folio of Modern "Architectural Details."

Published by the author, this important work pres
architectural elements developed by Mr. Raymond
a period of seventeen years practice in Japan. M
than 250 photographic plates and 530 measu
drawings reveal original techniques in wood and
crete construction and present dozens of detailed
sign studies ranging from exterior views and interi
to furniture and fittings.

MODERN DETAILS Antonin Raymon



"Architectural Details" is notable as a comprehens
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new light on the aesthetic value of the natural substa
and surface of materials. It is no less a memoral
record of the author's approach to a restatement of t
principles governing architecture.

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with heavy kraft cloth covers, Mr. Raymond's portfol
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copies of Antonin Raymond's "Architectural Details" at $5 each, postpaid.

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THE functional design of this modern building suggests that it was planned for years of service at moderate maintenance cost. . . .

And inspection of the interior bears this out. The entire heating and ventilating system — a long mile of it — is of galvanized ARMCO Ingot Iron, a highly refined and *extra-durable* metal with a record second to none in air-conditioning work.

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A NAME KNOWN TO MILLIONS

FORUM OF EVENTS

(*Continued from page 80*)

SILVER MEDAL AND DIPLOMA

Ingham & Boyd for Chatham Village, First Unit, Pittsburgh.

Mellor & Meigs for residence of Arthur E. Newbold, Jr., Philadelphia.

Frank Lloyd Wright for residence of Edgar Kaufmann, Bear Run, Pa.

R. C. Reamer for the Edmond Meany Hotel, Seattle.

Ernest A. Grunsfeld, Jr. for the Adler Planetarium, Chicago.

Lyndon & Smith for the Beecher High School, Flint, Mich. and the Northville Grade School, Northville, Mich.

Theodate Pope for the Avon School for Boys, Avon, Conn.

Janssen & Cocken for the Longue Vue Club, Pittsburgh.

Schmidt, Garden & Erikson for St. Francis Nurses' Home, Pittsburgh.

Arthur Brown, Jr. for the Department of Labor and Interstate Commerce Commission Building, Washington.

John Russell Pope for the Archives Building, Washington.

Jackson, Robertson & Adams for the Providence County Court House, Providence, R. I.

Gordon B. Kaufmann for Boulder Dam and Power House, Colorado River, Colo.

Holabird & Root for the Chicago Daily News Building.

Holabird & Root for the U. S. Forest Products Laboratory, Madison, Wis.

Howe & Lescaze for the Philadelphia Saving Fund Society Bank and Office Building.

Voorhees, Gmelin & Walker for the Irving Trust Company, New York.

Paul Philippe Cret and Alexander Trowbridge for the Folger Shakespeare Library, Washington.

Bebb & Gould for the Art Museum, Seattle.

John Gaw Meem for the Colorado Springs Fine Arts Center.

Bertram Grosvenor Goodhue and Carleton Monroe Winslow for the California State and Fine Arts Building, San Diego.

Cram & Ferguson for the Cathedral of St. John the Divine, Nave and West Elevation of Baptistry, New York.

Hobart Upjohn and Otto F. Langmann for All Souls Unitarian Church, New York.

And to each of the following U. S. Government Departments on the basis of its exhibit as a unit:

Housing Authority
War Department
Veteran Administration
Department of Interior
Department of Agriculture
Navy Department

HONORABLE MENTION

Dwight James Baum for residence of Anthony Campagna, New York.

Electus D. Litchfield for Yorkship Village, Camden, N. J.

Robert Rodes McGoodwin for "The French Village," Philadelphia.

Clarence S. Stein for Hillside Homes, N. Y.

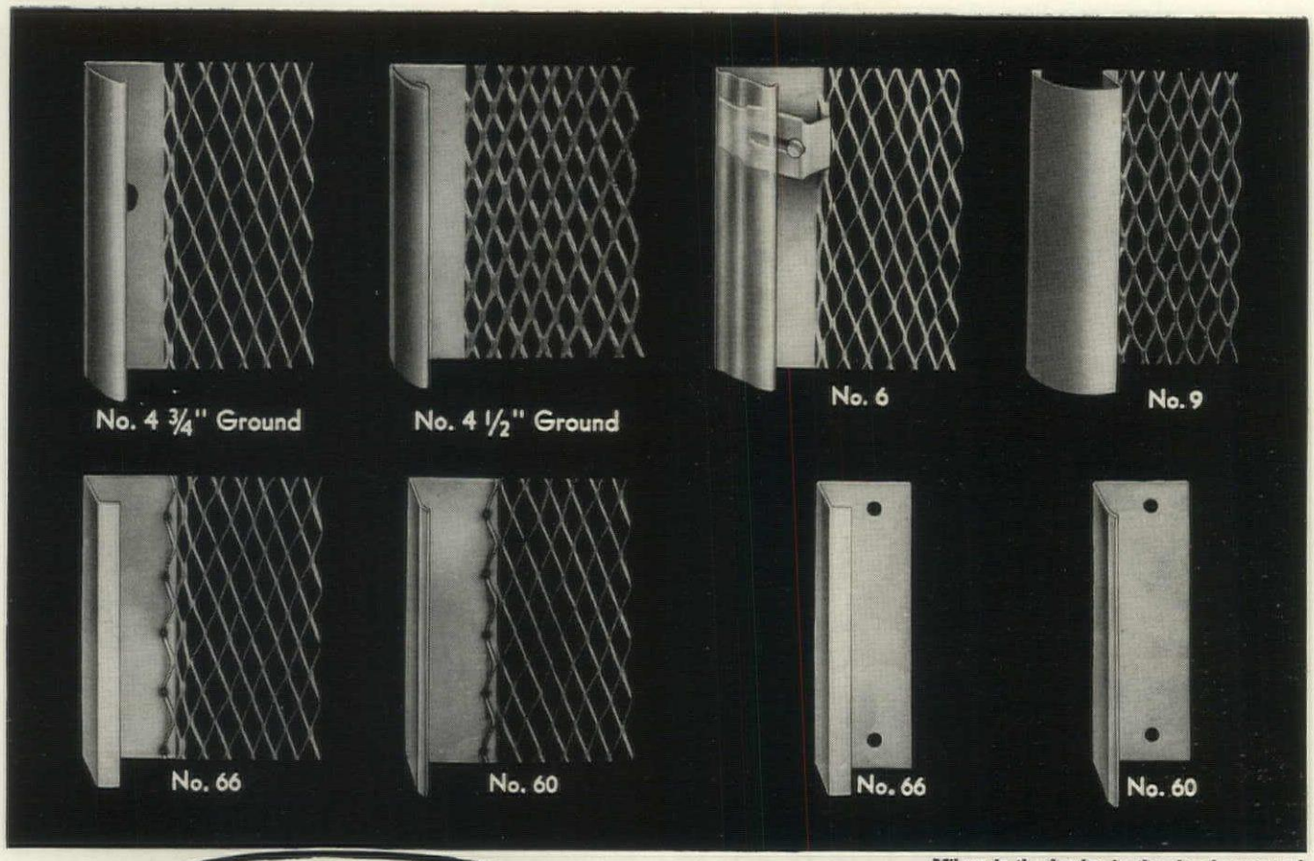
Reginald D. Johnson for the Santa Barbara Biltmore Hotel, Calif.

Louis Justement for the Falkland Properties, Silver Spring, Md.

Harrison & Fouilhoux for the Rockefeller Apartments, N. Y.

Wyatt & Nolting for the Warrington Apartments, Baltimore, Md.

(*Continued on page 88*)



Milcor is the leader in the development of metal trim . . . has available every type, style, and size you are ever likely to need.

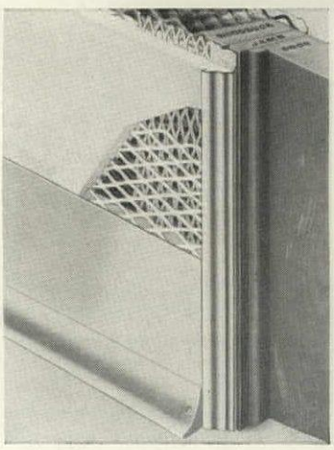
Your small homes seem more spacious . . . more substantial . . .

that's why you build good will — when you specify

MILCOR Metal Casings

Whether you design homes for builders to sell or for prospective home owners to build, it pays to specify Milcor Expansion Door and Window Casings for simple beauty harmonizing with modern interior decoration. • Rooms look larger, because only 1" or less of the casing is exposed above the plaster surface. Casings are tied into the plaster by expanded metal wings, reinforcing the plaster against cracks. The final cost is less than for a finished job with less durable materials. • Contractors appreciate this construction, because it gives them something substantial to sell . . . helps them close prospects soon after they open houses for inspection. And there is no running back and forth for adjustments after the job is finished. • Home owners like the neat, trim effect Milcor Metal Casings provide. Easy to keep clean, without frequent painting. And they like the permanence of steel. • No wonder the trend for small houses is to firesafe metal trim. Follow it to keep more calls for small home designs coming to your office. Write for the new Milcor Metal Trim Manual, helpful in your planning . . .

F-92



• Illustration at left shows exposed molding of Expansion Casing and its expanded metal wing; Netmesh Metal Lath; and Metal Base.

MILCOR STEEL COMPANY

MILWAUKEE, WISCONSIN CANTON, OHIO

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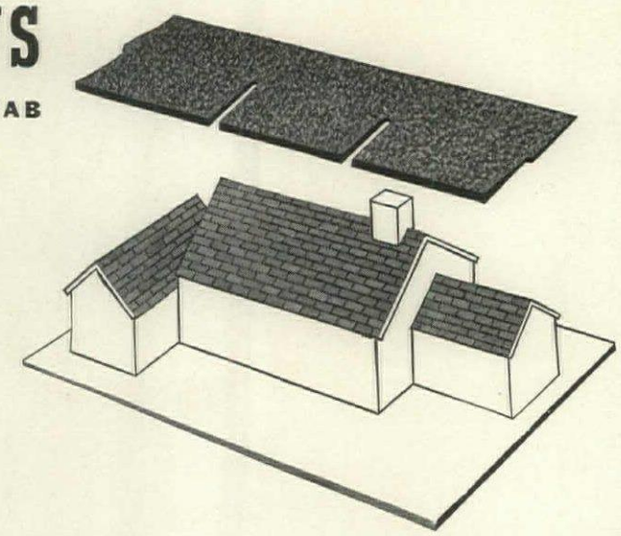
Sales Offices: Minneapolis, Minn., Little Rock, Ark., Dallas, Tex., Denver, Colo., Washington, D. C.,

HIT OF THE SHOWS

THE NEW BARBER GENASCO MAGNATAB



It meets with the approval of the F. H. A. and the strict requirements for roofings on F. H. A. financed buildings. It has the approval of the Underwriters Laboratories, Inc., withstanding all the tests that entitle it to a Class C label. It made a hit at the 1940 Lumbermen's shows all over the country. And now it's making a big name for itself with architects, builders and home-owners.

It's the *Magnatab*, Barber's brand-new shingle!

The new Magnatab is the only 240-lb. shingle made with genuine Trinidad Native Lake Asphalt, the long-wearing natural asphalt which is *The Vital Element* in all Barber Genasco Roofings.

And it's "color-styled" too. Howard Ketcham, one of America's leading color experts, has provided four smart new colors for the Magnatab—Blue, Green Tweed, Red Tweed and Mahogany—plus five other attractive colors.

We'd like to send you details about the new Magnatab and other newly "color-styled" Barber Genasco Roofings. Barber Asphalt Corporation, Barber, New Jersey.

Nationally advertised Barber Genasco Products, made with The Vital Element, *include: Bonded and other types of Built-up Roofings, Shingles, Sidings, Roll Roofings. Other Barber Products include: Waterproofing Asphalts and Fabrics, Resurfacer, Asphalt Protective Products (Plastics and Liquids), Spandrel Beam Waterproofing (Spandrel Cloth and Cement).*

FOR FURTHER INFORMATION
SEE OUR CATALOG IN SWEET'S

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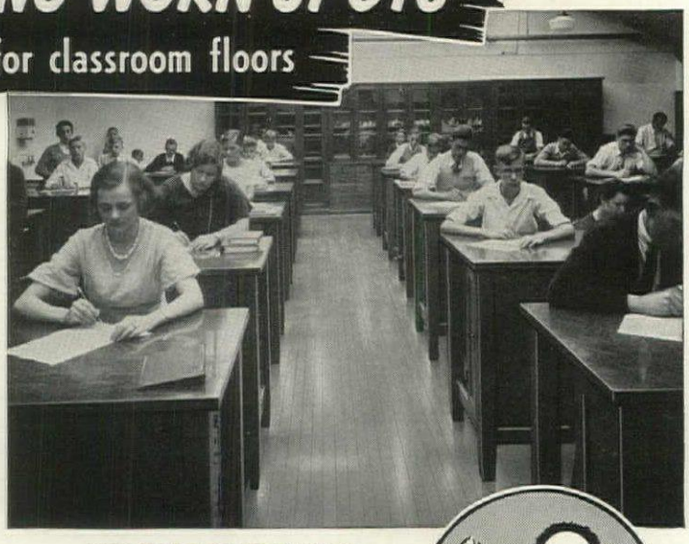
SHINGLES • SIDINGS • ROLL ROOFINGS • BUILT-UP ROOFINGS

NO TRAFFIC LANES.. NO WORN SPOTS

when you specify Seal-O-San for classroom floors



ARCHITECTS who specify this unusual floor finish know beforehand that school administrators will approve. For Seal-O-San is the one finish that has proved in more than 5000 schools — that it doesn't break down where traffic is heaviest.

Penetrating deep, Seal-O-San becomes part of the wood . . . leaves no surface film to chip or crack. Sealing the cells, it forms a protective finish that actually reinforces surface fibres. As a result, the rugged, *durable* seal offers protection not only against scraping feet but also against the damaging effect of ink, chemicals or water.

No other floor finish gives greater wear-resistance than Penetrating Seal-O-San. And no other finish can match the beauty of its smooth, *soft-lustre* natural finish.

By specifying Seal-O-San, you'll earn the thanks of everyone charged with school management. Write for details.

FOR GYMNASIUM FLOORS
SEAL-O-SAN HAS NO "OR EQUAL"

More than 5000 leading coaches have selected Gymnasium Seal-O-San for finishing gym floors. A *combined* seal and finish, 100% non-slippery, it has no equal for withstanding the punishing effects of basketball or other gym activities

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SEAL-O-SAN

PERFECT SEAL AND FINISH FOR WOOD FLOORS

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DENVER • HUNTINGTON, INDIANA • TORONTO

For MINIMUM Cost and MAXIMUM Effect

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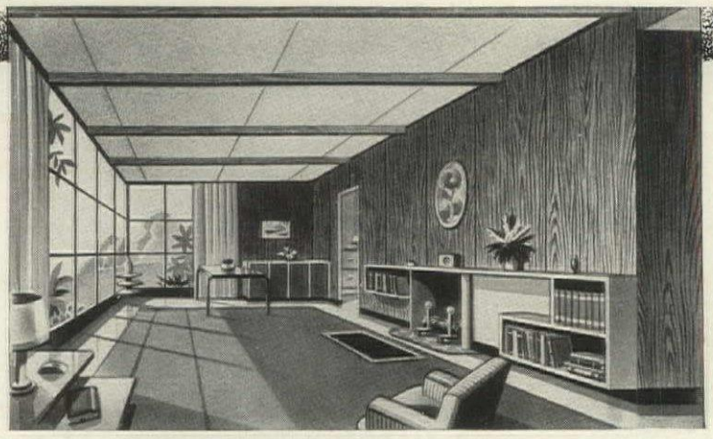
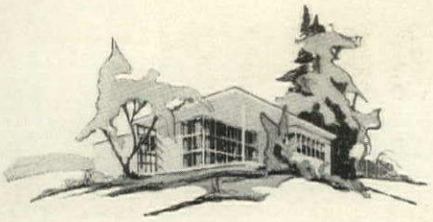
WELDBORD

HOT-PRESS RESIN-BONDED

Hardwood PLYWOOD Paneling

for WALLS and CEILINGS





Illustrations from "Designs for 60 Small Homes," by Samuel Glaser, Boston

Replace messy, time-wasting plaster with walls which are dry, crack-proof, mar-resistant and, in most localities, cheaper to install and maintain.

Blue Label WELDBORD
for walls and ceilings

on which paper or paint is to be applied—the only low-cost panel which may be tight-butted for invisible joints.

7½¢ *per sq. ft.**

De Luxe WELDBORD
for decorative effects

with Walnut, Oak or African Mahogany. Faces are long-grain and book-matched for maximum beauty. May be had on masonite backing at buyer's option.

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*Prices are approximate list, F. O. B. nearest warehouse.

The "Plywood Handbook of Residential Construction" contains complete data on dry-wall technique—FREE to Architects and Builders—send for your copy.

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BRANCH OFFICES AND WAREHOUSES: Baltimore • Boston • Brooklyn • Chicago • Cincinnati • Cleveland • Detroit • Los Angeles • Newark • New York • Philadelphia • Rochester • San Francisco • Seattle

FORUM OF EVENTS

(*Continued from page 84*)

Coolidge, Shepley, Bulfinch & Abbott for Harvard University.

Richard J. Neutra for school buildings, Los Angeles.

Lester W. Geisler for the Miami Jockey Club.

Frederick M. Mann for the University of Minnesota Memorial Stadium, Minneapolis.

John and Donald B. Parkinson for the Los Angeles Coliseum.

Schenck & Williams for the Dayton Y.M.C.A., Ohio.

Bennett, Parsons & Frost for the Federal Trade Commission Building, Washington.

Paul Philippe Cret for the Central Heating Plant, Washington.

Delano & Aldrich for the Post Office Department, Washington.

Howard L. Cheney for the U. S. Post Office, Miami Beach, Fla.

Shreve, Lamb & Harmon for the U. S. Post Office and Court House, Chattanooga, Tenn.

Paul Philippe Cret for the Calvert Street Bridge, Washington.

Aymar Embury II for the Triborough and Henry Hudson Bridges, New York.

Joseph Finger, Inc. for a "Printing and Lithography Establishment for Clarke and Courts," Houston.

Atlee B. and Robert M. Ayres for the Administration Building at Randolph Field, San Antonio.

Milton B. Medary for the Bok Singing Tower, Mountain Lake, Fla.

Davis, Dunlap & Barney for the American Bank and Trust Company Building, Philadelphia.

Holabird & Root for the A. O. Smith Engineering Laboratory, Milwaukee, Wis.

Morris & O'Connor for the interior of the Great Hall, Cunard Building, New York.

Edward F. Sibbert for the S. H. Kress & Company Building, New York.

Marston & Maybury for the Pasadena Public Library, Hill Avenue Branch.

Albertson, Wilson & Richardson for the Church of St. Joseph, Seattle.

Aymar Embury II and J. L. Hamilton for the Winnetka Congregational Church, Ill.

ERRATA

Credit for paint on interior plywood walls Puget Sound House No. 1 (April, page 264, Architect E. J. Ivey) should have read—Plasterez, Laux Sales Co., Seattle.

DIED

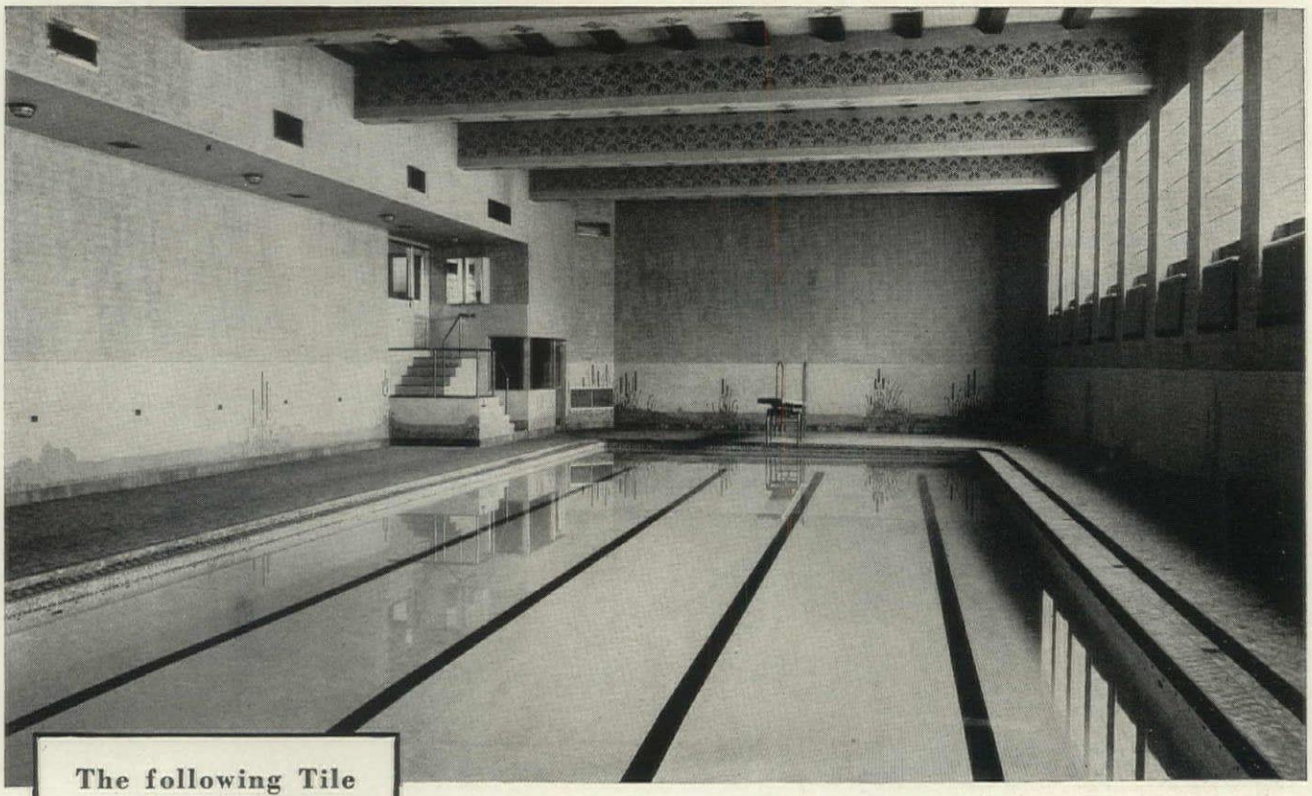
Clare C. Hosmer, architect, 59, in East Orange, N. J. Born in Oak Park, Ill., Mr. Hosmer had practiced in the West, in Florida and more recently had served with the New Jersey Housing Authority. He was a member of the A.I.A.

PERSONAL

School of Education, Northwestern University, Evanston, Ill. is enlarging and bringing up to date its collection of educative materials. The School would appreciate data from manufacturers of building materials.

Bert Haas, Designer, 301 Ayres Street, Corpus Christi, Tex., who specializes in store designing, would welcome information from manufacturers regarding new materials for this branch of architectural work.

FOR SUMPTUOUS POOL OR HUMBLE SHOWER STALL



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U. S. Quarry Tile Co.

TILE offers
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It is an interesting commentary on a material when it is accepted as the finest material when "price is no object," yet at the same time possesses such great durability that it is used in very modest homes where every penny of cost and upkeep are scrutinized carefully.

For beauty — for service — and for decoration, TILE is one of the oldest, yet one of the most modern, materials. Its simplicity of form, beauty of texture, and variety of colors meet the demands of modern designers, while others in the profession create intriguing scenic treatments such as the cat-tailed wainscot shown above with its reflection in the water.

To maintain and extend the appreciation for TILE, attractive advertisements appear regularly in House & Garden and in The American Home. The brochure "Facts About Tile" has been distributed to more than seventy thousand owners and prospective builders of homes. It will prove useful to you in working with your clients. Copies will be sent gladly.

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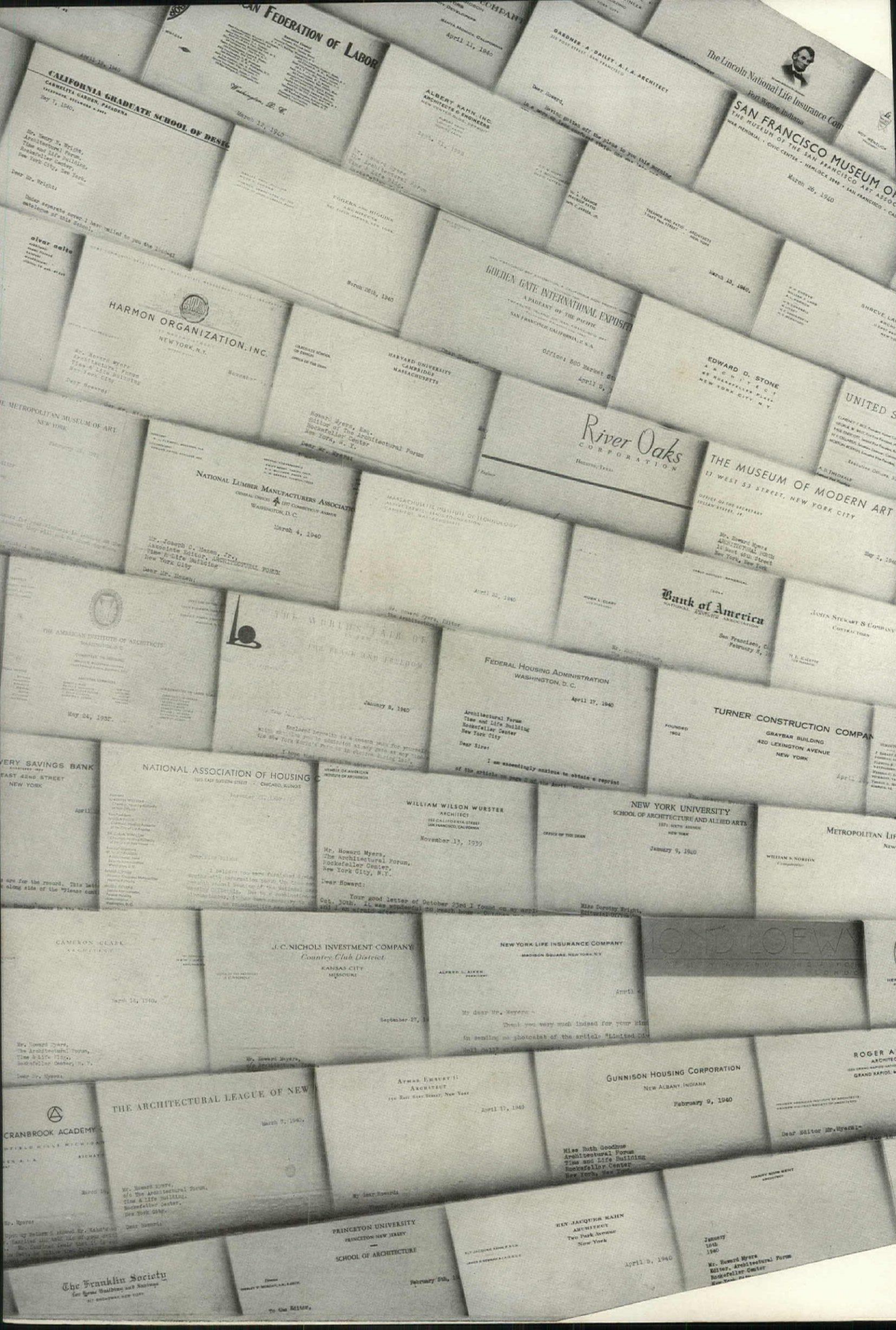
NOTE: If west of the Rockies, please write to the PACIFIC COAST ASSOCIATION OF TILE MANUFACTURERS, 5410 Wilshire Boulevard, Los Angeles, California for details of their complete Program and list of their members.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CALIFORNIA GRADUATE SCHOOL OF DESIGN
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THE MUSEUM OF THE SAN FRANCISCO ART ASSOC
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HARMON ORGANIZATION, INC.
NEW YORK, N.Y.
GOLDEN GATE INTERNATIONAL EXPOSITION
A PAGEANT OF THE PACIFIC
SAN FRANCISCO, CALIFORNIA, U.S.A.
EDWARD D. STONE
ARCHITECT
48 ROCKEFELLER PLAZA
NEW YORK CITY, N.Y.
HARVARD UNIVERSITY
CAMBRIDGE
MASSACHUSETTS
Howard Myers, Esq.
Editor of the Architectural Forum
Rockefeller Center
New York, N. Y.
River Oaks
CORPORATION
Houston, Texas
THE MUSEUM OF MODERN ART
11 WEST 53 STREET, NEW YORK CITY
OFFICE OF THE SECRETARY
NATIONAL LUMBER MANUFACTURERS ASSOCIATION
GENERAL OFFICES
WASHINGTON, D.C.
March 4, 1940
Mr. Joseph C. Hazen, Jr.,
Associate Editor, ARCHITECTURAL FORUM
Time & Life Building
New York City
Dear Mr. Hazen:
THE METROPOLITAN MUSEUM OF ART
NEW YORK
THE AMERICAN INSTITUTE OF ARCHITECTS
WASHINGTON, D. C.
May 24, 1939.
THE WORLD'S FAIR OF
1940
FREEDOM AND FREEDOM
January 8, 1940
Bank of America
NATIONAL TRUST AND SAVINGS ASSOCIATION
San Francisco, C
February 8,
JOHN STEWART & COMPANY
CONTRACTORS
FEDERAL HOUSING ADMINISTRATION
WASHINGTON, D. C.
April 17, 1940
Architectural Forum
Time and Life Building
Rockefeller Center
New York City
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VERY SAVINGS BANK
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NEW YORK
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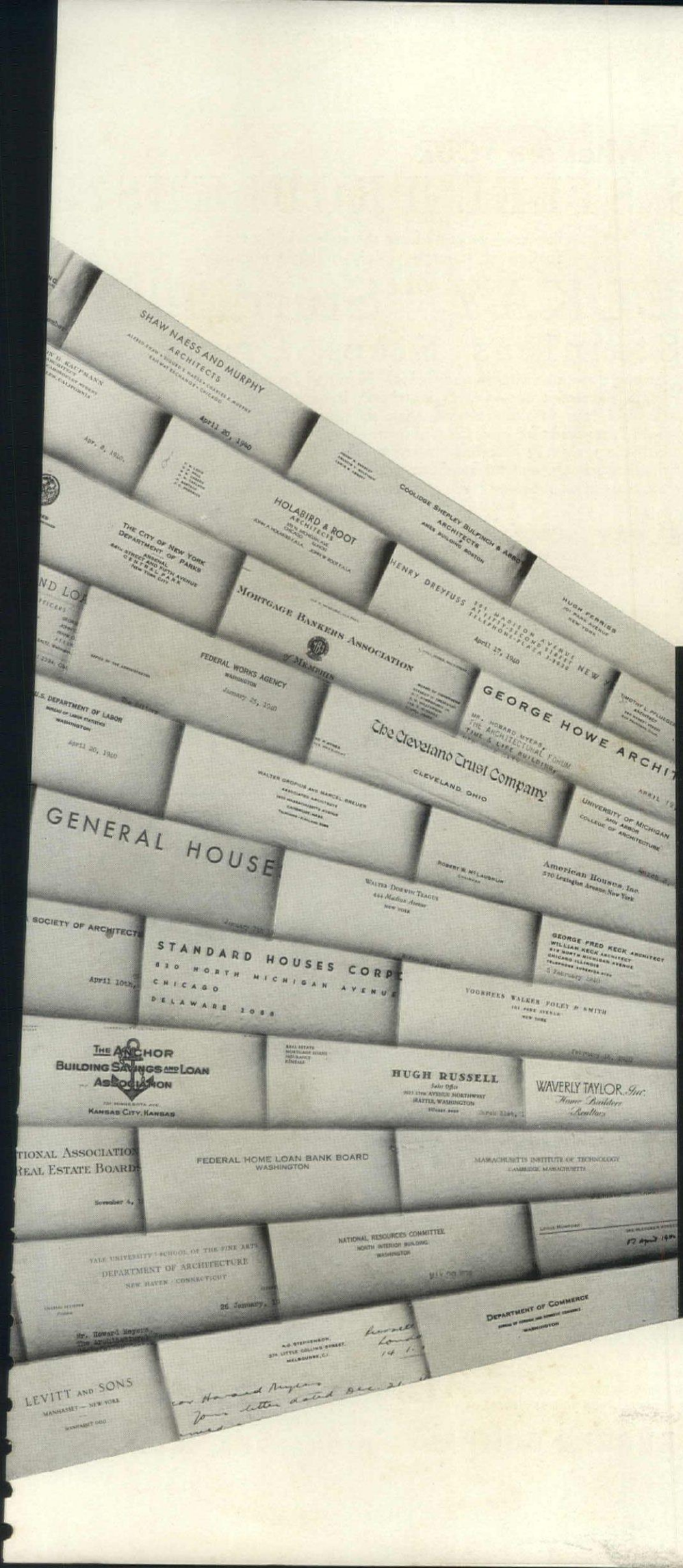
CHICAGO, ILLINOIS
WILLIAM WILSON WURSTER
ARCHITECT
SAN FRANCISCO, CALIFORNIA
November 13, 1939
Mr. Howard Myers,
The Architectural Forum,
Rockefeller Center,
New York City, N.Y.
Dear Howard:
Your good letter of October 23rd I found on my
Col. South. It was wonderful to reach home
NEW YORK UNIVERSITY
SCHOOL OF ARCHITECTURE AND ALLIED ARTS
NEW YORK
January 9, 1940
Miss Dorothy Wright,
METROPOLITAN LIFE INS
NEW YORK
WILLIAM S. NORTON
CAMERON CLARK
ARCHITECT
March 14, 1940.
J. C. NICHOLS INVESTMENT COMPANY
Country Club District
KANSAS CITY
MISSOURI
September 27,
NEW YORK LIFE INSURANCE COMPANY
MADISON SQUARE, NEW YORK, N.Y.
ALFRED L. AIKEN,
April
My dear Mr. Meyers:
Thank you very much indeed for your kin
in sending us photostat of the article "Limited Div
Mr. Howard Myers,
The Architectural Forum,
Time & Life Bldg.,
Rockefeller Center, N. Y.
Dear Mr. Myers:
Mr. Howard Myers,
HERBERT U
Mr.
CRANBROOK ACADEMY
THE ARCHITECTURAL LEAGUE OF NEW
March 7, 1940.
Mr. Howard Myers,
c/o The Architectural Forum,
Time & Life Building,
Rockefeller Center,
New York City.
Dear Howard:
AYMAR EMBURY II
ARCHITECT
155 East 38th Street, New York
April 17, 1940
Mr. Howard Myers
GUNNISON HOUSING CORPORATION
NEW ALBANY, INDIANA
February 9, 1940
Miss Ruth Goodhue
Architectural Forum
Time and Life Building
Rockefeller Center
New York, New York
ROGER ALLEN
ARCHITECT
GRAND RAPIDS, MICHIGAN
Dear Editor Mr. Myers:-
HARRY BOWIN KENT
ARCHITECT
PRINCETON UNIVERSITY
PRINCETON NEW JERSEY
SCHOOL OF ARCHITECTURE
February 5th,
To the Editor,
ELY JACQUES KAHN
ARCHITECT
Two Park Avenue
New York
April 9, 1940
January
1940
Mr. Howard Myers
Editor, Architectural Forum
Rockefeller Center
The Franklin Society
for Home Building and Savings
NEW ROCHELLE, NEW YORK



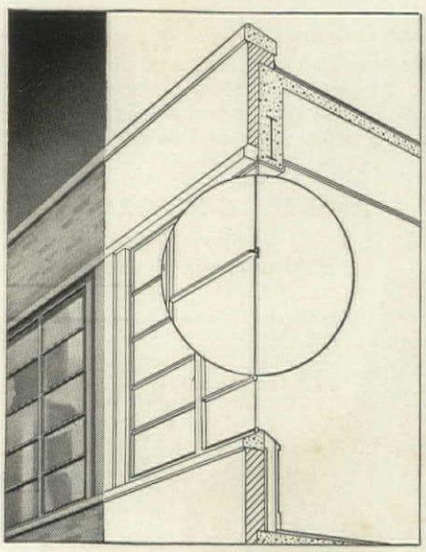
Letters...

A literate and articulate audience of nearly 40,000 subscribers is a pretty sure check on editorial ego. Letters from readers, once a trickle but now an avalanche, are the most stimulating part of THE FORUM'S day. In this office the postman has never had to ring twice. R.S.V.P.

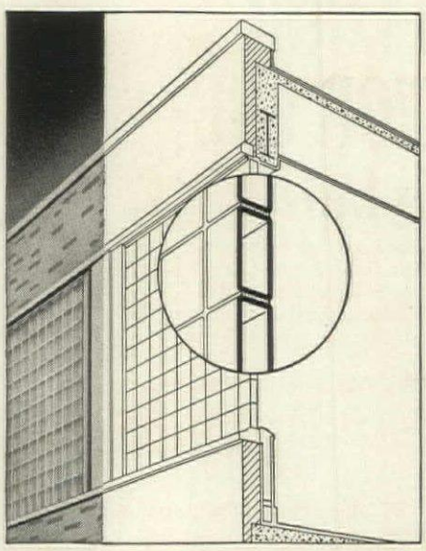
THE ARCHITECTURAL FORUM

How You Can Use Insulux Glass Block To Cut the Costs of Air Conditioning

BETTER DISTRIBUTION OF DAYLIGHT . . . higher insulation for air conditioning and heating . . . more usable space . . . lower cleaning and maintenance costs—these are the advantages Detroit Edison gained by using Insulux Glass Block panels. Air conditioning costs less to install, less to operate in offices, factories and stores when you use Insulux.



Ordinary windows put only a thin pane of glass between the heat outside and the cooled air inside. More heat is conducted and more solar heat transmitted through such windows than through Insulux panels. Air-conditioning load is higher.



Insulux Glass Block panels, caulked and sealed, eliminate air infiltration and give money-saving insulation. Each Insulux block provides two thicknesses of glass with dead-air space between, as drawing shows—better insulation against heat.

You can save your clients money on air conditioning by using Insulux Glass Block instead of windows. The higher insulation value of sealed Insulux panels permits use of a smaller air-conditioning unit and cuts operating cost.

Insulux provides a double wall protection from the heat of the sun (see cross section drawing). Glass block are more than twice as efficient as a window in keeping out direct heat from the sun. This, of course, means that it costs less for the comfort and efficiency of air conditioning.

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Insulux offers more efficiency and lower maintenance cost, as Detroit Edison's building demonstrates. Insulux helps to make possible the simple rectangular floor plan which, together with good interior lighting and air conditioning, provides the same usable space in six floors as is provided in a conventional eight-story building.

Insulux Means Low Maintenance

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- ☐ Master Model

OVERHEAD DOOR CORPORATION, Hartford City, Ind., U.S.A.

WHEN YOU SPECIFY

Brunswick WHALE-BONE-ITE SEATS

HOW long should a closet seat last? Five years? Ten years? Twenty years?

We honestly don't know how long a Whale-Bone-Ite seat will last because none has ever worn out. As a matter of fact, even after a quarter century, Whale-Bone-Ite seats subjected daily to the abuse of a none too careful public show not the slightest sign of wear.

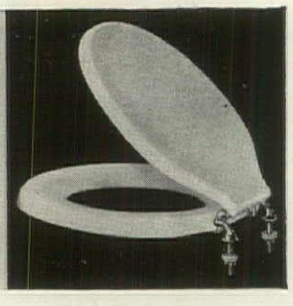
The almost universal recognition of Whale-Bone-Ite seats as representing highest quality in seat construction is your security of client satisfaction when you specify Whale-Bone-Ite seats.

Your customer's security is also guarded; for Whale-Bone-Ite seats guarantee to him year upon year of efficient, trouble-free service.

For 100% client satisfaction, specify closet seats of Whale-Bone-Ite for the buildings you design. Refer to your Sweet's Catalog Service, or write for a catalog.

BRUNSWICK PYRALIN-COVERED SEATS FOR HOMES

Brunswick seats covered with DuPont Pyralin are as ideal for homes as Whale-Bone-Ite seats are for public buildings. Made in sizes and styles to fit every closet.

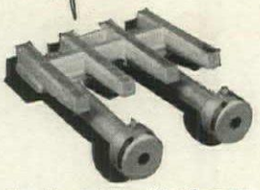


THE BRUNSWICK-BALKE-COLLENDER CO.

Plumbing Fixture Division

625 South Wabash Avenue — Chicago, Illinois

Janitrol... THE GAS-FIRED WINTER AIR CONDITIONER WITH THE EFFICIENT "AMPLIFIRE" BURNER



New Janitrol Amplifire Burners—another outstanding contribution to modern heating. Short, highly intense, continuous flame is directed exactly where it operates at highest efficiency. Easy to adjust—easy to inspect—easy to use—with famous Janitrol Safety Pilot—makes an unbeatable combination.

● Naturally, when you make up winter air conditioning specifications, you want to feel confident that you are selecting for the future as well as for the immediate present. You want to feel confident that your choice will look well, work well and be a credit to your judgment for years to come.

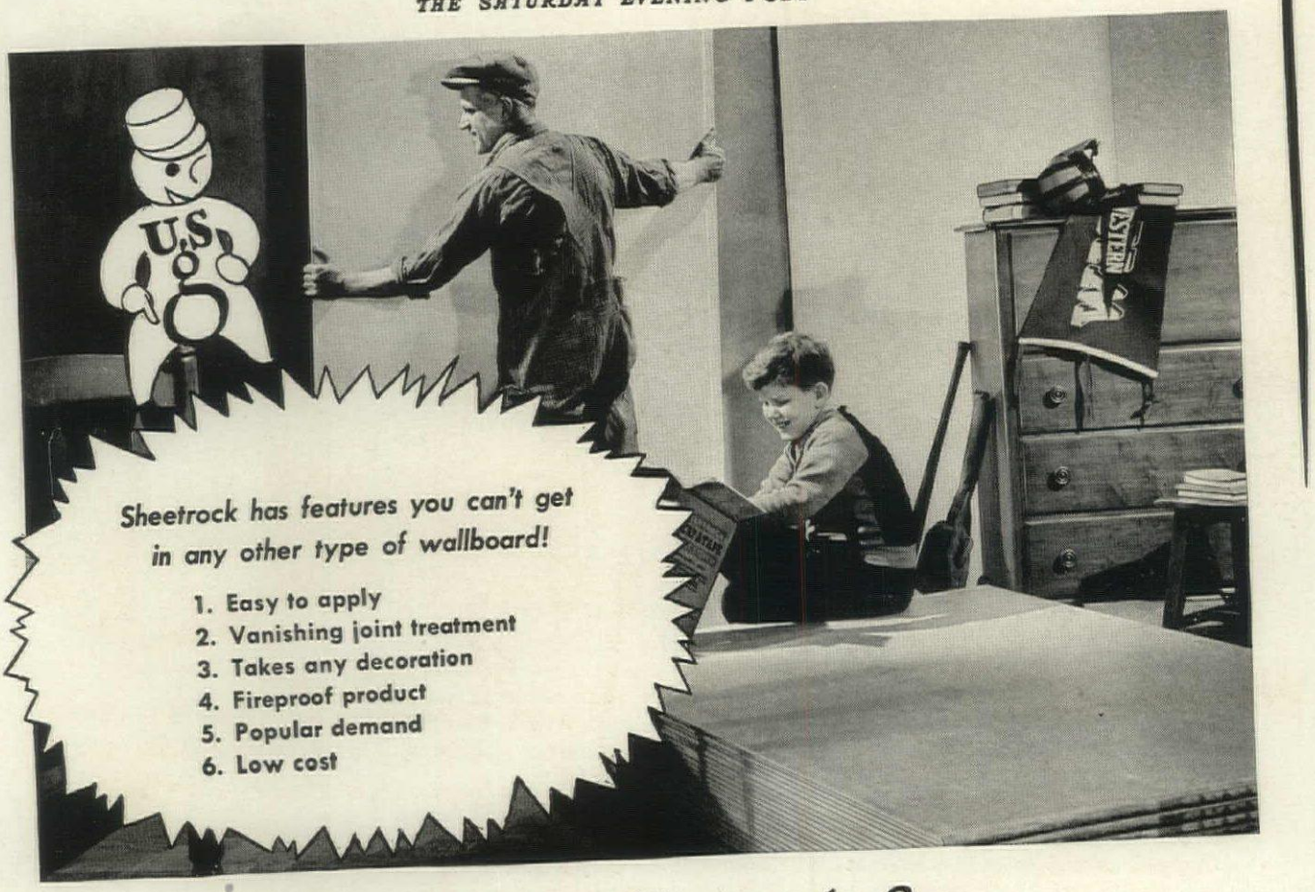
Specifying Janitrol accomplishes those things. The cabinet is styled in the modern manner, with a beautiful smooth gray baked enamel. Janitrol gives you new compactness never before incorporated in a winter air conditioner. The entire unit is the result of 33 years of research by the oldest and largest manufacturer of gas-fired equipment in the country.

You and your clients are not asked to experiment. With Janitrol you have the assurance of long, satisfactory operation. Utilities everywhere select and recommend Janitrol to give their users maximum satisfaction from the use of gas. For many such reasons, specifying the new FAC Janitrol winter air conditioner will be a permanent credit to you. Write for "FAC Specification Data."

SURFACE COMBUSTION CORPORATION • TOLEDO, OHIO

WINTER AIR CONDITIONERS
CONVERSION BURNERS
UNIT HEATERS

JANITROL



"We're using Sheetrock, Son, the *Fireproof* Wallboard that won't Warp, Buckle or Rot

"I told your Dad that he'd want your room to have strong walls. And he'd want safety for you, too, the safety of fireproof *Sheetrock!*

"You know I always say, when you use wallboard, use Sheetrock! It gives you advantages you can't get in any other type of wallboard."

* * *

That's right! Sheetrock, *the fireproof wallboard,* does a lot for a little! Consider its fireproof feature alone. Here is a wall and ceiling material that helps protect life and property! Yet it costs *less* than most combustible materials! And Sheetrock offers more than just fire protection. It won't warp, buckle or rot. Any skilled workman can make its joints vanish to provide smooth, even surfaces.* Sheetrock surfaces will take any type of decoration and are easy to redecorate.

Whenever you have a remodeling or building problem calling for a wallboard, use *fireproof* Sheetrock, an outstanding example of the application of research to home construction by the United States Gypsum Company. Like many other USG materials, it was developed to give you better, safer building, with more fire protection—a better value.

Fireproof Sheetrock is sold by leading lumber and building material dealers everywhere.

You May Save Many Dollars by Getting Help From These Books

Avoid mistakes, know how to build or remodel, save money! Read "How to Have the Home You Want" for genuine guidance in building or buying a home. 116 pages of practical facts. Or get a copy of "How to Modernize and Make It Pay." See how intelligent home modernization can pay for itself in better value. 84 pages of valuable ideas.

USG *offers you these helpful, valuable new books at only 10c each.* Ask your *local* USG Dealer or mail us the coupon today, while the supply lasts.

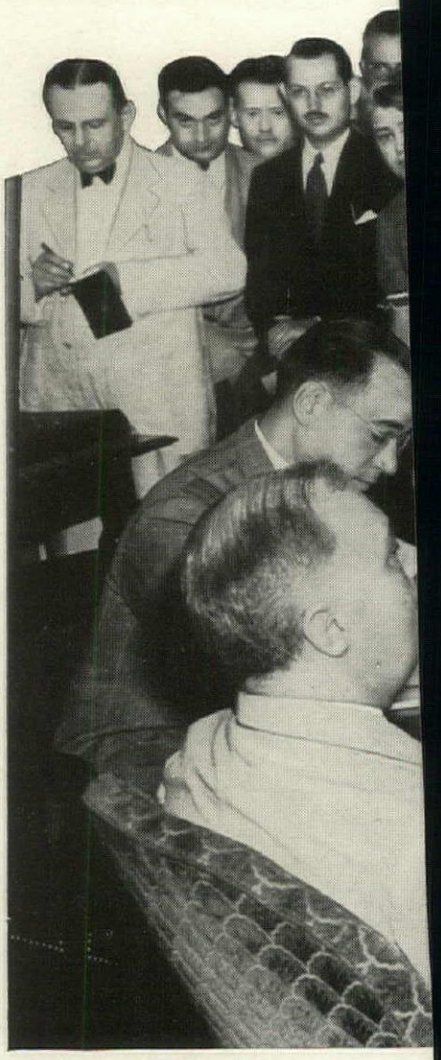
**For vanishing joints, ask for Recessed-Edge Sheetrock and Perf-A-Tape.*

UNITED STATES GYPSUM COMPANY

-where research develops better, safer building materials

Another dramatic USG advertisement! This year USG helps sell you and better building to America with advertisements in—
SATURDAY EVENING POST, BETTER HOMES & GARDENS, AMERICAN HOME, GOOD HOUSEKEEPING, AMERICAN MAGAZINE, LIFE, COLLIER'S, PARENTS' and others.

Number One news spot in the U. S. A.



"ALL IN!"
It is the voice of Bill Donaldson, Superintendent of the House press gallery. Every Friday morning at 10:30 and Tuesday afternoon at 4, that familiar call resounds through the oval inner room of the White House offices.

And with these two words, as free of ceremony as the shout of a subway guard, proclamation is made that the accredited correspondents of the nation's newspapers—75 to 200 strong—will now proceed to question the President of the United States.

▶ Let no foreign newspaperman suppose (and several of them are usually present) that the absence of fanfare implies any lack of seriousness. Not these days.

In the doldrums of last winter, the spot news men in the front row and the stiff-collared Mark Sullivan at the rear exchanged many a wisecrack with the man in the chair. But now the correspondents' questions, always prepared in advance and carefully worded, are asked with a full sense of their national and international import.

The front row may occasionally relieve the tension with a jest, but for the most part the problems of the hour are too harsh and dire for anything but the gravest faces, the most searching and genuine thoughtfulness on both sides of that famous, gadget-laden desk.

▶ Number One news spot in the U. S. A.? Yes, and in this portentous year of 1940, it may well be more than that. For this year, a World War and an American presidential election cross each other's paths—a meeting more weighted with destiny than any conjunction of planets.

Third term possibilities... changes in defense plans... developments in foreign policy... no newsman can go through these doors now without feeling that he may come out with a story for the history books.

▶ Not always have the Presidential doors swung open to correspondents. Most 19th century Presidents, even Lincoln, were suspicious of newspapermen. But during the reign of the unbending Cleveland, a reporter named Bill Price hit on the scheme of hanging around the White House gate to buttonhole the departing visitor, and he soon had plenty of imitators.

It was Theodore Roosevelt who first saw the possibilities in that little group of gate-watchers. One rainy day soon after the assassin's bullet had catapulted him into the Presidency, he called them in, gave them an anteroom of their own, and established the custom of face-to-face questioning of President by press.

▶ This journalistic questioning has really become part of the American governmental process. It means that Democracy gets more than lip service between elections. It means that it is somebody's regular job to report to the stockholders of U. S. A., Inc. what their chief has on his mind. Extended to all other public servants in Washington, it means that the citizen learns what the government is doing, and the government learns what the citizen is thinking.

White House coverage, of course, is only a fraction of the complicated Washington assignment. The queer little political island of D. C. is dotted with news sources. There is the Senate, which can (and has) upset the Presidential foreign affairs apple cart. There is the House, which must untie the purse strings for every Presidential project. There is the Supreme Court, which can topple his legislation after it's all signed, sealed, and delivered. And the Executive Departments... and the 79 independent administrative agencies... and the foreign embassies and legations... all gushing news from time to time faster than the White House itself.

▶ It's no job for an amateur—and there are no amateurs in the Washington correspondent corps. Many have been foreign correspondents in important European capitals, editorial writers on great metropolitan papers, managing editors or city editors. Many write books, magazine articles, syndicated columns. Though their median age is only 37, every one has proved himself on some lesser firing line. And they are paid accordingly... $25,000 for the tops, $6000 for the average.

No other group in Washington is their superior in intelligence. None

has fewer axes to grind, fewer oxen to be gored. And very few men, even in public office, have deeper responsibilities to the people.

Together with TIME's own Washington staff of eleven, these men supply the rich harvest of news from which the Newsmagazine extracts the most significant kernels.

Because the Presidency is the hub around which the nation revolves, TIME has always accorded lead-off position to what is virtually a diary for the President. No week of his life is unimportant, and TIME readers always know what he has done with it. And they know, too, every noteworthy event in the other departments of the government, for the Presidential "diary" is followed by a review of all Washington during a week of the nation's political history.

▶ One integrated, dramatic story... this is what TIME creates out of the two million words that pour forth from the city by the Potomac each week. Every piece of vital news is fitted into every other piece ... out of the week's haze of details emerges a clear, consistent, meaningful picture.

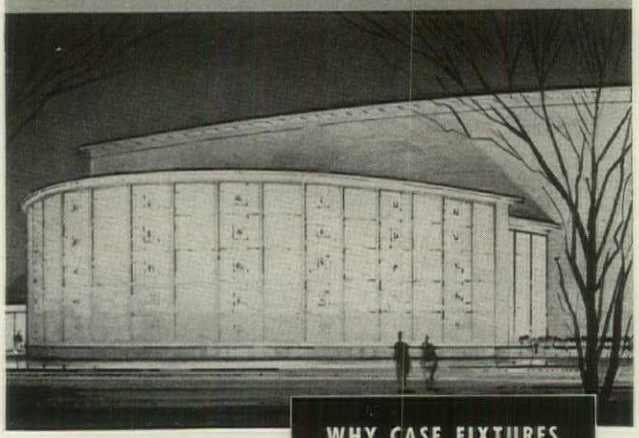
Democratic government will survive in this unfriendly world if the electorate knows and cares what its public servants are doing ... faces its democratic decisions with an informed understanding. TIME takes the responsibility for seeing that a most influential section of the electorate knows, cares, and understands.

This is one of a series of advertisements in which the Editors of TIME hope to give all the readers of Architectural Forum a clearer picture of the world of news-gathering, news-writing, and news-reading—and the part TIME plays in helping you to grasp, measure, and use the history of your lifetime as you live the story of your life.

TIME

-- THE WEEKLY NEWSMAGAZINE

PUBLIC HEALTH in PUBLIC BUILDINGS



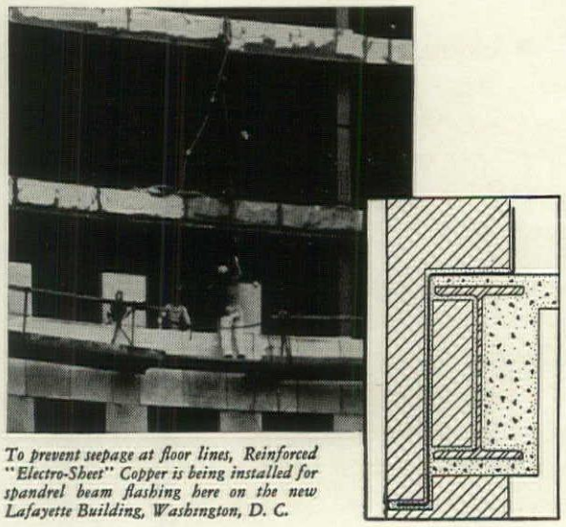
Kleinhans Music Hall

WHY CASE FIXTURES PROVED THE BEST ANSWER...

AN achievement in architecture, the famed Kleinhans Music Hall now under construction includes the highest standards of public health protection. Case plumbing fixtures are being installed throughout. Into Case fixtures goes only the highest grade twice-fired vitreous china... unequalled for cleanliness, sanitation and resistance to acids and discoloration. Mechanical excellence and many unusual features assure greater utility and dependable efficiency for lifetime performance. On display in distributor's showrooms everywhere. Write to Dept. E-60, W. A. Case & Son Mfg. Co., Buffalo, N.Y.

By test, the best for WATER- and MOISTURE-PROOFING

Reinforced "Electro-Sheet" proves impervious to water and water vapor before and after accelerated aging



To prevent seepage at floor lines, Reinforced "Electro-Sheet" Copper is being installed for spandrel beam flashing here on the new Lafayette Building, Washington, D. C.

TO DETERMINE the relative effectiveness of the various available materials for water- and moisture-proofing, tests were recently conducted on twenty-one different products, five of which incorporated thin sheet metal. *The metallic products, including four reinforced "Electro-Sheet" types, were the only ones to prove impervious to water and water vapor both before and after accelerated aging.* Such efficiency more than makes up for their moderate extra cost.

Reinforced "Electro-Sheet" Copper for weatherproofing and concealed flashing is available in widths up to 60" and in weights of 1, 2, 3 and 5 ounces per square foot.

ANACONDA from mine to consumer

4080A

Although we do not furnish "Electro-Sheet" laminated to building papers, fabric or asphaltic compounds, we will be glad to mail samples and direct you to sources of supply for these materials.

"ELECTRO-SHEET"
Anaconda Copper

THE AMERICAN BRASS COMPANY
General Offices: Waterbury, Connecticut
In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ontario
Subsidiary of Anaconda Copper Mining Company

HOMES ARE EASIER TO PAY FOR, CHEAPER TO OWN, HEALTHIER TO LIVE IN, WHEN YOU SPECIFY

HALF PRICE HEATING!

● Homes with Half Price Heating *are* Easier to Buy because their 2-Point Insulation feature reduces heating costs as much as 50%—saves up to $4.00 per month on payments—or the equivalent of 18 to 20 monthly payments on the average 20-year F.H.A. contract.

Homes with Half Price Heating are Easier to Own because what is saved on fuel may be used for painting, repairs or other improvements. But most important, they are easier to own because they are healthier and more comfortable to live in—drafts, cold room areas and frosted windows are a thing of the past.

When you specify Half Price Heating in the homes you design, you are giving your clients more for their money. Often too, the inclusion of Window Conditioning and a good ceiling insulation costs nothing or very little, because your heating engineer can in many cases, specify a smaller, less costly heating unit as original equipment.

And to insure the utmost in client satisfaction, specify L·O·F Quality Window Glass in storm sash as well as in conventional sash. An exclusive manufacturing process makes this glass flatter, more brilliant, clearer and freer from imperfections. Libbey·Owens·Ford Glass Company, Toledo, O.

LOOK FOR THE LABEL

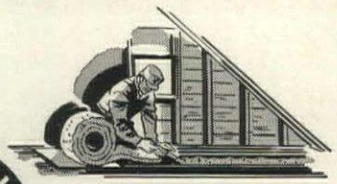
L·O·F WINDOW CONDITIONING PLUS A GOOD CEILING OR ATTIC INSULATION ASSURES HEATING ECONOMY AND CLIENT SATISFACTION ALL YEAR 'ROUND

●

HOW THIS 2-POINT INSULATION SAVES

1. *Window Conditioning* (storm sash) has proved in thousands of homes that it alone will cut fuel costs as much as 25%—in some places, even more.

2. *Attic (or Ceiling) Insulation,* when installed in homes already Window Conditioned, will bring additional savings. These two simple insulations together can save up to 50% of the annual fuel bill. Specify them in the houses you design.



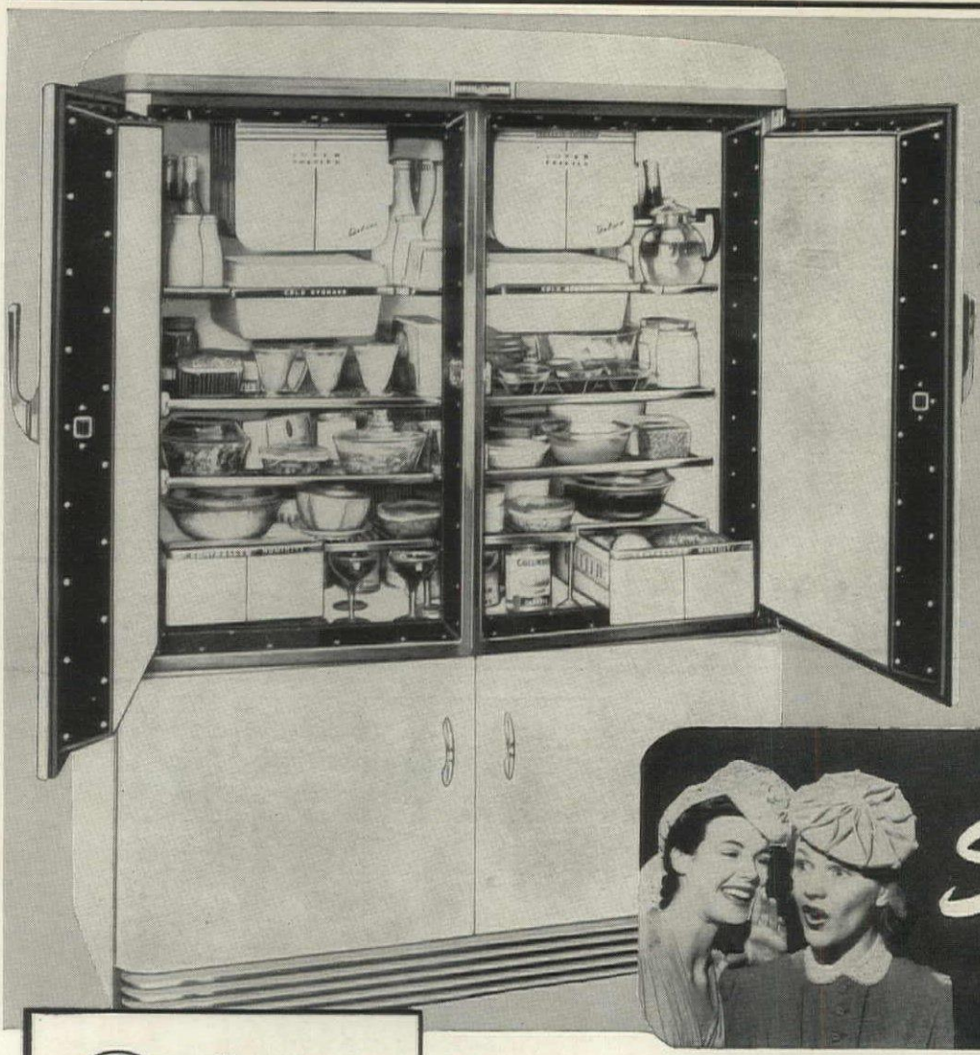
BETTER ★ HOUSING FHA PROGRAM ★

The Government, through the Federal Housing Administration is making it easier than ever before for America to build—and build better—an effort in which Libbey·Owens·Ford is glad to cooperate.

LIBBEY·OWENS·FORD QUALITY GLASS

When Planning the Kitchen . . .

Plan for a BIG G-E Refrigerator



THE BIGGER THE BETTER

You never hear a person complain that his refrigerator is too big. But time after time people wish they had a larger one. Be sure to specify refrigerators of *adequate* size for kitchens you are planning. It's best to figure two cubic feet of food storage space per person in the household.

Famous G-E Sealed-in-Steel

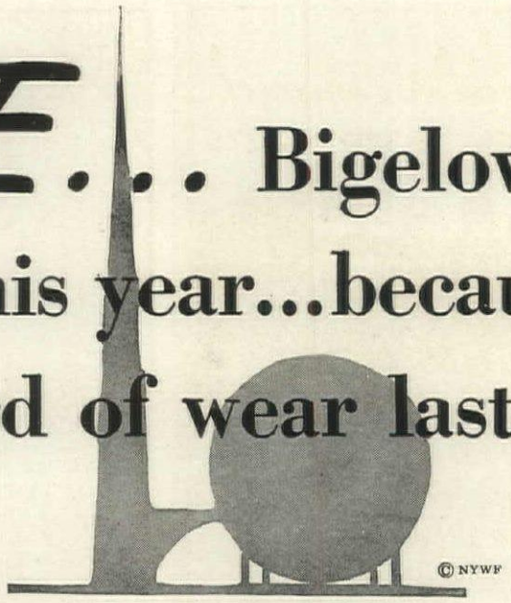
THRIFT UNIT

The refrigerator mechanism with an unequalled record for dependable performance and *enduring* economy.

1940 General Electrics with Conditioned Air and Selective Storage provide greater conveniences and offer greater economies by keeping foods fresher and longer than earlier models. Because of these increased conveniences and economies, thrifty buyers are selecting the larger G-E's . . . Besides, prices are lowest in G-E history. Adjustable interiors. Full-width Sliding Shelves of Stainless Steel. 12-point Illuminated Temperature Dial. Interior Light. Tel-a-Frost Indicator. Thermometer. 17 models, from 3 cu. ft. to 16 cu. ft.—a size for every kitchen. "You'll Always Be Glad You Specified General Electric." General Electric Co., Appliance & Mdse. Dept., Bridgeport, Conn.

GENERAL ELECTRIC

MORE... Bigelow Carpet at the Fair this year...because of its superb record of wear last year!



Did you go to the Fair last year? Of course you did. And didn't you shudder when you let your imagination conjure up a picture of what the carpet in the big buildings would look like after *millions* of feet had sight-seen over it?

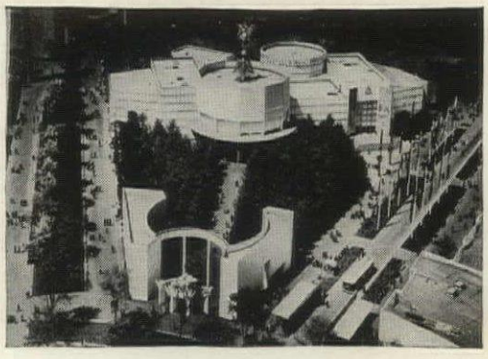
Ah, but here's what actually happened! In the 19 buildings which were Bigelow-carpeted last year, the original installations are still underfoot for this year's crowds, with only a few replacements here and there.

And on the strength of Bigelow carpet's performance in these 19 buildings, additional buildings will be Bigelow-carpeted this year! The new Ford Ballet Theatre, for instance...and the enlarged Westinghouse building.

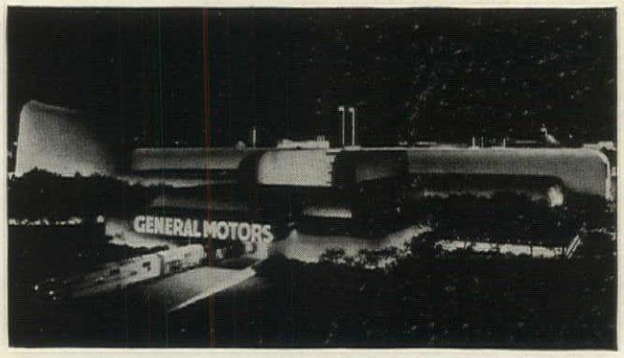
Bigelow carpet demonstrated its wearing qualities under traffic conditions which are not likely to be duplicated in the average hotel or theatre.

On *your* next job, remember the record of Bigelow carpet at the New York World's Fair. Bigelow's Carpet Counsel will be glad to offer expert advice and help in selecting the right grades and colors for the right spaces, keeping within your budget.

Consult your dealer, who will bring you to us. Bigelow-Sanford Carpet Co., Inc., 140 Madison Avenue, New York, N. Y.



The American Telephone and Telegraph Company's beautiful and popular building was carpeted with 7700 yards of 27-inch Bigelow carpet. Replacement this year is less than 250 yards, in spite of an attendance during 1939 of 7,878,000 people!



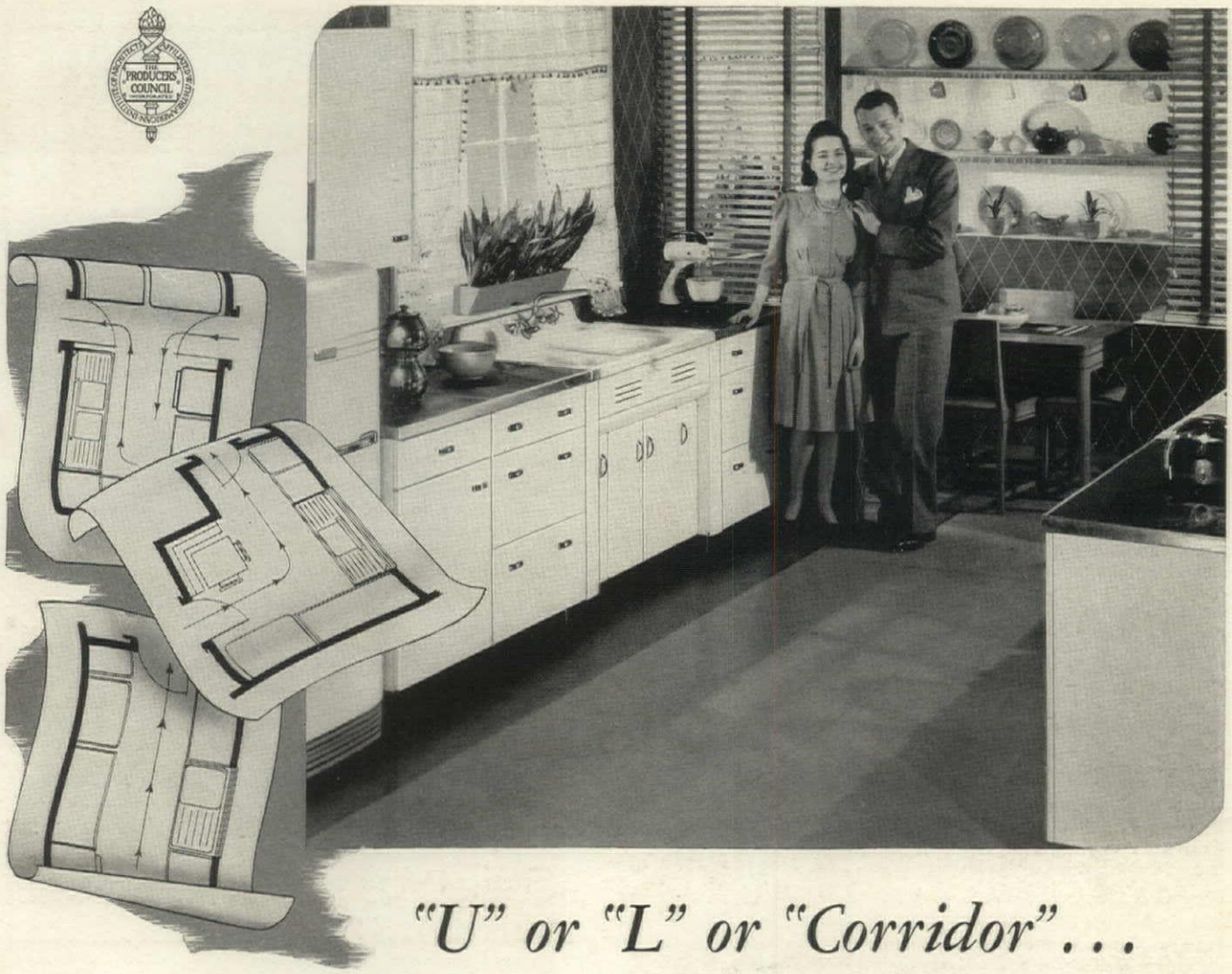
13,000,000 people visited the famous General Motors Building at the Fair last year and walked over Bigelow carpet. In this building, too, with an original installation of 7600 square yards, only 250 square yards are being replaced this year.

You'll walk on Bigelow Carpet in these Fair Buildings:

ADMINISTRATION BUILDING
AMERICAN TELEPHONE AND TELEGRAPH COMPANY
CHRYSLER MOTORS
COLUMBIA BROADCASTING COMPANY
COMMISSIONER OF PUBLIC SAFETY
DUN & BRADSTREET, INC.
E. I. DU PONT DE NEMOURS & COMPANY
FIRESTONE TIRE & RUBBER COMPANY
FORD MOTOR COMPANY
GENERAL MOTORS
GREEK PAVILION
INTERNATIONAL BUSINESS MACHINE COMPANY
MAYOR'S OFFICE, N. Y. CITY BUILDING
NATIONAL BISCUIT COMPANY
OTIS ELEVATOR COMPANY
SWEDISH PAVILION
UNITED STATES FEDERAL BUILDING
UNITED STATES STEEL SUBSIDIARIES
WESTINGHOUSE ELEC. & MFG. CO.
WORLD'S FAIR HALL OF MUSIC

CARPET COUNSEL by BIGELOW WEAVERS

THINK OF CARPETS... ...THINK OF BIGELOW



"U" or "L" or "Corridor"...

Crane Kitchens Give Your Clients MORE

WHETHER you plan a "U" or "L" or "Corridor" type of kitchen—whether the space is big or small . . . whatever the needs and tastes of the family . . . it is easier to put more livability and convenience into the kitchen with Crane-Equipment.

A strong statement—but reasonable, when you think of it. Crane has spent years in determining the exact scientific basis for designing kitchen sinks and cabinets. Crane has made thousands upon thousands of observations of modern kitchens to crystallize the best thinking for you. Crane has examined every detail of sink and cabinet construction to provide the utmost in quality within a price range that covers *every* size of house and every building budget, no matter how small.

In Crane sinks and cabinets, you'll find an impressive array of work saving features . . . plus the thoughtful construction that keeps the equipment new. Plenty of surface area on the sink—no cracks or crevices . . . finest acid-resisting enamel on a rigid cast iron base . . . deeply depressed drainboards . . . every feature that contributes to enduring ease of use.

Your Crane architects' catalog is an up-to-date guide in planning more practical and more livable kitchens. Use it—and get first-hand facts about Crane quality by visiting the nearest Crane display room!

In bathrooms, too, Crane offers a comprehensive line of quality equipment—for every size and style of house, at every price level.

1940 OUR 85th YEAR

CRANE

CRANE CO., GENERAL OFFICES
836 S. MICHIGAN AVE., CHICAGO
VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

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

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.

If you want greater latitude in Store Front Design—

Give the job to GLASS

GLASS—in countless variety of forms—is a store front medium that never exhausts its design possibilities. It gives you a versatile tool to work with—one that provides you with a "new way" to meet any store front demand.

Architects in increasing number are employing glass in store front work—and achieving effects that are possible with no other medium. In Pittco Products they find an ever-widening line of materials of top quality . . . materials that are available in identical quality throughout the country.

Recently, Herculite Tempered Plate Glass, Suede-finish Carrara Structural Glass, PC Architectural Glass and PC Glass Blocks have taken their places with the other Pittco products. Striking achievements already accomplished with these new kinds of store front glass indicate that their scope in creative store front design is practically limitless.

Drop the coupon at the bottom of this page in the mail. We'll be glad to send you, without obligation, more detailed information about Pittco Store Front Products.

Morris Ketchum, Jr. designed this truly distinctive front in New York City. He employed glass — in new and striking form — to give it its individuality. The facia, piers, and the walls of the vestibule are of gray Carrara, suede finish. And the attractive entrance door is of Herculite Tempered Plate Glass.

PITTCO STORE FRONTS

PITTSBURGH PLATE GLASS COMPANY

"PITTSBURGH" stands for Quality Glass

Pittsburgh Plate Glass Company
2359 Grant Bldg., Pittsburgh, Pa.

Please send me, without obligation, your new book entitled "How to Get More Business."

Name .....

Street .....

City ..... State .....

DO PEOPLE REALLY WANT "CHEAP" CABINETS IN THEIR DELUXE BATHROOMS?

MATCH BEAUTY WITH BEAUTY — LUXURY WITH LUXURY — by Specifying

MIAMI CABINETS

You don't have to go far to find bathrooms where beautiful fixtures are keeping company with cheap, tinny cabinets.

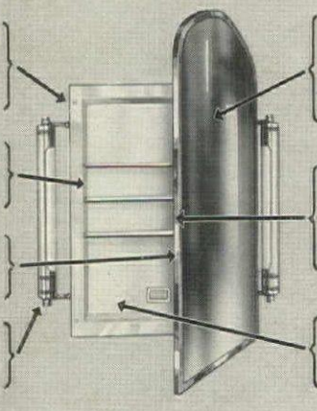
This doesn't make sense. People do not want—for the sake of saving a few dollars—this element of cheapness that detracts from the beauty and harmony the architect planned.

For only a few dollars more than the cost of a cheap cabinet, you can equip the average bathroom with a *Miami Cabinet* that matches beauty and luxury with *any* bathroom equipment, however de luxe.

Don't permit cheap cabinets to let your bathrooms down. Build them "UP" with MIAMI CABINETS. Our catalog AF mailed upon request or see it in Sweet's.

ONLY MIAMI CABINETS GIVE YOU ALL THESE IMPORTANT FEATURES:

1. Rigid one-piece body of heavy Armco Steel—specially prepared for the finest finish
2. Sanitary—no open seams to start rust or collect dust
3. Noiseless Doors — heavy brass and chromium, no-tarnish hinges
4. Scientifically designed lights with adjustable non-glare shades



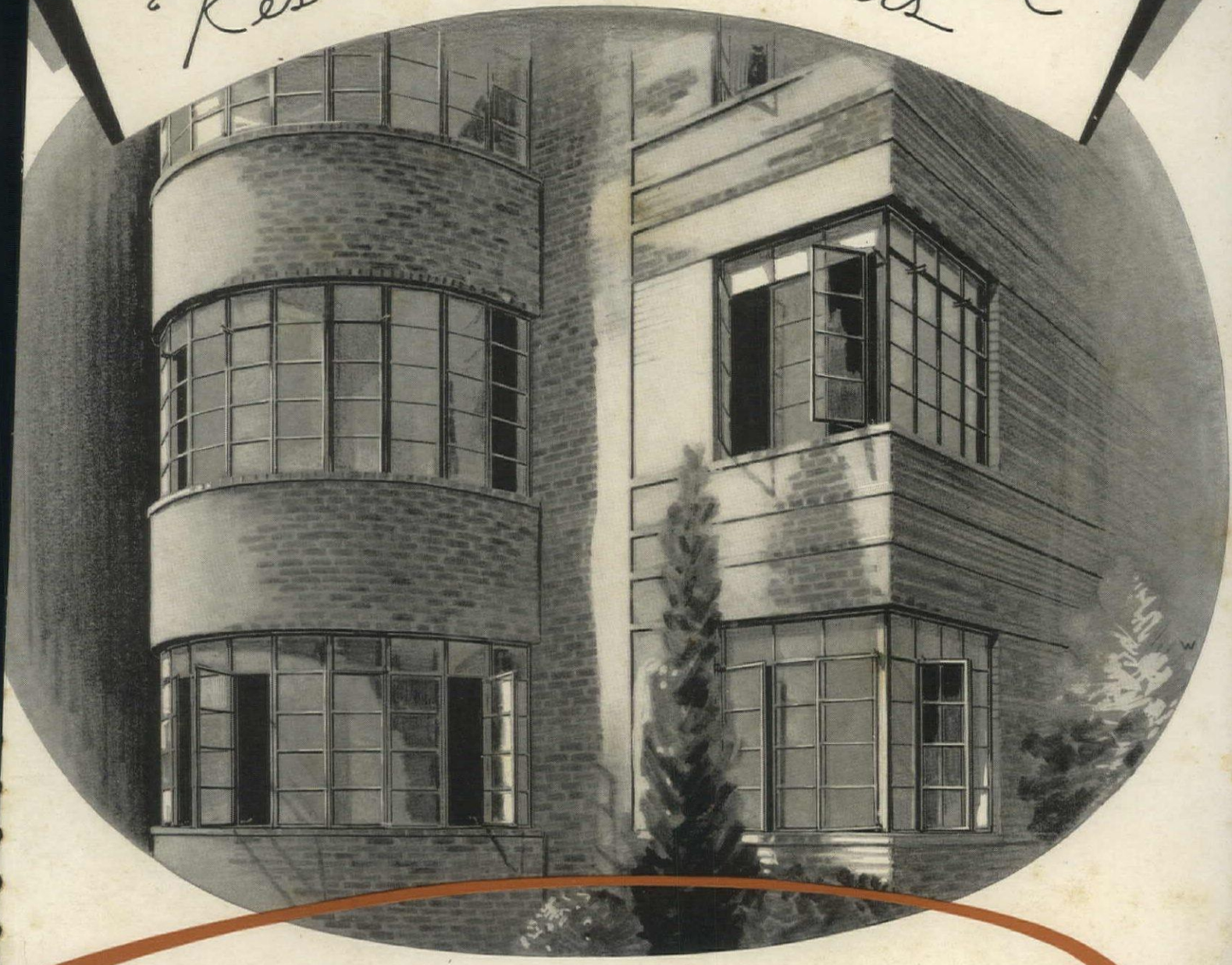
5. "A" Quality Mirrors (in accordance with government specifications) — electrolytically copper backed
6. Brilliant chrome mirror frames; effective lighting; master craftsmanship in every detail
7. "Crystal Snow" the finish that will not retain a stain

THE MIAMI CABINET DIVISION

THE PHILIP CAREY COMPANY • MIDDLETOWN, OHIO

TRUSCON Steel Residence Casements

SERIES FIVE



CUSTOM-BUILT STANDARDS AT MASS PRODUCTION COSTS

As recently as five years ago, the building industry could not obtain at any price the combination of features now incorporated in TRUSCON Residence Steel Casements.

Now, in an almost unlimited range of standard units, you can obtain ALL the latest desirable features of casement construction and operation at prices that permit you to use TRUSCON Residence Steel Casements in any house or apartment, regardless of budget limitations.

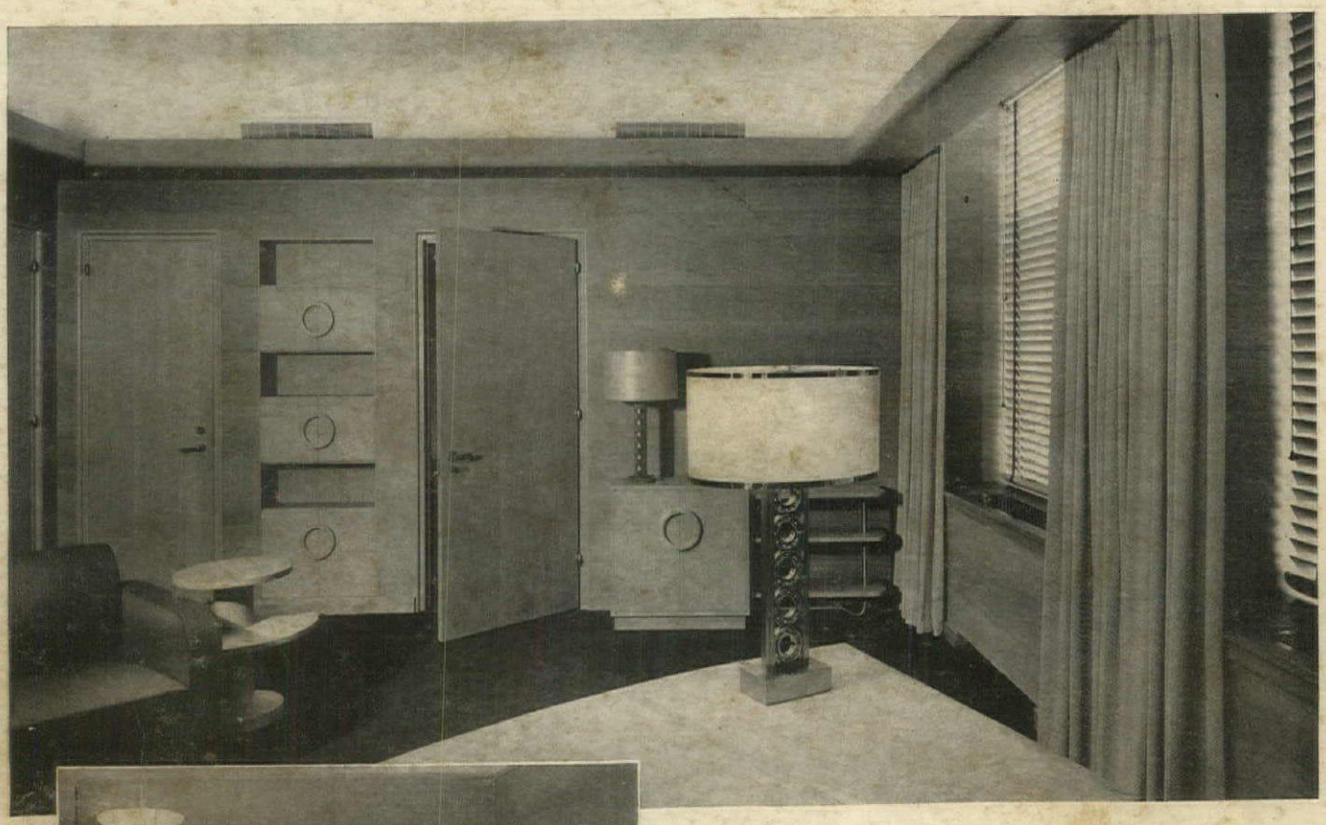
A 32-page illustrated catalog is necessary to describe adequately the essential details of TRUSCON Residence Steel Casements. Send for this catalog, study it carefully, note how completely it is prepared to assist you in utilizing to the fullest extent the advanced features of design, construction and operation of modern TRUSCON Residence Steel Casements.

TRUSCON
A Safe
SPECIFICATION

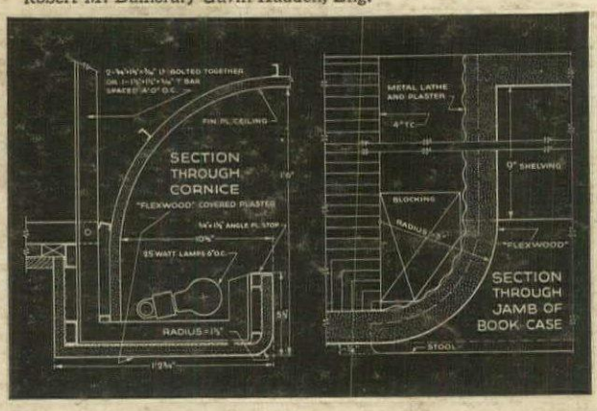
TRUSCON Steel company

61 SALES ENGINEERING OFFICES • 29 WAREHOUSES
YOUNGSTOWN • • • OHIO
SUBSIDIARY: REPUBLIC STEEL CORPORATION

The art of modern wood treatment



Rift Oak Flexwood treatment, private offices, Ford Motor Sales Bldg., New York; Walter Dorwin Teague, Designer. (Photos: Robert M. Damora.) Gavin Hadden, Eng.



Details of construction of cornice, and bookcase jamb.

FORD OFFICES AND SHOWROOM IN NEW YORK EFFECTIVELY STREAMLINED WITH RIFT OAK

Flexwood
[WOOD IN FACILE FORM]

To create a rich, mellow atmosphere, expressive of the personality and character of the Company... and a setting as streamlined as the latest Mercury or V-8, Designer Walter Dorwin Teague treated walls and cornices with Rift Oak Flexwood, end-matched and applied horizontally. The same treatment is used as a background for the huge showroom. The richness of this impressive, genuine wood interior is belied by its moderate cost. The ease and speed of application of Flexwood brings the luxury of rare and exotic wood interiors within the limits of the average decorating budget.

UNITED STATES PLYWOOD CORPORATION,
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Manufacturers of Flexglass, Plywood, Armorply and Weldwood