ARCHITECTURAL RECORD

COMBINED WITH AMERICAN ARCHITECT AND ARCHITECTURE

VOLUME 88 OCTOBER 1940 NUMBER 4

IN THE RECORD NEXT MONTH

NATURALLY WE ALL want to know how the national defense program is affecting the field of design and construction. To that end the November Record will introduce a new department, a series of monthly reports on legislative and administrative developments in Washington, prepared by a building specialist in constant touch with Federal agencies and officials whose activities vitally affect our own. But building design and construction continue to forge ahead apart from the abnormal impetus of the times—and to the end of reporting this progress more fully, comprehensively, and advantageously to readers, the November Record will carry on the expansion and revitalization of existing departments and features, a determination which this month brings back to you Time Saver Standards in as close as we can make them to their original, traditional, and thrice-honored form.

Building Types in November will devote at least 50 pages to an increasingly important question—"The House in the Controlled Neighborhood," and the architect's place in producing it. Authoritative architects and specialists who have been conspicuously successful in this field will discuss the practical and profitable aspects of designing houses which are subject to group controls and conditions, as distinguished from those which are unrelated expressions of purely individual considerations. They will answer such questions as: the type of office organization required for this work; ways in which such professional activity can be promoted; design problems imposed by restrictions and controls; and what the public looks for and likes in these houses intended as "salable commodities." A huge portfolio of case studies, as nationally representative as the 76th Congress, will show you successful examples of houses designed and built as units of a group, and will indicate the influences in such design of locality, materials available, and sectional popular taste.

Editorial Director: Thomas S. Holden. *Editorial Consultant*: Michael A. Mikkelsen. *Editors*: Roger Wade Sherman (*Managing*), James M. Fitch, Jr. *Associate Editors*: Elisabeth Kendall, Frank G. Lopez, Jr., George A. Sanderson. *Art Director*: Gene Hawley. *Desk Editor*: John W. Ragsdale.

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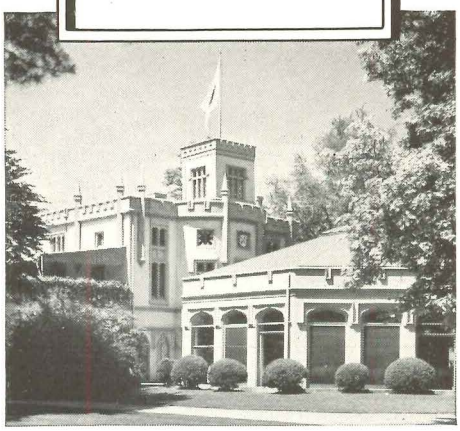
Manuscripts, photographs, and drawings which conform to RECORD'S editorial aims are welcomed. Every effort will be made to return material (if accompanied by stamped, addressed envelopes); but the editors will not be responsible for losses.

Other Dodge Services: REAL ESTATE RECORD, SWEET'S CATALOG FILES, HOME OWNERS' CATALOGS, DODGE REPORTS, and DODGE STATISTICAL RESEARCH SERVICE.

● Note detail of mouldings; ornamented battlements, pinnacles and window mullions—all faithfully preserved in line and detail by portland cement stucco made with Atlas White cement.

Born Tudor-Gothic

...KEPT ALIVE FOR TOMORROW BY STUCCO



● Turf and Field Club, Belmont Park, Long Island. Engineer, C. V. Boyle, also supervisor of Belmont Track. Contractor, Frank Hawkins, New York. Stucco manufacturer, Artstone Rocor Corp., Brooklyn.

FACTORY-PREPARED STUCCO IS PREFERABLE

How the architectural style of a century ago is preserved in line and decoration at Turf and Field Club, Belmont Park, L. I.

More than a century ago residential Tudor-Gothic was in vogue in and around New York. The famous Belmont Turf and Field Club on Long Island is a classic example. Originally of frame, the building was resurfaced recently with Artstone Stucco, made with Atlas White cement. This steel and concrete overcoating now preserves the original lines, decoration and color from foundation to highest pinnacle.

Architects are consistently proving the versatility and adaptability of portland cement stucco as a medium of expression in designing new buildings or modernizing old ones. They find that it blends well with wood, stone and brick, and gives permanence to design and durable protection. Fire- and weather-resistant, its first cost is moderate, and upkeep is practically nil.

Consider the lasting good appearance and relatively low cost of portland cement stucco, made with Atlas White cement, in connection with your next job. Universal Atlas Cement Co. (United States Steel Corporation Subsidiary), Chrysler Building, New York.

Offices at: *New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.*

AR-S-20

ATLAS WHITE CEMENT

A UNIVERSAL ATLAS PRODUCT

Best-laid plans of editors—like those of mice and men—sometimes must be changed. A case in point is the *Telesis* story on pp. 69 to 72 of this issue. We hadn't figured on running an exhibition story in October. We'd planned to present another in our series of interior-detail studies. But when—literally at the last editorial moment—one of our editors wired us from the West Coast that we shouldn't miss the story of what a group of enterprising San Francisco architects had accomplished for themselves and their profession through an outstanding job of showmanship, we tore the October issue apart. When we finally remade the issue, *Telesis* was included. So read this month what makes an architectural exhibit click and look forward to seeing more interior details in December.

* * *

Speaking of details, take a long look at the *Time-Saver Standards* this month (pp. 103 to 106). Belaboring the obvious, we point to the revised format and new typography; to tersely inclusive text and drawn-to-scale diagrams, each developed to complement the other, and presented in combination as easy-to-use reference data. In short we call attention to these Time-Saver Standards as typical of the working information which you have all been demanding that the RECORD publish.

If ever a staff of editors received a mandate to publish anything, we've been singled out so far as this familiar Time-Saver Standards presentation is concerned.

In we-don't-know-how-many letters you architects (and the whole tribe of your technical cousins throughout the building field) have made it clear, in no uncertain terms, that "this sort of practical, reliable reference data is what we need; and why the hell—."

All right! Here it is in October. And here it is to stay; for each future issue of the RECORD will contain from four to eight pages of reliable, time-saving data. Subject matter will naturally cover a wide range of usefulness; but its presentation will be similar in form and function to the Time-Saver Standards pages of this issue.

So quit cussing us out! File your epistolary shillelaghs and brass knuckles in the wastebasket; but don't stop writing us. Let us know what subjects you want Time-Saver Standards to include; and you'll be helping to make the RECORD a better working tool for architects than it's ever been before.

* * *

Those of you who voiced approval of the Bankers Life Building presentation in the June RECORD can pat yourselves on the back. Your judgment was confirmed when, on September 19th, the RECORD received a Special Award for the "editorial excellence" of these pages, as the result of a competition conducted annually by *Industrial Marketing* for "excellence in editorial achievement." That the RECORD was singled out from a field of some 20 publications for this honor is a fact that naturally makes us pretty proud. And we can't help feeling that this approval of our publishing contemporaries is forceful justification of the RECORD's technique for reporting the architectural story of a building. It's necessarily pictorial to a large degree; but graphic, concise description, and logical layout devoid of arty tricks, are of almost equal importance. With such a building as the Bankers Life we had a chance to achieve the spectacular. But fundamentally every RECORD presentation of a building project is developed on the same editorial chassis.

Don't take that statement for complacency. On the contrary. *Industrial Marketing's* award puts the RECORD staff way up on its editorial toes.

* * *

Correction: On page 93, AR, 8/40, we described, incorrectly, the heating system in Kimbrough Tower Apartments. Each group of six apartments is heated by a gas-fired warm-air furnace equipped with a fan-filter unit—the first installation of this kind which has come to our attention.

"Poor old Tom—he still thinks a woman's place is in the machine for living."

—Drawn for the RECORD by Alan Dunn

It takes 30 pairs of hands—

to complete a MESKER STEEL WINDOW

HERE'S WHY MESKER HEAVY DUTY STEEL SASH LAST LONGER . . . ARE MORE WEATHERTIGHT AND ALWAYS WORK EASIER:

- Mesker pivoted sash are made of sturdy heavy duty steel sections a full 1½ in. deep from front to back. All joints are welded throughout assuring greater strength.
- More weathertight because . . . All of Mesker's weathering members are made of hot-rolled angles a full ⅛ in. thick . . . no thin sheet metal sections used anywhere.
- Always work easier because . . . Mesker master engineering has developed the famous solid bronze cup pivot that will never rust, wear out or fall to pieces.

This doesn't mean thirty hand operations, either. From the time the dies are set . . . the steel cut and shaped to your specifications . . . and handed to the next two pairs of hands which assemble the outer frames YOUR WINDOWS ARE WORKED ON BY 30 PAIRS OF SKILLED HANDS. They are fitted by hand . . . welded by hand . . . individually assembled by hand . . . and, most important, your MESKER STEEL WINDOWS are finally shaped by hand. There are trained workers who specialize in fitting the windows made to your specifications in specially constructed adjustable openings. And when those hands have tested your Mesker Steel Windows you can lay a bet on their perfection of fit. There's no inflexible allotment of time for every operation. For the men behind these hands have just one goal . . . to build the best steel windows you can buy!

- Mesker Projected Windows
- Mesker Detention Windows
- Mesker Industrial Windows
- Mesker Metal Screens
- Mesker Basement Windows
- Mesker Utility Windows
- Mesker Custom Casements
- Mesker Metropolitan Casements
- Mesker Master Casements
- Mesker Guildhall Casements
- Mesker Metal Sub-Frames
- Mesker Pivoted Windows

See the 24 page Mesker catalog in Sweet's architectural files. Section 15/15
Write today for complete details on the Mesker Dealer Plan. Your territory may be open.

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WHEN PENCILS WRITE *Nairn* ARCHITECTS SPECIFY

In this smart, modern kitchen, the architect has built his decorative scheme around a beautiful Nairn Veltone Pattern. Border, counter tops, drainboards and splashboard are Nairn Linoleum. Note cove-base treatment (left of door) eliminating cracks at junction of floor and wall — making cleaning easier.

WILL it be lastingly attractive? Practical for my clients? Within the client's budget?

These are the questions the architect must ask about the material he selects for kitchen floors. And in Nairn Linoleum, he finds the perfect answers to all three.

BEAUTY . . . Assured by a wide range of colorful, distinctive patterns. From them you can choose the exact one to fit any decorative scheme.

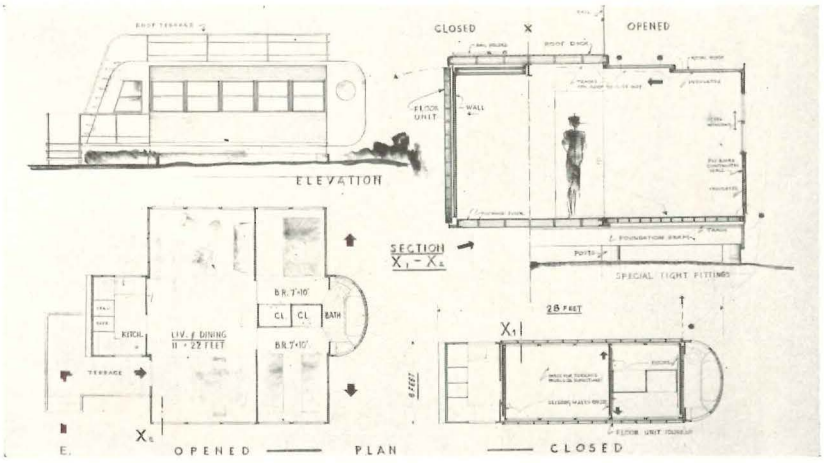
UTILITY . . . Nairn Linoleum wears for years, even under the heaviest foot traffic. Its extra-smooth surface is free of dirt-collecting cracks and crevices. Remarkably easy to clean.

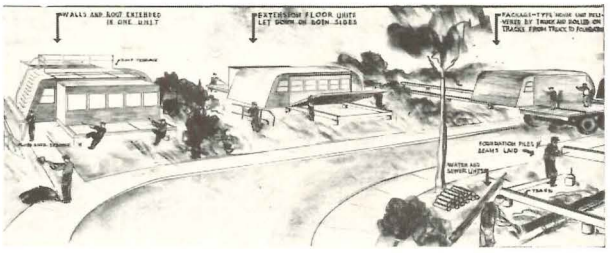
ECONOMY . . . Moderate in first cost, Nairn Linoleum requires little maintenance. Needs no costly refinishing . . . a point builders can use to advantage with prospective clients. Installed by Authorized Contractors, Nairn Linoleum is fully guaranteed.

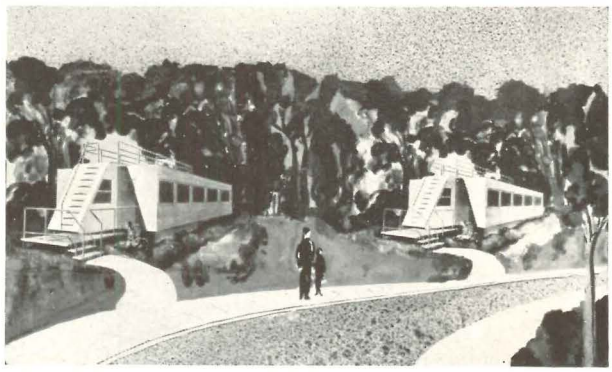
CONGOLEUM-NAIRN INC., KEARNY, N. J.

NAIRN
REG. U. S. PAT. OFF.
LINOLEUM
Floors and Walls

Notice how linoleum has been used as a wainscot for this convenient breakfast-nook. Just another utility feature of Nairn Linoleum! It prevents damage from kicking and scuffing. Washing with mild soap and water keeps it fresh and new-looking.







Architect Alfred Clauss of Knoxville, Tenn., offers the above scheme as one possible solution to defense housing needs. Necessary reductions in reproducing his drawings have obscured some details, but we hope not the essential idea. Size of shipping unit, according to Mr. Clauss, is 8 by 9 by 28 ft.; size of extended house, 22 by 11 by 28 ft.; estimated cost, $900; weight, 6800 lbs.; erection time, one hour, with unskilled labor.

Mid-West Architectural Conference Draws Delegates from Six States

PROBLEMS OF increasingly vital concern to all American architects absorbed the attention of delegates from six states at the second annual Mid-West Conference, held on September 12 and 13 at Cranbrook Academy of Art, Bloomfield Hills, Mich.

Following a declaration by *Clair W. Ditchy* of Detroit that "We are here . . . to devote some time to co-operative effort and to consider methods of meeting and dealing with each other as well as with the public," *Leigh Hunt* of Milwaukee spoke on the subject of "Unification." Stating that "perhaps the thing most lacking among architects is working together outside their own offices," Mr. Hunt warned that "successful co-operative effort . . . is found more among builders and contracting bodies than among architects," and developed his arguments toward the conclusion that more money and effort must be expended in demonstrating to members of the profession at large the importance of affiliating state societies with the AIA in order to achieve unified action and betterment of professional conditions.

Talmage C. Hughes of Detroit, speaking next on "Public Information," dismissed the truism "Virtue is its own reward" as being no longer a valid single basis for popular recognition of the architect's value to society. Members of the profession, according to Mr. Hughes, must seize every opportunity to place themselves favorably before the public's eyes. Newspapers, magazines, radio—all available media—must be utilized to the fullest in reporting elections, honors, appointments, exhibitions, competitions, lectures, and all such events and activities as will tend to establish before the public the architect's essential importance to every phase and operation of the design and construction field.

Other addresses of general significance were: "Professional Practice" by *Leo A. Bauer*, Detroit, wherein, among other issues, he discussed the encroachment on the architectural profession of large industrial contracting concerns; "Architectural Clinics" by *Branson V. Gamber*, Detroit, in which he dwelt particularly upon the Architects' Co-operative Service Bureau, recently organized under the sponsorship of the Detroit Division of the Michigan Society of Architects; "The Architect and the Small House" by *Edward D. Pierre*, Indianapolis, from which we quote: "In its determination to solve the small house problem will the architectural profession discharge its first duty to the nation, its sacred obligation to the young men of the profession, and its golden opportunity for service and substantial profit"; and "Auto Courts" by *Kenneth C. Black*, Lansing, in which he pointed to numerous profitable possibilities in this field for the architectural profession.

At the final banquet, National AIA President *Edwin Bergstrom* talked on the "Preparedness Program," and predicted on the basis of his wide knowledge of the situation that "Civilian housing will be the chief task of architects in the national defense program."

Words and Action on National Defense

AS EVIDENCE of the response in thought and action which national preparedness is prompting amongst architects and the building field, the RECORD quotes from the following sources:

Washington, D. C. (From a report recently issued by the Washington Build-

(*Continued on page 12*)

CALENDAR OF EVENTS

- **October 1-20**—Memorial Exhibition of the work of John Calvin Stevens, F.A.I.A., L. M. Sweat Memorial Art Museum, Portland, Maine.
- **October 12-November 4**—9th Annual National Ceramic Exhibition, Syracuse Museum of Fine Arts, Syracuse, N. Y.
- **October 15-18**—18th Annual Convention, American Institute of Steel Construction. Greenbrier Hotel, White Sulphur Springs, W. Va.
- **November 1-January 2**—"Art Finds a Way," exhibition at Brooklyn Museum, Brooklyn, N. Y.

WITH RECORD READERS

(Continued from page 10)

ing Congress's Industry Survey Committee, headed by *Harry A. Johns*, Washington district manager of the F. W. Dodge Corp.): "The purpose in assembling these data was to obtain a general picture of the local situation and to set up the machinery for getting more specific information about any branch of the industry which government agencies connected with the defense program may find necessary or desirable." Among the survey's findings: 50 architects and 55 general contractors are equipped to perform more than $145,000,000 of work in a year, a considerable increase over current volume.

Philadelphia (From an AIA news release quoting *Edmund R. Purves*, Middle Atlantic regional director of the AIA): "Against a background of ill-considered opinions concerning national defense, the American Institute of Architects has been trying to prepare the profession to serve the country in time of emergency and to make the government aware that architects are valuable and available."

New York City (From an AIA news release quoting *Frederick G. Frost*, New York Chapter president): "High-pressure methods, developed by New York Architects during the pre-depression building boom, must be revived for the rapid construction of plants necessary to rearm the United States . . . Working drawings must be developed while actual construction is in progress . . . Close co-operation between architects and contractors is essential." *Richmond H. Shreve*, New York architect (from the same source): "Low-cost housing (for defense workers) . . . should stimulate prefabricated building to a considerable extent. Prefabrication in the sense of the mass production of complete houses in a factory will probably not be adapted as quickly as the prefabrication of bathroom, heating, and kitchen units around which a frame house can be quickly built."

Utica, N. Y. (From an AIA news release quoting *Clement R. Newkirk*, New York regional director of the AIA): "Apart from the position of the architect in the industrial picture, there is a place for him, by reason of his particular training and experience, as an individual in military affairs"—Mr. Newkirk suggests, among other possibilities, as "observers in the Air Service . . . personnel of the Camouflage Corps."

Milwaukee (From an AIA news release quoting *Peter Brust*, Illinois-Wisconsin regional director of the AIA): "With an abundance of skilled architects, engineers, and industrial workers, Wisconsin is in a strong position to cooperate in the national defense program . . . The architectural profession of the state is organized to proceed with the design and construction of new plants, and otherwise to serve the Federal government."

Museum of Modern Art Announces Two Home-Furnishing Design Competitions

SOMETHING OF A departure from the ordinary in design competitions has been announced by the Museum of Modern Art, New York City. In order to stimulate new ideas in home-furnishing design which will reflect "today's social, economic, technological, and esthetic tendencies and possibilities," two competitions have been opened in this field to: (I) all residents of the United States except employees of the Museum; and (II) all residents of the 20 other American republics in Mexico, Central and South America, and the West Indies.

Competition I: Winners in this group, instead of being premiated with conventional prizes and certificates, will be awarded commissions and contracts from stores or manufacturers for the production and sale of their designs throughout the country; such contracts will provide for payment of royalties or fees to the designer at the usual rates.

"In order to allow as much room as possible for new ideas," according to *Elliot F. Noyes*, Competition Director, "no specific pieces will be called for in this program." Rather, the competition has been divided into nine general categories for which designs may be submitted—e.g., seating for a living room, furniture for a dining room, furniture for outdoor living, fabrics for drapery, upholstery, or other uses.

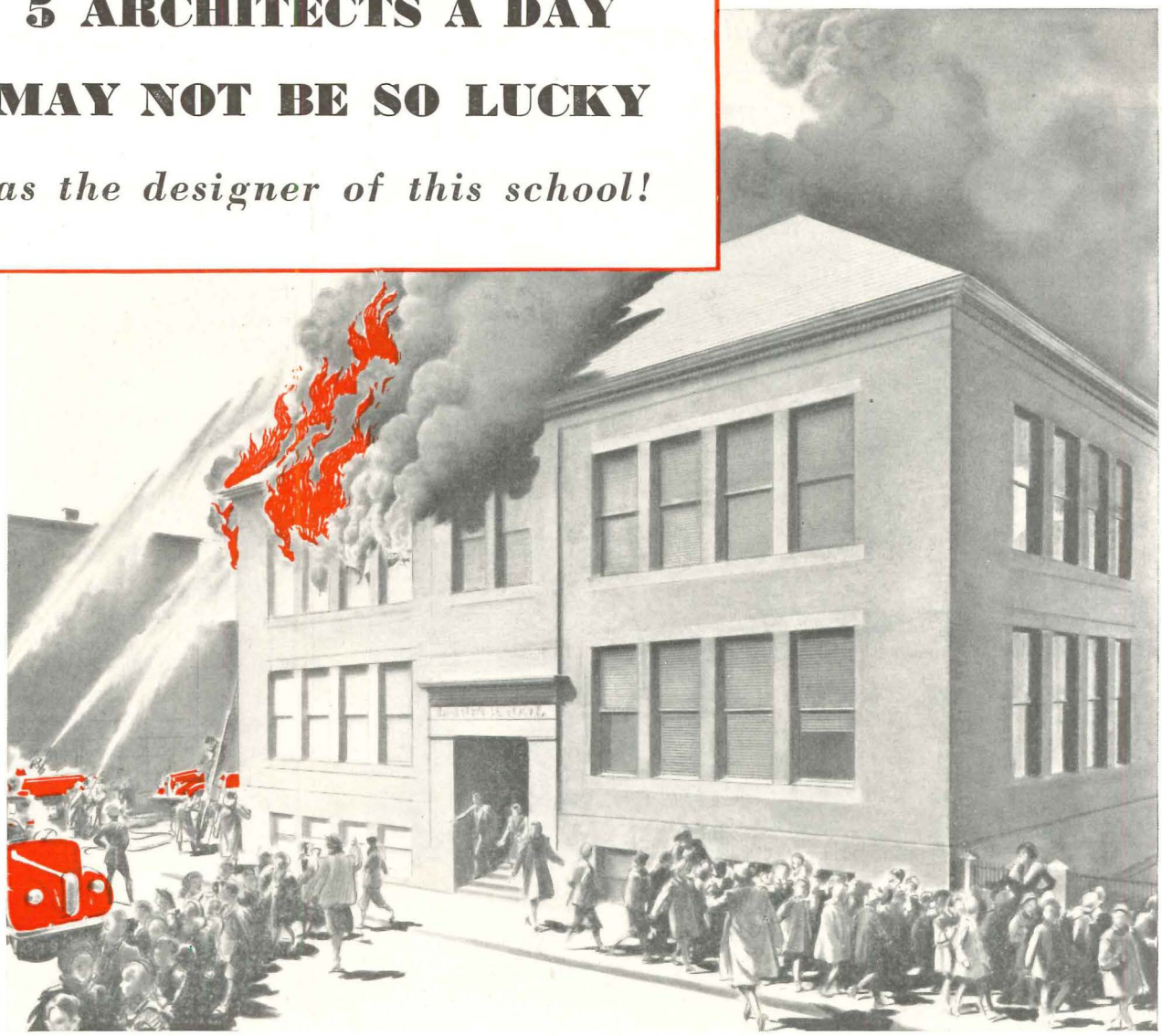
The purpose of Competition II is to discover designers of imagination and ability in the other Americas and bring some of them to New York for a period of a few months. The sponsors are interested particularly in having this program elicit ideas from the participants for application of their own native materials and methods of construction in the making of furniture for contemporary American usage.

Judges for both competitions will be: *Alvar Aalto*, Finnish architect; *Alfred*

(Continued on page 14)

5 ARCHITECTS A DAY MAY NOT BE SO LUCKY

as the designer of this school!



IT'S sheer luck when every child is safely removed from any school where fire has gained headway. And five times daily, Fortune spins this wheel of chance . . . for records show that an average of 5 school fires *start* each day.

Before the plans for any school building are off the draughting boards, architects can block this gruesome gamble from their structures by providing Grinnell Automatic Sprinkler Fire Protection. On guard 24 hours a day . . . ready to spring into instant action without human aid or supervision . . . Grinnell Systems *stop fire at its source!*

Since 1930, Grinnell Sprinkler Systems have nipped more than 8,000 fires in the bud . . . saved thousands of lives. Perfected by the pioneers of automatic sprinklers, they represent the highest, safest development in such fire protection equipment.

Phone or write for a Grinnell engineer to help you adapt automatic sprinkler systems to both the aesthetic and utility requirements of your designs. One of Grinnell's 34 branch offices is conveniently near you. Grinnell Co., Inc., Executive Offices, Providence, R. I. Branch offices in U. S. and Canada.

GRINNELL

AUTOMATIC SPRINKLER FIRE PROTECTION

WITH RECORD READERS

(*Continued from page 12*)

H. Barr, Jr., director of the Museum; *Catherine K. Bauer*, special USHA consultant; *Edgar Kaufmann, Jr.*, Design Editor of "New Directions"; and *Edward Stone*, New York architect.

All entries for Competition I must be mailed by January 11, 1941; Competition II entries must reach the Museum not later than January 15. Entry blanks and complete program may be obtained from *Eliot F. Noyes*, Director, Department of Industrial Design, The Museum of Modern Art, 11 W. 53 St., N. Y. C.

* * *

CASH PRIZES of $200, $100, and $50 will be awarded by the American Institute of Steel Construction to winners of first, second, and third places in the annual bridge design competition scheduled to be judged on February 19, 1941.

The competition is open to bona fide registered students of structural engineering and architecture in recognized technical schools of the United States and Possessions; this year's subject is "a steel overpass bridge to carry a single-track railroad over a highway."

Entries must be received at the Executive Offices of the American Institute of Steel Construction, 101 Park Avenue, New York City, not later than February 10. Further information may be obtained from that address.

Mentor Praises Telesis Group

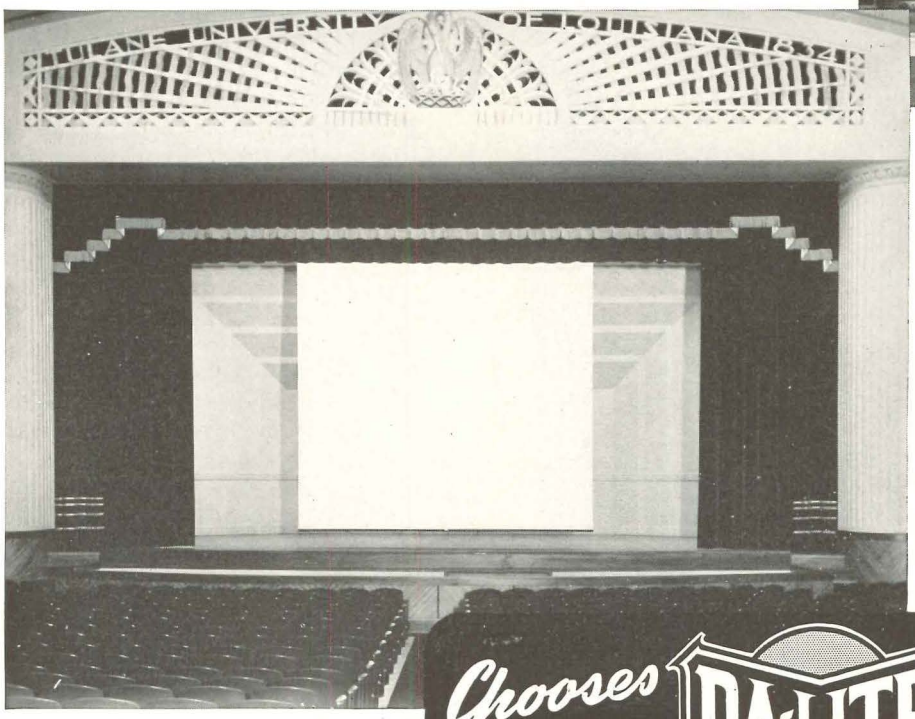
"BRILLIANT STUDENTS", says *Michael Goodman*, Professor of Architecture at the University of California, of those among the Telesis group (see pp. 69-72) who formerly were taught by him.

"These young people have achieved a union which the older groups of professionals could not effect; . . . thus banded they are selling the idea to amused and indulgent bystanders who eagerly viewed the displays."

Members of Telesis are:

Burton Cairns,* Vernon De Mars, Garrett Eckbo, Phillip E. Joseph, Francis J. Violich, Edward A. Williams, Francis Joseph McCarthy, Albert Henry Hill, Jack Kent, Corwin R. Mocine, William E. Spangle, Walter Jo Landor, Sydney Williams, Alfred Sawahata, Gryffyd Partridge, Richard Banwell, James Stamos, Milton Butts, Delevan Burge Freyer, Jane Root, Marie Harbeck, Leonore Upham, Henry Hebbeln, Ruth Jaffe, John Webb, Elizabeth Allen, Ward J. Thomas, Mary Anthony, Philippe Mutrux, Henning Watterston, Carolyn Watterston, George Kalleg, Mary Merrill, Francis Yeazell, John Anderson. (*Deceased)

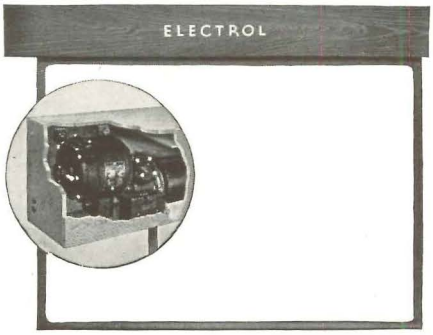
The Tulane University OF LOUISIANA



The Da-Lite Electrol Glass-Beaded screen in the new McAlister Auditorium was installed by HarFilms, Inc. of New Orleans. Architects: Favrot and Reed, New Orleans.

Chooses the DA-LITE ELECTROL SCREEN

REG. U.S. PAT. OFF.



Because of its compact proportions, with motor, gear-drive and screen housed in a case, the Da-Lite Electrol can be quickly and easily installed either from hangers or in recesses in the ceiling. Supplied with either Da-Lite's specially constructed glass-beaded surface or Da-Lite white surface, each of which has special advantages in certain applications. The 48 page Da-Lite catalog gives complete suggestions for the use of each and full instructions on the installation of the Electrol.

THE ELECTRICALLY OPERATED HANGING SCREEN

Further evidence of the superior advantages of the Da-Lite Electrol Screen is provided by the selection of this model screen for the beautiful new McAlister Auditorium of Tulane University of Louisiana, New Orleans.

Of this installation Mr. J. H. Randolph Feltus, Assistant to the President, writes—"While we have not yet had occasion to use the screen in a scheduled program, *we are highly pleased with its convenience and appearance* and are looking forward to its use when we reopen the University in the fall. *It certainly represents the last word in motion picture screens for non-commercial use.*"

Here, as in the Carnegie Institute, Pittsburgh, the Field Museum, Chicago, and other institutions where perfect projection is required, the Da-Lite Electrol provides not only brighter, clearer pictures but utmost convenience. Operated electrically by remote control, it can be quickly and easily unrolled and re-rolled. The Electrol is one of many styles in the Da-Lite line—a line famous for quality for 31 years. Write for literature.

THE DA-LITE SCREEN COMPANY, INC.

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RECORD POLL IN HARTFORD: Caledonian Insurance Building Voted Outstanding

Photos from Gustavus Sickles

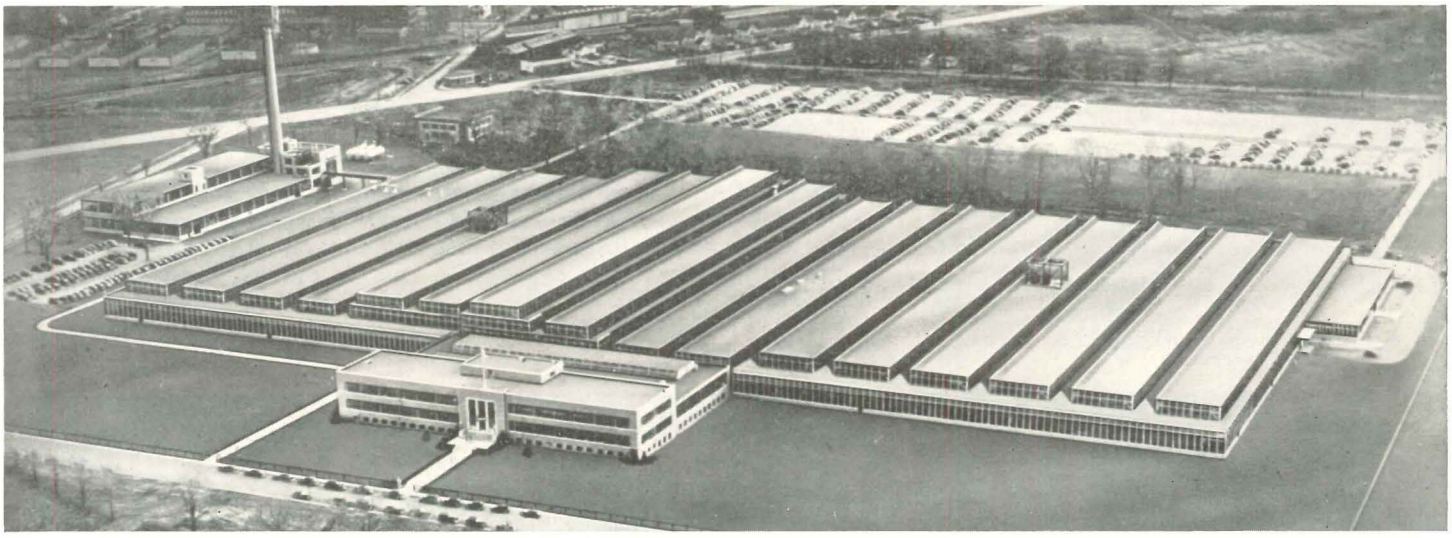
TEN NOMINATIONS: Home office building (United States) of the Caledonian Insurance Co. Carl J. Malmfeldt was architect for the project.

PAUSING THIS MONTH over Hartford, Conn., in the restless flight from poll to poll, we find the home office building of the Caledonian Insurance Co. highlighted by most lay-citizen nominations as the city's outstanding recent architectural achievement.

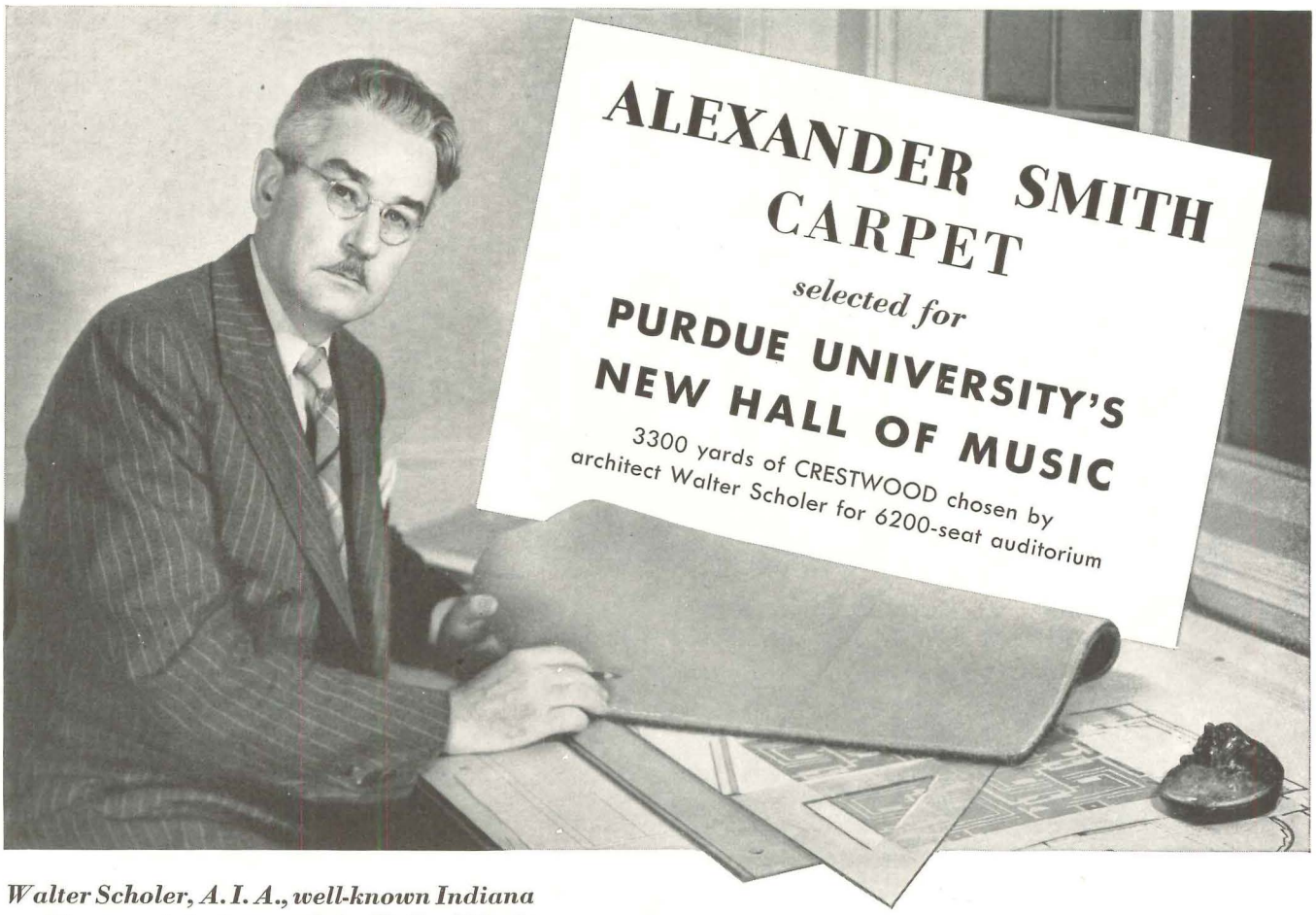
The buildings on this and the following page are pictured in order, on the basis of nominations received from the following Hartford citizens: the Rev. *Robbins W. Barstow; James Brewster,* State Librarian; Dr. *Morris N. Cohen;* Rabbi *A. J. Feldman; Max L. Goldenthal,* lawyer; *Spencer Gross,* lawyer; *Maynard T. Hazen,* banker; *George H. Hollister,* Superintendent of Parks; *Samuel Lebon,* Alderman; *George C. Lessner,* lawyer; *Robert Lewis,* editor; *Edwin F. Nelson,* Board of Education; *Walter S. Paine,* insurance; *Fletcher D. Parker,* minister; *W. H. Putnam,* executive; *Willard B. Rogers,* hotel-chain executive; *Walter K.*

(*Continued on page* 18)

NINE NOMINATIONS: The Dominick F. Burns School, Lawrence St. Carl J. Malmfeldt, Arch.; Strayer & Engelhardt, Consultants.



SEVEN NOMINATIONS: Pratt & Whitney plant; division of Niles-Bement-Pond Co. Albert Kahn was the architect.



Walter Scholer, A. I. A., well-known Indiana architect and designer of the Hall of Music at Purdue, evaluates the carpet as follows:

"THE carpet in the new Hall of Music at Purdue University was especially woven by the Contract Division of Alexander Smith from details prepared in my office showing pattern and colors. Their experienced craftsmanship and knowledge of carpet color and design and their close cooperation with me in this work resulted in a handsome job. I can speak highly of their services.

"In this Music Hall, particularly where beauty and utility are essential, the carpet gives color, quietness and distinction to the interior. In the immense auditorium with over 6200 occupants constantly moving in and out, we have relied on Alexander Smith to produce in their well-known Crestwood Carpet the durable floor covering for the requirements."

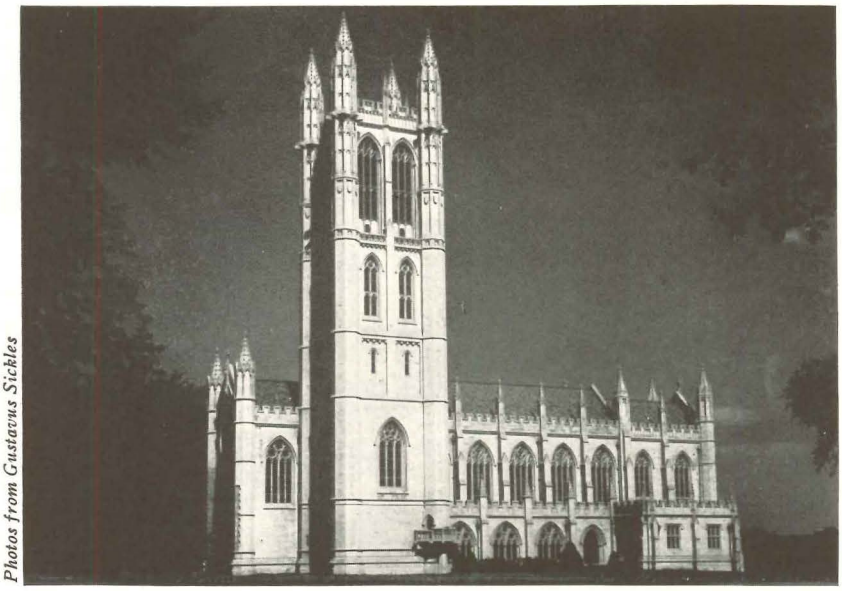
Foyer of Purdue Hall of Music showing Alexander Smith Crestwood Carpet

RECORD POLL IN HARTFORD

(Continued from page 16)

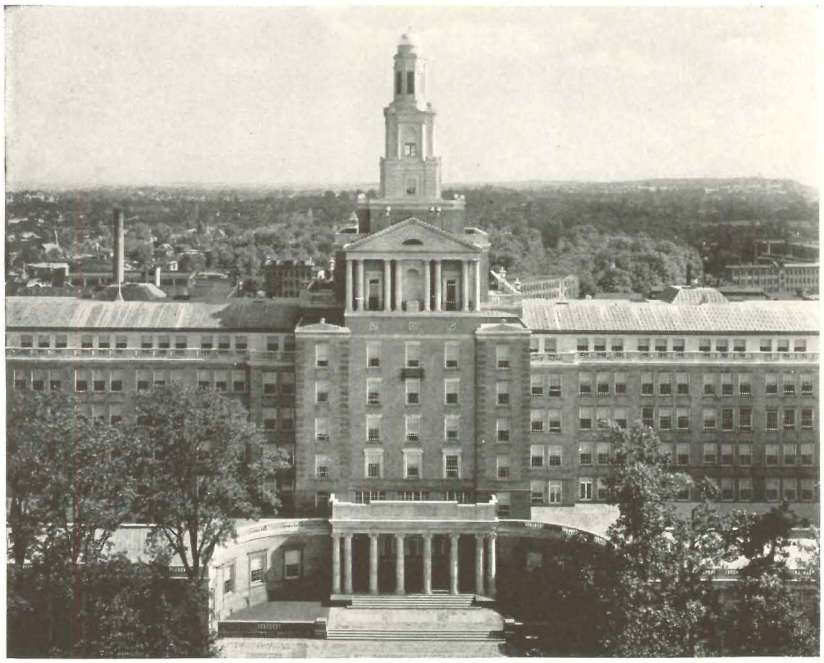
Schwinn, editorial writer; *Truman R. Temple*, librarian; *S. F. Westbrook*, insurance; *Arthur Worth*, merchant.

Other buildings receiving nominations, but less than the pictured winners, are: the County Courthouse (Paul P. Cret, Architect; Smith & Bassette, Associates); Keney Park Golf Club House (Smith & Bassette); State Police Building (Golden, Storrs & Co.); Temple Beth Israel (Charles Greco); West Hartford Town Hall (Ebbets & Frid, Archs.; Mylchreest & Reynolds, Assocs.); West Middle School (Malmfeldt, Adams & Prentice).

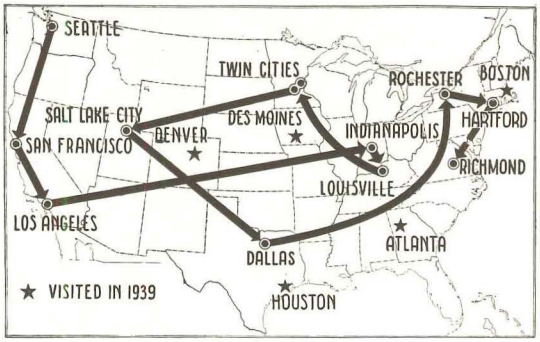


Photos from Gustavus Sickles

SIX NOMINATIONS: the new Chapel at Trinity College. It was designed by the architectural firm of Frohman, Robb, and Little.

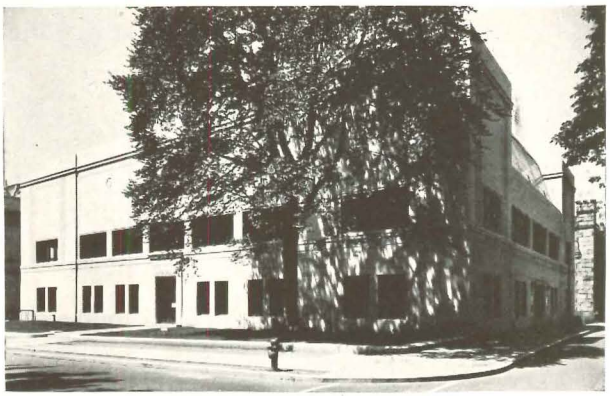


SIX NOMINATIONS: the home office building of the Aetna Life Insurance Company. James Gamble Rogers, Architect; Otto Faelten, Associate



Courtesy American Map Co.

Next month the Poll will look in on Richmond, Va.

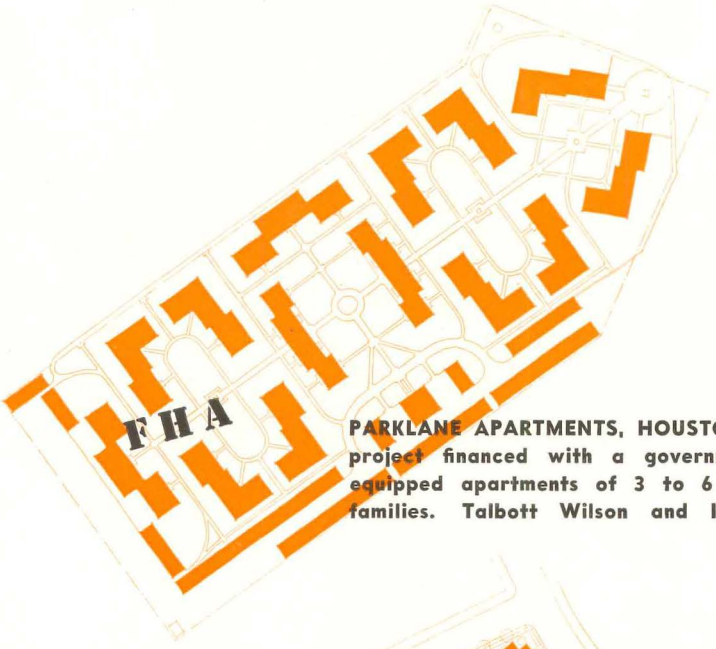


FIVE NOMINATIONS: the Avery Memorial. Morris & O'Connor, Architects; A. E. Austin, Associate.

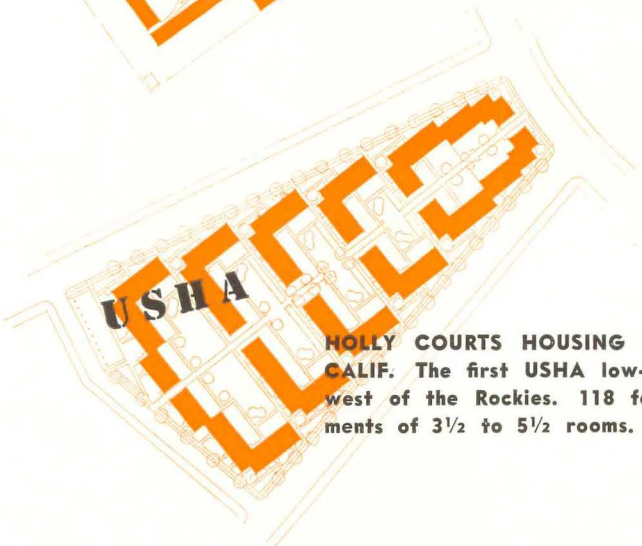
FOUR NOMINATIONS: the new Webster Movie Theater and Shopping Center. George Zunner was the architect for this project.

FOUR NOMINATIONS: the West Hartford Public Library; the firm of Ebbets & Frid were architects.

2 LARGE-SCALE MULTIFAMILY PROJECTS

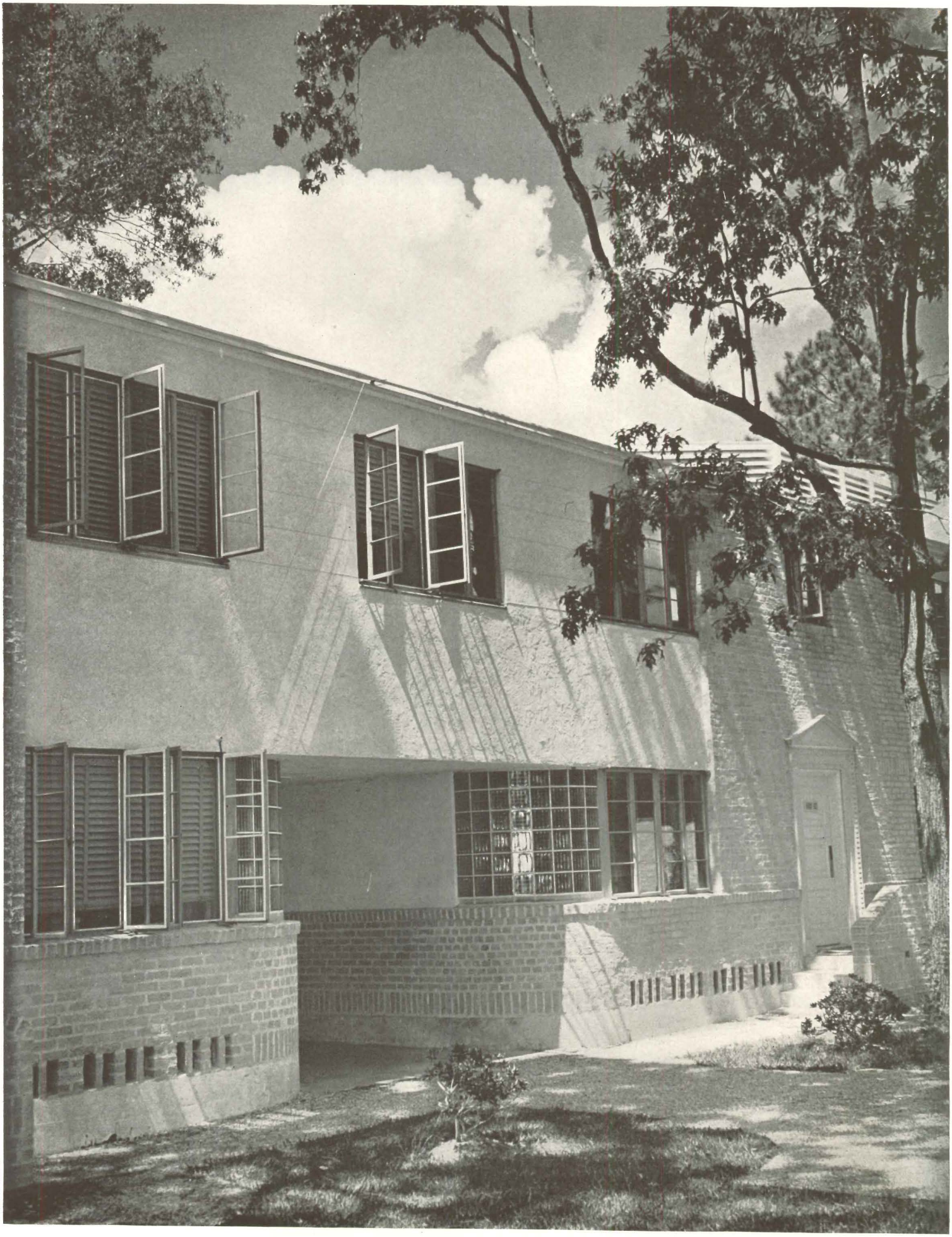


PARKLANE APARTMENTS, HOUSTON, TEX. A million-dollar project financed with a government-insured loan. Fully equipped apartments of 3 to 6 rooms provide for 140 families. Talbott Wilson and Irwin Morris, Architects

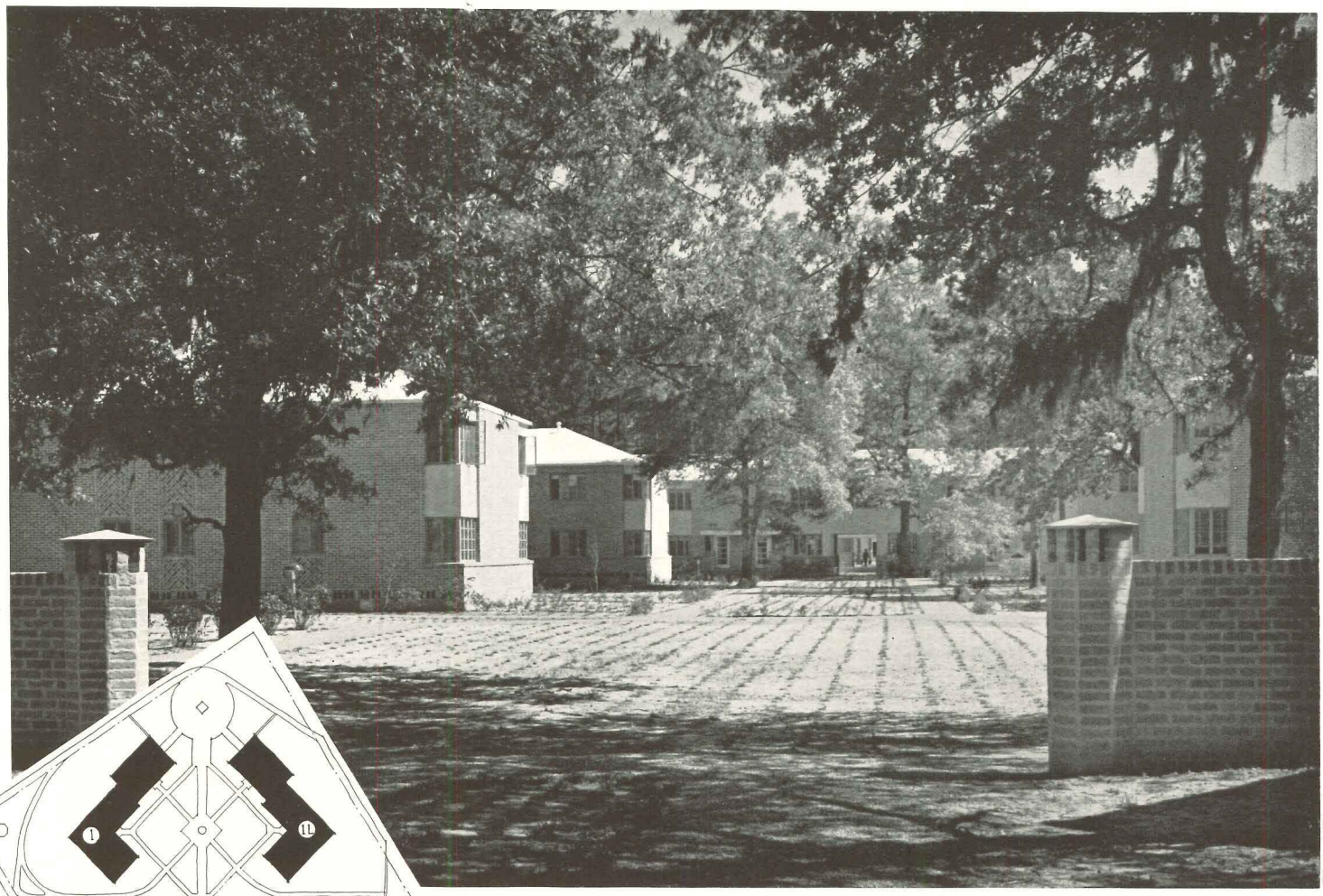


HOLLY COURTS HOUSING PROJECT, SAN FRANCISCO, CALIF. The first USHA low-rent project to be tenanted west of the Rockies. 118 families are housed in apartments of 3½ to 5½ rooms. Arthur Brown, Jr., Architect

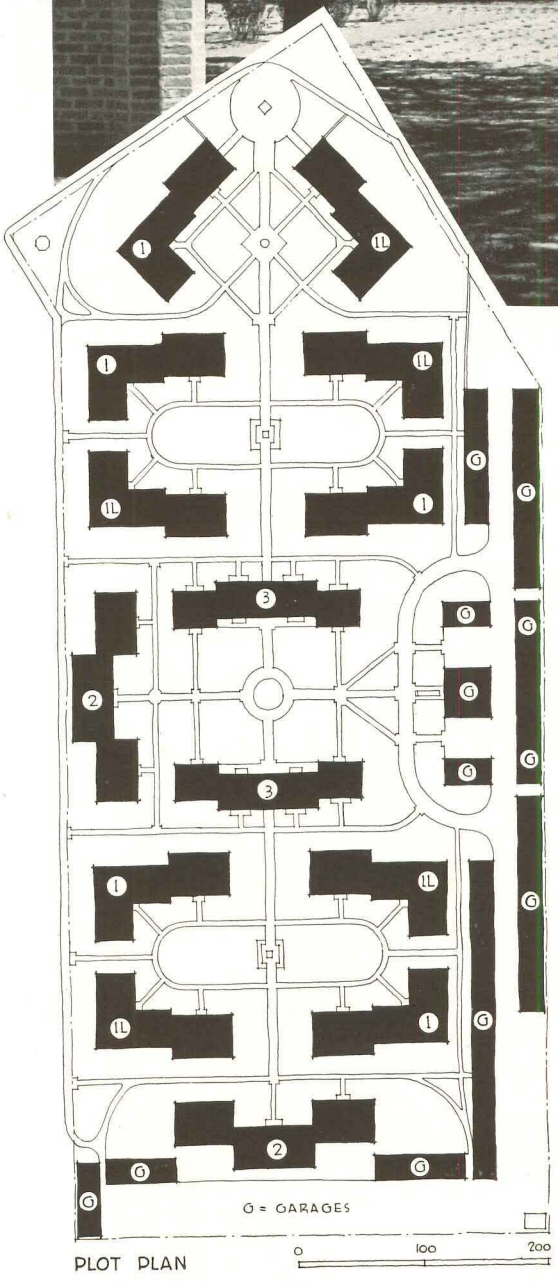
BOTH PROJECTS are made up of a series of two-story buildings in which three basic plan units are arranged in varying assemblies. Both occur in built-up sections of large cities. In both, the structures form interior courts, providing ample light and air and an unusual measure of privacy. Both are outstanding examples of the living amenities derived from the high standards required in all residential work that is financed by the government.



Paul Peters



Sigurd Fischer



PLOT PLAN

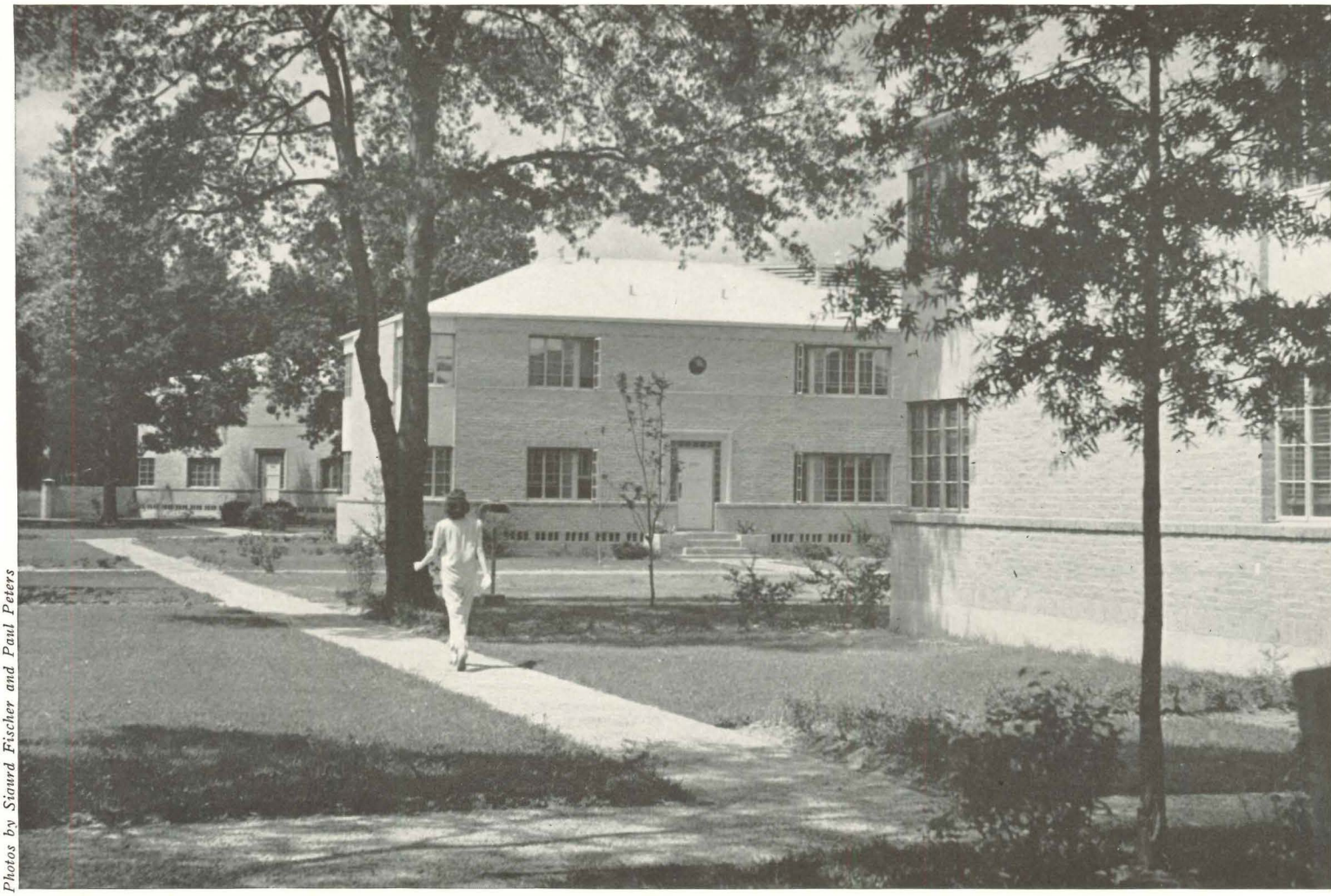
FHA

PARKLANE APARTMENTS IN HOUSTON

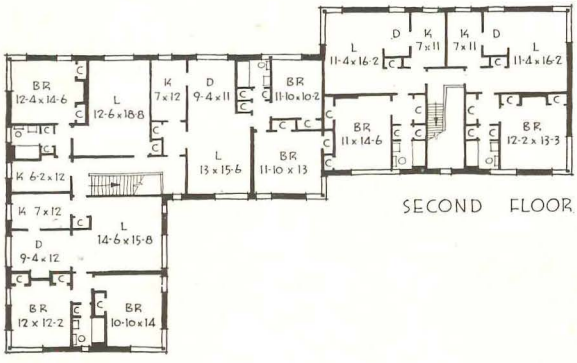
Built with an FHA-insured loan, this 7½-acre development is the work of Architects TALBOTT WILSON and IRWIN MORRIS. The 14 two-story buildings provide homes for 140 families. Landscaping by Meyer and Johnson.

THE WOODED tract is adjacent to Houston's Hermann Park, with the long axis parallel to the park. The problem was to plan for the greatest privacy for apartment tenants and to develop a relation between open and built-on area, room count, and rooms per apartment that would meet both FHA standards and probable tenant demands. "We were tempted," the architects report, "to open the courts out toward the park. . . . But this cut down on the number of windows facing the park so the premise of designing from the inside out prevailed."

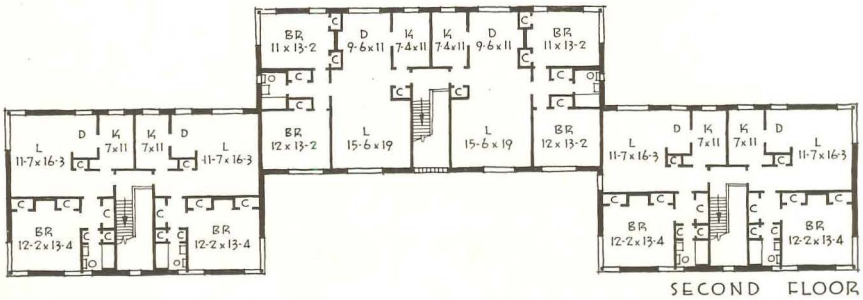
As built, the long strip of land is laid out with only two public approaches into a group of four courts, with an uninterrupted vista from one end to the other. Three basic types of blocks form all 14 of the two-story structures. In the case of Type 1, its exact reverse (indicated as 1L) was also used. In the 10 Type 1 (and 1L) blocks, there are 20 three-room apartments, 40 three-and-a-half-room apartments, and 40 five-room units. The two Type 2 blocks contain 16 three-room units and 8 of five rooms each. In the two Type 3 blocks, there are 12 five-room apartments and 4 containing six rooms each. This makes a total of 140 apartments and 572 rooms.



Photos by Sigurd Fischer and Paul Peters



SECOND FLOOR



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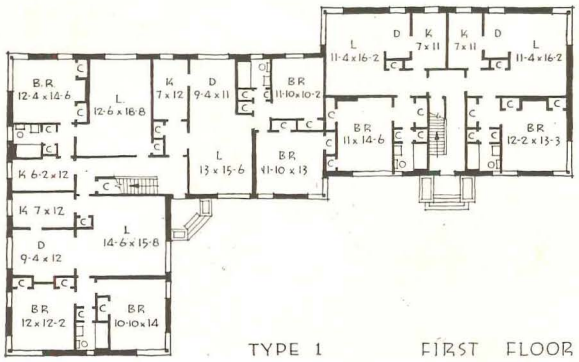
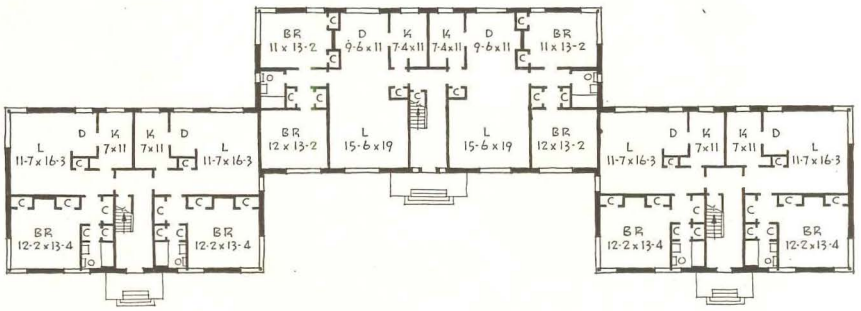


TYPE 1 FIRST FLOOR



TYPE 2 FIRST FLOOR

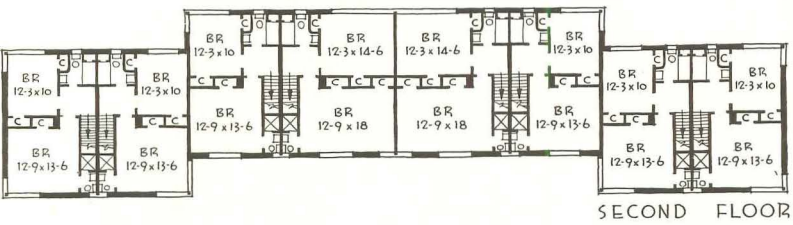
HOUSTON APARTMENTS

WILSON & MORRIS, Architects

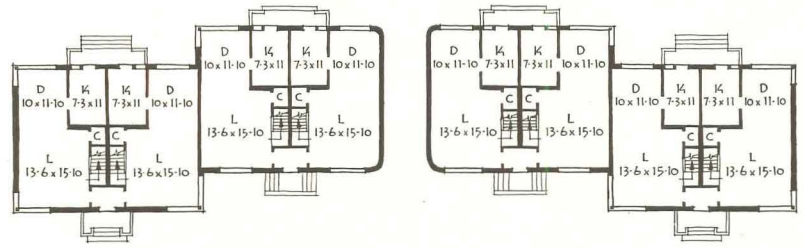
THE PARKLANE Apartments are of brick-veneer construction with specially constructed steel frame and concrete floor slabs. The frame is sheathed with sheathing wallboard and faced with rusty-pink brick and warm gray-white stucco. Fenestration consists of both steel casements and glass-block panels. The roof is of galvanized iron, 29 gauge, with standing seams and covered with four-coat asphalt and sand treatment with a white cement-base finish coat.

Individual apartments are carefully studied for adequate wall space, cross ventilation, room-to-room circulation, and standardization of such items as baths, kitchens, and stair halls. To relieve monotonous repetition, entrances to the blocks are varied within allowable limits, as indicated in the photographs at right.

Heating is furnished by individual thermostatically controlled gas-fired hot-air furnaces, located in concrete pits below the floor of the basementless buildings. Accessory electric unit heaters are installed in bathrooms. For cooling, individual apartment fans were considered adequate for such a well shaded site. Those in upper apartments exhaust through roof louvers. The downstairs fans draw through screened grilles of brick which form a band 8 in. high just above the grade beam.



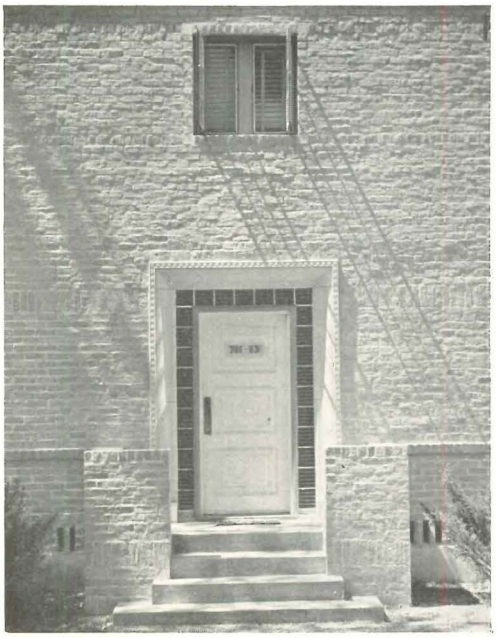
SECOND FLOOR

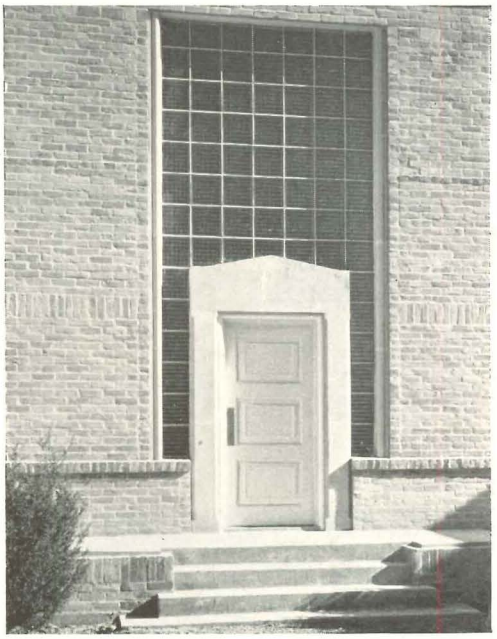


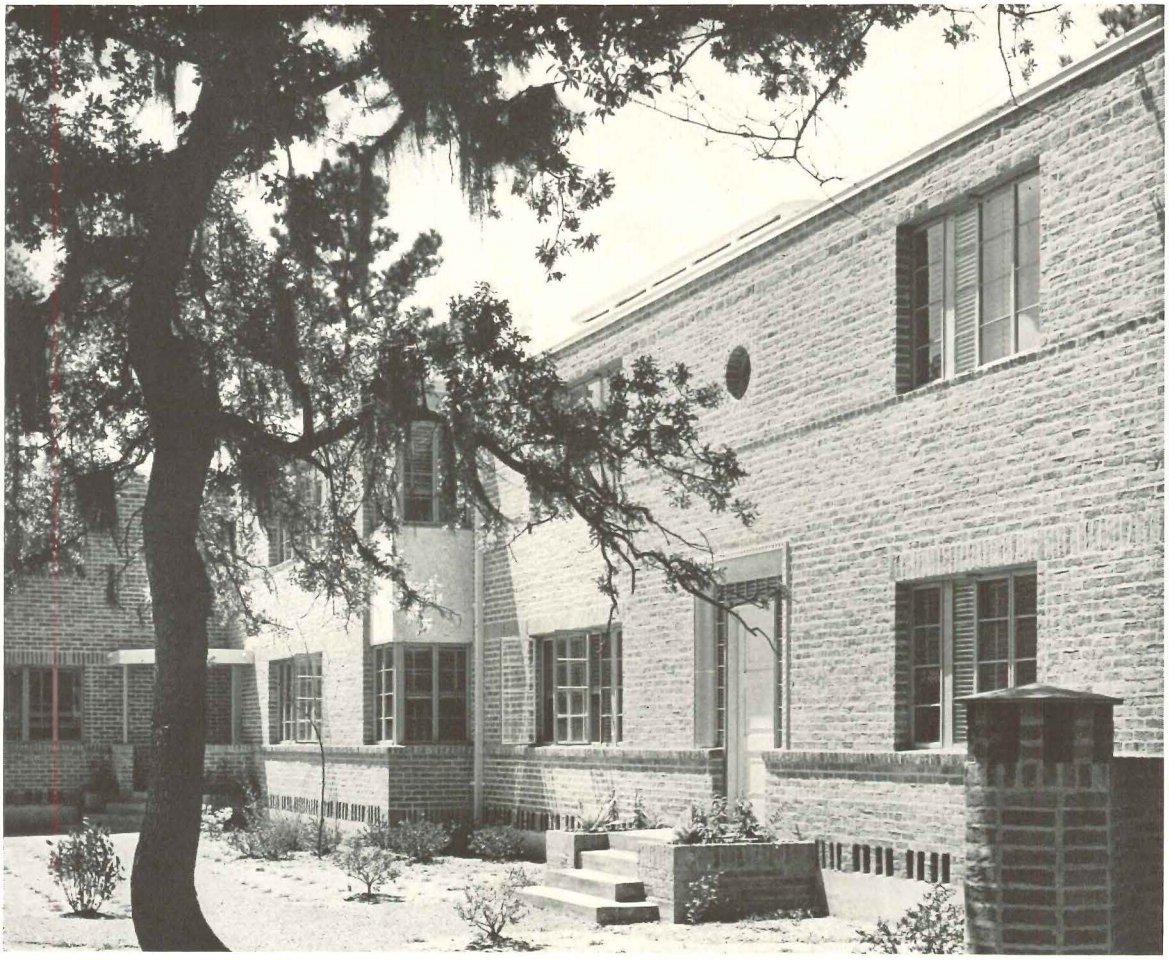
TYPE 3

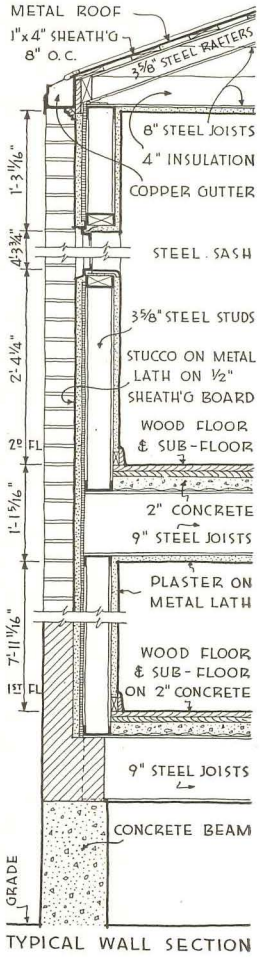
0 20 40 60 80

FIRST FLOOR

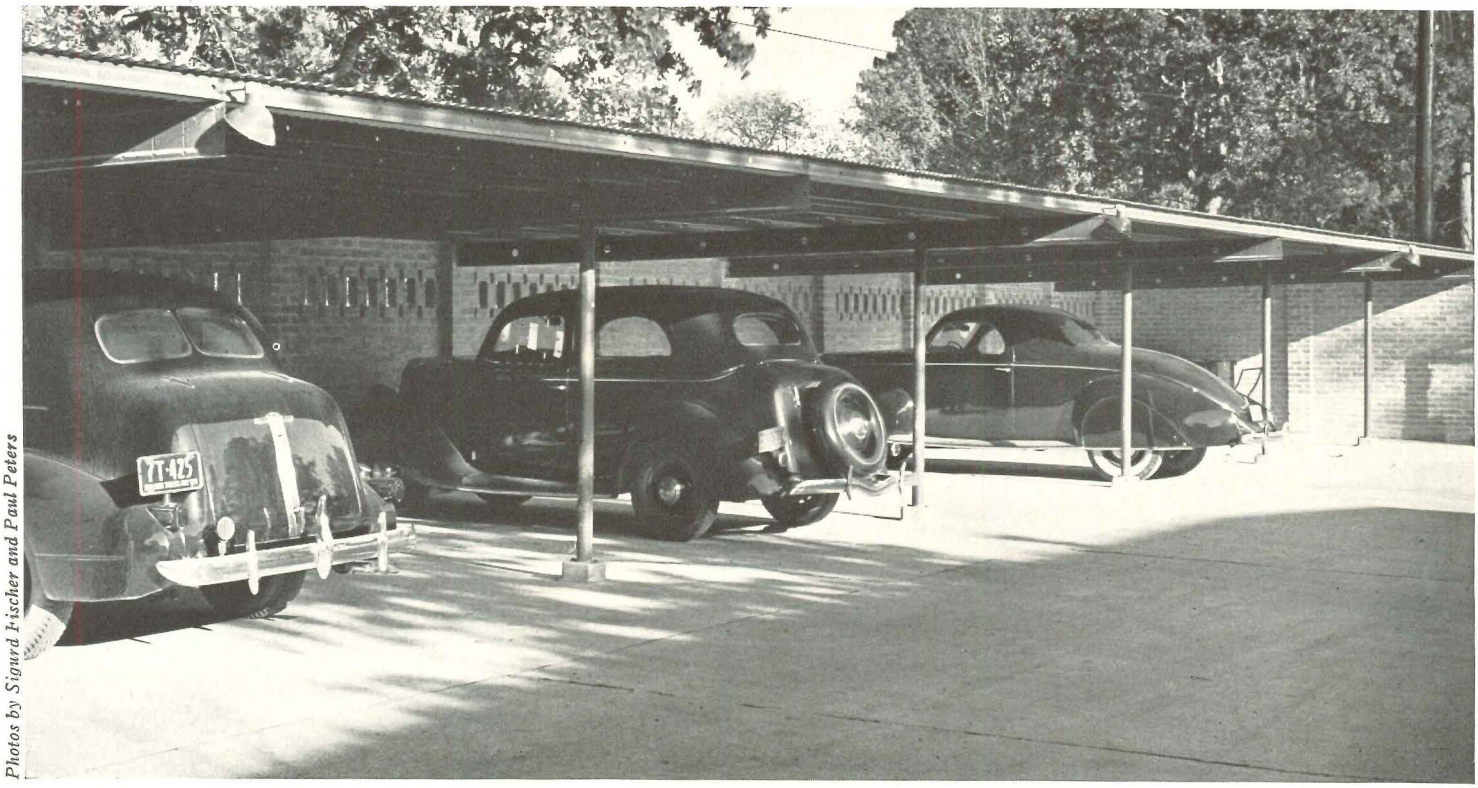








TYPICAL WALL SECTION

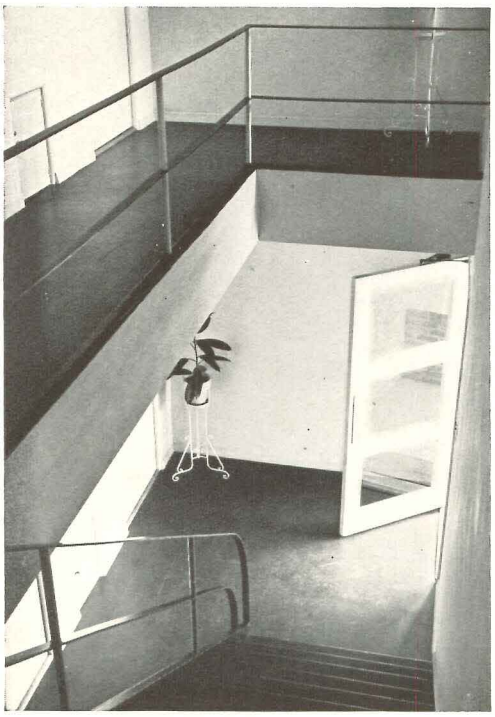


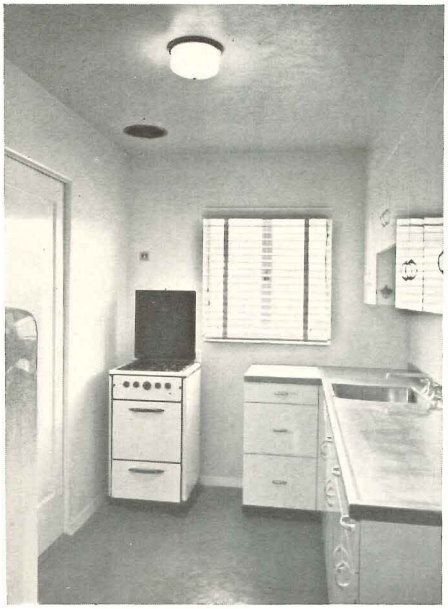
Photos by Sigurd Fischer and Paul Peters

EACH OF THE apartments has a tile bath with shower, oak floors, and painted plaster walls. Kitchens are fully equipped with ranges, refrigerators, and steel cabinets, and monel finish trim. There is generous provision of storage space. Special arrangements have been included for garbage disposal, with outside access door provided for every apartment.

The photographs at right show typical interiors in a two-story apartment in one of the Type C groups.

The carports (see photo at bottom, opposite) are located along the north and east sides of the site, with a turn-around arranged at the north end of one of the courts. The grilled-brick backs of the garage compounds form garden walls on the court sides.





USHA

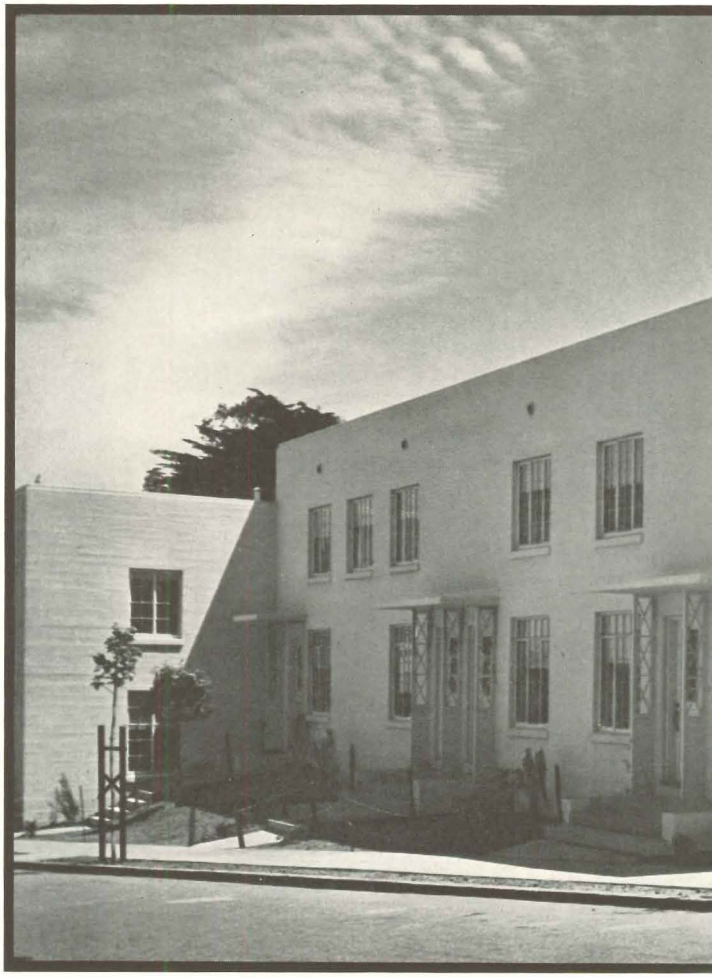
SAN FRANCISCO HOUSING PROJECT

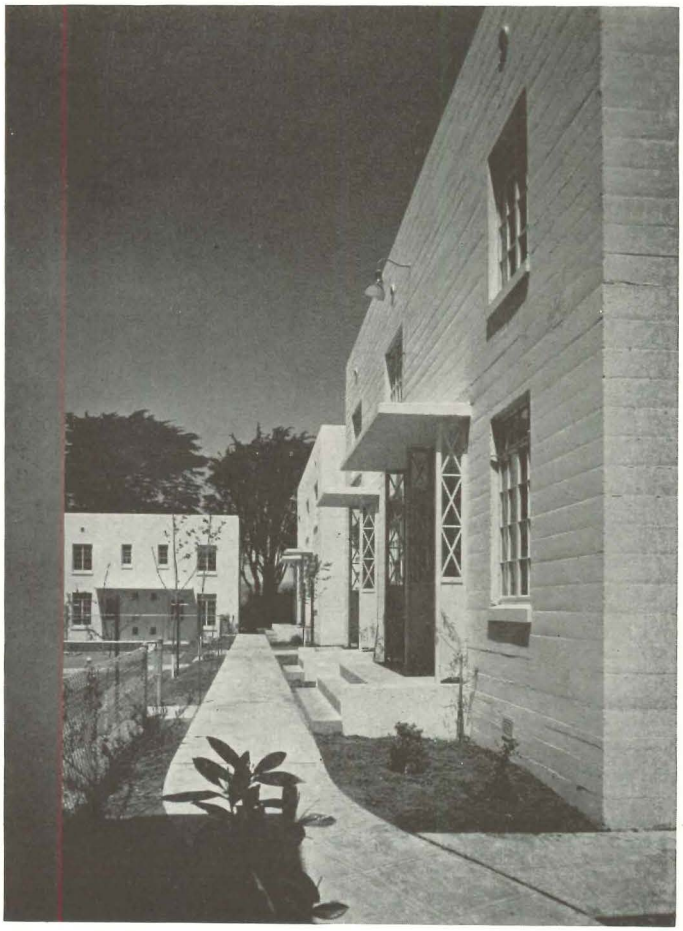
The first public housing project to be tenanted west of the Rockies, the Holly Courts group was designed by Architect ARTHUR BROWN, JR. Homes for 118 families are provided in the 10 two-story blocks. L. Glenn Hall, Landscape Architect.

WITH THE COMPLETION of this notable project, San Francisco starts its USHA attack on the city's substandard housing. All new dwelling projects under the auspices of the Housing Authority of the City and County of San Francisco involve "equivalent elimination" of an equal number of unsafe and insanitary units.

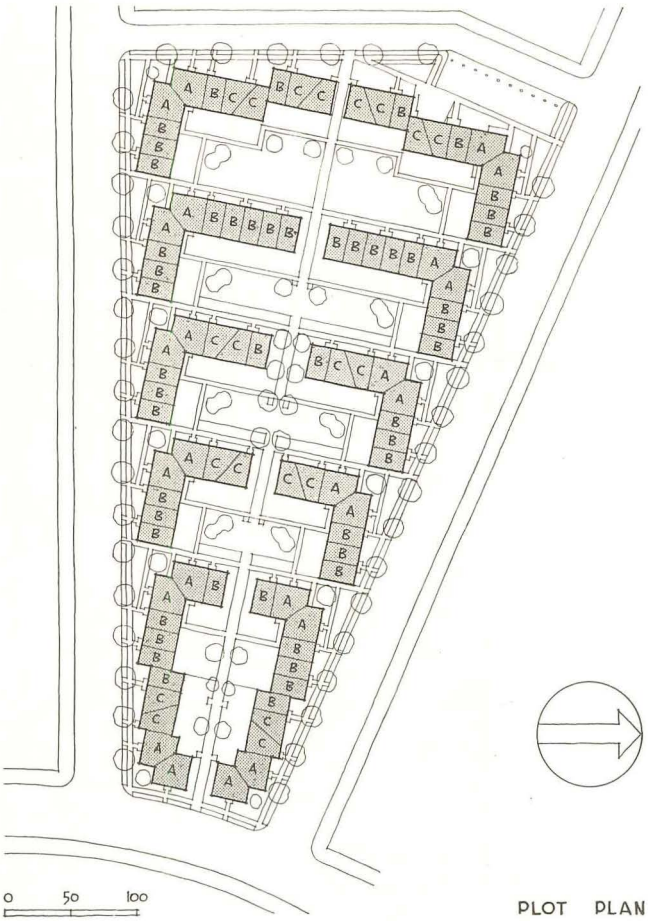
The typical San Francisco city block consists of from 30 to 50 deep, narrow (usually 25 ft.) lots containing from 70 to 100 dwelling units in flats and single dwellings. Each structure has sun in only front and rear rooms, with the rest lighted by small courts and light wells. Buildings cover from 80 to 90% of the land.

On the 2.68 acres at Holly Courts (approximately the same area as an average city block), the buildings use only 36% of the land, with the rest left free to form interior courts, gardens, and off-the-street playgrounds.

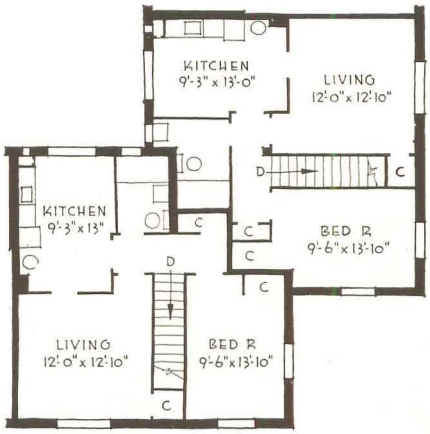




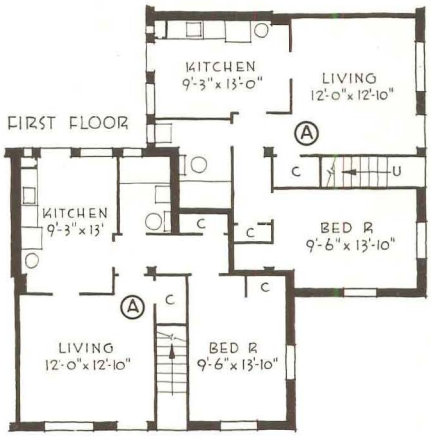
Photos by Stuttevant



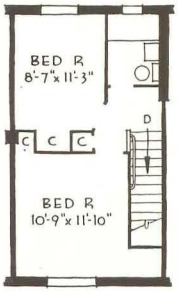
PLOT PLAN



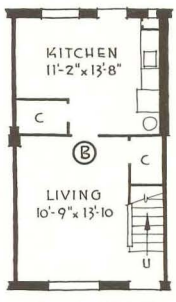
SECOND FLOOR



FIRST FLOOR



SECOND FLOOR



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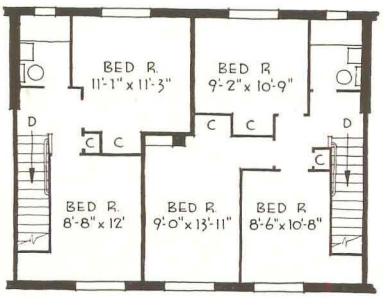

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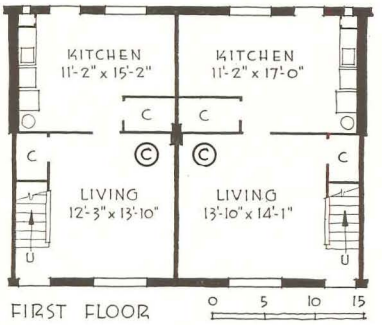


FIRST FLOOR

Each of the big blocks, indicated on the plot plan opposite, is composed of varying alignments of the three unit plans shown above.

SAN FRANCISCO HOUSING PROJECT

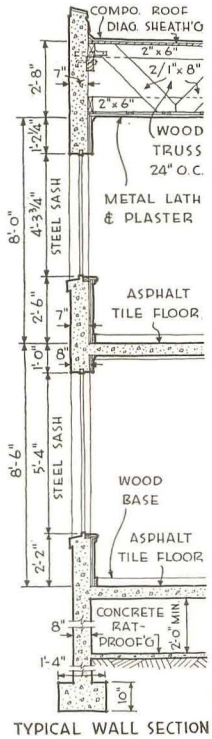
ARTHUR BROWN, JR., Architect

Photos by Sturtevant

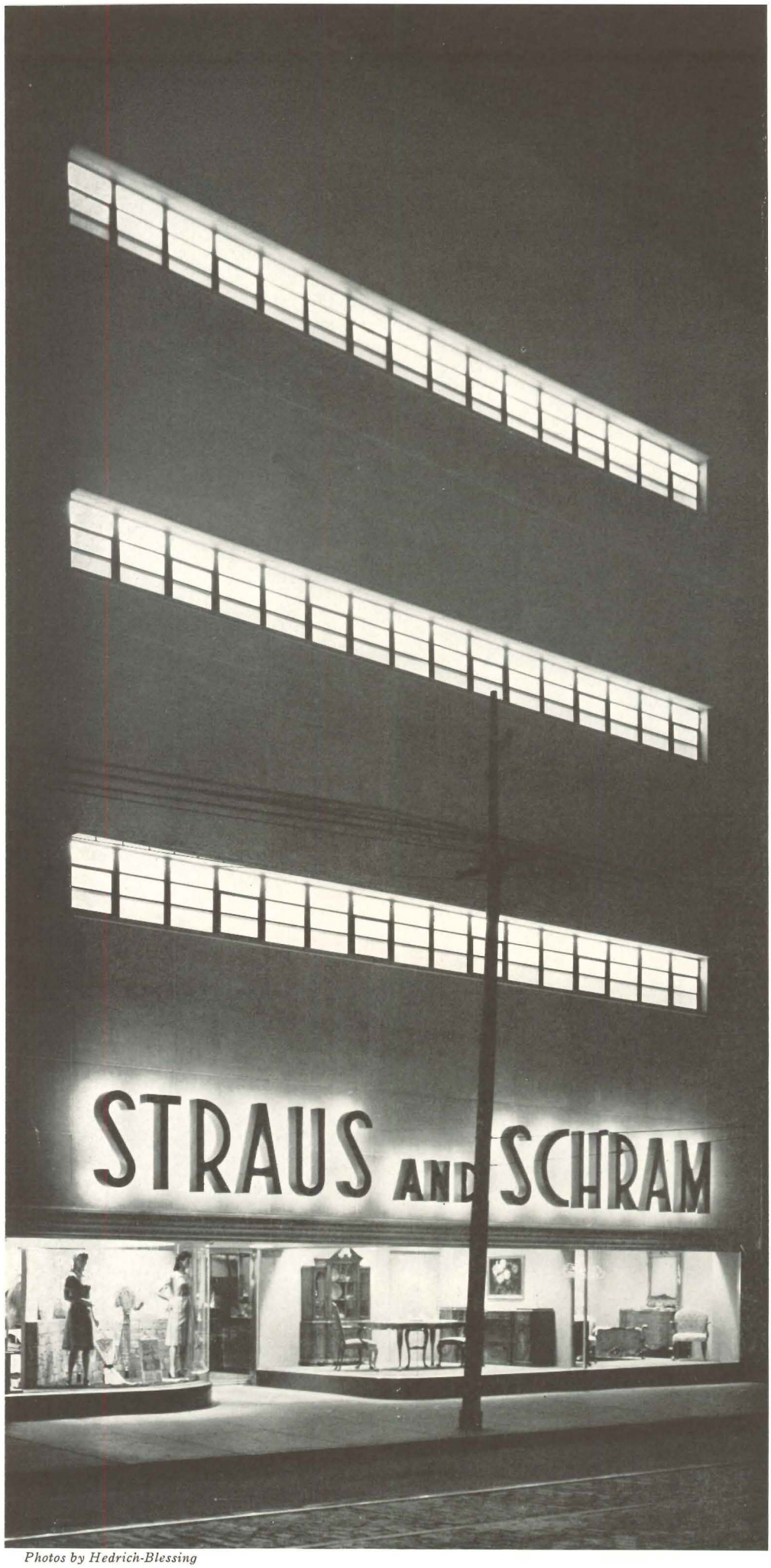
THE BUILDINGS at Holly Courts have concrete foundations, walls, floor slabs, and stairs. Roofs are of composition laid over wood trussed rafters. Interior partitions consist of 2-in. solid plaster on metal lath and steel studding; between apartments, partitions are soundproofed. Steel casements are used throughout. Heating is accomplished by individual unit gas heaters. Floors in kitchens and baths are of linoleum; elsewhere, of asphalt tile.

Interior court space is divided between private tenant gardens, fenced-in playgrounds, walks, and lawns.

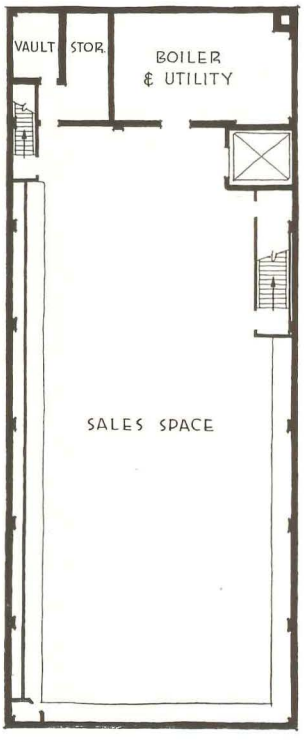
At left, one of the screened garbage-collection houses; bottom, opposite, a protected, off-the-street playground



TYPICAL WALL SECTION



Photos by Hedrich-Blessing



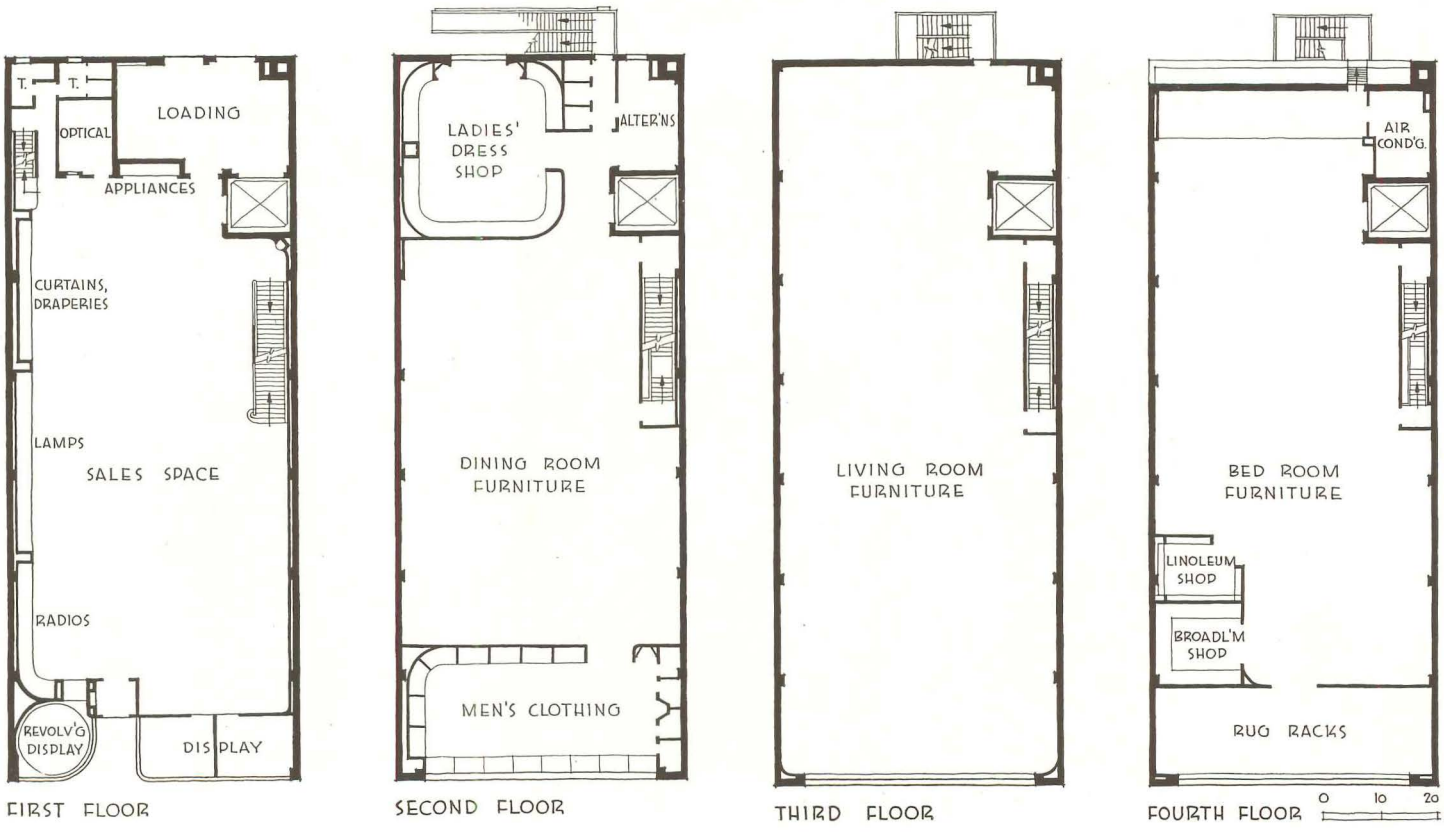
BASEMENT

CHICAGO TWO-DEPARTMENT STORE IS BUILT WITHOUT INTERIOR COLUMNS

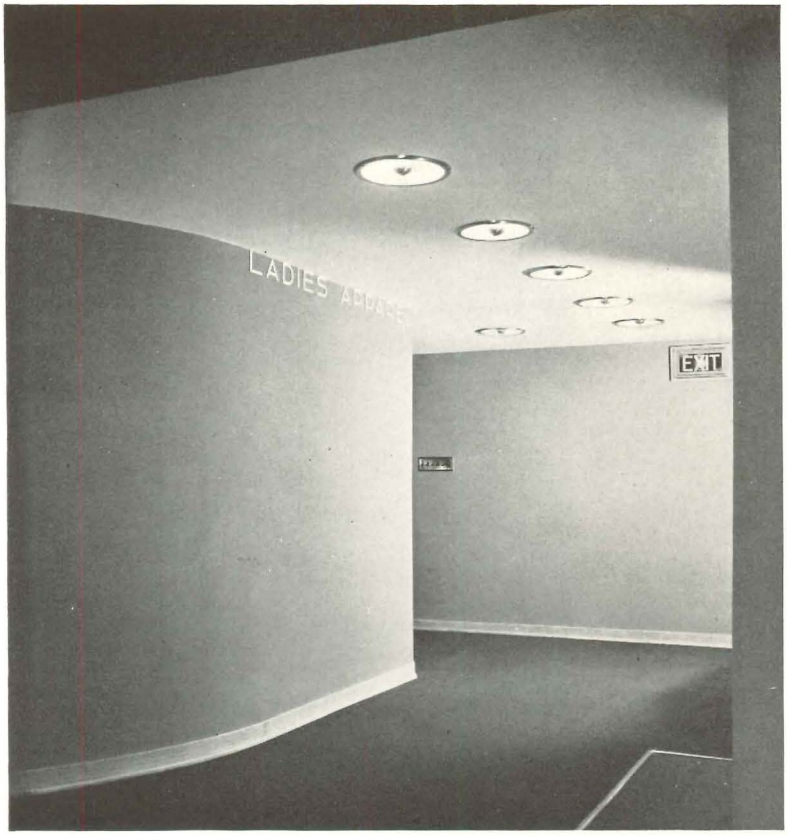
The floor space of this store by ROBERT HELLER, New York Industrial Designer, is 100% usable, the entire 50-ft. width being spanned by steel girders framed to exterior-wall steel columns. The store has both furniture and clothing departments.

SIMPLICITY OF plan, exterior design, and surface treatments throughout characterize the functional nature of the Straus and Schram store. Although it is actually a neighborhood store in a great metropolis, the simple and efficient organization of the structure suggests solutions that are widely applicable. An unusual requirement in a store that is essentially a furniture and home-appliance store demanded provision for the sale of men's and women's clothing as well.

The front of the building is surfaced with limestone, with continuous steel sash fitted with translucent glass in the long, horizontal openings. For night illumination, the heads of the openings are equipped with fluorescent-tubing strips. The base of the building is of gun-metal-finished structural glass. The store-front frame and finish moldings are of white metal. In the curved-surface show window at the left of the entrance is a revolving platform for mobile display of merchandise. The vestibule enclosure and entrance doors are made entirely of heavy plate glass (see photo at right).



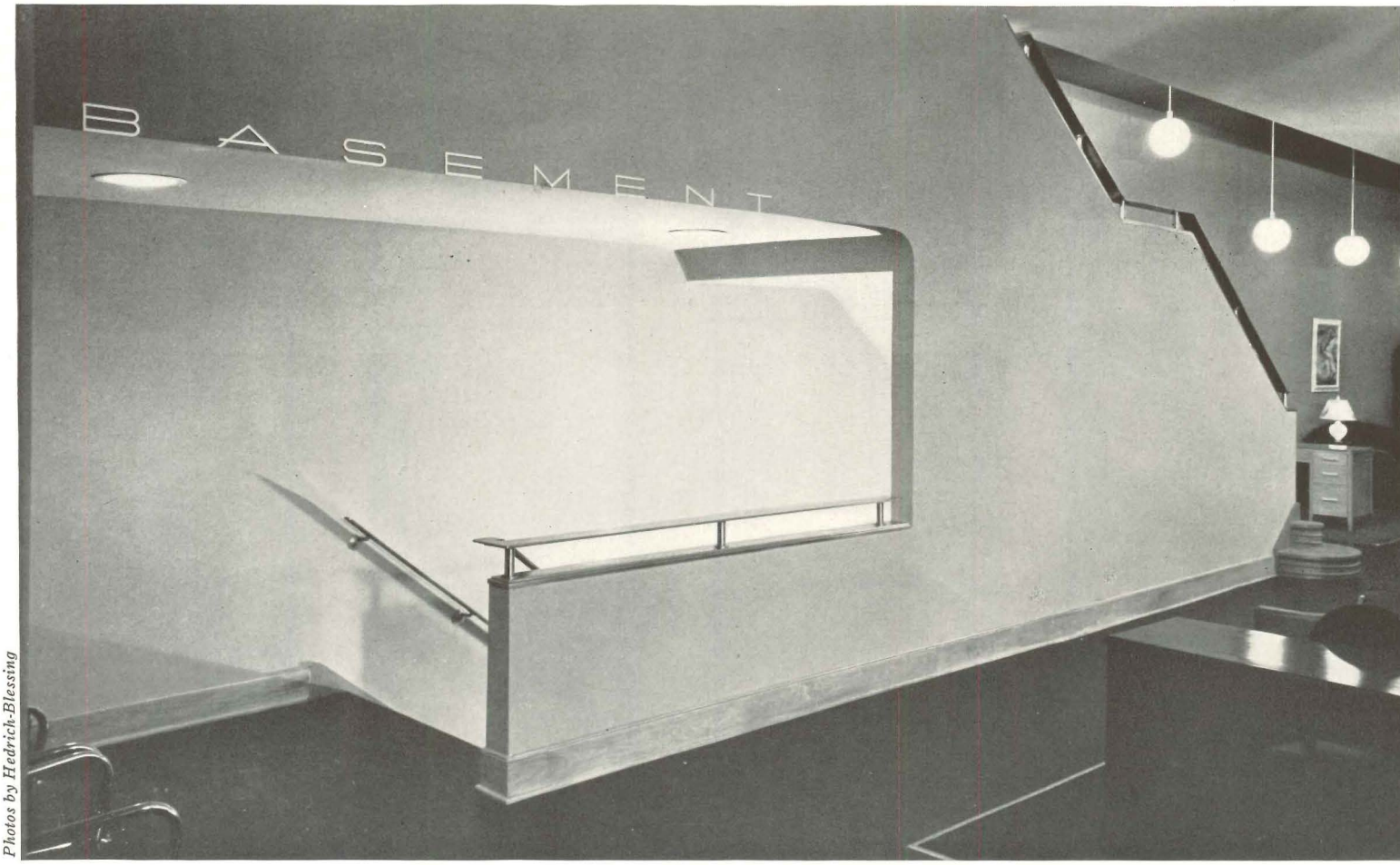
CHICAGO STORE ROBERT HELLER, Designer



Vestibule to the women's clothing department

THE BUILDING is of fireproof construction, with steel frame and pan-type concrete floors. Communicating between the floors are both stairs and an automatic combination freight and passenger elevator.

All of the floors are carpeted; the stairs are of steel with terrazzo treads. Partitions are of plaster over tile. The entire building is air conditioned, with separate units on each floor to permit more accurate zoning of space. Both the hot water to heat the building in winter and chilled water for summer cooling are circulated through the same coils in each unit by means of the same piping. Heating is accomplished by a forced circulation hot-water system, with an oil-fired steel boiler.

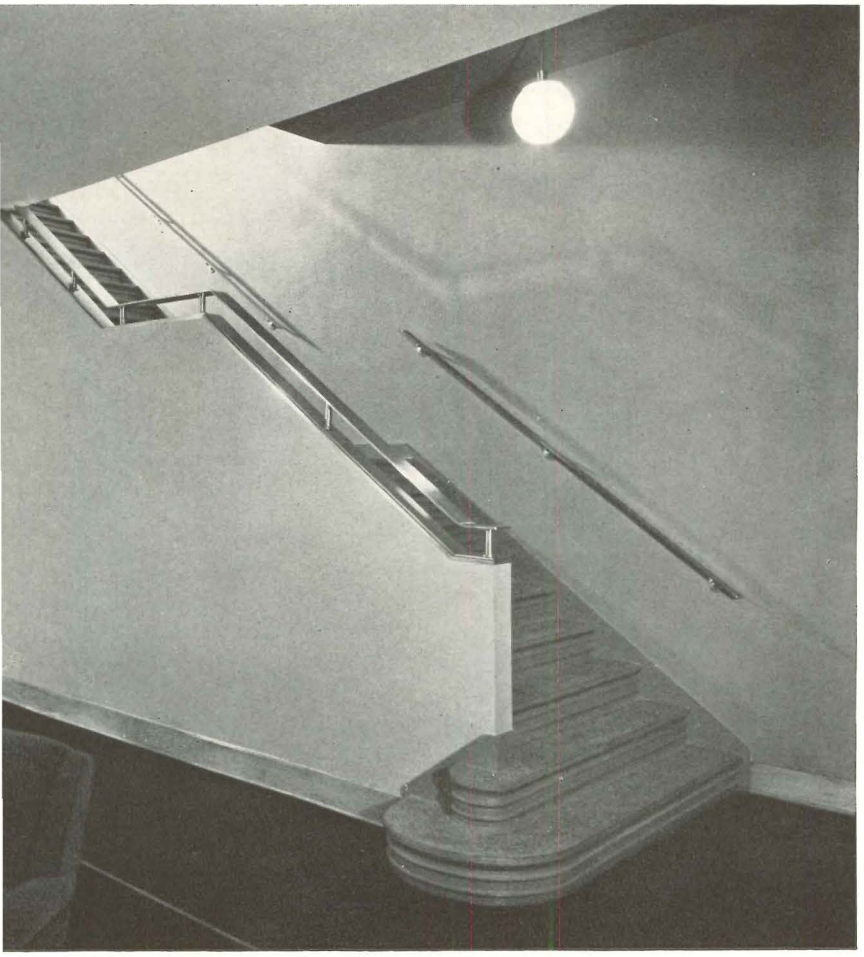


Photos by Hedrich-Blessing

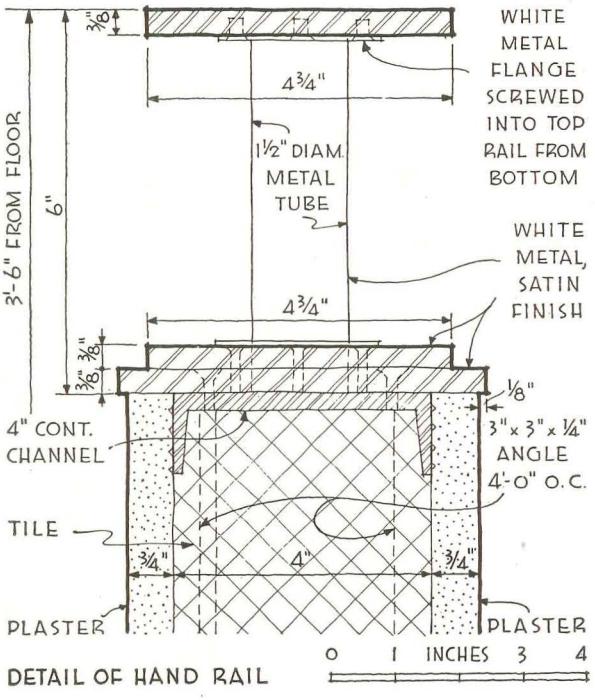
Basement stairs at one side of the ground-floor sales area

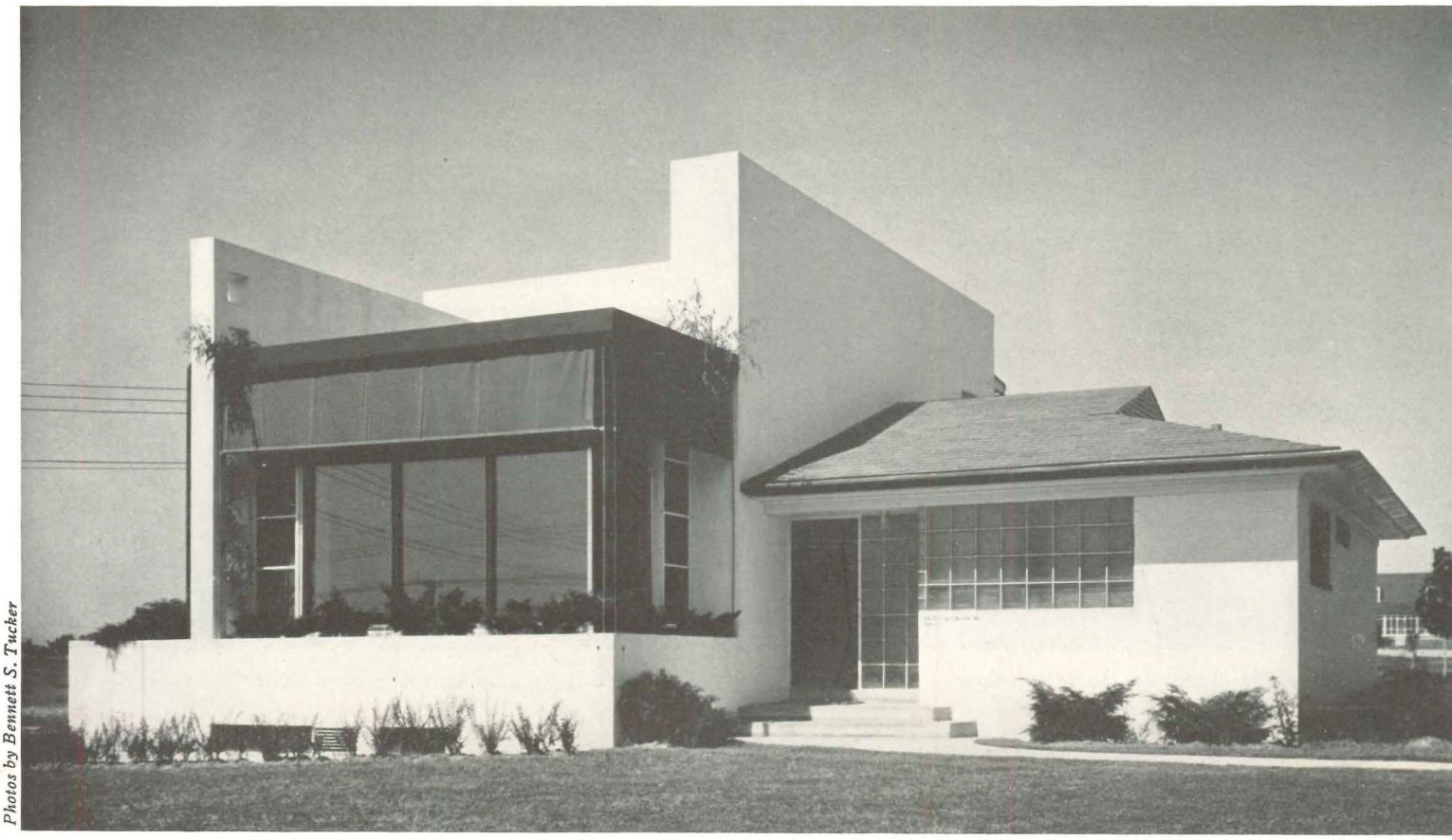
Carpet display room on the fourth floor

Appliance display case on the ground floor



Stairs up to the second floor; detail at right





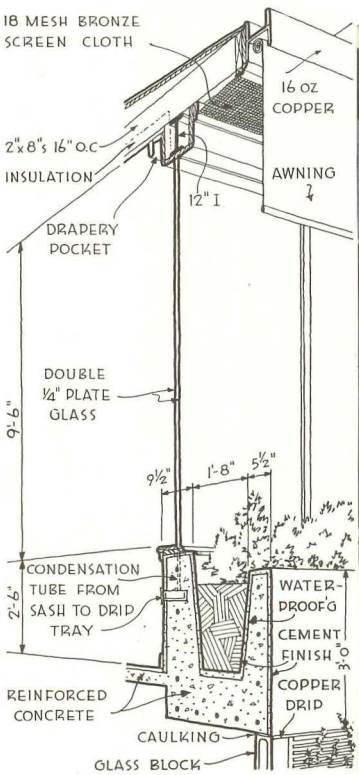
Photos by Bennett S. Tucker

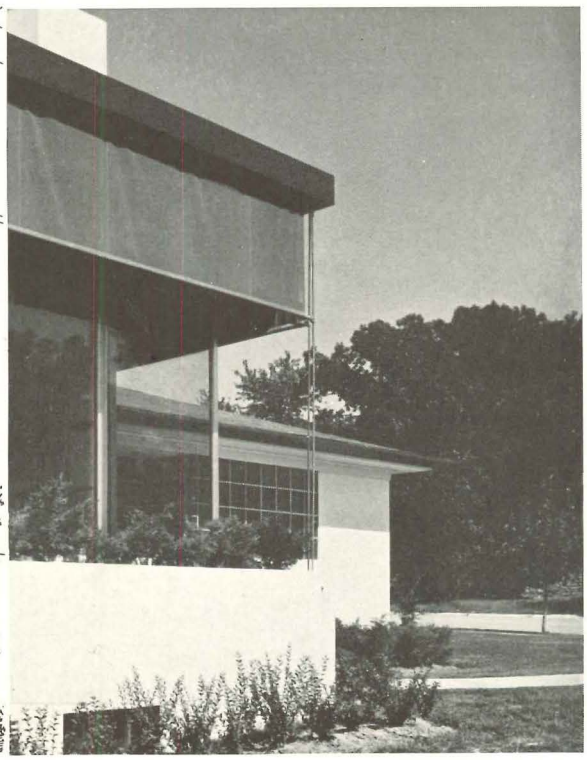
DENTAL OFFICE AND APARTMENT COMBINED

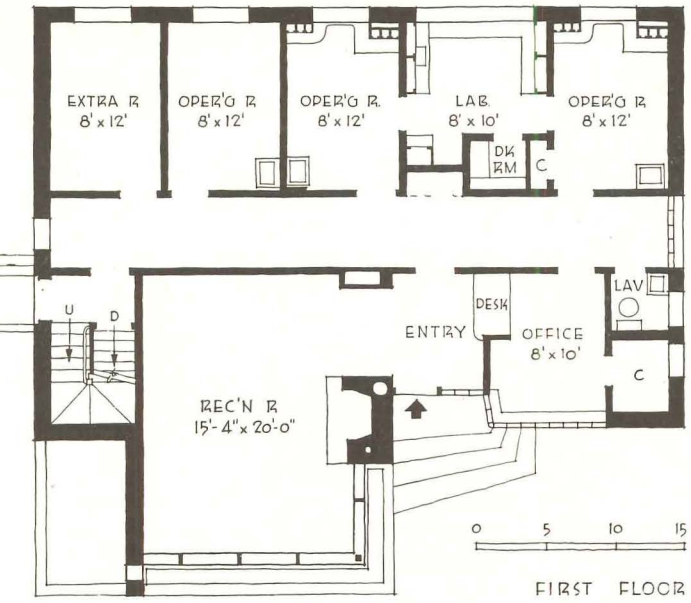
This dual-use structure at Clayton, Mo., was designed by Architect HARRIS ARMSTRONG. Inclusion of an apartment in the scheme accomplished two objectives: The building qualified for construction in a residential zone where cost of land was relatively low. The apartment furnishes some revenue which goes toward the maintenance of the property.

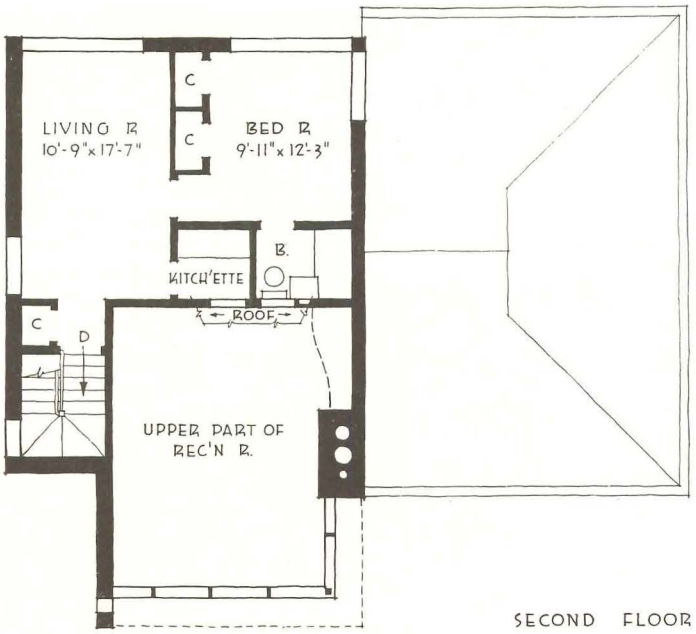
IN THE PROFESSIONAL part of the building, two basic things were desired: offices that would receive ample northern light; a comfortable and pleasant reception room. So a site was selected where the best outlook was toward the south, and the arrangement of the rooms followed logically from this condition. The apartment entrance is on the opposite side from the dentist's entrance, giving privacy to each of the units.

As the building is on filled ground, large spread footings and heavily reinforced foundation walls were required. Exterior walls are of hollow tile and brick masonry finished in stucco. Partition, floor, and roof framing is of wood. Interior walls are painted plaster. Fixed windows are of double glass, with built-in dehydrator pans. All air circulation into and out of the space between panes passes over calcium chloride in these metal trays which removes moisture and prevents frosting or sweating.






EXTRA R
8' x 12'
OPER'G R
8' x 12'
OPER'G R.
8' x 12'
LAB.
8' x 10'
OPER'G R
8' x 12'
DK RM
C
U
D
ENTRY
DESK
OFFICE
8' x 10'
LAV
C
REC'N R
15'-4" x 20'-0"
0 5 10 15
FIRST FLOOR


LIVING R
10'-9" x 17'-7"
C
C
BED R
9'-11" x 12'-3"
B.
KITCH'ETTE
ROOF
C
D
UPPER PART OF
REC'N R.
SECOND FLOOR

WHAT'S NEW IN MATERIALS AND EQUIPMENT

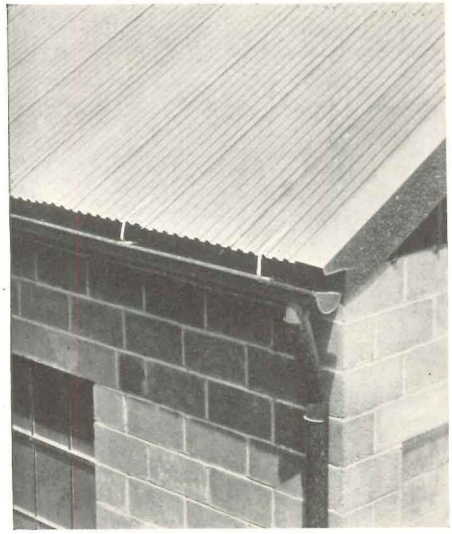


Figure 1

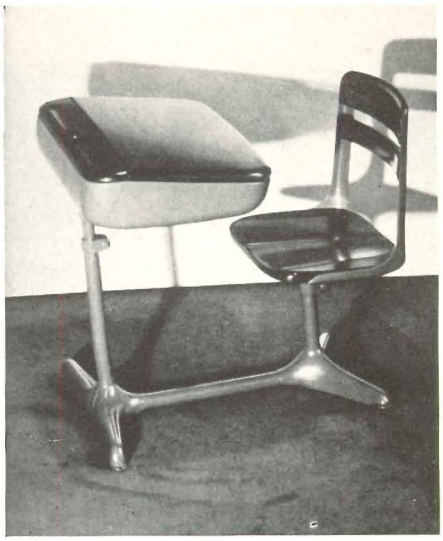


Figure 2

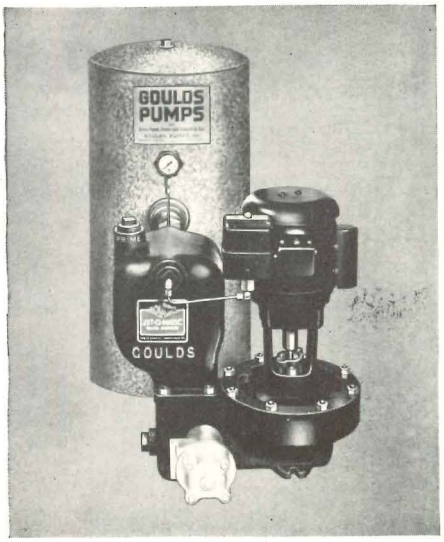


Figure 3

Gutter Note

PORCELAIN enameled gutters and downspouts, rustproof and with high resistance to acid-laden industrial atmosphere, offer complete freedom from upkeep and replacement, their manufacturer reports. Their long life offsets their additional cost. The enamel is applied over Vitrenamel, a special enameling sheet manufactured by U. S. Steel Corporation subsidiaries. (See Fig. 1) Ferro Enamel Corporation, Cleveland, Ohio.

Comfort for Scholars

REFLECTING THE STUDY and attention now lavished on most school equipment, is a new combination desk and seat (see Fig. 2). Its design, dictated by use-convenience and posture habits, is the collaborative effort of the American Seating Company, its manufacturer, and Design Director Onnie Mankki, of Designers for Industry, Cleveland, Ohio. Both desk and seat are height adjustable. The so-called "streamlining" permits easy use and cleaning of the equipment and offers less chance for "bumps" or caught clothing. Desk top, seat and seat-back are of maple; book compartment and feet are steel stampings. Universal Desk and Seat, American Seating Co., Grand Rapids, Mich.

Help for Well Worriers

A COMBINATION shallow-well, deep-well pump of the jet type (Fig. 3), designed particularly for shallow wells that drop during dry spells and require quick conversion to deep-well pumping, has just been introduced. The new pump, its makers state, is convertible from shallow- to deep-well use by removing the shallow-well jet assembly from the base of the pump unit and lowering the deep-well jet assembly into the well to the desired setting. Other features claimed for it are the absence of valves, pistons, and gears, and a lubricated-for-life motor. The unit cannot lose its prime under any condition; it is flexible in location—may be placed on lakes, ponds, streams, or in wells. Jet-O-Matic, Goulds Pumps, Inc., Seneca Falls, N. Y.

New Duct Cuts Swell Figure

A "STREAMLINED" metal air-conditioning duct—designed to be looked at—has been developed for use in exposed places. The new duct, with a smooth, unbroken surface, has the appearance of a beam. Its use eliminates the expense of furring with lath and plaster, although for best appearances, it is recommended that the space between the duct and the ceiling be filled in. Other advantages of its improved design are tighter seams, which reduce leakage and permit a reduction in the capacity of air-handling equipment, ease of decoration, greater head room. The new, tighter seams are achieved by fastening sections with counter-sunk flat-head screws. The screw heads and joints are then filled with a special metal-holding cement. Hangers, if needed, are put inside the duct. The inside seams are flattened to assure smooth inside surfaces. Construction and installation of the new ducts require a higher degree of care and precision than conventional types, it is claimed. Carrier Stream-Lined Duct, Carrier Corp., Syracuse, N. Y.

Spring Clip Helps Walls Breathe

A NEW SPRING WIRE CLIP for attaching gypsum lath to wood studs makes for a resilient, floating wall construction that reduces plaster cracks, it is claimed. It is made in two types: for flat surfaces and corners. The corner clip obviates the use of reinforcing at internal angles; both clips reinforce lath joints. The clips are installed between all horizontal joints, 16 in. O.C. Pronged ends, attached firmly to the sides of each stud, hold the clip in place yet permit a "breathing" movement of the entire wall. Gypsum Lath Clips, Olsen Products, Inc., Binghamton, N. Y.

New Lockers Halve Floor Space

A SOLUTION to the problem of undersized locker rooms is the new "Two-in-one Steel Locker" which provides locker space for two persons in one-locker floor space. The space-saving miracle is achieved by dividing the upper two-thirds of a single unit into two narrow compartments. Each of these has its own door and is provided with two single-prong coat hooks and a coat rod. The lower third of the unit contains two hat compartments, one above the other. These are automatically unlocked when

(*Continued on page* 116)

First of this month's group of houses designed for hillside lots is this two-story residence in Gouverneur, N. Y.
Photo by Severance Studio

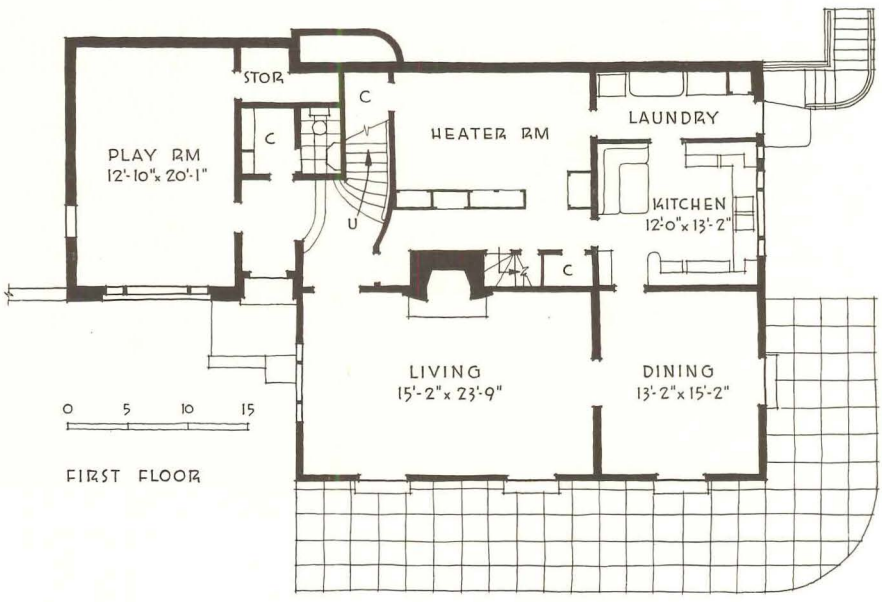
HILLSIDE HOUSES

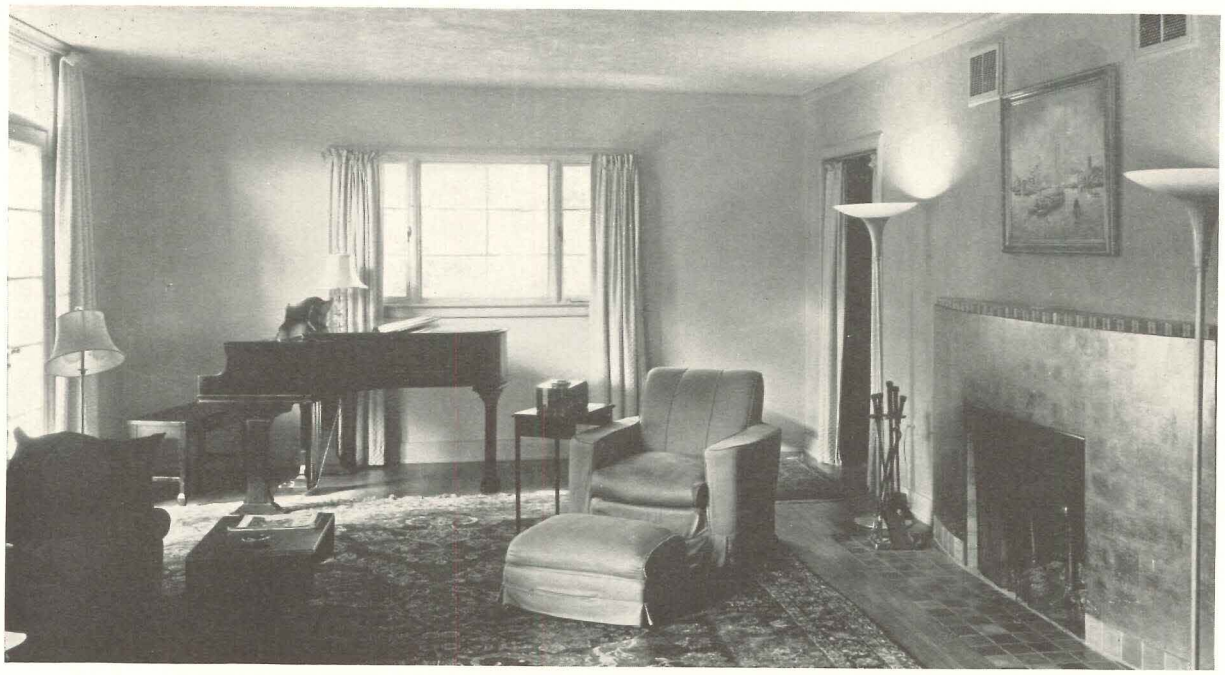
Photos by Severance Studio

STEEP LOT CONDITIONS PLAN ORGANIZATION

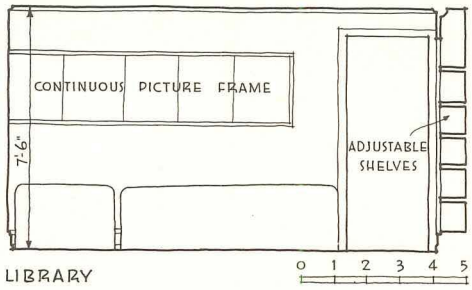
The lot on which the Mason Smith residence in Gouverneur, N. Y., was built slopes steeply from the street. For it Architect D. KENNETH SARGENT and ERVAY J. BAKER, Associate, designed this two-story house which takes advantage of the slope to place all living quarters on the first floor so that they open directly onto dining terrace and garden.

IMPORTANT IN PLANNING the house was the organization of the various areas. The second floor is given over to sleeping quarters (the library is designed for use as a guest room as well as a study); with living and dining rooms on the first floor, privacy and proximity to garden are obtained. The service area is concentrated in the unlighted north portion of the first floor against the retaining wall, and is accessible to the service stair which leads to the street. Adjacent to the playroom under the garage are closets for storage of toys and photographic equipment. The entrance vestibule has a flagstone floor; elsewhere floors are of birch, except in baths where linoleum was used. Casement windows are of the sliding type; other windows are double hung.

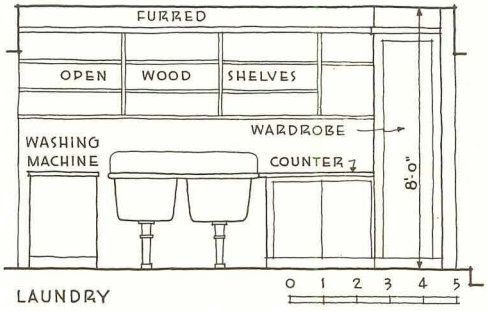




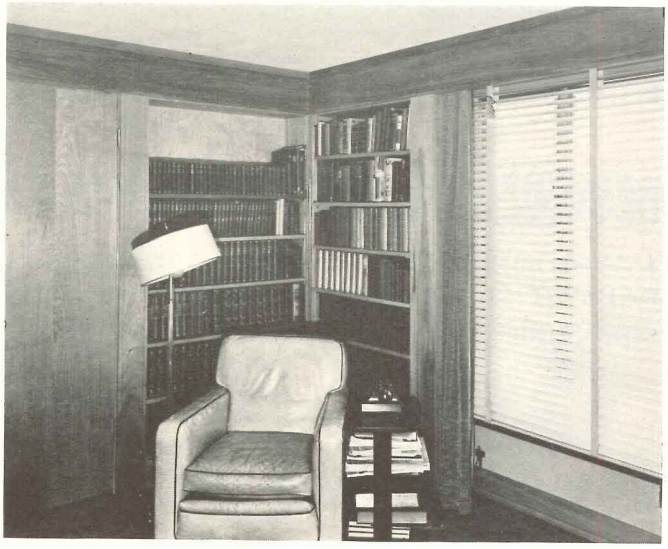
Living room: Fireplace is of plaster covered with copper leaf; French doors at left lead to terrace.



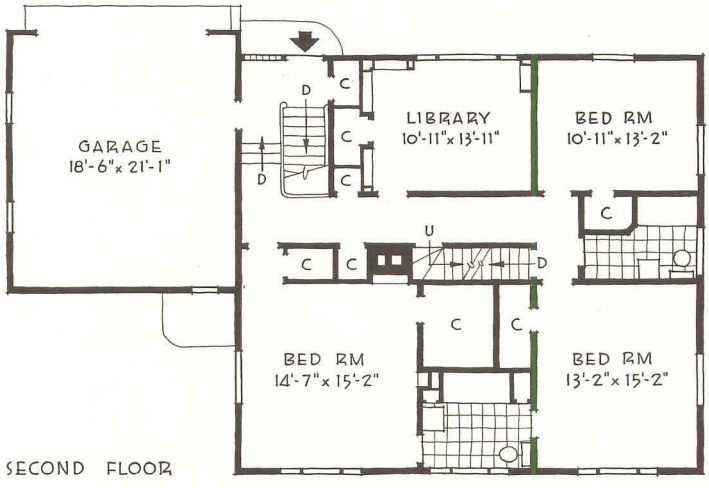
LIBRARY



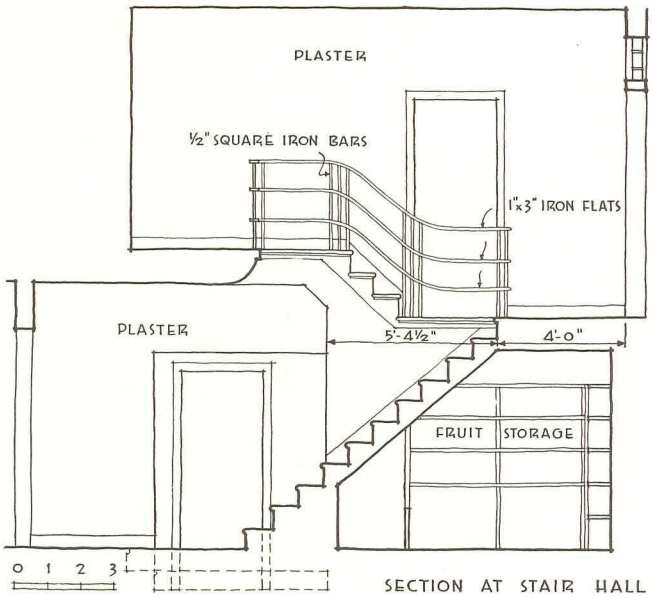
LAUNDRY



Library: Bookshelves, trim, and door are of dull-finish birch.



SECOND FLOOR

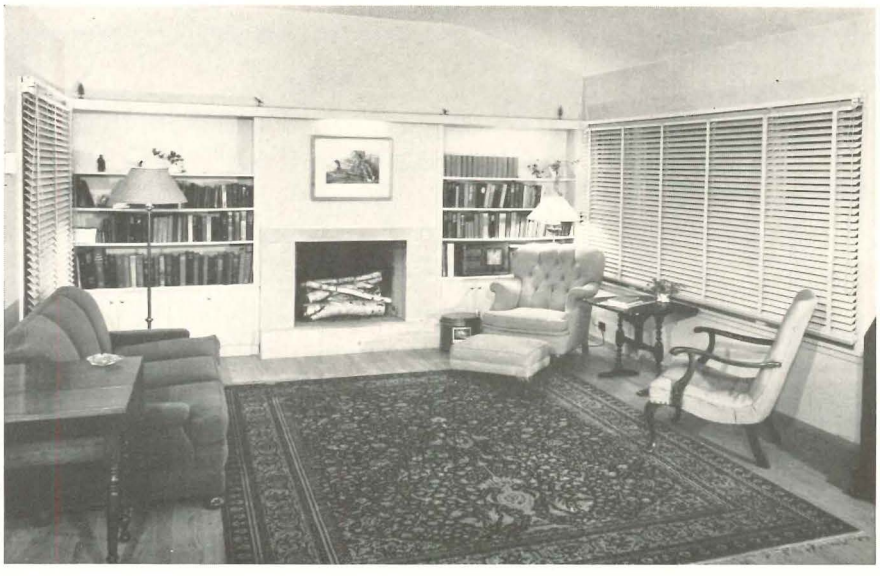


SECTION AT STAIR HALL

DESIGNED TO MEET EXPANDING NEEDS

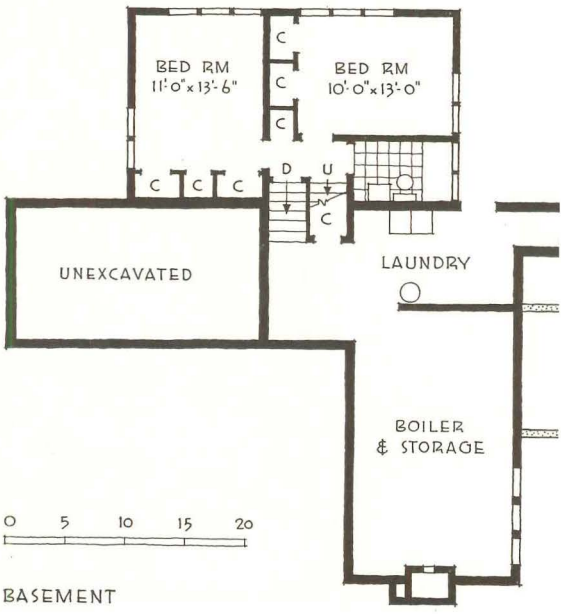
Architects HAMILTON BEATTY and ALLEN J. STRANG planned this house for Mr. and Mrs. Leon E. Isaksen in Madison, Wis., so that it could be added to with a minimum of interruption to original lines of house.

THE SITE IS a ridge which slopes in two directions; owners' instruction was to disturb the site as little as possible, and to adapt the house to it. The main feature is its provision for easily adding on two bedrooms and a separate dining room (future work shown in stippled poche). Bedrooms will occupy the

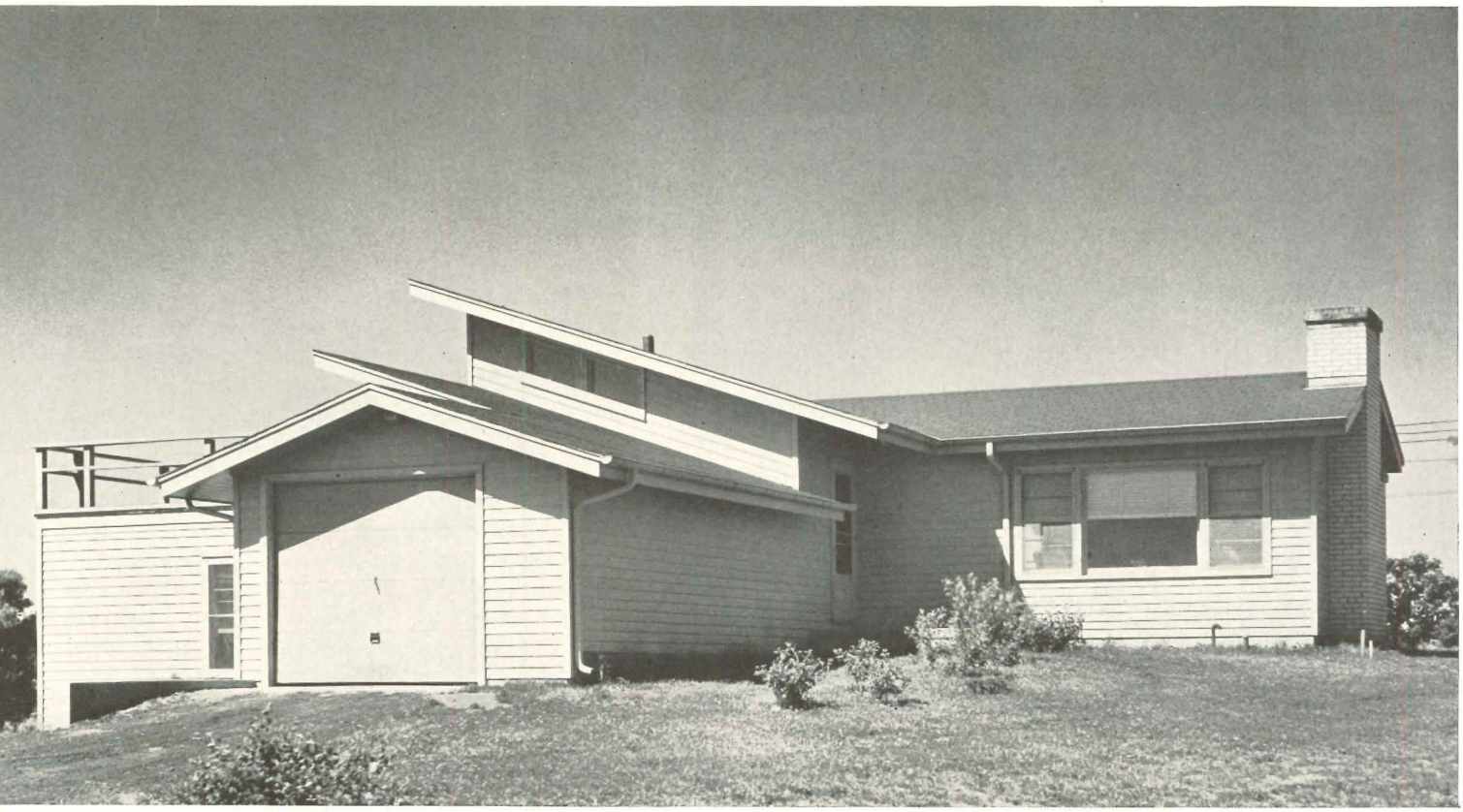


Photos by Charles C. Bradley

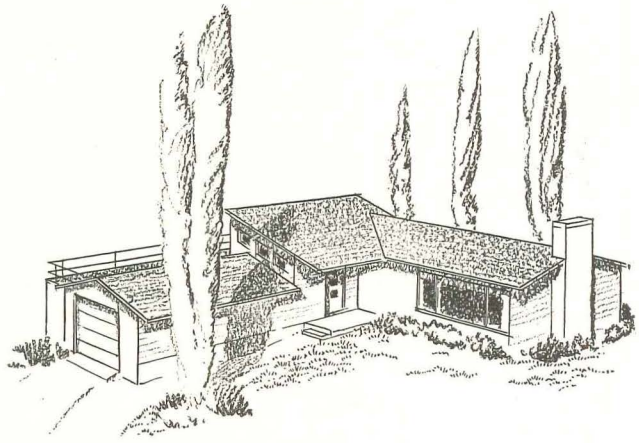
Living-room walls and ceiling are ivory plaster; windows overlook Lake Mendota.



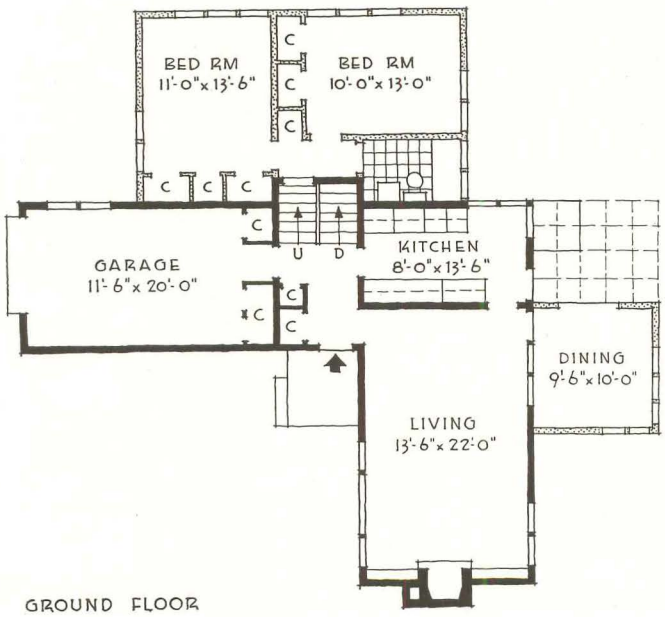
BASEMENT



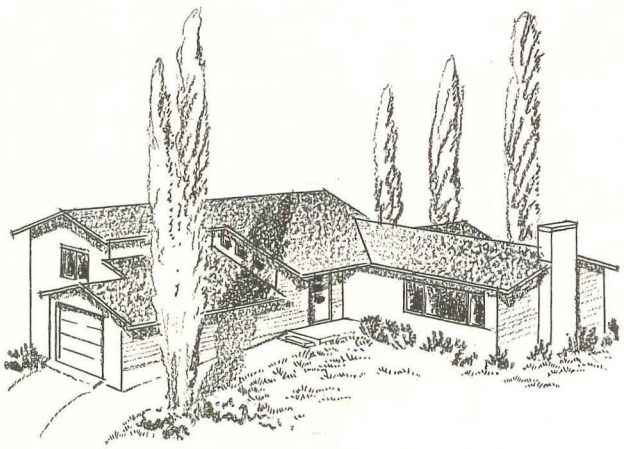
space now used as a sun deck; their addition will represent a completion of the exterior design. The exterior walls are painted sand color; shingles are blue black. Front and rear doors, garage door, and overhang soffiits are painted sumac red. Interior walls are of plaster, painted in light colors.



Perspective of house at present



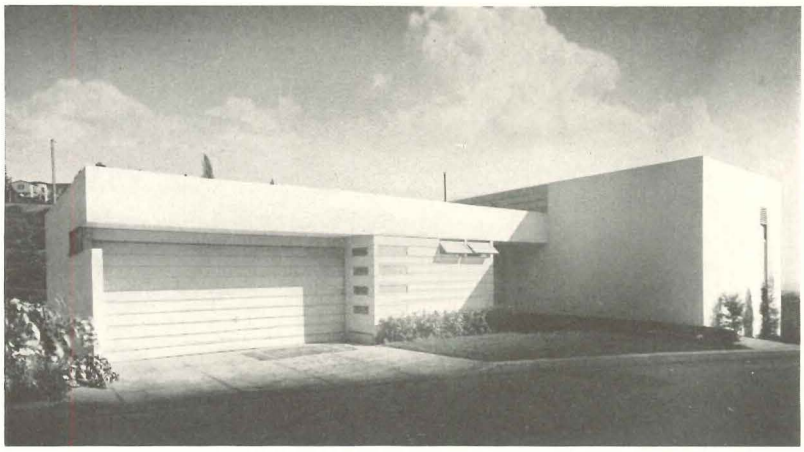
GROUND FLOOR



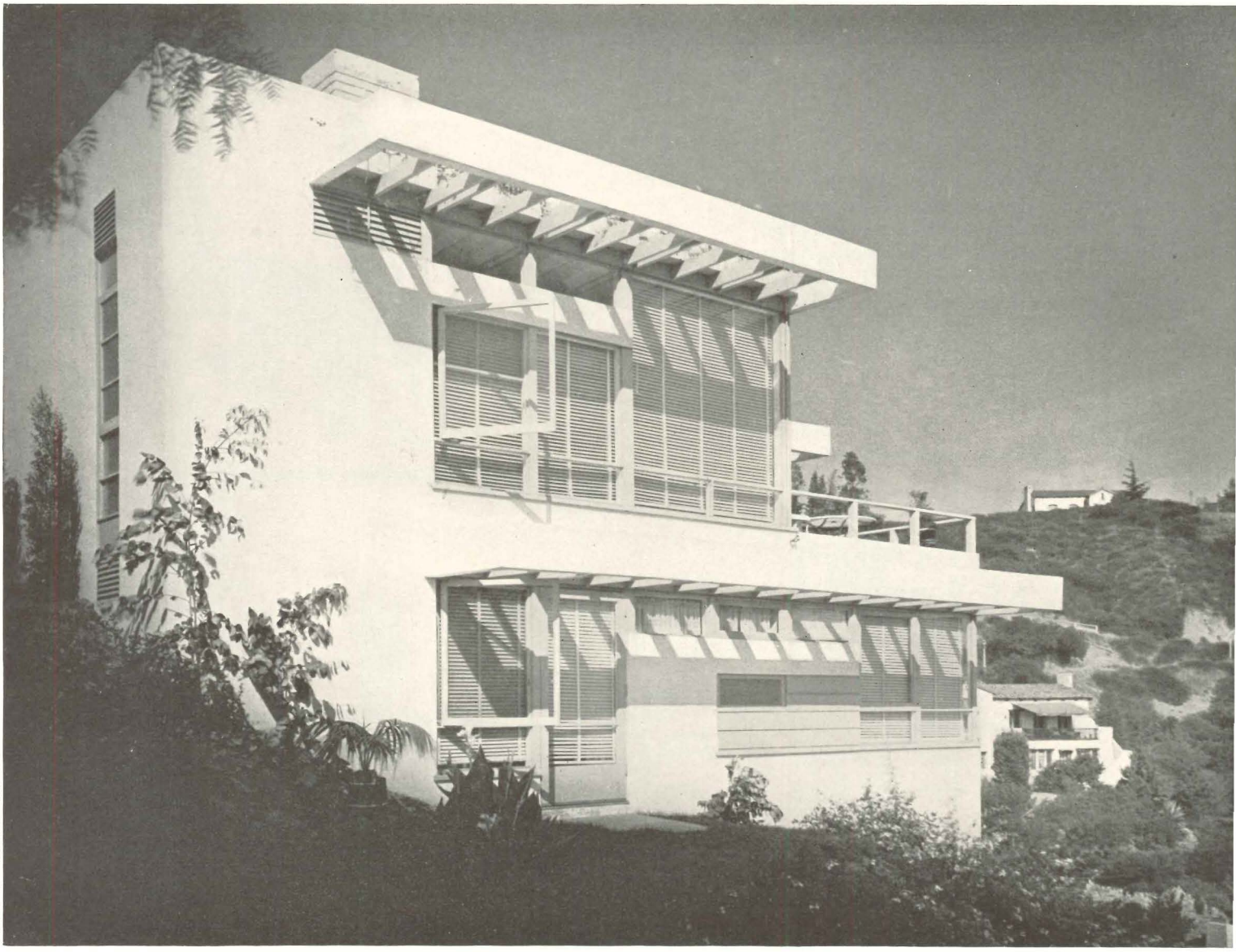
Perspective with addition of bedrooms and dining room

DESIGNED FOR A STEEP AND SHALLOW LOT

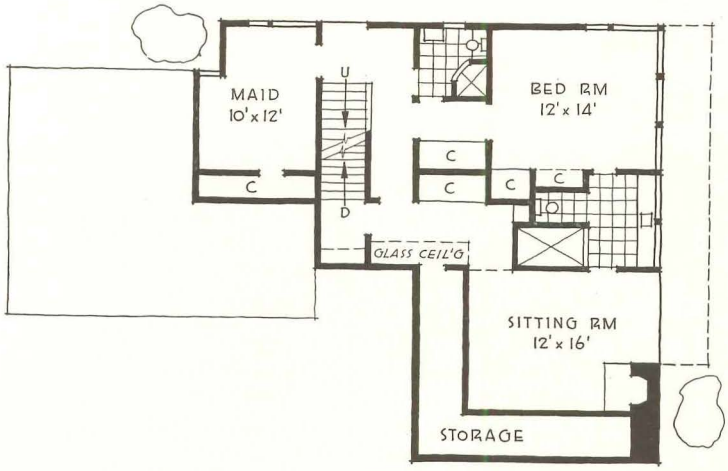
On a steep lot in Los Angeles, Calif., is the residence of Mr. and Mrs. A. A. Ernst, for which GREGORY AIN was designer. The rather long, shallow lot invited ingenuity in solving the problem of obtaining privacy and some space for outdoor living. Since the house had to be located practically at the street lot line, walls on the street side of the house are blank except for small openings which accent horizontal and vertical lines.



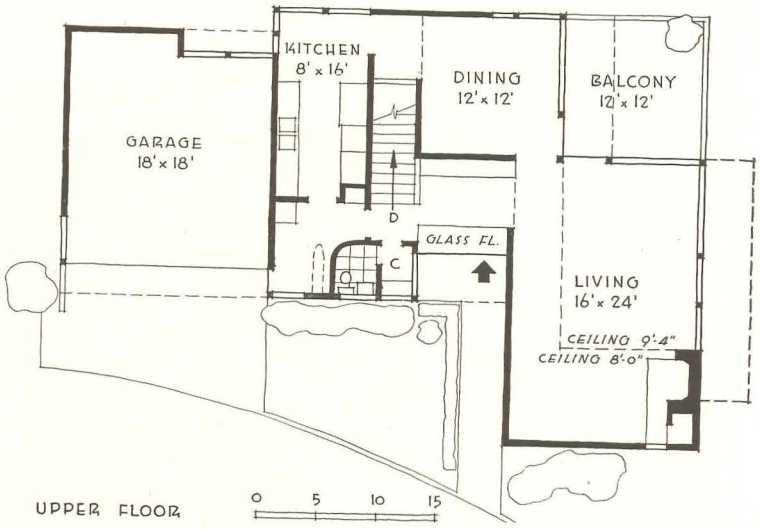
ENTRANCE TO the house is at street level (service entry is at left). The main entry has a glass floor which serves during the day to admit light to the foyer of the downstairs sitting room; at night it acts as a lighting fixture. All main rooms except the dining room are reached from the entry; most of the rooms have access to the outside—either to the garden or to balcony, or direct to the street. Construction (continuous cantilever post) provides earthquake resistance in spite of the continuous glass walls on the south and east. Windows on the south are shaded by pergolas carrying irrigated flower boxes. The exterior is of oyster-white stucco with gray-blue redwood trim.



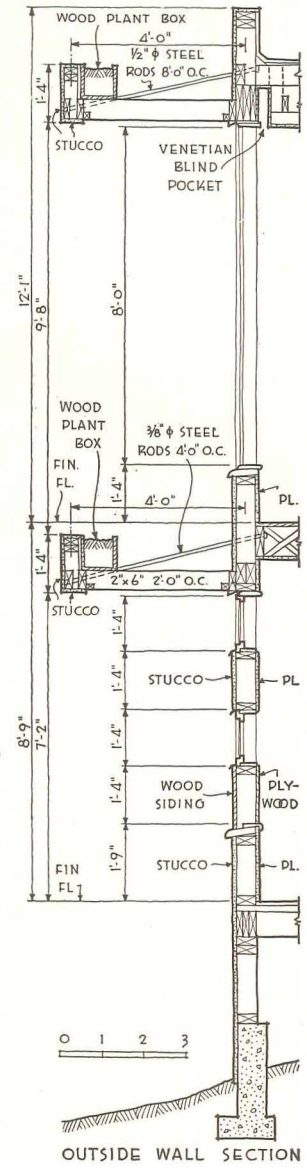
Photos by Fred R. Dapprich



LOWER FLOOR



UPPER FLOOR

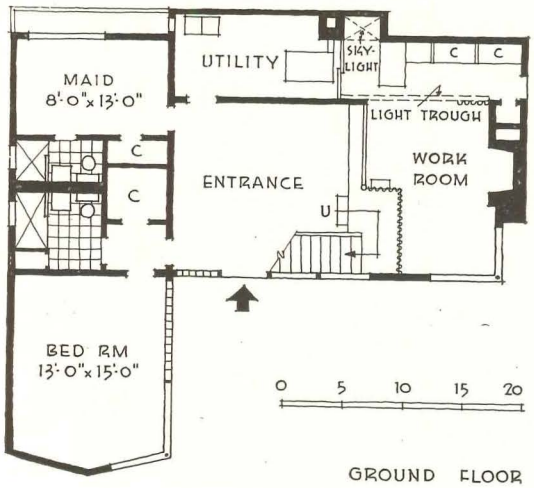


OUTSIDE WALL SECTION

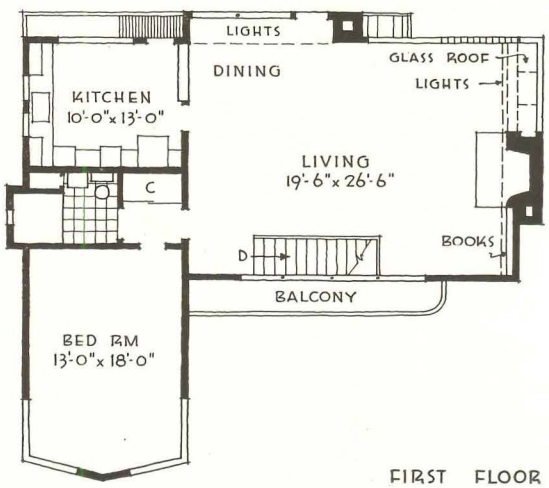
AN ARCHITECT'S HOME ON SEATTLE HILLSIDE

In planning this residence for himself and his mother, Architect PAUL THIRY had three particular aims in mind: to obtain privacy for each unit, to take advantage of the view to north and provide a garden on south, and to separate main entrance from living area.

Photos by Roger Sturtevant



GROUND FLOOR

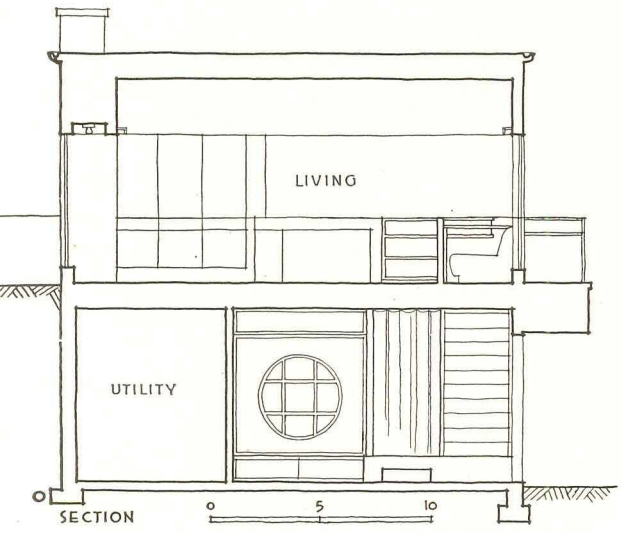


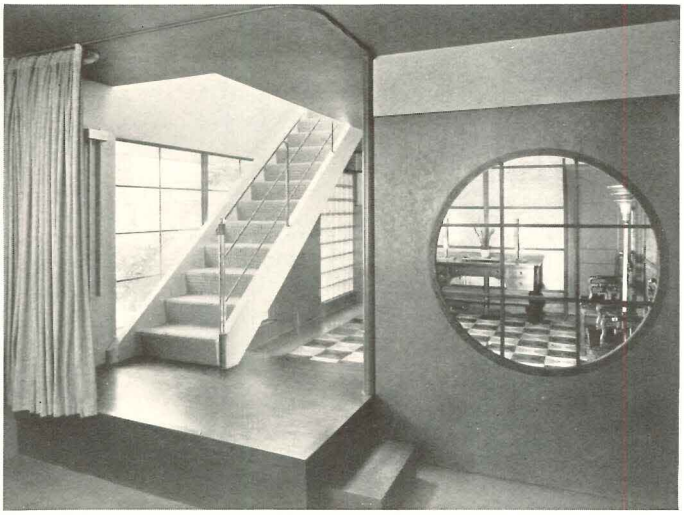
FIRST FLOOR

View from pergola in rear garden, looking across the terrace to the living room

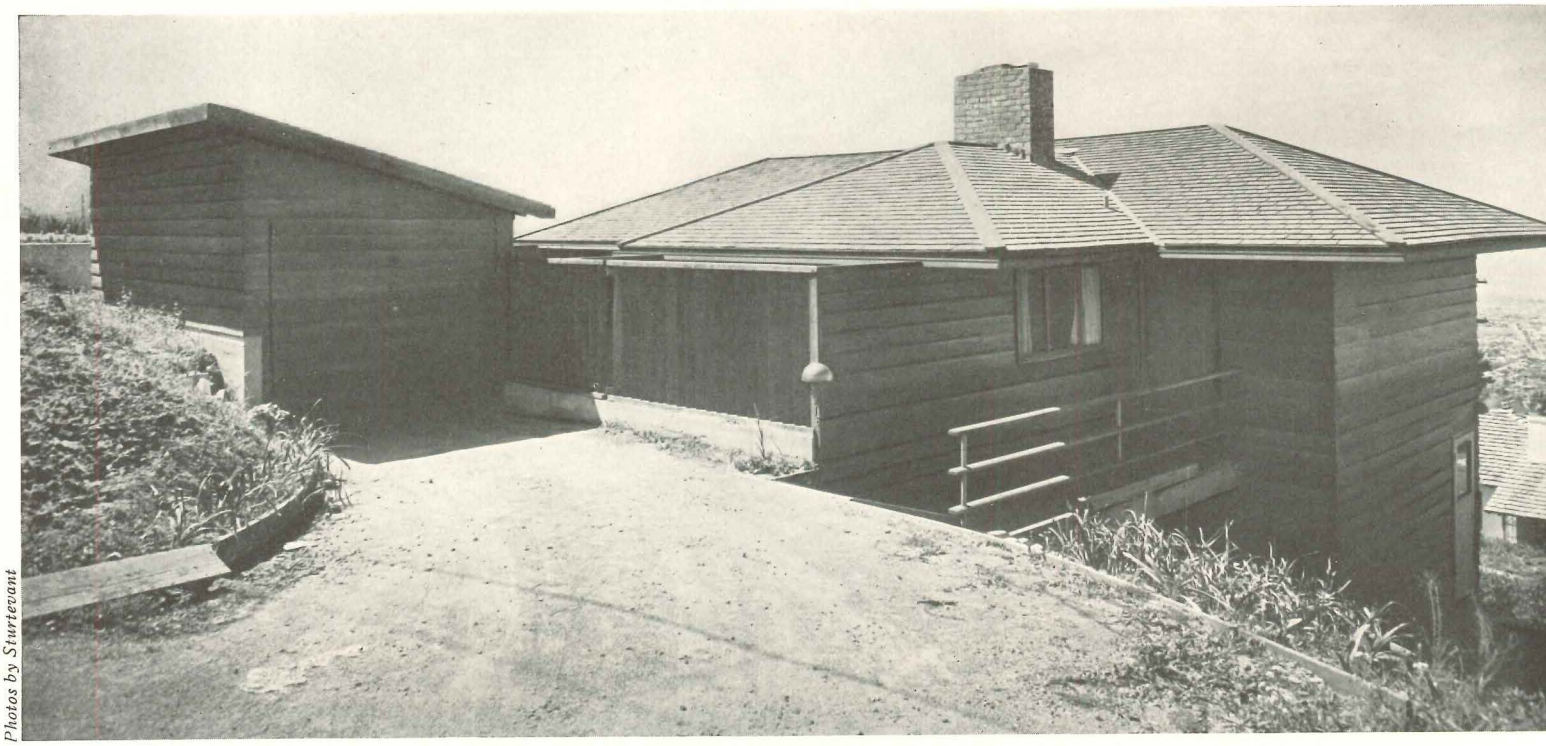
THE SLOPE OF the property made possible a close relationship between indoor and outdoor living areas, since the second-floor living area is on the same level with the rear garden. At the same time, the living room has an outlook on the north (front) toward a boulevard and park. Besides, complete dissociation of entrance and living areas was achieved by this second-floor location of the living room. This particular solution was desirable, says the architect, because it lends privacy to an otherwise open plan. The spaciousness of the entrance hall is compensated by the fact that the plan holds hall space at a minimum elsewhere. Construction of the house is concrete to grade, with exterior walls of metal lath and cement. Exterior walls are painted white; the steel window sash are blue green, and, for accent, the doors are painted coral.

Glass block and plate glass in alternate panels vary the light transmission for living area

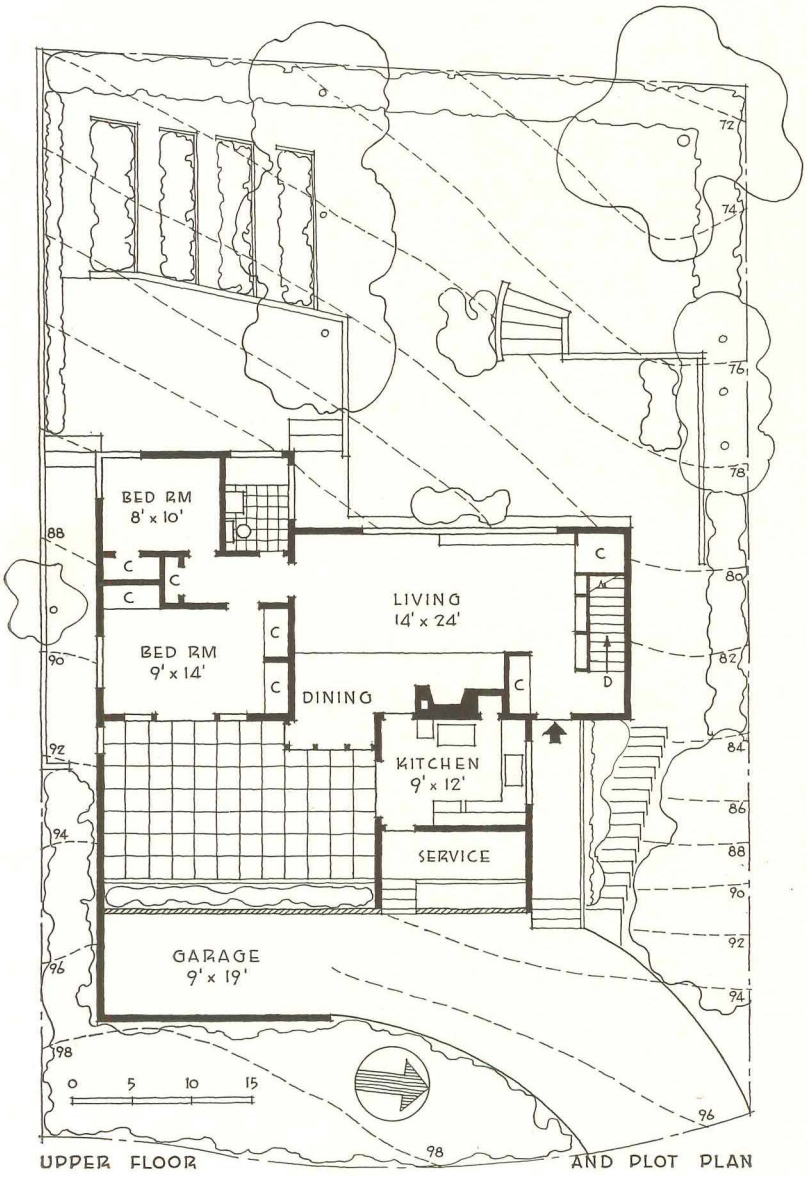




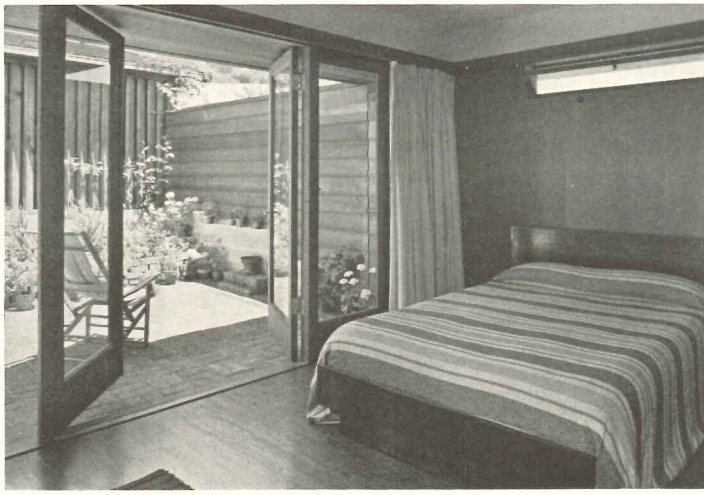
Entrance hall and stair to living area, seen from work space

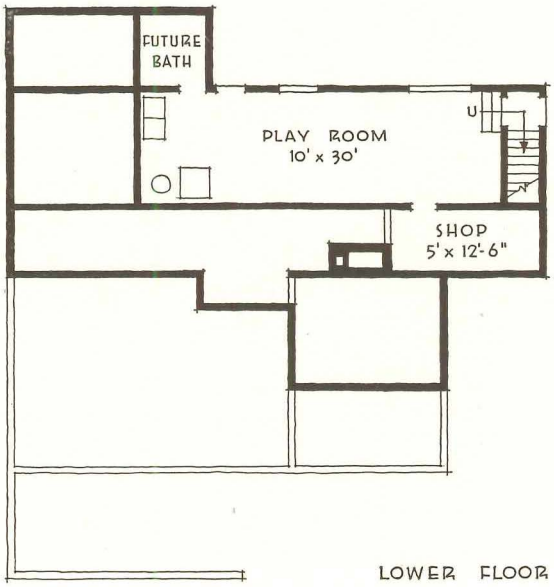


Photos by Sturtevant



UPPER FLOOR AND PLOT PLAN



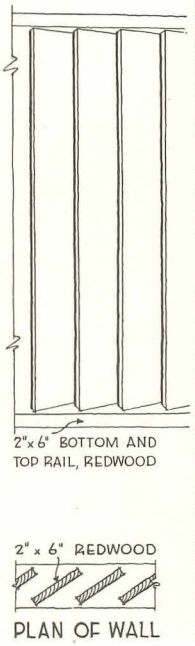


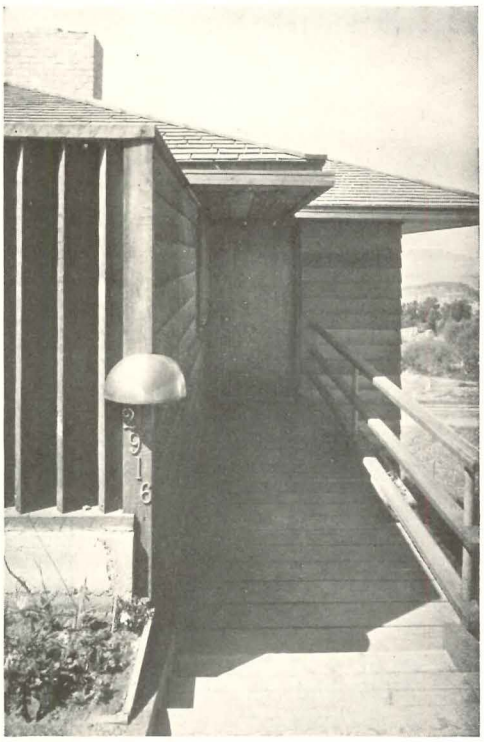
LOWER FLOOR

HOUSE PLANNED AROUND A COURT

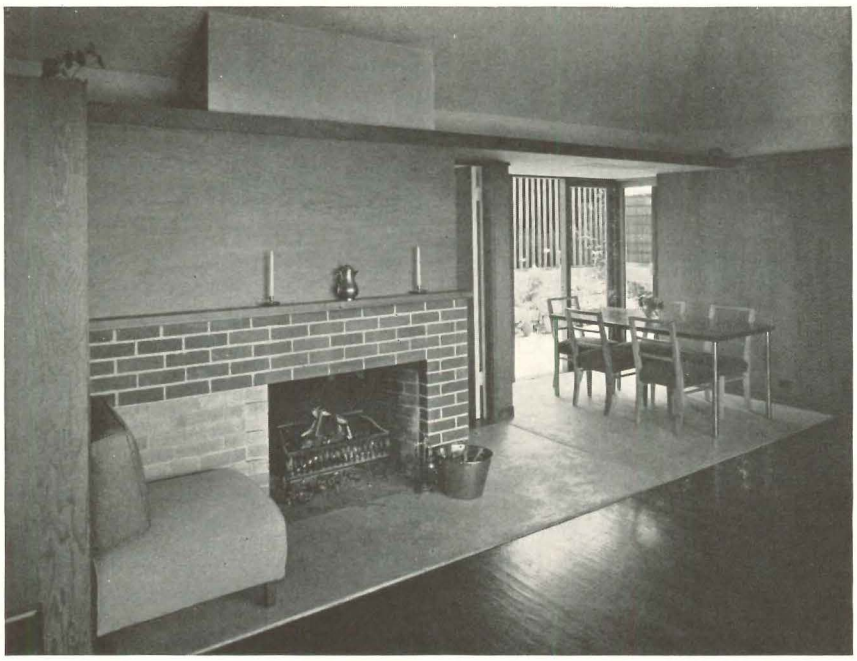
Designer FRANCIS JOSEPH McCARTHY planned this house on a hill, overlooking Berkeley, Calif., and San Francisco Bay, for Dr. and Mrs. H. A. McPherson. The owners required that the house be designed to provide privacy and that it be easy to maintain.

To OBTAIN that privacy requested by the owners, the house is sheltered on the eastern (road) side by a fence which encloses a court and garden. The court is a special feature of the plan, with master bedroom, dining alcove, and kitchen all opening onto it. The house acts as protection against the western winds, and the ingenious louvered fence (see detail, right) on the east allows for circulation of air on hot days. A hidden door in this fence opens onto a small service court. The plan is one which permits easy maintenance, as all rooms are on the same floor. Ample provision of closet space is a further aid to housekeeping. The exterior is of wood frame with beveled redwood siding treated with logwood oil. The furniture was all designed by Mr. McCarthy, as were the lighting fixtures. Edward A. Williams designed the landscaping scheme.

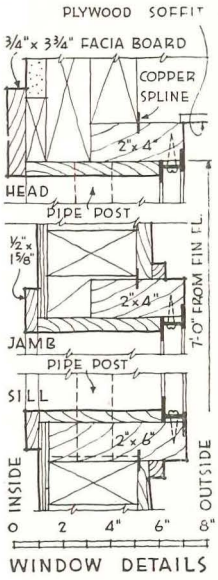




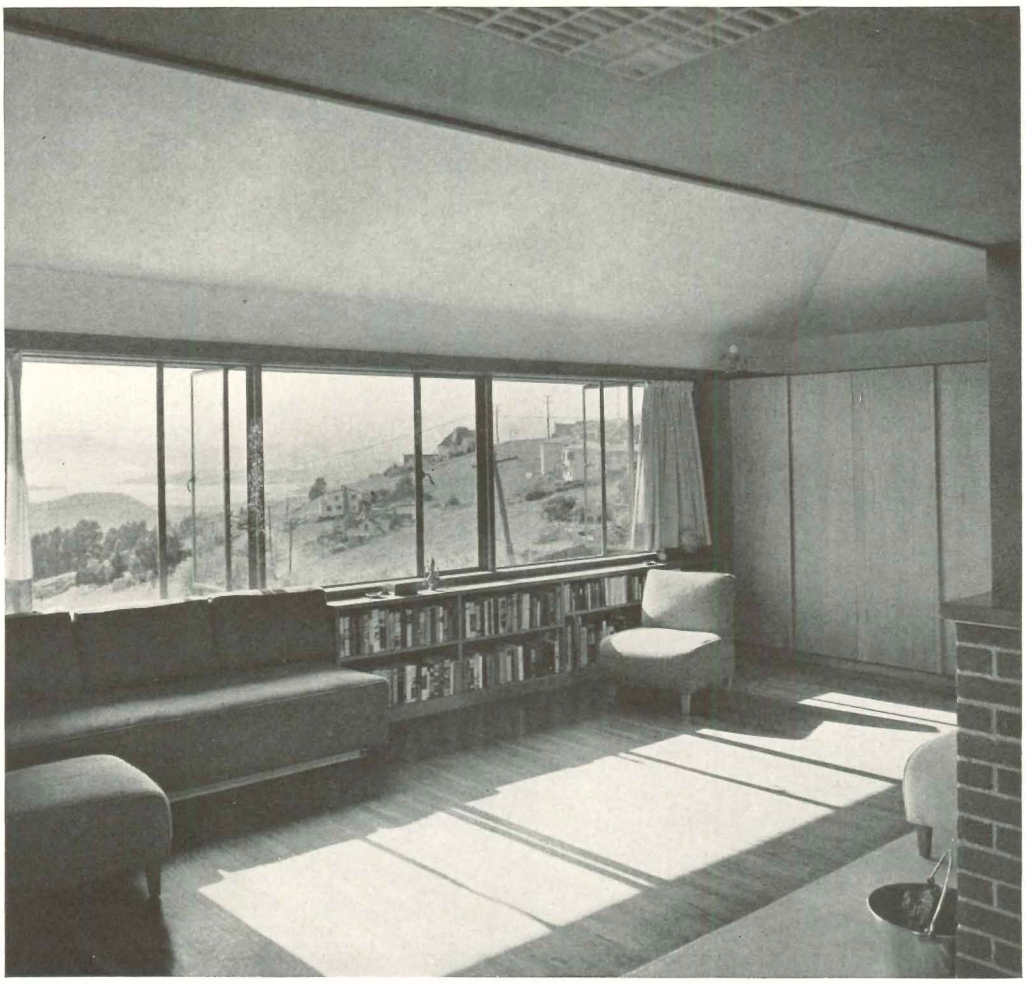
FRANCIS JOSEPH McCARTHY, Architect



Omission of a partition between living room and dining alcove adds to the spaciousness of the area. Walls are redwood plywood, untreated; hearth is concrete.



Windows are hung on a projecting wood frame—a simple and economical construction, according to the designer.



Photos by Sturtevant

Sturtevant

telesis ★

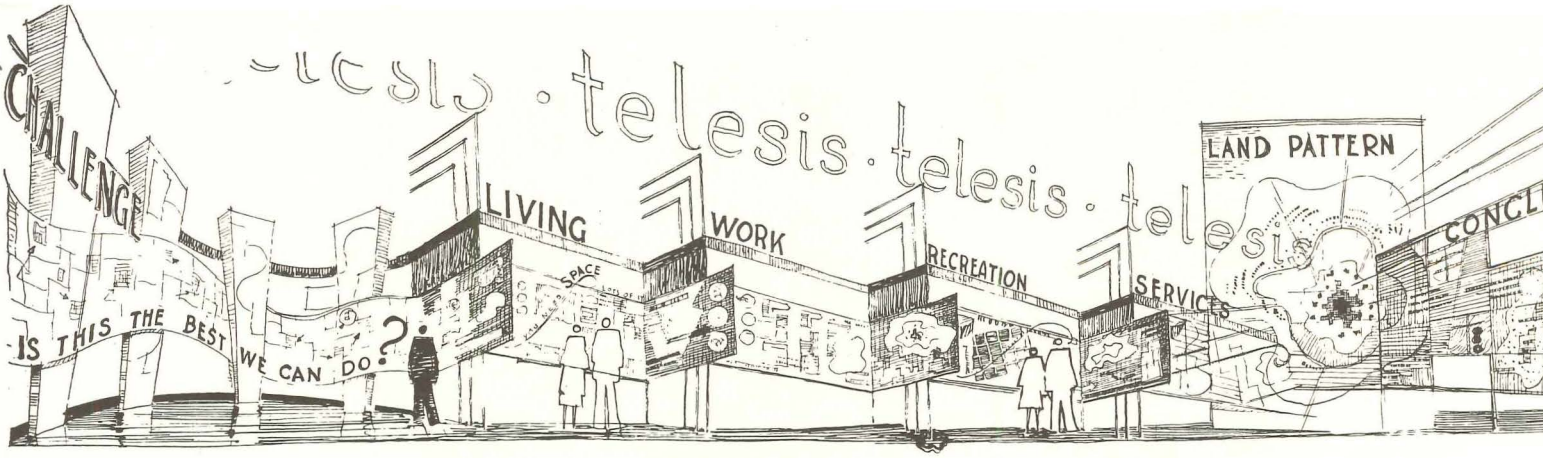
WHEN 13,000 PEOPLE troop to a museum to see and study an architectural exhibit, the story is big architectural news. That is what happened in San Francisco when Telesis, a group of live-wire young men and women, placed on exhibit a show called "Space for Living." With neither training nor experience in display technique, with limited time and—more important—limited funds, but with enthusiasm and singleness of purpose, this group conceived and executed an exhibit which is outstanding in interest, content, and method.

Invited last winter by the San Francisco Museum of Art to put on an exhibit, Telesis (then but four months old as an organization) began first to study the subject which is the object of its existence—environmental improvement. As plans were formulated interest grew and new members came into the group. By June there were 35 enthusiastic young architects, city and regional planners, landscape architects, and industrial designers working on the exhibit in an empty downtown store. On July 31, the exhibit opened, with 900 local and national celebrities, civic leaders, and lay citizens present. Originally scheduled for a four weeks' run at the Museum, popular demand held it over for an extra week. It is now touring the Northwest and will shortly go to the Southwest.

Telesis came into existence a year ago when six young men from San Francisco's Bay Region decided to do something to improve the environment in which they live. Aware that today's social and economic factors are not those which existed when our cities began, they became convinced that the slow deterioration of our environment could be halted only by careful evaluation of these factors and by conscious planning of future development. Limiting themselves to their own immediate environment, they embarked on a program of research. Their aim is to call attention to existing problems in the Bay Region and to suggest a method of attack rather than to propose specific solutions.

Telesis is organized on a non-profit basis and is affiliated with no other organization or group. Of prime importance in its organization is the emphasis on group effort and individual anonymity. The members are recent college graduates—their average age is 28—who are willing to contribute part of their spare time to the work. As a permanent organization, Telesis will continuously take in younger members to replace those who drop out because of increased business activity or other demands on their time. These last will become associates, acting in an advisory capacity. Present associates include some of San Francisco's most distinguished architects.

★ ***progress intelligently planned and directed; the attainment of desired ends by the application of intelligent human effort to the means*** **(Webster). Telesis, environmental research group of young San Franciscans, made its first public appearance in a recent exhibit which drew 13,000 visitors during a five weeks' showing.**



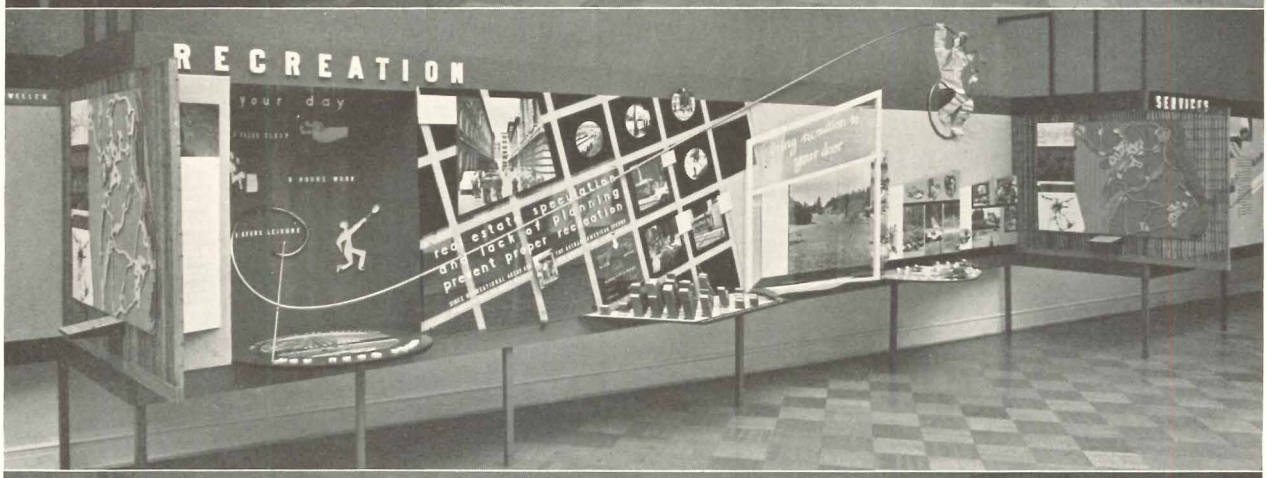
Sketch by John Ekin Dinwiddie

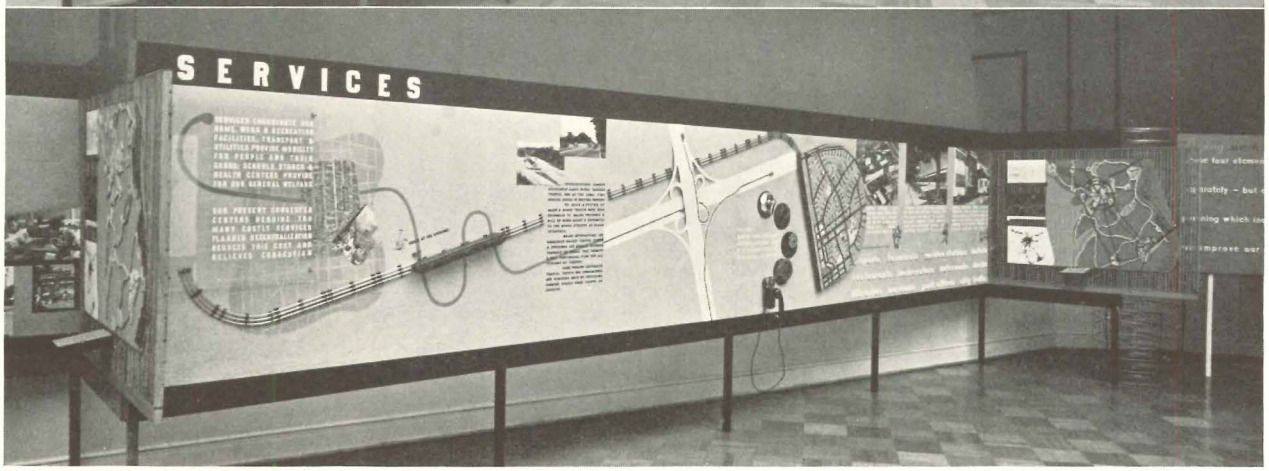
telesis

Four main panels dramatize the project's broad scope. Between these, regional maps suggest planning schemes for specific phases. A large map at the end of the room coordinates the separate elements.

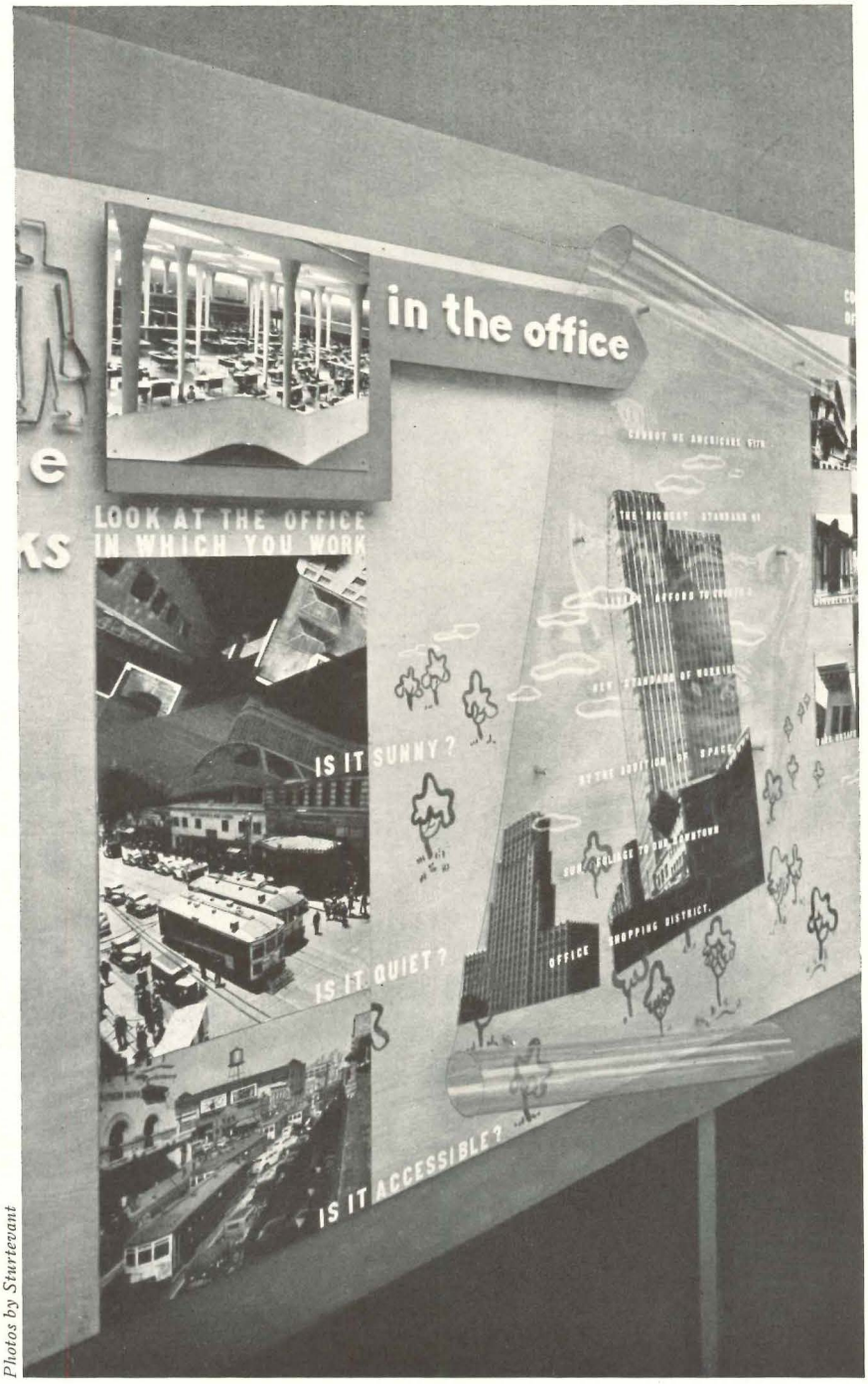
Photos by Sturtevant


WORK
in the office
you may be one of the
40 out of 100 who works
in the factory
on the land

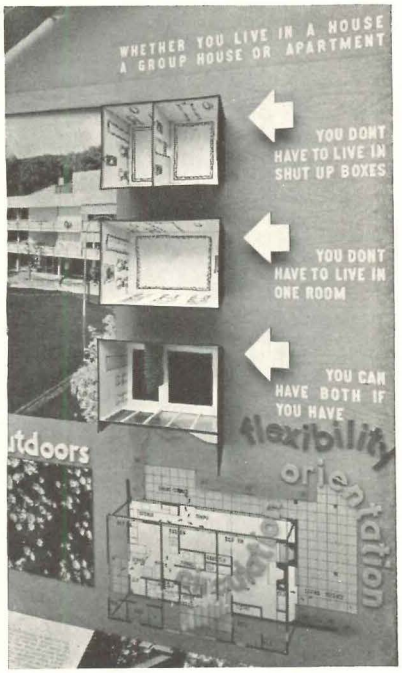

RECREATION
your day
8 HOURS WORK
SERVICES


SERVICES


planning machinery:
governmental agencies
SERVICES

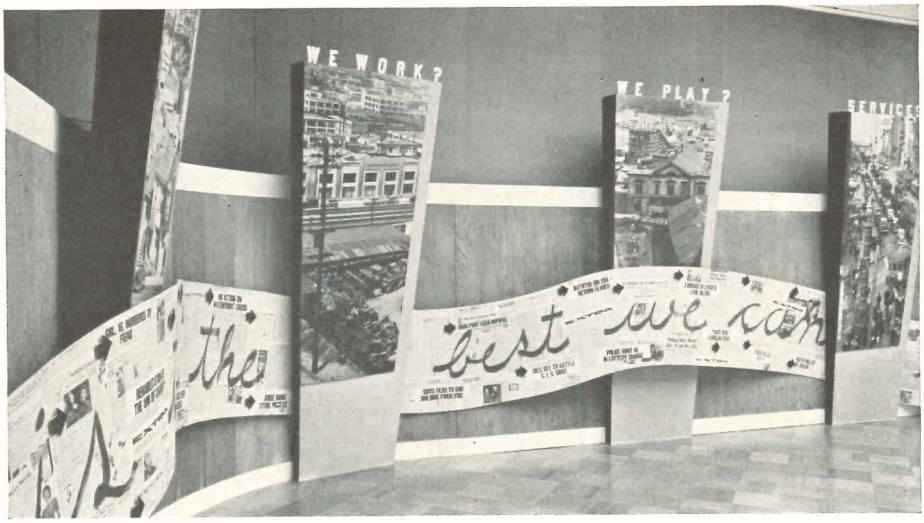


Photos by Sturtevant



telesis

Striking at two vulnerable spots—the place we work in and the place we live in—Telesis challenges the visitor to evaluate his environment. The opening panel (right) puts the question squarely: "Is this the best we can do?"



The prehistoric artist of this cave painting made the most of the materials and techniques available.

MURALS★

Oldest of man's art forms and—from the beginning—closely allied to architecture, the mural today is marked by a resurgence such as it has scarcely witnessed since the days of Michelangelo. The technical means whereby American muralists are accomplishing this are herewith surveyed by Miss Ruth Reeves, well-known New York designer, for the benefit of American architects.

IN ANY discussion of murals, even the rather factual one of techniques, I must assume that somewhere down the line this particular art form is as necessary to the men, women, and children of today and tomorrow as it was for ancient men living in their caves, or for our own colonial ancestors who stenciled their walls rather than live with them bare. This premise is necessary at the outset because in the maelstrom change in world economy—and the accompanying change in esthetic currents (changes of which the architects and engineers have perhaps been first aware since building has been the first to meet the challenge of these changes)—the "simple" physical aspects of building were bound to be most emphasized. The result is that the mural designer of today is left wondering if, indeed, he isn't being considered as a mere lily-gilder for American building.

"From the standpoint of human living," Lewis Mumford has said, "it is as important to insure the supply of art to a region as the supply of milk. . . ." So, unless one prefers the notion that mural decoration merely springs from man's abhorrence of a vacuum, the validity of murals in the building program of today and tomorrow must, it seems to me, stand. Somehow I feel we needn't worry; new esthetic attitudes are always ushered in with a good deal of questioning all around. It is the moment when schools of old and new thought start campaigning and baiting each other; and it unfortunately is a time when art expression can most easily be congealed into static grooves.

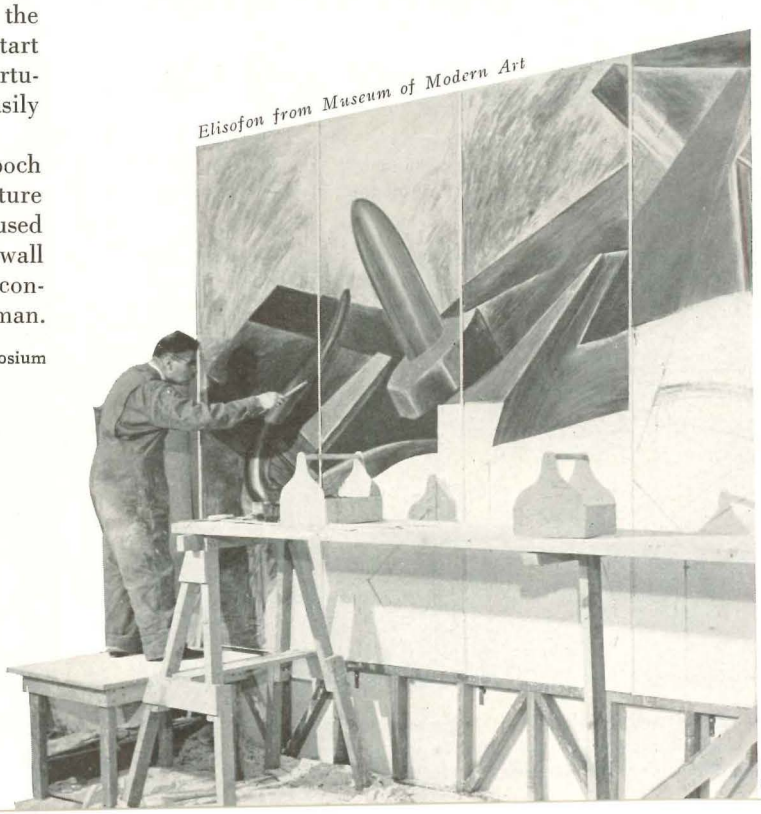
The mural message is bound to change from epoch to epoch (nor does anyone know what the future nature of it will be), and the various mediums used to present that message will change also; but wall decoration of one kind or another will, I am convinced, be necessary as long as walls are built by man.

This, the swiftest time change in world economy that we have ever known, has accelerated technological advancement in the industrial fields to such a pace that almost overnight it has deposited at the doorstep of the building field in general, and the mural designer in particular, a veritable gold mine of new materials. This change has also brought in its wake, as I have already intimated, a good many burning esthetic and economic issues which muralists all over the country are trying to solve by print, and even fisticuffs—whether, for instance, murals should be illustrative or symbolic; whether there should or shouldn't be murals in an age which moves too fast to allow us to assimilate any wall decoration more complicated than a poster; whether murals should or shouldn't be "portables" in the face of the short life span of a building (which, in New York City, happens to be about 30 years). And finally, whether the preponderance of murals at the New York World's Fair are primarily commercial displays and only secondarily murals.

In a paper concerned with technical problems, I am not going into the esthetic merits or shortcomings of any of the murals I use as illustrations. Whether or not I personally agree with the artistic merit of the Fair murals, the fact remains that both the New York and San Francisco Fairs have given modern mural techniques a testing ground which will pave the way to wider experimentation with these various methods and mediums for a generation to come.

★This and the following paper on sculpture complete the symposium begun in AR, 5/40, pp. 80-85.

Elisofon from Museum of Modern Art



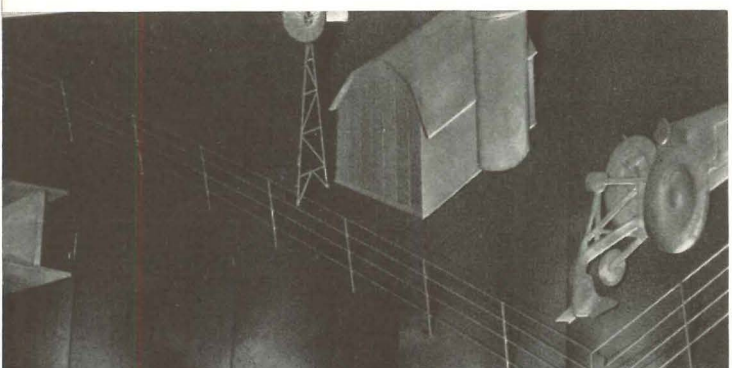
WPA Photo

Balcombe Greene (left) and the famous Mexican, Orozco (right), both draw upon modern life for materials as well as for inspiration.

ART FORMS IN ARCHITECTURE . . . NEW TECHNIQUES AFFECT BOTH

Philip Guston, muralist, for WPA

UBBER BASE PAINT Classic medium of the muralist, the paints have seen host of additions—most of them from industry. Weather-resistance, permaence of color, and flexibility in use are among the properties of the new rubber base paint, used here in the prize-winning mural of the New York Fair.

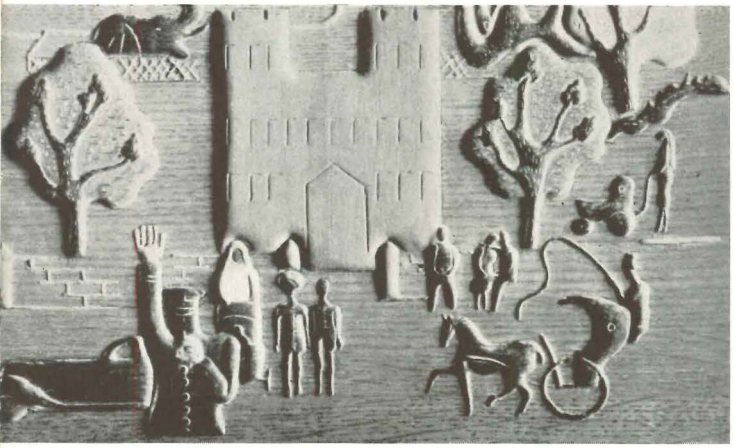


Otto Wester, muralist

TEEL Steel in various forms and finishes is widely used for decorative purposes at the New York Fair. Here objects in low relief are mounted on a background of sheet-steel panels . . . Because of steel's strength and ductility, details such as the fence can be easily executed in three dimensions.

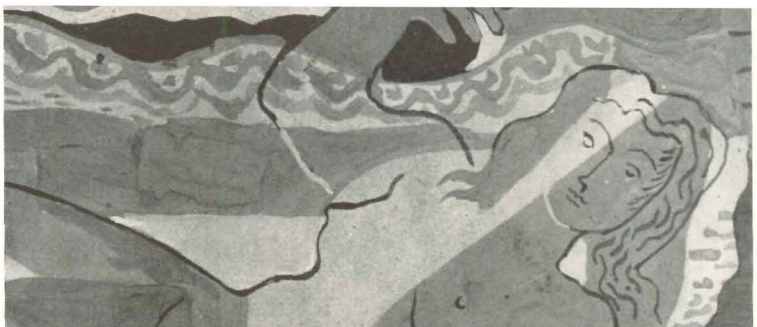
Walter Quirt, muralist, for WPA

MOSAIC has been revived by several contemporary artists and is particularly useful where hard wear, high moisture, or long life are important factors. . . . This mural in a New York hospital is executed in glass, but many other materials are suitable.



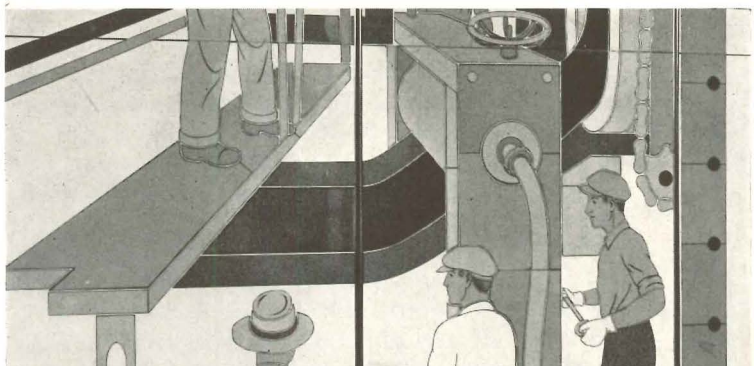
Louis Ross, muralist

RESIN GESSO Developed by the artist, this new material of resin, casein, and powdered silax will adhere to any surface—wood, glass, metal, or plastic—and offers a wide range of permanent colors.

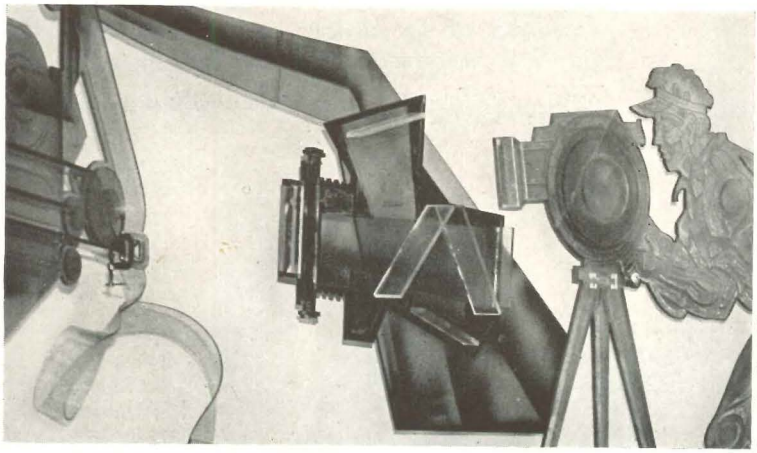


CASEIN PAINT—as on this canvas theater curtain in the FWA building—gives the artist an economical cold-water medium with a wide range of colors. . . . All types of modern spraying paints are now employed by muralists, while phosphorescent and luminescent paints have also been used at both Fairs.

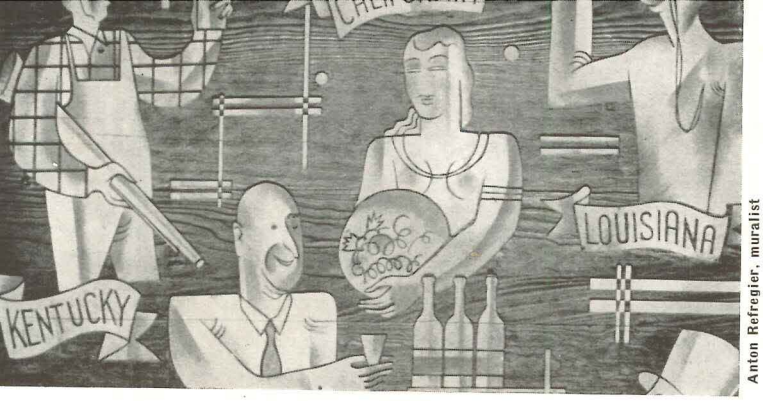
STAINLESS STEEL, together with other alloys, forms the medium for this low-relief mural, mounted slightly off the face of the wall and backlighted. . . . Like many of the new murals, these may be either fabricated directly by the artist or by craftsmen from his drawings. . . .



GLASS, with its long and decorative history in cathedral windows, is again receiving the attention of serious artists in both translucent ("stained-glass") and opaque forms. . . . This mural at the San Francisco Fair, executed in multicolored structural glass, indicates a new line of development.



PLASTICS Largest of several murals in the same medium, this mural in the DuPont building at the New York Fair, exploits the brilliant color, high transparency, and workability characteristic of the material.



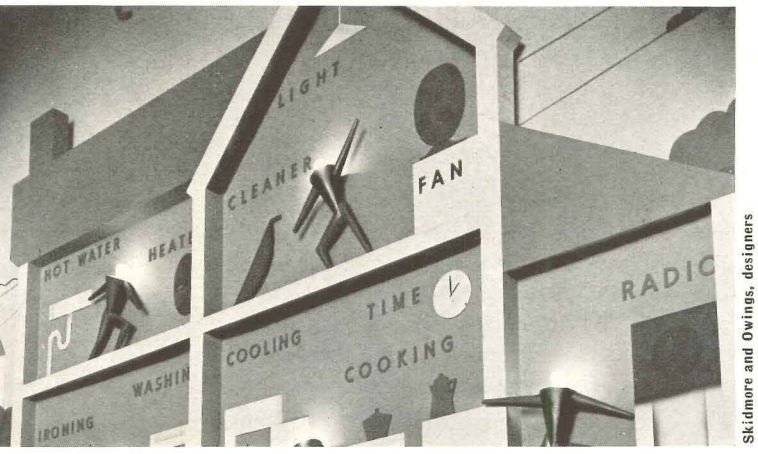
Anton Refregier, muralist

WOOD In this mural, the artist has sandblasted the background for desired texture, having first sprayed the figures with a special glue which is later removed; figures are then painted. . . . Plywood is another mural material in wide use, either as background or cut out and applied in silhouette.

Underwood & Underwood

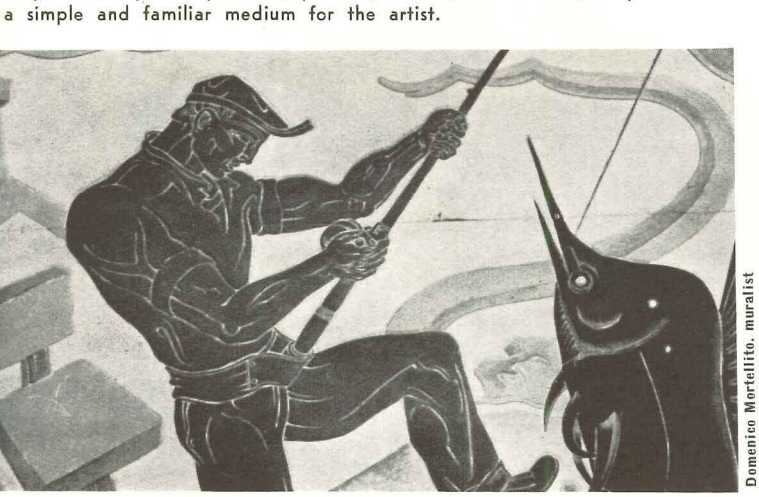
J. Scott Williams, muralist

FERRO-ENAMEL bids fair to be an important mural technique, especially since recent developments make possible the commercial production of any design. . . . This mural at the New York Fair was executed by regular workmen from full-size, full-color drawings furnished by the artist.



Skidmore and Owings, designers

PLYWOODS—and indeed all the new surfacing materials—have proved adaptable because of their color, texture, and high workability. Since they may be easily cut, polished, painted, tooled, sandblasted, they constitute a simple and familiar medium for the artist.



Domenico Mortellito, muralist

LINOLEUM, already widely used for inlay, is here employed on an exterior mural in a novel way: the design is first incised in the linoleum and then built up with special lacquers.

In recommending the exploration of these by-products of modern industry to architect and muralist I do not mean that he should throw the traditional mural mediums out the window. I do believe, however, that these new techniques and materials are to the modern muralist what the discovery of the chisel was to the sculptor using an obsidian tool, or the discovery of canvas as wall covering for murals; and certainly they are going to extend the inventiveness of the artist's mind to the end that modern wall problems will be more economically and satisfactorily solved in terms of our living needs.

New developments in the field of mural design fall into three general categories: (1) use of new materials; (2) use of new lighting methods; and (3) use of motion. All of these naturally imply use of new techniques by the artist.

Many new paints developed

More than any other organization, the Federal- and State-sponsored art programs have fostered a lively experimentation in the use of new materials. Many of these experiments involve use of new "paints"—although many of the new synthetic varnishes, resins, and lacquers are not technically paints.

The Massachusetts WPA Art Project has been carrying on paint testing research in its laboratory in Boston. The Technical Division of the New York City WPA Project has also done signal service for the mural painters in research on permanent pigments and experiments with new synthetic "binders." They have found that magnacite cement mixed with dry colors may be applied to the wall like paint, either thickly (to get a rich, textural "Rouault" effect) or used thinly like oils on canvas. It will cover and adhere to any surface—wood, brick, or tile—and has the durability of rock.

The New York City WPA Art Project has also developed and put to use two of the most permanent types of synthetic resins, the alkyd and the acrylic. These resins may be used for mixing with lacquers and varnishes and dry pigments, producing a wall surface that is as durable and as washable as the body of a motor car. They may also be used straight as a resin binder, or in emulsion form for tempora painting. The latter method is now being used by James Brook for the New York City WPA Art Project's murals at the North Beach Airport.

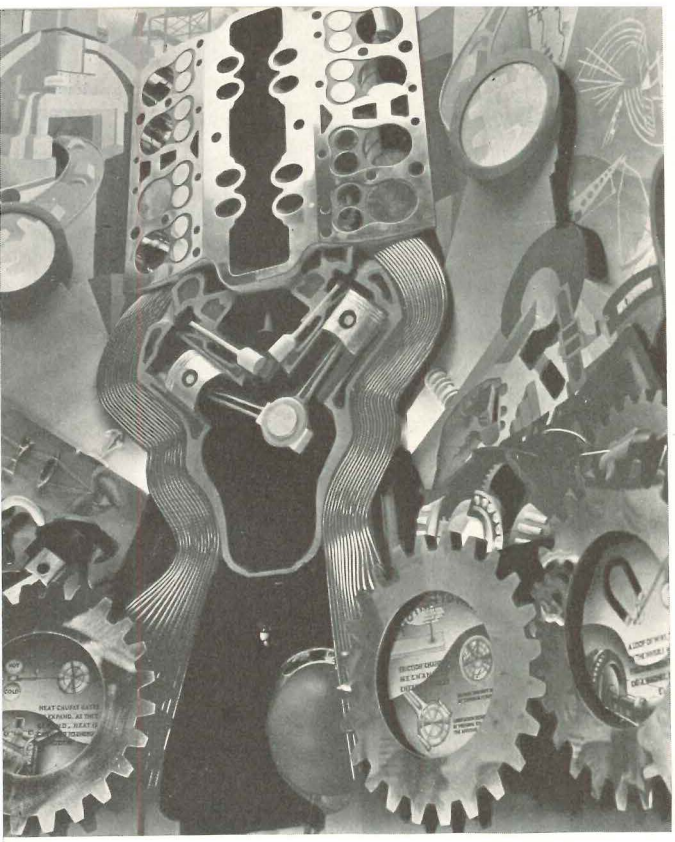
Still another experiment which this Art Project has developed is a noncrackable gesso size for canvas. For murals which cannot be painted "in situ"—i. e., must be done in the studio and then shipped for installation—this is good news.

One of the newest and most important of the new paints is the rubber base paint, because it widens the outdoor uses to which murals may be put. The New York World's Fair has, of course, employed this rubber base paint on many of its outside walls, of which Phillip Gustin's mural is a good example.

The new casein medium with colors already ground is a water-soluble paint with wide applications. This water paint can be used on outside or inside walls and (so the advertisements read) become increasingly durable with time.

Host of new mediums for the artist

Aside from the new paints, the modern industrial world has also given the muralist a whole new palette of materials which, by their very character, are appropriate for the walls in today's buildings. The



Henry Billings, muralist

MOTION The movement of the cylinders in the motor is reproduced in "plan" (top) and "elevation" (center); here physical motion adds an esthetic dimension which—in the control of competent artists—extends the mural.

André Vigneau, designer

LIGHT Probably because of the high capital cost, experiment in the new artificial light sources has been left largely in the hands of commercial advertisers. Yet this mural in 17 shades of fluorescent tubing indicates the exciting possibilities of the medium.

Fair in New York has fairly blossomed with experiments in these new industrial materials: plastics, linoleum, glass, plywood, cloth, asbestos, and many of the new alloy metals. Still another material, an admirable medium for a subway mural or any place where dampness is a factor, is ferro-enamel.

Mosaics revived

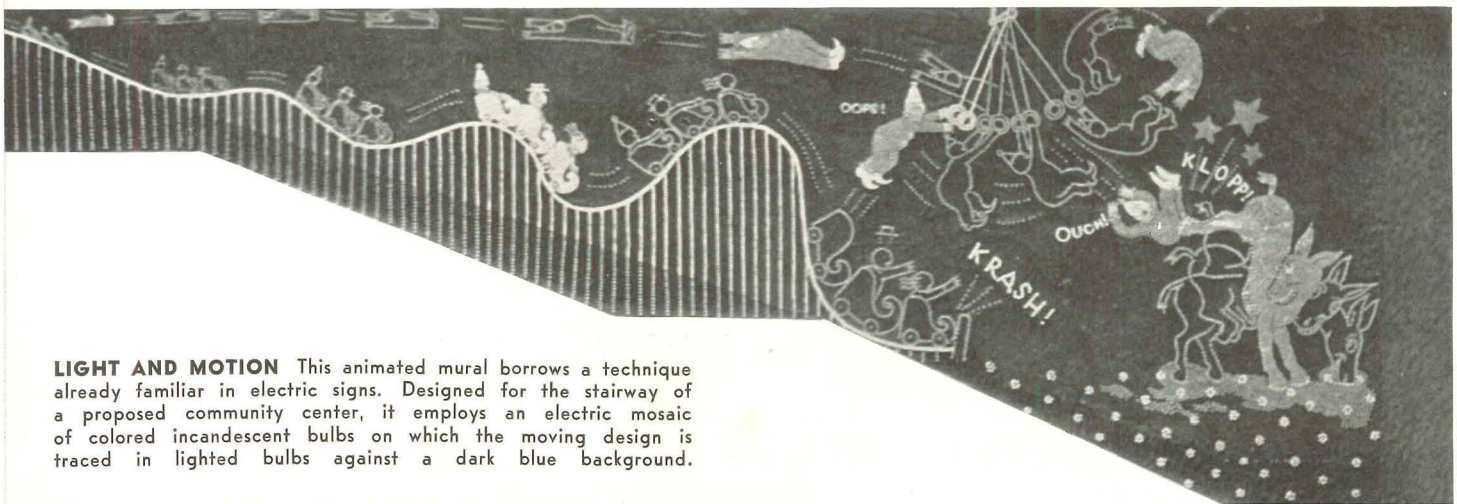
Thanks to the experiments of the New York City WPA Project, one of the finest of all traditional wall mediums, mosaic, is in process of undergoing an economic face lifting, so to speak. This laboratory has found that a solution of magnacite cement mixed with dry pigments, poured into glass-bottomed trays and allowed to dry for thirty days, makes very durable and beautiful tesserae when chipped up in the ordinary way. With the war curtailing shipments of Venetian glass and marble tesserae from Italy, this is worth looking into. Thus far experiments in this medium show that these tesserae could also be "cast" in a wall covering of magnacite cement, and that they are also practical for use as an indoor medium.

Photo-montage murals, and photo murals in general, are by this time almost as familiar as fresco or oil on canvas. They have been widely used for indoor murals and I only mention them because of a new processing of photo murals for outdoor use.

New techniques for mass production

One can conceive of building projects, particularly low-cost modern housing projects, where the mass-produced printed mural on cloth might well be employed. Because of the simplicity of the profilm and enamel-stoppage-type silk-screen processes, the economic problems of reproduction have been solved. These hand-printed murals could be produced on a large- or small-quantity basis on inexpensive materials, and sold at relatively small cost.

There has just been worked out successfully a photographic method of silk-screen printing which can reproduce actual photographs and complicated color schemes. In short, a photo-montage mural with color could be achieved by screen printing. By color separation and transference of each positive plate to the bolting cloth in proper sequence for blending, and careful registration of each "screen-block" as it is printed, the esthetic possibilities inherent in this method are limitless. Again, as in modern housing, where "stock" wall spaces exist, I would suggest trying out the technical feasibility of screen printing directly on the walls themselves. If successful, this would mean that many walls carried the same design, but, as in the new screen printed graphic prints, each one would be hand-pulled "originals."



Louis Ferstadt, designer

LIGHT AND MOTION This animated mural borrows a technique already familiar in electric signs. Designed for the stairway of a proposed community center, it employs an electric mosaic of colored incandescent bulbs on which the moving design is traced in lighted bulbs against a dark blue background.

Perfect unity between concept, material, and tool was the crowning achievement of the Greeks.

SCULPTURE

Always responsive to their environment, sculptors today have the task of expressing concepts quite different from their predecessors. Movement, tension, time, and space—all these impose severe strains on academic concepts, tools, and materials. At the same time, modern techniques offer the sculptors almost limitless potentials. . . . Herewith David Smith, New York sculptor, summarizes some of these potentials in the sculptural field.

SCULPTURE has always been dependent upon architecture for its setting—not because it is a "lesser art," but by the very nature of its function and sponsorship. Its purpose has been to lend esthetic identity to the building's function, either with the mechanics of the interior, or to project or complement the atmosphere created by the exterior. Sculpture not dependent on buildings proper, but relegated to a setting in the landscape, still maintains this relationship.

Therefore, for esthetic unity, the architect's building must establish the function of a specific sculpture. Too often the architect misses such unity by making (or allowing) the sculpture to function as a mere billboard. Bromidic quotations, realistic sex imagery, and acts of pretentious idealism too often serve as standard specifications for sculpture, wherein an esthetic conflict between building and sculpture is naturally introduced. The modern building, by its composition of line, space, and texture, appeals to the eye by definite esthetic principles; and the sculpture cannot represent a concept alien to the esthetics of such architecture.

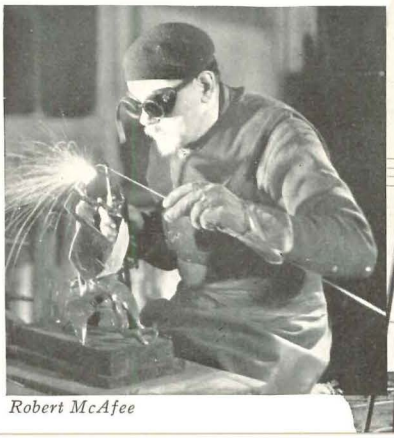
As in architecture proper, so in sculpture, the concept is primary, the material secondary: but there is a constant *interaction* between the two. The secondary or material parallels have existed through the mud, stone, and bronze ages to the present-day period of alloys. And the tools of all ages have left common marks on both.

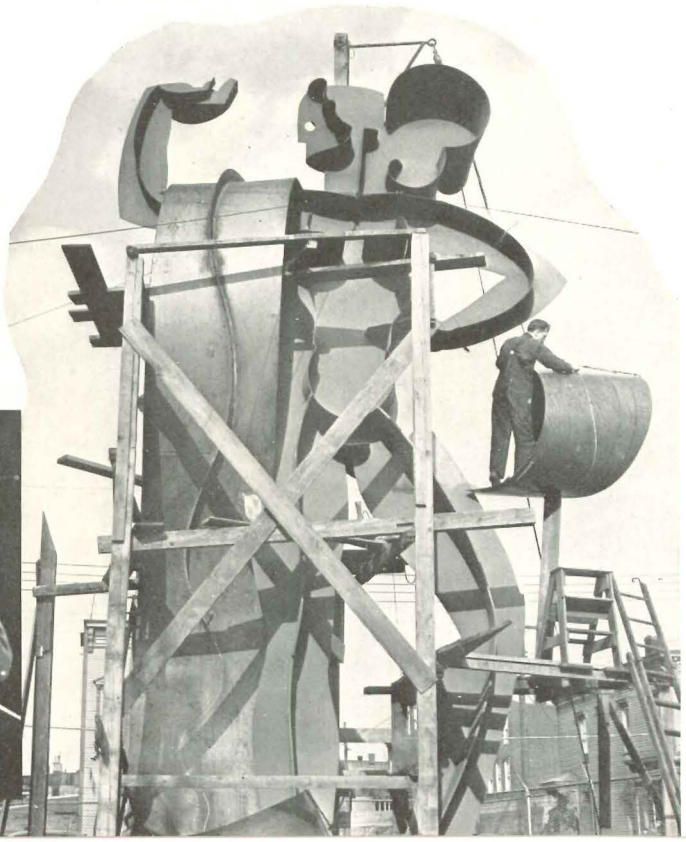
The esthetic standards now operative in current sculpture are much the same as those of past periods—namely, that there must be perfect unity between the idea, the substance, and the dimension; that the sculpture be conceived in perfect equilibrium to the related areas. But the thing that differentiates modern sculpture from all its predecessors is its *means* of achieving these esthetic standards. Never before have the sculptors had so rich and varied a selection of materials, tools, and techniques with which to work. It is the purpose of this paper to summarize these new means.

One of the most important developments in method is the application of welding to metal sculptures; here, by using stock forms, a composite structure may be fabricated with qualities as inherently different from carved or cast pieces as steel framing is from masonry construction. To fabricate a finished piece of sculpture requires a concept in unity with the method, a recognition of the change in forces, a knowledge of the limitations and a respect for the virtues of material and method. This concept already exists in industry and, to a lesser extent, in architecture. Fabricated sculpture is, in a certain sense, "industrialized" in that it uses both industrial methods and materials and makes possible the rapid multiplication of a given piece. As yet uncommon, it seems destined to become relatively important.

Aluminum and its alloys greatly favor sculptural use, by economy of weight, ease of fabrication, and variety of surface treatments. Its stability and low cost have been attested in architecture and industry. Oxide finishes by anodic treatment are suitable to sculpture not too massive, or to fitted sections. The hard anodic coatings which can only be formed on aluminum are considered to be the most durable, have high corrosion resistance and high dielectric strength. They also produce the best surfaces for dyeing or mineral impigmentation.

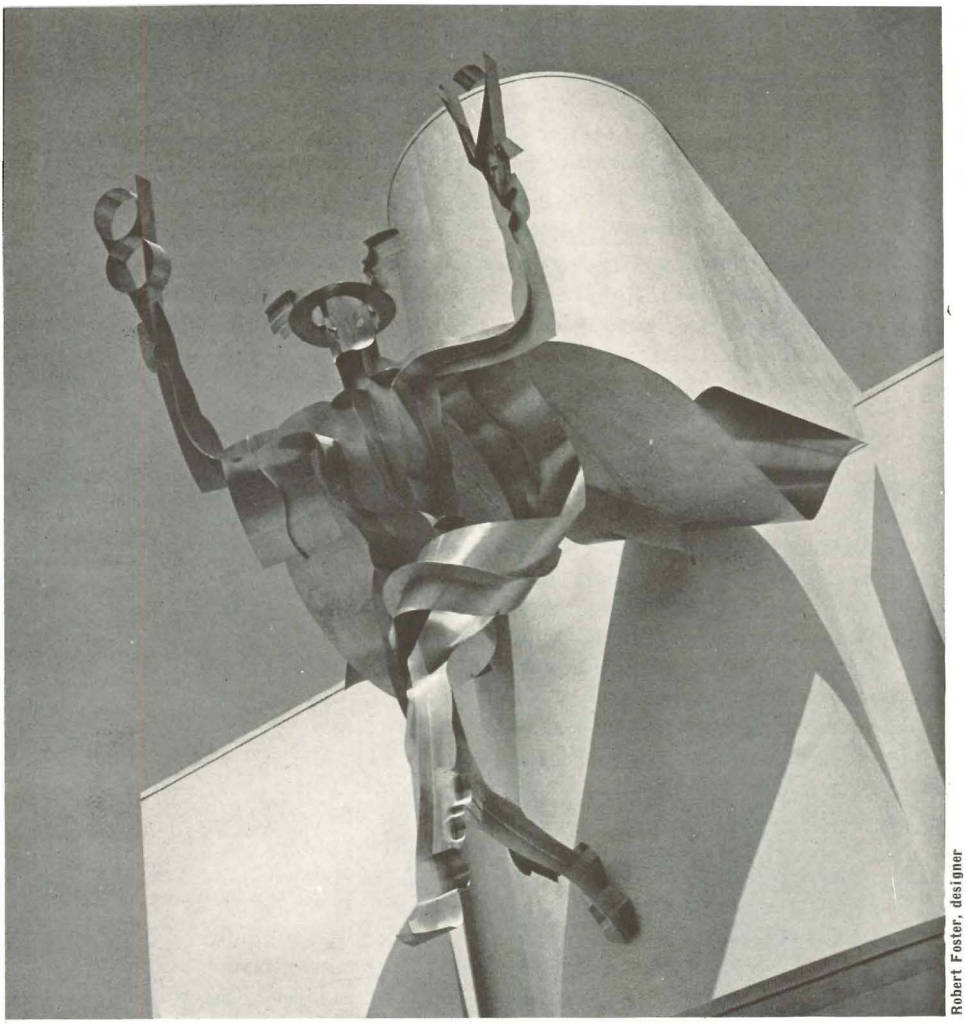
Cast aluminum possesses especial economy for the electro-deposition of a variety of metallic plates. It can be plated for exterior use with deposits over .001 in. A dozen or more types of alloy castings are easily worked





The same unity between modern concepts, modern materials, and modern tools is the objective of such sculptors as David Smith (right) and Robert Foster (extreme right).

Robert McAfee



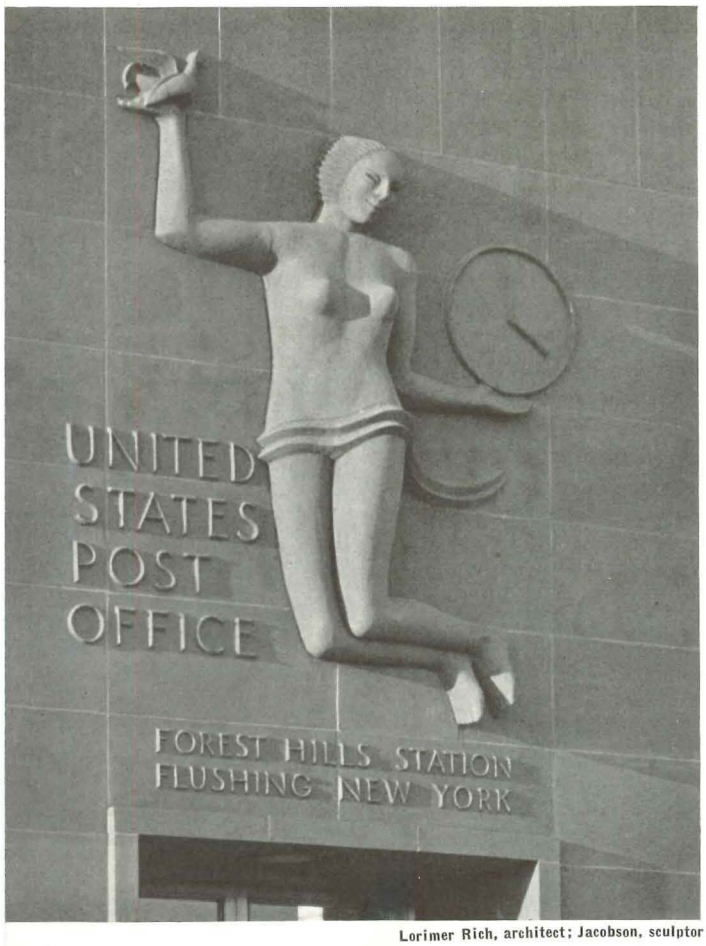
Robert Foster, designer

STAINLESS STEEL here performs a job beyond the reach of practically any other material—a 25-ft. welded figure whose cantilevered stress organization required regular engineering.

Pablo Gargallo, sculptor *Photo, courtesy Weyhe Bookstore*

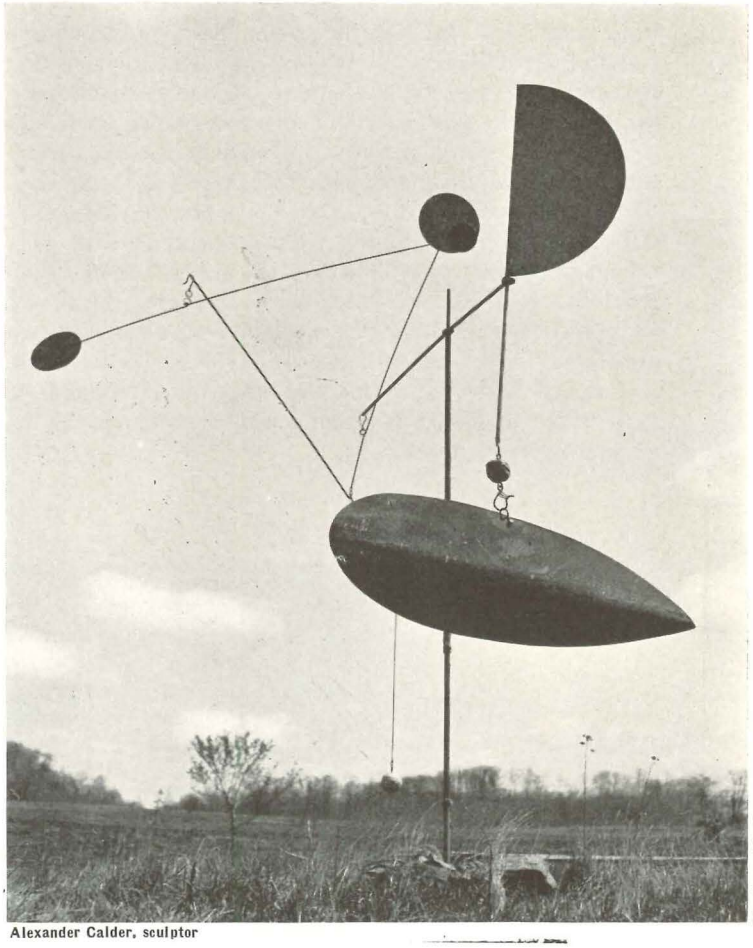
STEEL, because of its flexibility and easy workability, was the favorite medium of this Spanish sculptor.

TERRA COTTA Here the sculpture is an organic part of the structure's surfacing material with the same color, texture, and long life.

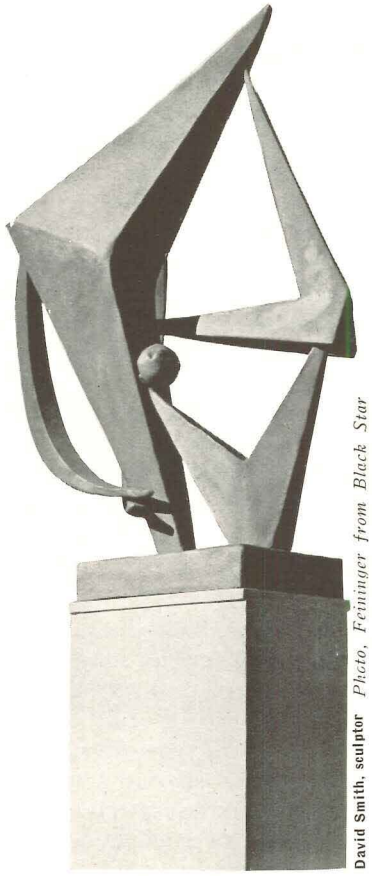


Lorimer Rich, architect; Jacobson, sculptor

MOTION The so-called "mobiles" rely upon the vagaries of the wind for completion of their eccentric movement; brilliant color completes the design.



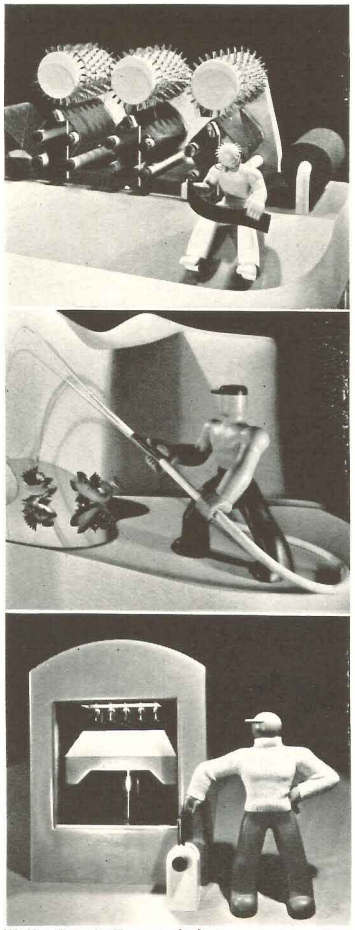
Alexander Calder, sculptor *Herbert Matter*



David Smith, sculptor *Photo, Feininger from Black Star*

STEEL in sheet form was the basis for this welded sculpture.

MOTION is an organic part of the design of these indoor sculptures.



Walter Dorwin Teague, designer

GRANITE—an ideal medium for this abstraction in a garden setting.

Marc Vaux, from Museum of Modern Art

Lipschitz, sculptor

by hand. In sheet or casts, aluminum responds to fabrication by standard methods.

Stainless steel is ideally suited for sculpture in architecture, but its maximum function will be achieved when fabricated from sheets and forms. (This parallels its most important use in architecture and industry.) As a casting metal, its defects are all too evident. In gravity casting it pours thick and slow, making both a bulky and expensive job for sculptural purposes.

Other stainless metals of the copper-nickel-alloy type possess similar visual appearance, and function best when fabricated.

Bronze casting will probably always serve a useful purpose in sculpture, although the stock bronze in the majority of foundries has become limited to the commercial billet, giving all metal casts much the same color. Statuary bronzes in color range from red to pale yellow, made by the French process, have fallen from general use, but for art purposes deserve to be rediscovered. Likewise the oxidation from these bronzes of varying formulas offer greater tonal gradations.

Bronze-sheet alloys for fabricating are obtainable in various color ranges from red (98.10% copper, 1.90% tin) through yellow, red grey, bluish red, white, to bluish white (25% copper, 75% tin). Similarly, brass alloys of copper and zinc come in wide natural-color ranges. These copper-bearing alloys form oxide finishes from black through red, green, blue to brown by accelerated chemical action and can be fixed by special metal lacquers. To maintain a constant appearance and for protection from stain to surrounding areas, bronze sculpture should always be protected by lacquer coats.

Steel can be cast, forged, and fabricated to exploit its natural characteristics to denote resistance and tension. It responds to a host of treatments which have possibilities for sculpture. Esthetic applications wholly untenable by traditional materials are possible.

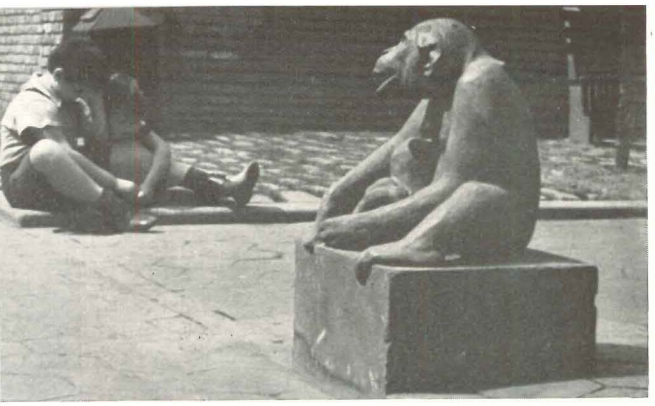
Sculpture can be built of fabricated steel rods. Lines can indicate form by outline, can confine areas, can maintain their own sculptural import, yet lose nothing by permitting a view of a building or the landscape through the open areas which may represent the inside of the sculptural form. To view a building through the branches of a tree destroys neither the esthetic value of the tree nor the building; they both bear the added interest of associated objects.

Color in sculpture overlooked

Contemporary sculpture has made timid use of color, although it has been an important factor in the best periods of the past. It is obvious that there exists a logic of color in relationship to sculptural form just as there exists a logic in the scale of sculpture. Yet for centuries, bronzes have been dead dark, and marble, dead white. The public has acknowledged its preference for color in articles of every-day use from hacksaw blades to automobiles. Ironically, the trend behind this change in "industrial design" is accountable to the fine arts, especially to cubism and the later schools which regarded texture, material, and color as esthetic forces.

Sculpture can be rustproofed by chemical immersion, or sprayed with a chemical solution, to produce an insoluble black phosphate, and painted with stable oxide enamels. The form could be brightly painted in winter and softly colored in summer, or repainted in any specified color each decade, or as often as the enamel medium showed weathering.

Steel sculpture sprayed with molten zinc or cadmium which are both electro-negative, thereby affording corro-



WPA, sculptors

STONE offers an ideal material for such sculptures as this in New York's "First Houses," where playing children would damage more fragile material.

Robert Cronbach, sculptor for WPA

PRECAST CONCRETE spandrels were an organic part of the design of this USHA project in Buffalo. Designs were specially made for easy mass production on site.

sion resistance by galvanic control, could then be sprayed with harder metals like chromium, monel, silver, stainless alloys, cobalt, etc. By the molten-spray method mixed metals can be applied, used as accents or as separate color areas. A steel sculpture sprayed with zinc and accented with copper would exhibit, after buffing, a silver-and-pink-colored granulated surface. This could be held by lacquer or permitted to take on a natural green and white-grey oxide patina.

Useful as a finish to bronze and other metals are the chemically and mechanically stable colors produced by light refraction from a semitransparent electro-deposit.

A cuprous oxide deposit in violet, blue, green, yellow, orange, and red has been produced by cathodic deposits from alkaline solutions of copper lactate. The color of the deposit is a function of thickness, or plating time. As the thickness of the deposit increases, complete color cycles take place, each cycle building different shades.

Heavy deposits from .001 to .005 in. can produce a metallic copper of extremely fine grain, with colors in rich browns of a pigmentary nature. This plate can be buffed and polished, and has a high corrosion resistance.

Old materials in new forms

Ceramic processes have for milleniums been used in architecture and are still important. The most important recent development is the "glass on steel" process of vitreous enamels on ingot iron sheets having a common coefficient of expansion. The firing of fabricated sculpture and fitted sections are both possible. So far one sees the result of this process only on gasoline stations, hamburger stands, and stew pans, but the colors and freedom in application are as flexible and varied as those in the artist's oil palette.

Advanced methods of glass casting and shaping take precedence over most synthetic plastics in practically all architectural sculpture, especially in consideration of relative life economy.

Materials with high specific gravity and low tensile strength are still useful in modern architecture. There are times when the exploitation of mass, density, texture, and color common to marble, granite, and stone are esthetically useful. Oftentimes their contrast with materials possessing opposite qualities is very interesting.

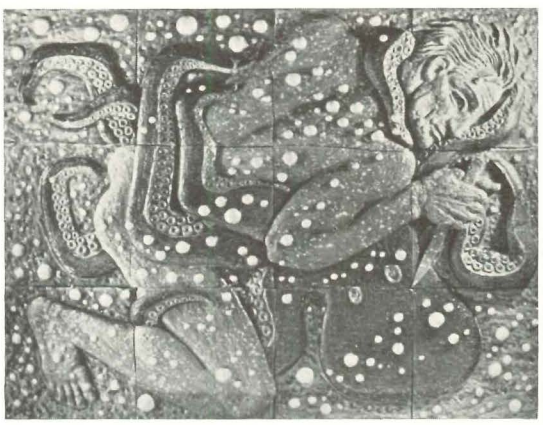
In this same field may be included the plastic counterparts representing various types of concrete. Concrete art forms have largely been but an imitation of the clay model, with their aggregates used to imitate granite and stone. This unimaginative concept of pouring concrete to rigid sculptural form fails to reveal the true nature of the material. As yet it has not suggested new form or new freedom. But concrete is a new material to the sculptor; and (it is well to remember) it suffered quite as badly in the architects' hands until it was freed by Freyssinet and Maillert.

Controlled illumination for sculpture

Although sculpture has by definition always exploited natural light, use of artificial lighting as a basic element of design has never been practical until recent times. It still remains a development requiring new mechanics and concepts. The use of varying intensities, types of light, and controlled beams offers amazing potentialities. Objects projected, objects moving in controlled light, or moving light on static objects have possibilities yet to be investigated sculpturally. Not only can light be used in new relationship to material form, but it can be developed as an independent form. Projected light naturally functions best in a darkened field. It has a limited use, but an important and distinctive one.

Motion important new potential

Physical movement in sculpture also offers possibilities, especially when it is used as a basic element of design as Calder, Brancusi, and Man Ray, among others, have done. "The Miracle" of Brancusi, when shown at the Museum of Modern Art, was rotated by a quiet low-gear operation, turning the sculpture with a smoothness and precision impossible to obtain if the onlooker had been forced to reverse the viewing process and walk around the sculpture. An amusing (and effective) example of physical motion in sculpture is to be seen in Walter Dorwin Teague's "Cycle of Production" at the Ford exhibit at the New York Fair. Here highly stylized figures go through a cycle of highly stylized motions illustrating the various steps in motorcar manufacture.



Waylande Gregory, sculptor

CERAMICS Their brilliant color, long life under difficult conditions, and relatively low cost warrant more attention to this very old sculptural medium.

Black Star

DESIGNING FOR GREATER FIRE SAFETY

Each year the practical possibility of reducing the appalling loss of American life and property by fire is dramatized by Fire Prevention Week (October 6-12). Accordingly, the RECORD—with the assistance of the National Fire Protection Association and the Safety Research Institute—summarizes herewith measures that architects may take to reduce this needless drain on the nation's resources, property, and lives.

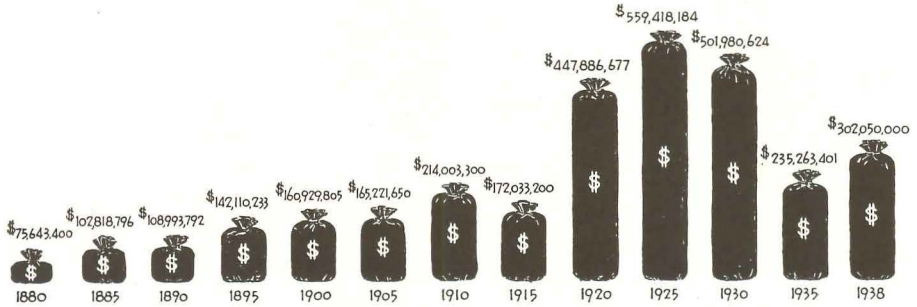
OCCASIONALLY the architect will encounter a client who is thoroughly "fire conscious"—as a rule, someone who has previously been "burned out". Generally speaking, however, people give little thought to fire protection, and there are few who—when free to choose—will pay for special constructional features that will help safeguard their lives and property from fire. Indeed, so widespread is this disregard that millions of Americans are today living, working, worshipping, and educating their children in buildings which are potential death traps. Our annual fire loss—whether in terms of human lives or dollars—is staggering: worse still, it is preventable. (See charts, next page.)

We are, of course, being protected in some degree from the consequences of our own folly by various official codes and regulations—especially in the larger urban areas. But unless such protection is extended to complete control, it is limited in its scope and can deal effectively with structures of only a few special kinds—schools, theaters, hospitals, factories, etc. It is probable that almost any kind of building can be so designed that, though well within the law, it will offer its occupants few chances of escape in case of fire. This is particularly true of dwellings which are exempt from many of the restrictions in existing codes. And when it is realized that a large portion of these dwellings lies beyond the zone of effective fire-fighting service the danger is obviously even more apparent.

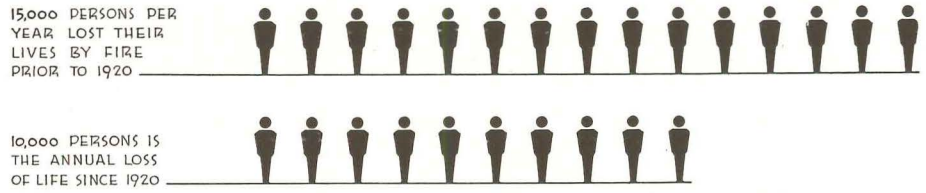
Fire-safe design is of course no simple problem, since it may involve any or all of three separate factors—(1) maximum safety for the occupants of a building, (2) maximum protection of equipment and material in a building, and (3) maximum protection for the building itself. However, the absolute minimum is that every regularly occupied building, including frame dwellings, should be *so designed that smoke and flames are confined to the area of their origin long enough to permit the occupants to escape.*

The architect can obtain this minimum fire safety in buildings of all classes—often at no material increase in cost—if he considers the following safeguards even where codes might not require them:

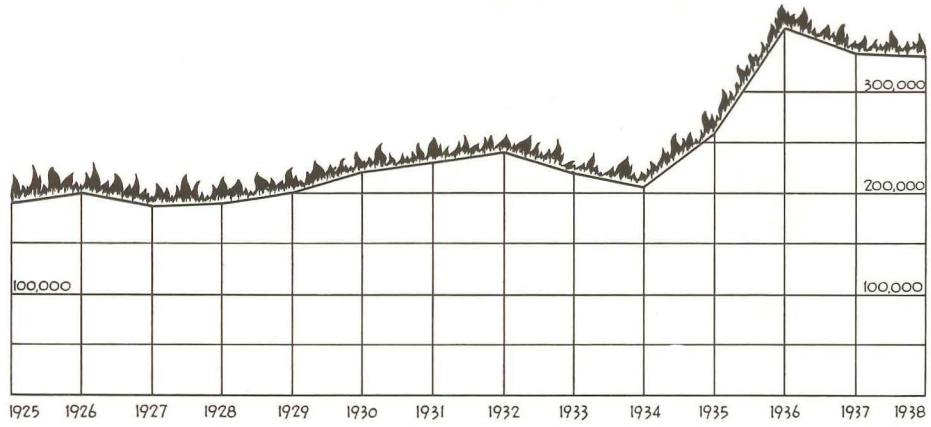
Protect vertical openings: In event of fire, the most dangerous features of a building are unprotected vertical openings which permit, first, smoke, then highly heated air, and, finally, flames to pour from the seat of the fire into the upper stories. Such openings are, in fact, responsible for most of the deaths that occur in burning buildings. Even in "fireproof" buildings, many people are killed every year by smoke from fires that never reach them. Fire safety, therefore, requires the proper closure of all vertical openings, including stairwells, elevator shafts, chutes, and pipe holes.



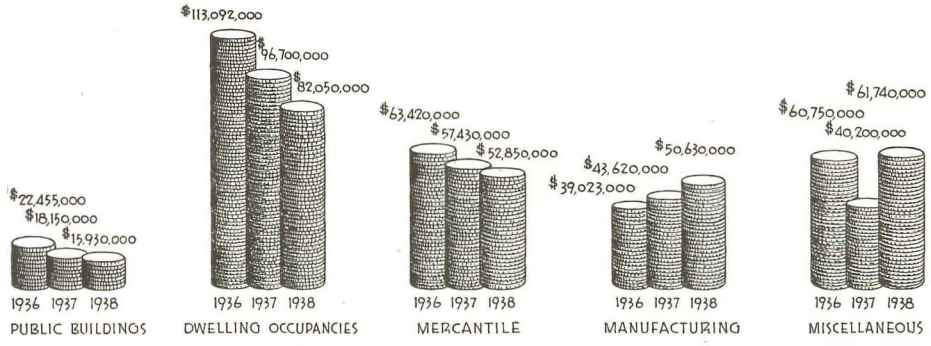
The staggering annual property loss by fire in the United States is graphically indicated in these figures for the last 60 years. (Although taken at 5-year intervals, sums shown are not cumulative.)



Although current estimates indicate a substantial reduction, loss of life by fire still remains one of the largest categories of accidental deaths.



Annual totals for dwelling occupancies show a great rise over a 15-year period.



Property losses by types of occupancy for the three-year period ending with 1938. Note that dwelling losses are still the highest.

Restrict horizontal areas: To limit the spread of flames laterally, large areas must be subdivided by means of fire walls. Maximum areas within such walls should be 5000 sq. ft. for frame construction, and 10,000 sq. ft. for fire-resisting construction. Horizontal openings in fire walls should be kept at a minimum and should be protected in every case with approved fire doors.

Enclose special hazards: Heaters, mechanical service equipment, areas where flammable liquids are stored or used, laundries, drying rooms, carpenter shops, and other special fire hazards, when placed in a building used for other purposes, should be cut off from the remainder of the building by fire walls and fire doors.

Provide adequate exits: Means for evacuating every building quickly and safely must be provided.

Restrict heights unless "fireproof" construction is employed.

Supply fire-extinguishing equipment: The excellent record of sprinklers, fire alarms, and fire extinguishers in helping to decrease the fire losses of industries emphasizes their desirability.

Protect air-conditioning systems: The ducts of air-conditioning systems should be made wholly of incombustible materials. Thermostatic controls, placed at strategic points, should shut down blowers and close dampers in the ducts in event of fire. "Electric-eye" controllers can be used to prevent systems from spreading smoke throughout large buildings.

Protecting a Frame Dwelling

To illustrate how these safeguards can be applied, let us consider what steps should be taken to protect the simplest kind of a building, a balloon-frame single dwelling:

Area and height: Buildings of this type of construction should not exceed 2000 sq. ft. in floor area and 2½ stories in height.

Basement: As the basement contains the hazards of heating and service equipment and is usually a place of storage for papers, old furniture, paint cans, and other combustible rubbish, it is not strange that 20% of all home fires, and probably more than 50% of the most serious ones, originate here.

Of foremost importance, smoke and flames from a basement fire must be prevented from quickly invading the living quarters of the house and overwhelming the occupants before they have time to escape safely. To this end—

Seal up all openings into the upper part of the house.

Fire-stop hollow walls and partitions with loose incombustible material held in place by galvanized sheet metal or other suitable means.

Finish the basement ceiling with plaster on incombustible lath.

Provide a solid wood or metal-sheathed door at the head of the stairway leading into the living quarters. Do not use a door with thin wood or ordinary glass panels. Additional protection, desirable in all dwellings and

especially those outside the area of quick fire-department service, is obtained by installing an approved automatic sprinkler system. In such a system, a sprinkler head is supplied for every 144 sq. ft. of floor area, with a head over the heater and another over the stairway. A system for a basement 20 ft. by 60 ft. will have 11 heads and will cost about $200 installed, including an alarm system.

In all dwellings, a mounting for a hand fire extinguisher should be placed close to an unrestricted exit. Without such a mounting, the householder is likely to neglect the installation of an extinguisher or place it close to the heater or in some other location where it will be inaccessible when needed.

When the basement is eliminated, the heater should be located in a compartment that is entirely separated from the rest of the house by fire walls and an approved fire door. One danger with this arrangement is that thoughtless people may use the heater room for storing combustible rubbish. A small sprinkler installation will provide protection from this hazard, and, in any case, a fire-extinguisher mounting should be provided outside the door.

Interior finish of living quarters: All walls, ceilings, and partitions in the living quarters should be plastered or covered with incombustible wallboard.

Kitchen: More than 30% of all home fires originate in the kitchen, and the majority of these are started by the housekeeper in the course of her work. The architect's concern with this matter is to provide a niche that will house a fire extinguisher of a type approved by the Underwriters' Laboratories, for use on flammable liquid and other fires, and suitable for a woman's use. This niche should be close to the doorway leading from the kitchen into the living quarters.

Stairways: The open stairway is the most dangerous feature of a house because it provides a perfect passage for smoke, highly heated air, and flames from the lower parts of the house to the bedrooms. If safety alone is considered, it should be closed, relegated to the side or rear of the house, and supplied with substantial self-closing doors at the foot of each flight. A doorway leading from the bottom of the stair well directly out of doors still further increases the safety value of this arrangement.

Exits: Lack of safe exits is a major cause of death in home fires. A single open stairway is almost certain to be rendered unusable by a serious fire in a floor below, and then windows offer the only means of escape. But if this pathway is unsafe, one may have to face the unpleasant alternatives of being killed either by fire or by a fall. Hence, in a house with an open stairway, porch roofs, balconies, or other elements should be so arranged that a safe retreat is provided from a window in every bedroom.

When the stairway is enclosed, it can be assumed that the upper hallway will remain usable long enough after a fire starts in the lower story to permit occupants of the upper story to escape through any window on that floor that offers a safe exit.

Roof coverings: Should be of fire-retardant material, such as asphalt and rag-felt, or better.

Garage: If the garage forms part of the house, it should be cut off from the living quarters by (at least) walls and ceiling filled with incombustible materials and a substantial self-closing door. Walls and ceiling should be plastered or covered with incombustible wallboard. The floor of the garage should not be below grade, since a pocket is then formed in which gasoline vapors may collect, making an explosion possible.

Fire alarm: The measures outlined above will serve to enable occupants of the house to escape safely in event of fire, provided they are warned as soon as the fire starts. Hence, the installation of an approved fire-alarm system is a safety essential and should be made in every house. The system should cover at least the basement or heater compartment, the kitchen, and the garage, if it forms a part of the house.

It is to be noted that a high degree of fire safety will be provided only if all of these safeguards that apply to a given building are incorporated in it. It is an easy matter to put all of them into a new building but experience shows that it is extremely difficult to persuade home owners to put any of them into old buildings. Hence, the architect must take the initiative if we are to have safer homes.

The means employed to render a frame dwelling adequately fire-safe have been considered in some detail because so many buildings of this grade are erected without proper safeguards and also because the principles involved apply to all other buildings.

Black Star

A cigarette stub smoldering in the upholstery of a chair in the middle of a basement floor may eventually consume the entire chair without ever setting the house on fire; yet people upstairs may be found dead in their beds. The smoke from many burning household articles contains such poisons as carbon dioxide, carbon monoxide, hydrogen cyanide, and hydrogen sulphide. Smoke, in fact, kills most of the people who die in burning buildings, and a house so designed that smoke generated at one point can travel freely throughout the structure is not safe to live in.

Recommended Bibliography

"Specifications for Private Residences," National Fire Protection Association, 60 Batterymarch Street, Boston, Mass. (15c)—covers all grades of residences, single and duplex.

"Building Code," National Board of Fire Underwriters, 85 John St., New York (free to architects)—covers all types of structures.

"Manual of Fire-Loss Prevention of the Federal Fire Council," Superintendent of Documents, Washington, D. C. (20c)—Concerned with types of structures erected by the Federal Government.

"Multiple Dwelling Law of the City of New York," City Record Office, Municipal Bldg., New York (50c)—Covers new buildings and also the special problem of transforming old residences into fire-safe apartment houses.

The following publications of the *National Fire Protection Association* are also of interest:

"What One Architect Thinks About the N.F.P.A.," by Robert D. Kohn, F.A.I.A., Past President of A.I.A. and N.F.P.A.

"Structural Defects Influencing the Spread of Fire."

"Fire Record of Dwellings."

"Fire-Protective Construction on the Farm."

"Building Exits Code."

"Fire Exit Drills and Alarm Systems."

"A Standard Ordinance on Chimney Construction."

"Suggested Fire-Resistive Roofing Ordinance."

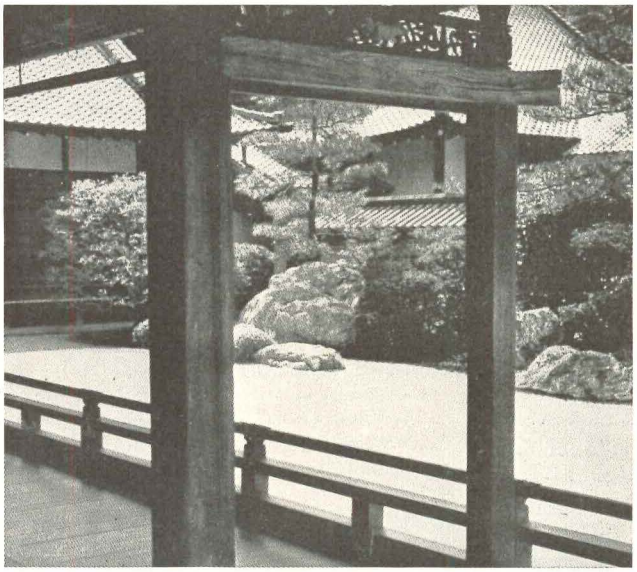
"Recommended Good Practice Requirements for Building Construction Operations."

"Standards for the Installation of: air conditioning, warm air heating, air cooling and ventilating systems."

REVIEWS OF CURRENT BOOKS

THE ART OF JAPANESE GARDENS by Loraine E. Kuck. The John Day Company, N. Y. C. Illustrated. 324 pp., 7¾ by 10¼ in. Price, $5.00.

INTEREST in Western European culture looms so large in American textbooks and pedagogy that such careful explorations of any specialized phase of Oriental culture as Miss Kuck's new book come almost as a revelation. The average designer—if he knows anything of Japanese gardens—is likely to think of them "as merely quaint and pretty toys"; whereas, as Miss Kuck points out, they are in reality works of art, "deserving to be classed along with the great Oriental landscape paintings to which they are closely associated in spirit." Moreover, there is a tendency to mistake their very complex and highly developed esthetic standards for an incomprehensible religious symbolism. Actually Japanese garden design leans no more upon such symbolism than does the European garden with its ubiquitous imagery of fertility (Ceres), love (Venus), and play (Bacchus). Rather—as is apparent from this study—Japanese garden design is based upon a profound attachment to the natural landscape; a shrewd observation of natural phenomena (e.g., a full understanding of perspective centuries before the European painters mastered it); and an unsurpassed horticultural technique. Twelfth-century accounts of garden construction tell of *moving full-grown trees* which were in *full flower three months later*.



From "The Art of Japanese Gardens"

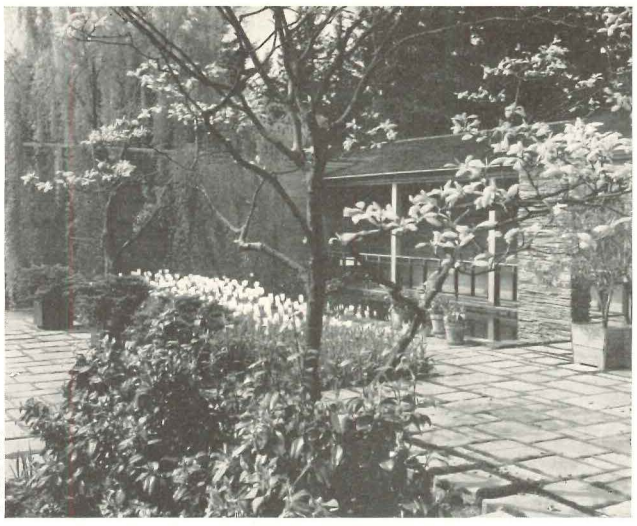


Photo Art

The Japanese garden offers many interesting potentials —technical and esthetic standards—to the American designer as the comparison above indicates. Garden at top is late seventeenth century, while that at bottom, in Oregon, is by A. E. Doyle and Associates, Portland.

The highly abstracted art of the Japanese garden can be best understood in terms of its uninterrupted development over a period of 1,000 years in Japan, and its even longer history in China—which constituted the main source of Japanese culture—before that. Miss Kuck's carefully documented account of this development forms an illuminating document, which not only fills important gaps in historical research but also proves valuable to garden and building designers today. For it is clear that the Japanese long ago faced, and in their own way mastered, many esthetic and technical problems which still haunt the American designer. Indeed, some of the best of recent urban work bears a startling similarity to some of the gardens illustrated in this book.

Esthetically, the Japanese garden is as far as possible removed from the Versailles tradition. Here is no brutal imposition of geometry upon landscape, of axis and pruning shear on natural form. These gardens are designed much more for use than for mere display; yet beneath their apparent simplicity lies an esthetic discipline at least as complete and impressive as that of Le Notre.

Technically, these old Japanese designers are rich in suggestion—their conception of the garden as a basic part of the house, *a living area;* their use of colored sands and gravels where a lawn is technically impossible; their technique of planting a garden fully grown and maintaining the form by vigorous pruning; their reduction of maintenance by the use of relatively few species and a limited number of plants; their use of plants as structural material; their inventive exploitation of water. And Miss Kuck's book is so far the best introduction to their philosophy of design and their work as designers.

MR. SAMUEL McINTIRE CARVER by Fiske Kimball. The Southworth-Anthoensen Press, Portland, Maine. 157 pp. (exclusive of 373 illustrations), 9¼ by 12 in. Price, $12.00.

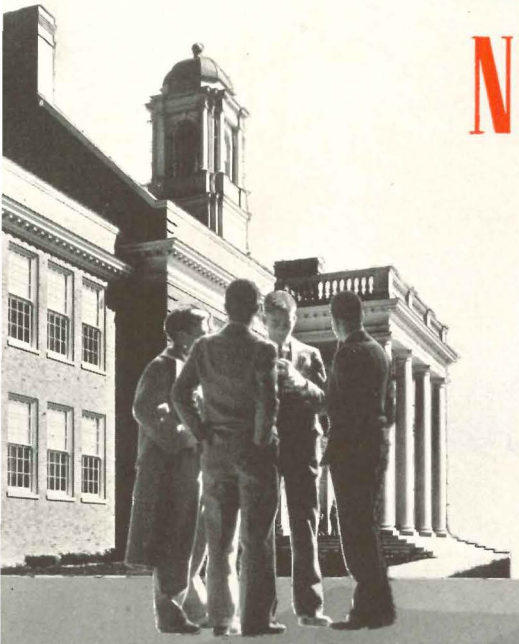
BEGUN IN 1917 and "more consonant with (his) interests a score of years ago than now", Mr. Kimball's new book is perhaps the most thorough study yet to appear on the scope and character of the work of the almost legendary McIntire. The book represents an incredible amount of research, assembled with Mr. Kimball's usual scholarship and care. It is profusely illustrated.

STAIR BUILDING: Design and Construction; Bevels and Face Molds; Self-Help Questions. By Gilbert Townsend, S.B., with Ross and Macdonald, Architects, Montreal, Canada. Published by the American Technical Society, Chicago. 200 pp., 5½ by 8½ in. Illustrated.

EMPHASIS on the integral relation of the stairway with the rest of the house for safety, efficiency, and pleasing appearance makes this book valuable to architects as well as those whose particular concern may be with the design and construction of the stair itself. The authors go from cellar to

(*Continued on page* 118)

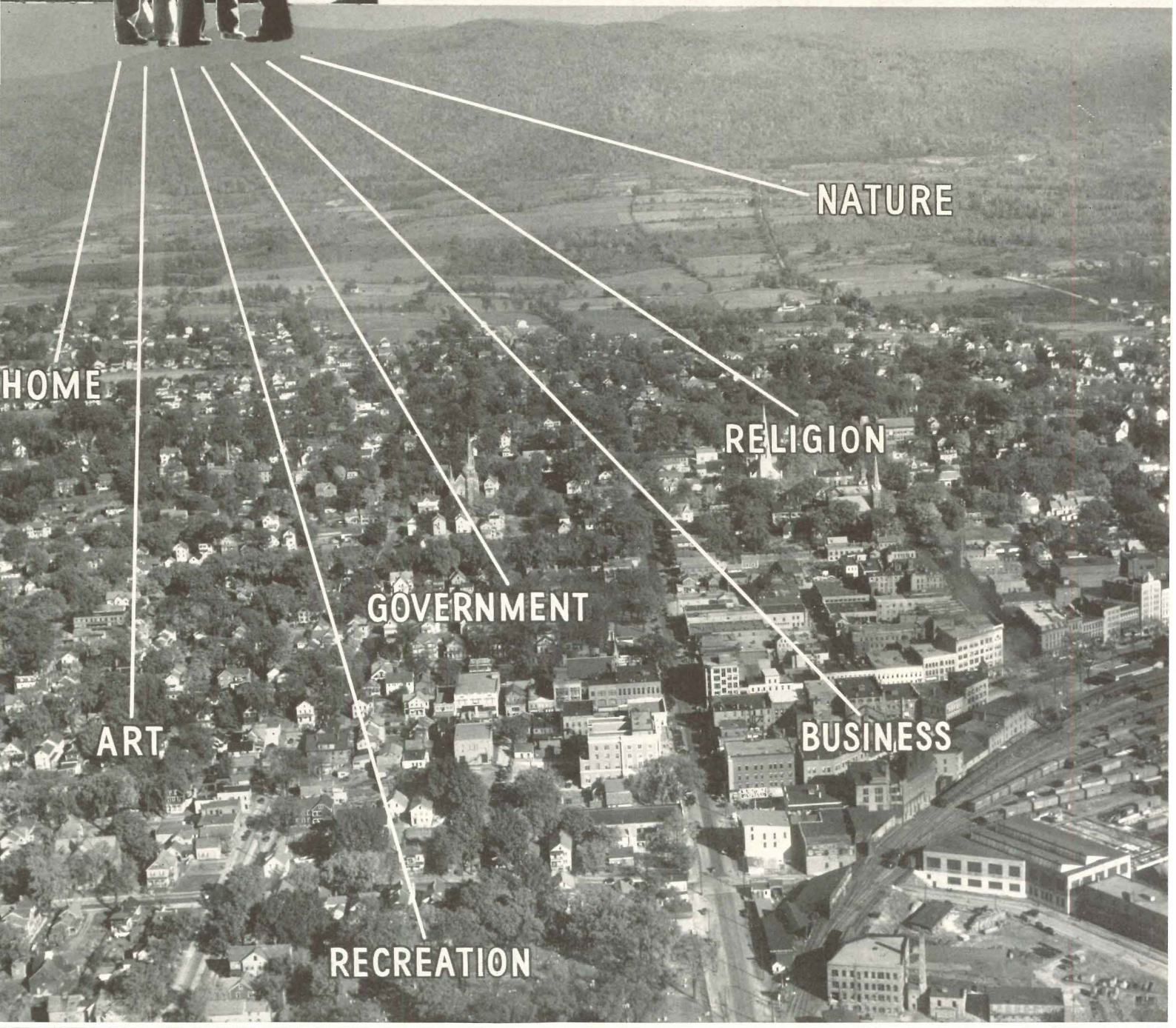
The NEIGHBORHOOD SCHOOL



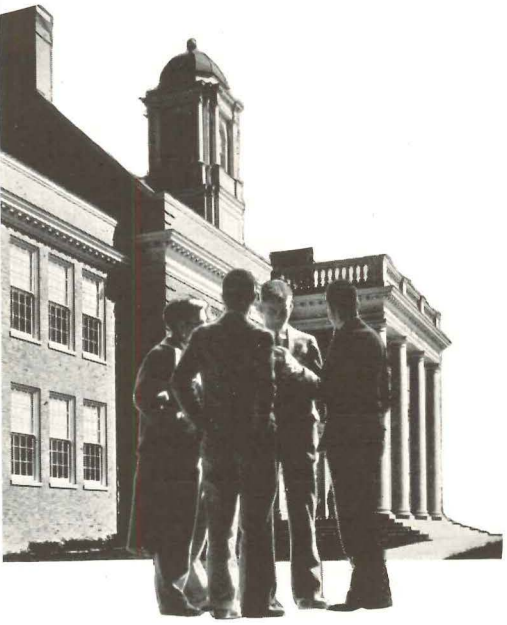
Increasing numbers of school programs throughout the country are interwoven with local community life. Schools with such programs prepare pupils for worthwhile citizenship, and offer adults opportunities, often unobtainable otherwise, for recreation and avocational training. Thus the school becomes

A SERIES OF LABORATORIES FOR LIVING

Photos: Ewing Galloway, McLaughlin Aerial Surveys, Paul Davis. Montage: Sigman-Ward.



BUILDING TYPES



COMMUNITY PROGRAMS MODIFY

Community-school programs may be expanded for two purposes: to enable students to become better citizens of the complex, rapidly changing communities in which twentieth-century man lives; and to bring into the school's sphere of influence adults, particularly those who might ordinarily have little interest in the school plant and program. Both are important to new trends in educational philosophy; both are important if school design is to continue to improve in quality, and to hold its place in our national economy.

On these two pages, Dr. THOMAS C. HOLY, of the Bureau of Educational Research, College of Education, Ohio State University, explores the phases of school design affected by school programs for adults in the community. Elsewhere in the study, various facilities for community programs are discussed, four community schools are studied, and TIME-SAVER STANDARDS of a type long desired return to the Record's pages.

THE TERM "COMMUNITY SCHOOL" is variously defined in accordance with the concepts of the person formulating the definition. In the main, these definitions fall into two classifications: those which interpret the community school as one in which "the basic problems now facing the American public and local community groups become the major problems to be dealt with in the community school",* and those which make the school the center of the normal adult activities of the community.

An analysis of literature regarding the community school shows that much attention has been given to this problem within the last decade. However, as is frequently true, practice has not kept pace with concepts. In his foreword to a recent book, John Dewey makes this statement: "A great deal is now said about the social functions of schools; more is said than is done".† Further analysis reveals that little attention has been given to the plant and equipment implications of the community school, yet such considerations greatly influence the practicability of a community-school program.

Although the community school, as now conceived, is of rather recent origin, the idea was expressed by Henry Barnard as early as 1854. He wrote: "The successful establishment of a high school by improving the whole system of common schools, and interesting a larger number of families in the prosperity of the school, will create a better public sentiment on the subject than has heretofore existed, and the schools will be regarded as the common property, the common glory, the common security of the whole community."‡

Factors Contributory to Current Activity

The recent intensification of interest in planning school programs to serve the entire community is due to a number of factors:

(1) Change in character of high-school population has resulted in only about 20% of the high-school graduates going to college. It becomes incumbent upon the school to adjust its program to give the 80% not interested in higher education, and those who drop out before graduation, some preparation for life in the community.

(2) Changing social conditions have resulted in: lengthening the school period; large increase in leisure time of the adult population; and technological changes which make it necessary for workers to learn new skills.

(3) It has become apparent that a large percentage of the families living in the area served by a given school have no direct contact with that school. In a study which the writer made a few years ago in 16 consolidated districts in a midwestern state, it was found that only 54% of the families served had children in the schools. If those persons not directly benefited are to support a program of public education, it is imperative that they be brought into the scope of influence of the program.

(4) A gradual change is taking place

*"The Community School", edited by Samuel Everett, D. Appleton-Century Co., 1938, p. 461.

†Elsie Ripley Clapp, "Community Schools In Action", The Viking Press, 1939, p. VII.

‡Henry Barnard, "School Architecture", H. W. Derby & Company, 1854, p. 268.

SCHOOL DESIGN CONCEPTS

among educators, away from the philosophy that "education is *preparation* for life," toward the philosophy that "education *is* life."

Possible Community Activities in Schools From Roselle, N. J., comes the following record of evening activities in the school: "W.P.A. sewing, gymnasium, and recreational classes, Boy and Girl Scouts, high-school activities, credit-union meetings, extension courses, women's clubs, church organizations, parents' meetings, community bands, service clubs, American Legion".* To this list might be added the Grange, Farm Bureau, adult education, athletic activities, dramatic groups, and others.

Planning Buildings for Community Use Due to the wide variation in character and degree to which a school may go in serving its community, only general requirements can be listed here.

(1) Site should be of sufficient size to provide recreational opportunities, not only for the school, but for the community. There should be ample space for community parking.

(2) Music room, auditorium, and gymnasium, whether planned separately or in combination, should as a group have an independent entrance and be so planned that they can be shut off from the rest of the building. It is essential that toilet facilities be provided in that part of the building open to the public.

(3) Kitchen, complete and independent, to be used principally for community purposes, may be so planned that it opens either into the regular school cafeteria or the gymnasium; i.e., it should open into a space large enough for serving community banquets.

(4) Shops and laboratories should be planned and equipped to serve both the school and the community. Separate tool rooms, and storage space for supplies and equipment, may have to be provided for community use.

(5) Lockers and dressing rooms for adults in addition to those for school children are desirable for the gymnasium. Where funds permit, it is likewise desirable that separate showers be provided.

(6) Library with outside entrance, and of sufficient size for community use, is desirable.

(7) Heating and ventilating systems are preferably so designed that units such as the music room, auditorium, gymnasium, and library can be heated without heating the entire building.

(8) Student activities require adequate space: at least the equivalent of one classroom, with sufficient storage space for all types of activities—rehearsals, clubs, school publications, etc.

(9) Classrooms: Where the school staff is desirous of increasing student participation in classroom programs, movable equipment is essential, and larger classrooms are often required.

(10) Health-clinic rooms should be provided so that pre-school children (as well as those enrolled in the school) may be cared for and instructed.

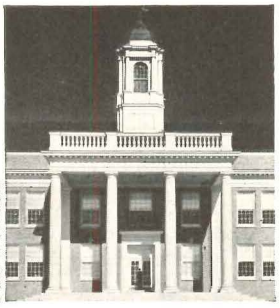
(11) Entertainment: In small communities where there are no satisfactory theaters, ample provision should be made for showing moving pictures to the community. Such provisions are desirable for school use in all communities.

Effects of Community Programs

While no one can fully prophesy the results of an enlarged community-school program, certain practical benefits are bound to accrue to both the community and the school. With the tremendous public emphasis on national defense, and on unemployment compensation, old-age pensions, and other forms of public welfare, it seems evident that support for schools—financial as well as inspirational or personal—is going to be increasingly difficult to obtain. Such a state of affairs may lead to advances in educational philosophy and in design of buildings to house educational facilities—in other words, the situation may become a spur rather than an obstacle.

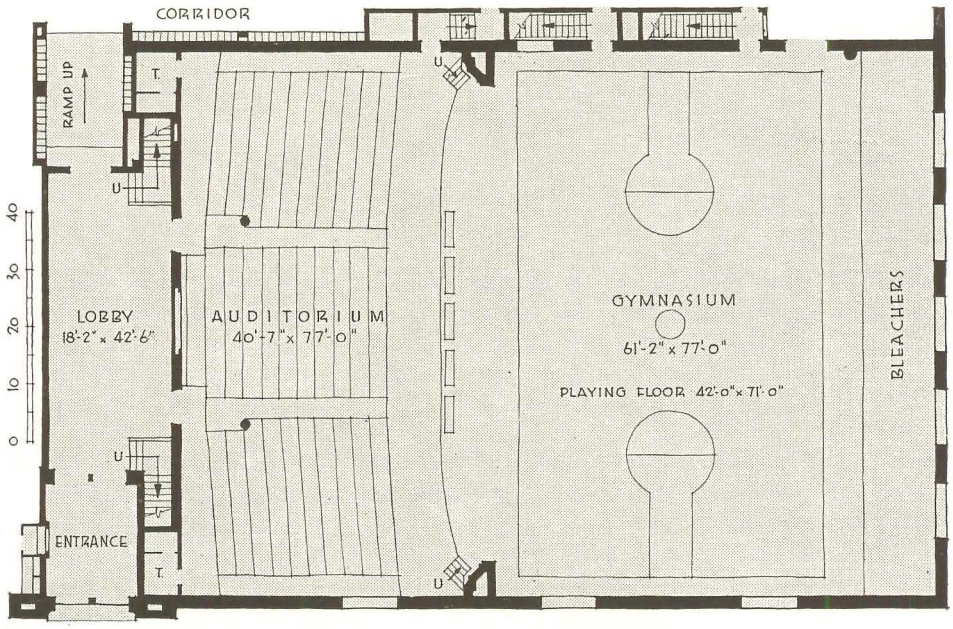
Aside from its fundamental purpose of producing an enlightened populace, better able to cope with the rapid changes now taking place in our social order, a school program which obtains the active support of its community offers practical advantages to the educator, and to the architect. If, while it turns out citizens well fitted for the community, the school also embraces within its program every family in a district, constructive enthusiasm can be nurtured and financial support assured. Thus the school and school buildings can continue to occupy their properly important place in our national life and in the building field.

*Burton P. Lewis, "A School Building For Everybody", New Jersey Educational Review, February, 1940, p. 154.



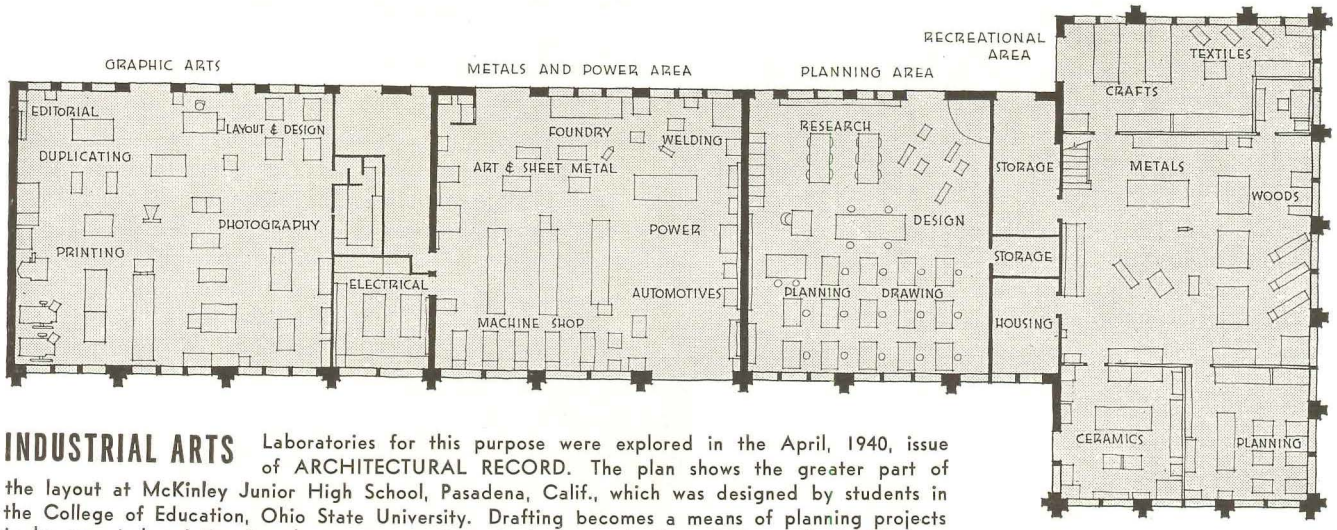
Paul W. Davis

LABORATORY METHODS NEED EXPANDED



★ AUDITORIUM AND GYMNASIUM

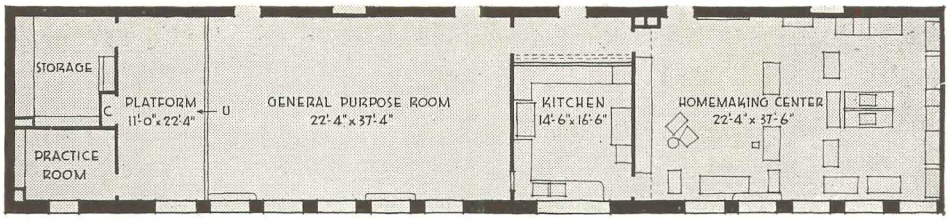
While these facilities are not always recognized as "laboratories," they become an important unit of the community-laboratory program. Here student productions enable classes in literature momentarily to live the dramas which might otherwise become dull assignments. Townspeople may receive cultural and entertainment values. Athletic programs provide outlets for adolescent energy, aid physical development, entertain students and community. In this example from Glencoe School, Mankato, Minn., Architects PASS and ROCKEY achieved a satisfactorily large stage by combining stage and gymnasium, rather than by using gymnasium as auditorium.



★ INDUSTRIAL ARTS

Laboratories for this purpose were explored in the April, 1940, issue of ARCHITECTURAL RECORD. The plan shows the greater part of the layout at McKinley Junior High School, Pasadena, Calif., which was designed by students in the College of Education, Ohio State University. Drafting becomes a means of planning projects to be executed; printing is only one means of mechanical reproduction of ideas, all of which are properly related in a graphic-arts center; woodworking, metal working, electricity, etc., are used to stimulate creative impulses and clarify modern life.

FACILITIES



★ STUDENT AND COMMUNITY ACTIVITIES

To serve a multiplicity of purposes, none of which requires independent provisions, many schools include a "general purpose" room. In Croton Elementary School, Croton, N. Y., Architect A. H. KNAPPE has included a room for teaching music, public speaking, and occasional English programs. Local adult organizations meet here, and sometimes serve meals; there has to be a kitchen en suite. The adjacent domestic science center offers "overflow" seating space.

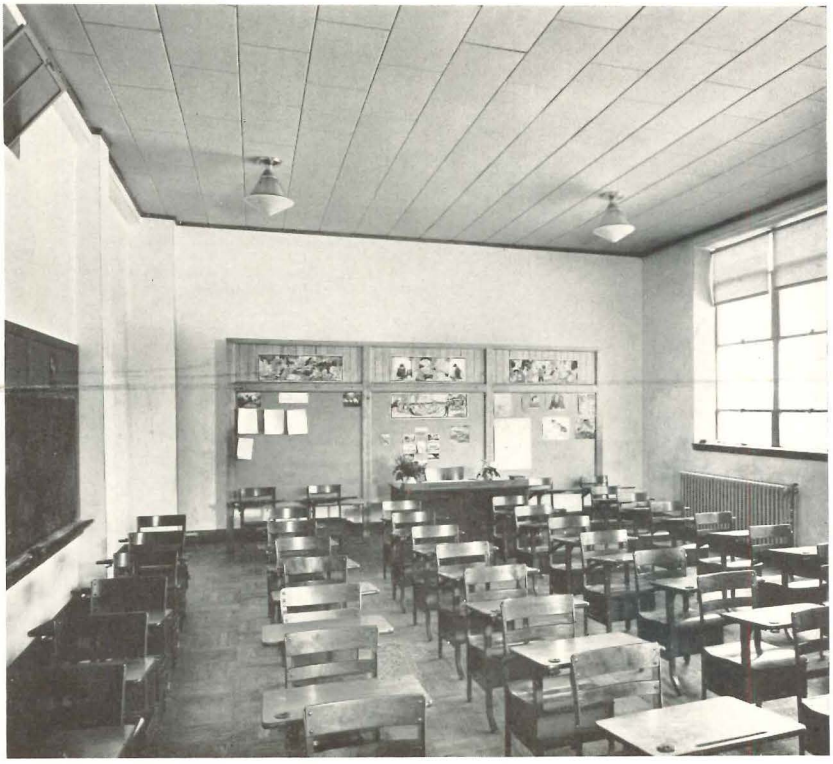
★ LIBRARY

The school in which laboratory methods of teaching supersede more pedantic routines may eventually become a series of conference rooms where projects are planned, each room with access to laboratories for executing projects and to a central information source, or library-museum. Though such a scheme may seem radical, it is in fact a statement, in different words than usual, of the requirements of many existing school programs in America. The library becomes important as a research center; it may also house a branch of the public library. In Washington School, in Davenport, Iowa, of which SETH J. TEMPLE was architect and CHILDS and SMITH were chief architects, the library has two conference and work rooms.

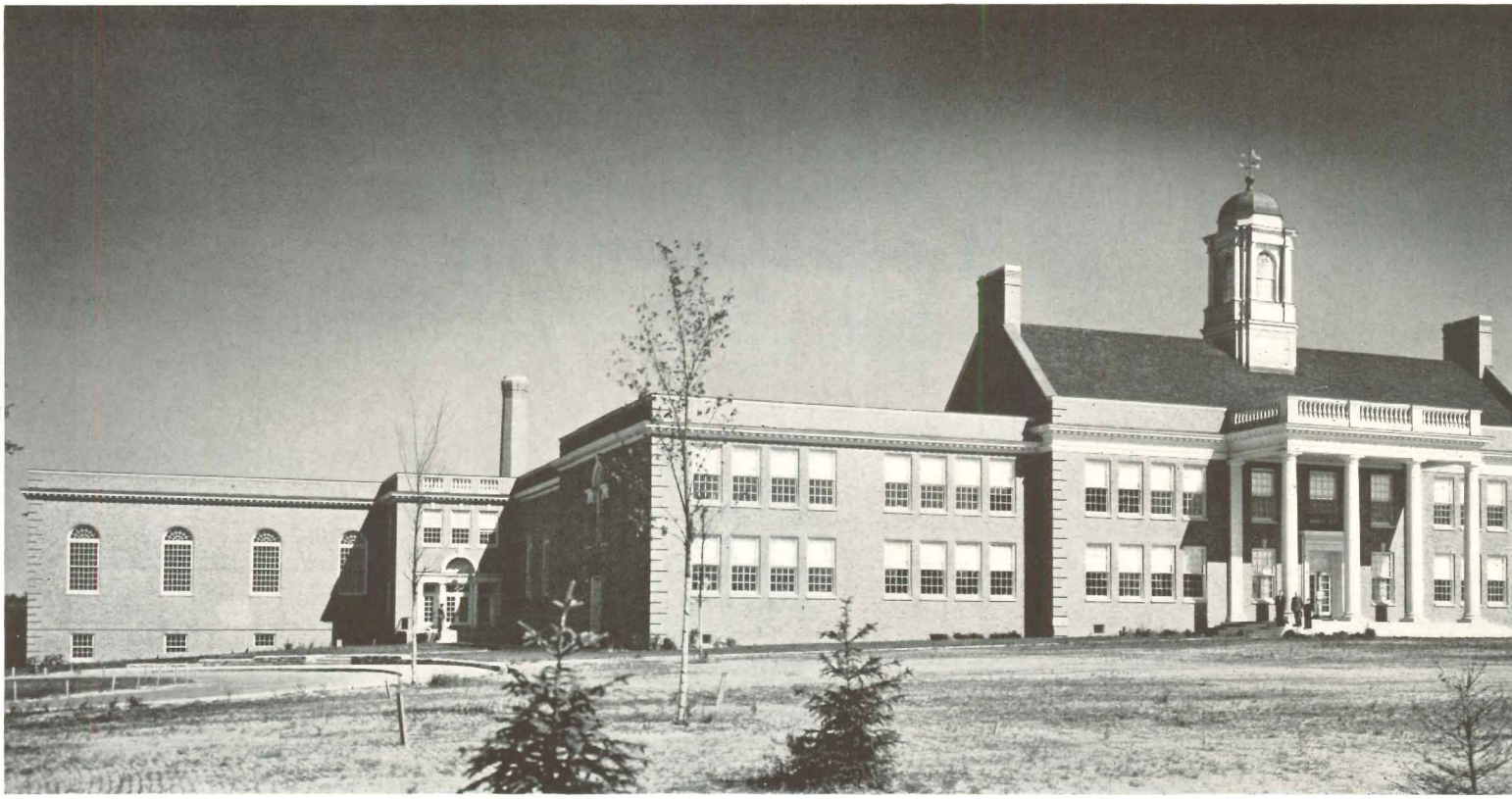
Fromader

★ CLASSROOMS

These need not be elaborate, overexpensively outfitted spaces. More important is their adaptability to a program which is at least partially student controlled. Proper light, both natural and artificial; some means of limiting noise, because democracy is noisy; space for class projects, and a minimum of fixed impedimenta —these are important considerations. In the example at right (Crosby Garfield School, Raleigh, N. C.; WILLIAM HENRY DIETRICH, Architect) large windows are used; walls and ceilings are light colored for reflectivity; indirect ceiling fixtures provide adequate artificial illumination. Ceiling is acoustically treated. Screen at rear conceals students' overclothing and serves as a bulletin board. Notice that the conception of the student as practitioner, and teacher as guide, is carried even as far as reorienting the classroom furnishings. Teachers' desk is not in the traditional location; it is out of the way, at the rear, so that pupils can feel that they, themselves, are in charge.



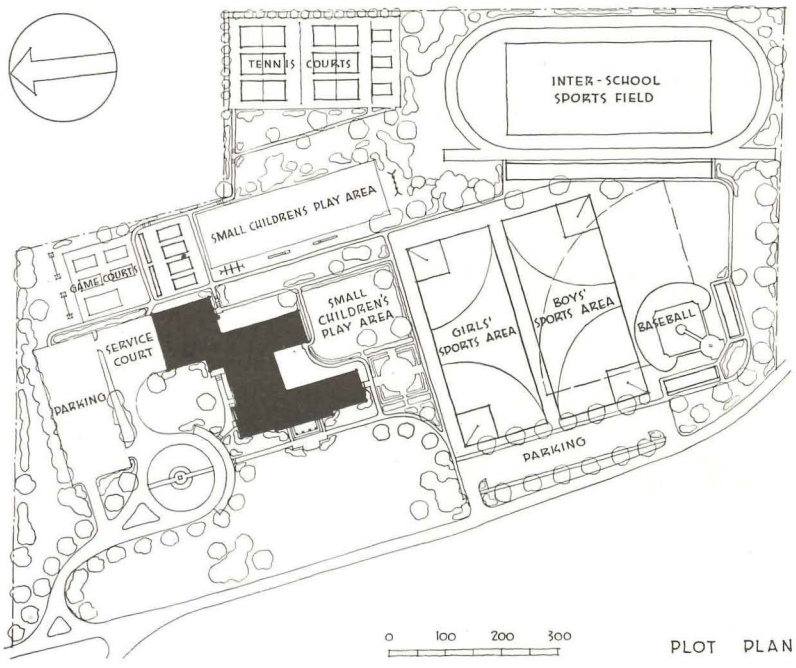
Joseph W. Molitor



Exterior photo by Paul W. Davis; interiors by Thomas L. White

SCHOOL DESIGNED TO TRAIN PUPILS AND ADULTS FOR COMMUNITY LIFE

CATO-MERIDIAN CENTRAL SCHOOL, located midway between the municipalities of Cato and Meridian, N. Y., serves a consolidation of 30 school districts in the towns of Cato, Meridian, Ira, Conquest, and Victory. CARL C. ADE, Architect and Engineer, had an interesting problem: fitting a building to a program based on advanced philosophy, in a conservative region. THOMAS LYON WHITE was Landscape Architect.



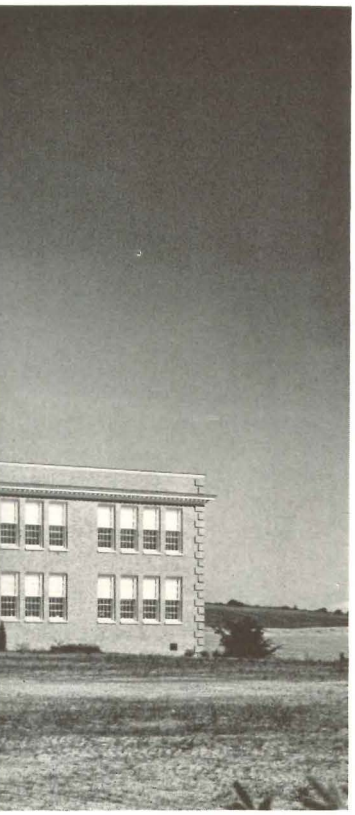
PLOT PLAN

THE CATO-MERIDIAN school program reaches almost all phases of community life. For children, the program is based on advanced principles: the familiar, though not always practiced, precept, "learn by doing"; encouragement of practice of good citizenship according to standards set by pupils; increasingly free participation of pupils in the program; physical and extra-curricular activities whose values carry over into later life; due regard for the effects of the program on body, mind, and nerves; special attention to adolescent needs at junior high school age; introduction of practical courses designed to permit all children their share of success; and a conception of the "teacher" as a personal, social, moral, educational, and vocational guide, rather than an instructor by rule and rote.

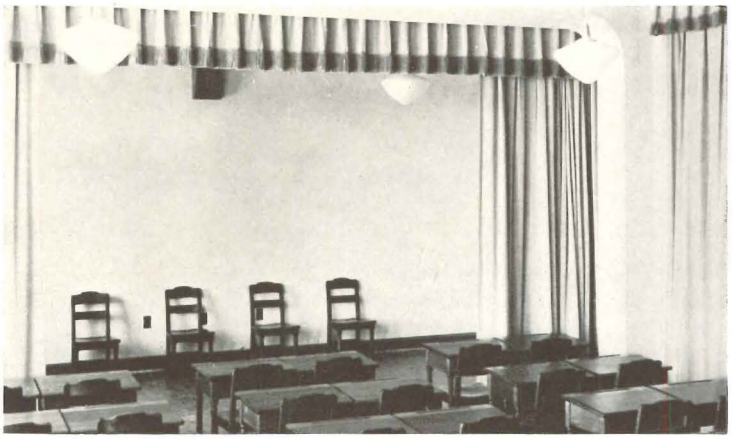
For adults, the school serves as a community center, where there are available facilities for adult education, entertainment, participation in and attendance at sports, and opportunities for practical use of the school plant in daily activities. For instance, local farmers can weld machinery or use the agricultural shop.

This comprehensive program was developed under the leadership of Paul W. Seagers, Supervising Principal, before working drawings were started. Translated into

(*Continued on page 93*)



Gymnasium is planned for pupils and adults.



Studio offers opportunity for studying broadcasting technique.

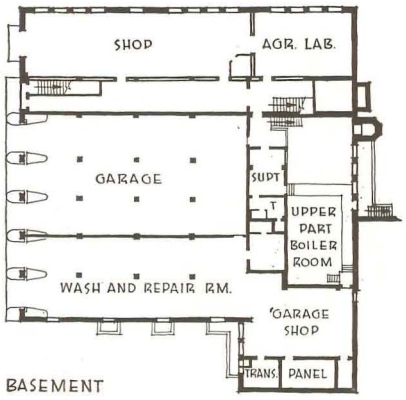
Library serves both community and school.

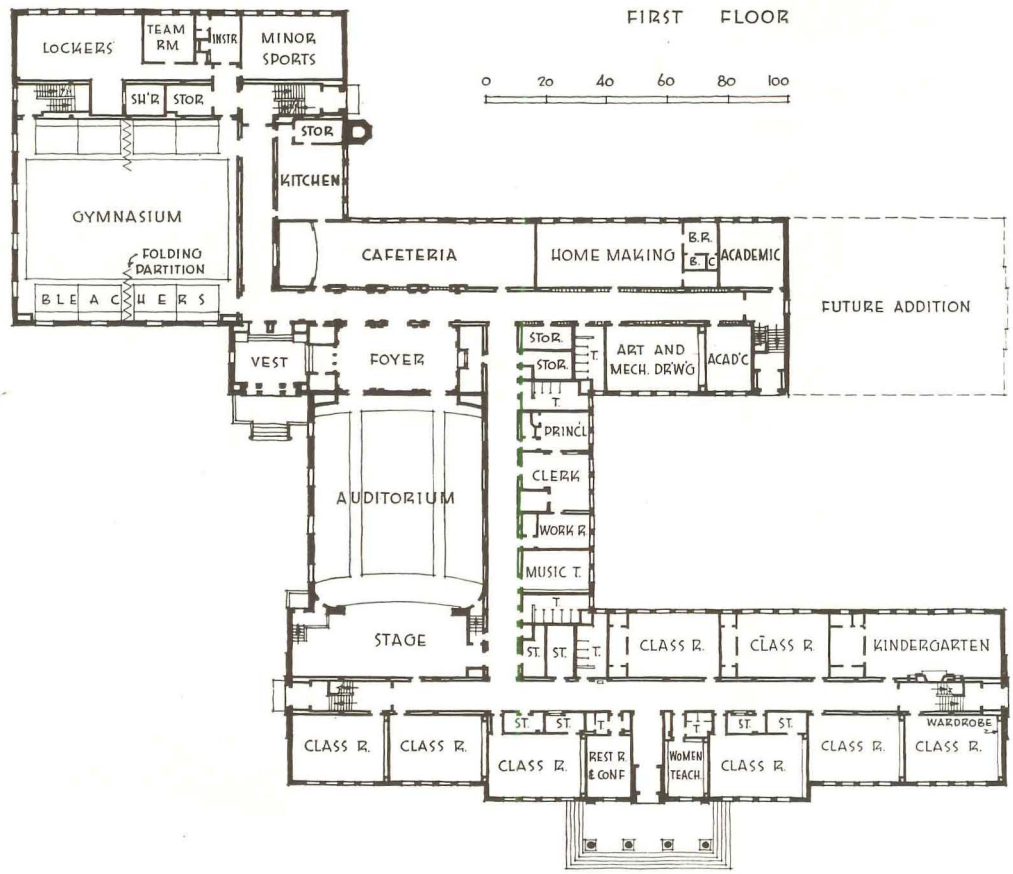
Health clinic is designed for preschool and pupil use.

Cafeteria has stage for speakers at banquets, etc.

CATO-MERIDIAN CENTRAL SCHOOL

CARL C. ADE, Architect and Engineer



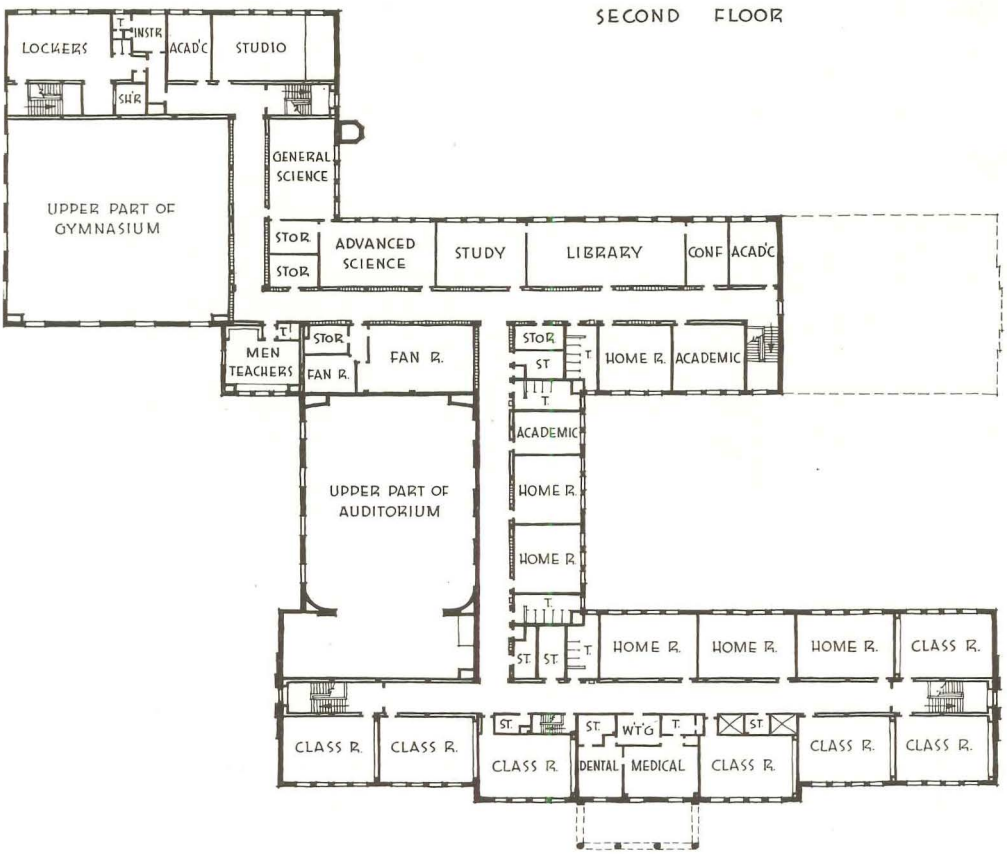


Plans show community entrance at left. Areas used by entire community are closely grouped, can be segregated from remainder of building by metal corridor gates, and are heated independently of other teaching areas in the school.

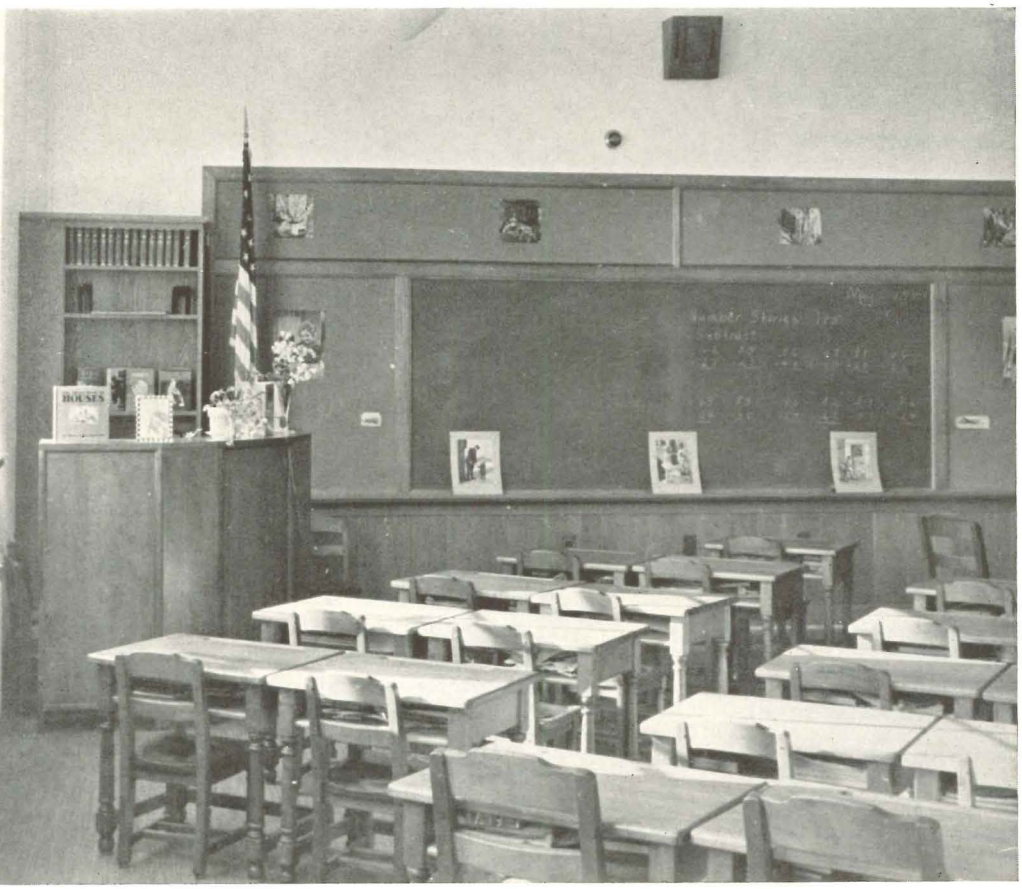
Industrial arts shop in basement contains areas for graphic arts, wood and metalworking, and similar crafts.

Photos by Thomas L. White

(Continued from page 90)



Classroom design, and placing of equipment with teacher at side or rear, make it plain that "teacher" is a guide, not a pedant.



building requirements, its effects are visible in all portions of the structure: for instance, emphasis on health results in use of acoustically treated ceilings, linoleum floors, chime program system, filtered and humidified air, and illumination-control indicators designed to impress on pupils the importance of proper illumination at home as well as in school.

There are special provisions which illustrate the integration of health policies with other phases of the program: a health suite for medical and dental care of both preschool children and pupils; physical correction and minor-sports gymnasium; and a campus type of site development (shown on the plot plan) divided into play areas for various age groups, game courts and fields, tennis courts with flooding provisions for skating in winter, and a portable bandstand.

Guidance phases of the program depend for efficiency upon use of the school plant rather than on special provisions. However, a guidance and placement office is included adjacent to the library and conference rooms.

Teaching equipment includes wiring for sound movies in all rooms, and provisions for television. The gymnasium, cafeteria, and auditorium have microphone outlets; and the studio, a laboratory for public speaking and English classes, serves also for instruction in radio technique. The school office has a PBX switchboard on which all commercial students are trained.

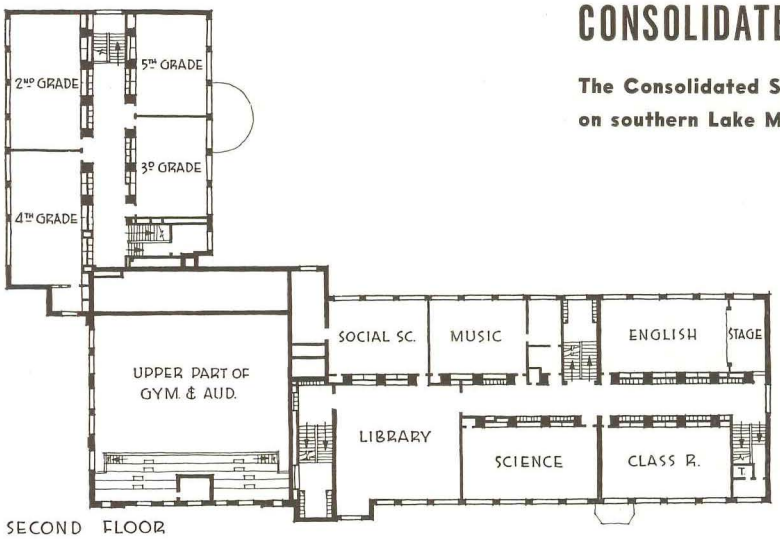
Commercial, agriculture, shop, homemaking, and science departments are equipped for exploratory courses as well as regular studies. Homemaking department contains a model apartment, and is so laid out that either "laboratory" (theoretical) or "cottage" (practical) teaching technique may be employed.

To provide for extra-curricular activities, the school contains special rooms and equipment for clubs—farming, photography, dramatics, science, journalism—and the usual gymnasium and auditorium. The site, in addition to athletic fields and courts, contains a skating house for winter use and a cabin—yet unbuilt—for Boy Scouts.

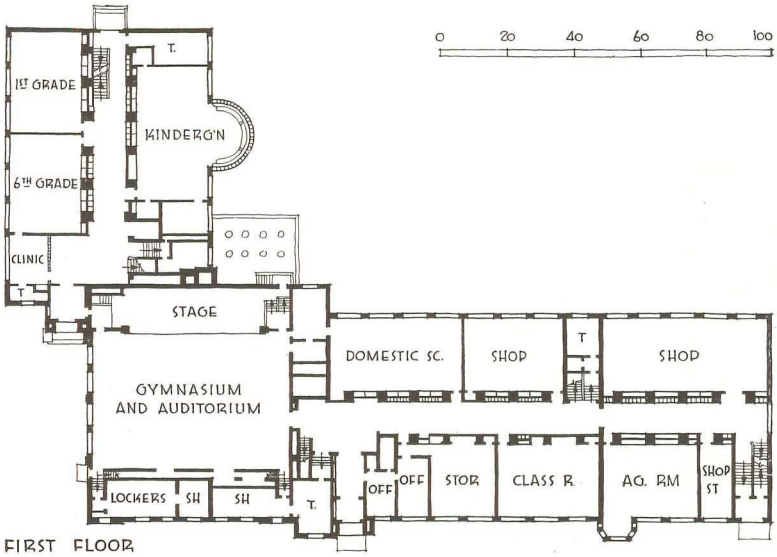
Since Cato-Meridian is a rural school, provision had to be made for transportation of pupils. Buses are housed and serviced in the building, a practice which results in substantial economy to the school.

CONSOLIDATED RURAL SCHOOL BUILT ON UNIT PLAN

The Consolidated School of New Buffalo, Mich., serves a fruit-growing community on southern Lake Michigan. The firm of WARREN S. HOLMES were the architects.



SECOND FLOOR

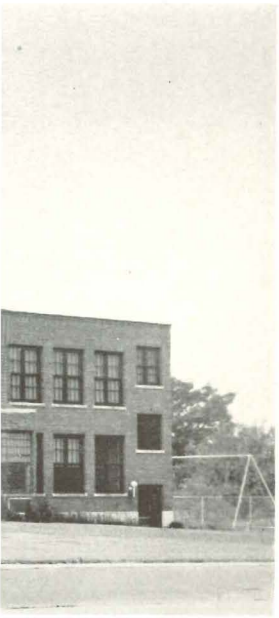


FIRST FLOOR

THE ENTIRE building is constructed on a unit plan whereby the portion represented by each set of windows constitutes one unit, heated, lighted, and ventilated independently of adjacent units. Partitions between rooms are nonbearing, and contain no pipes or conduits. This design makes possible changes in room layouts with a minimum of difficulty.

Resultant economies were realized when the original building, erected in 1930 at a cost of $85,000.00, was enlarged in 1939. The two additions built at this time included a wing for elementary grades and enlarged junior-senior high school accommodations, which together cost $100,000.00.

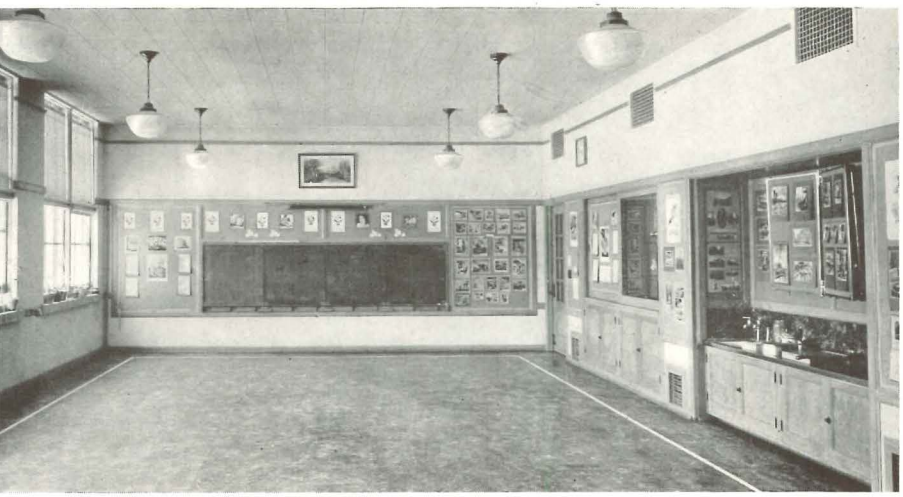
The school provides agricultural, music, and recreational programs, intimately coordinated with home and business interests in the community. Total enrollment is approximately 800.



Leavenworth

Combined auditorium-gymnasium

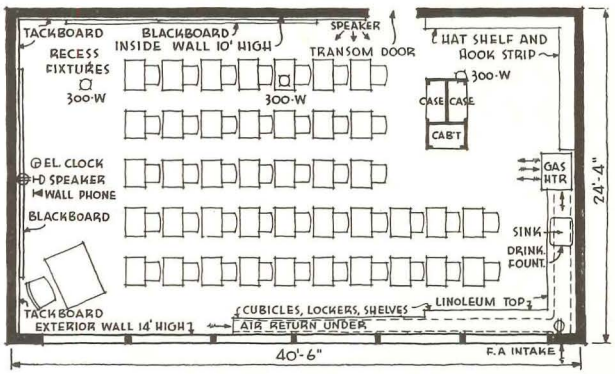
Kindergarten bay has sandbox and pool.



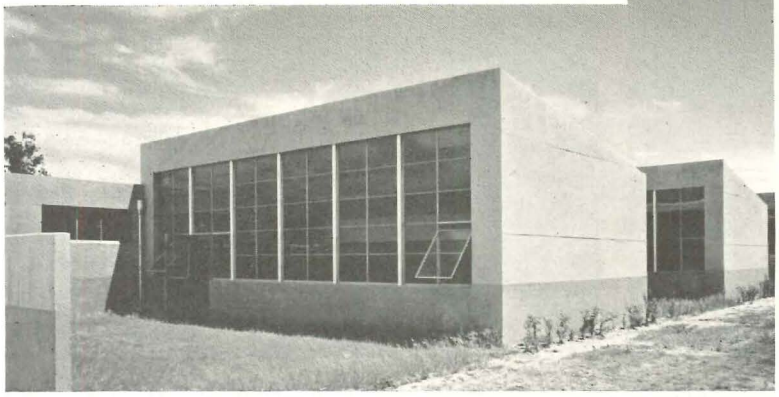
Linn Camera Shop

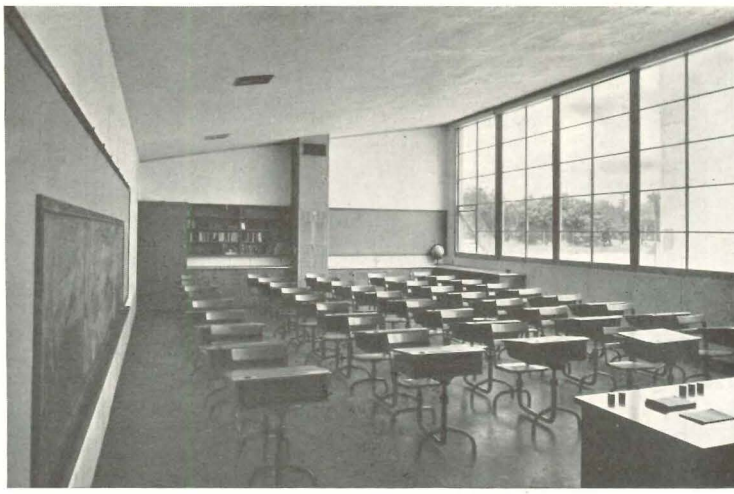
Typical classroom has 20 lin. ft. of cabinets; portable furniture is used throughout. At right, industrial arts laboratory

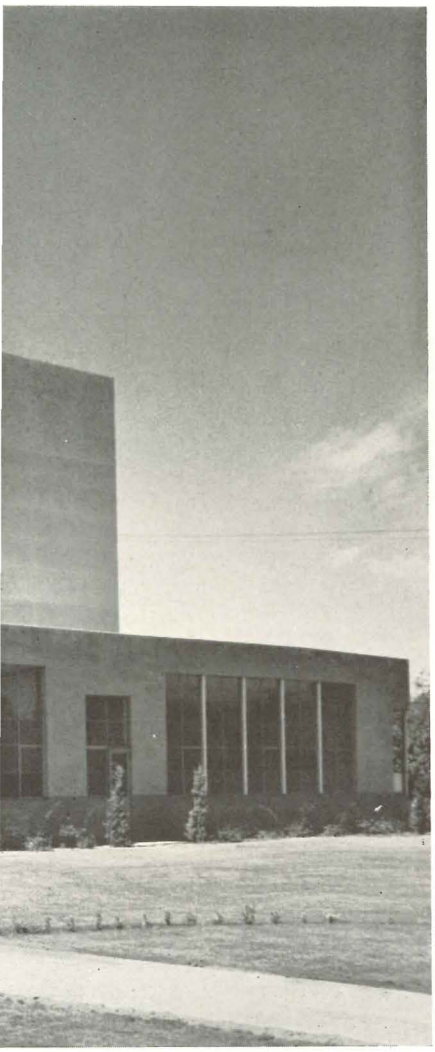
Photos by Sturtevant



Typical classroom with western exposure, placed at right angles to corridor to provide north and east light. Sloping ceiling distributes light evenly.





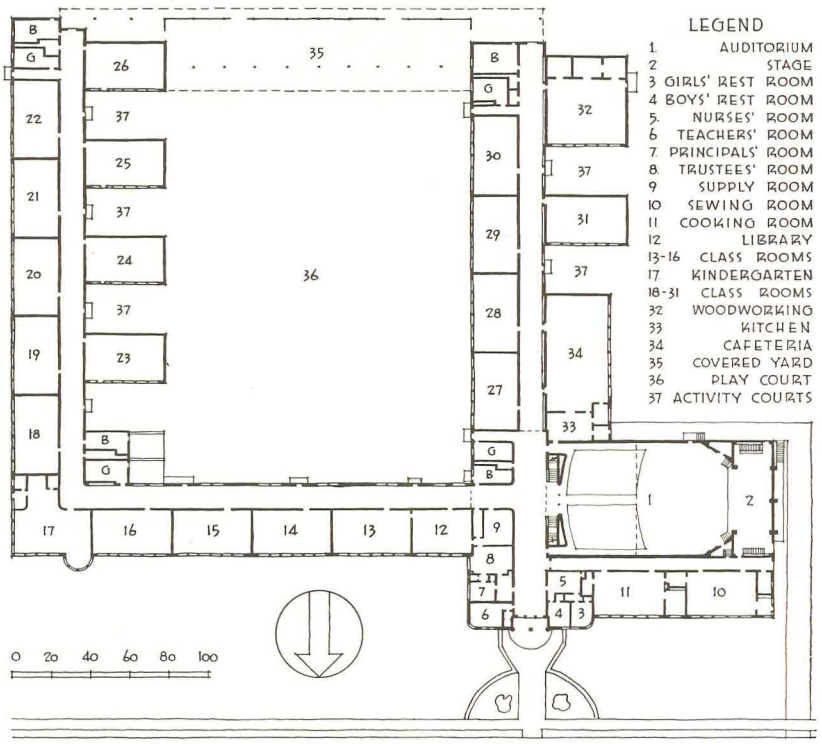


LARGE SITE OFFERS UNUSUAL PLANNING OPPORTUNITY

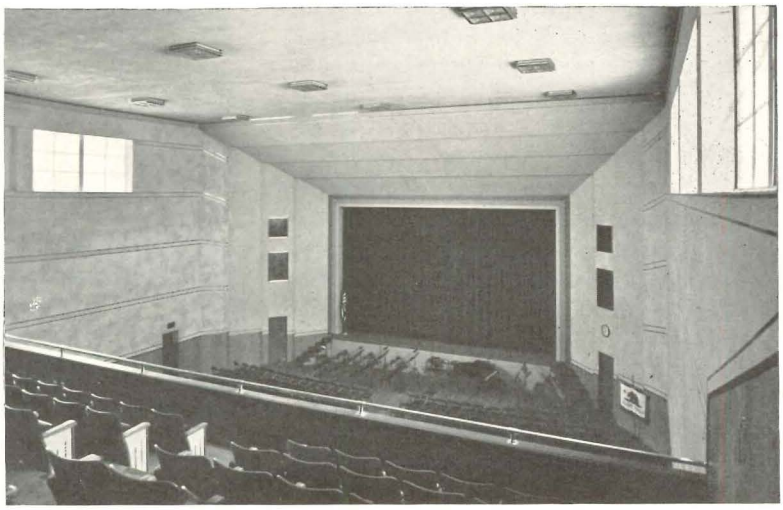
The architects of the 800-pupil Oakdale Union School in Oakdale, Calif., FRANK V. MAYO and ERIC W. JOHNSON, took advantage of a 9-acre site to provide outdoor activity areas and an enclosed playground, 150 ft. wide by 200 ft. long.

IN THIS 300 by 380-ft school it was possible to put all classrooms on one floor, thus securing an intimate relationship between outdoors and indoors. Portions of the building which will be used by the community as a whole, namely, theater and auditorium, are placed close to the entrance.

A two-purpose concrete pipe is laid around the building and court. In winter, storm-water drains discharge into this piping and thence through a by-pass into the city's storm sewer. In summer, the same system irrigates the grounds through a series of valved connections which admit water from the district irrigation system.



At left, typical skylighted 12-ft. corridor. At right, auditorium has a stage completely equipped for amateur theatricals, sound and moving pictures, etc. The ceiling and walls are acoustically treated and insulated. The entire school is served by a two-channel sound system for records or programs.



Photos by Sturtevant

OAKDALE UNION SCHOOL

FRANK V. MAYO and ERIC W. JOHNSON, Architects

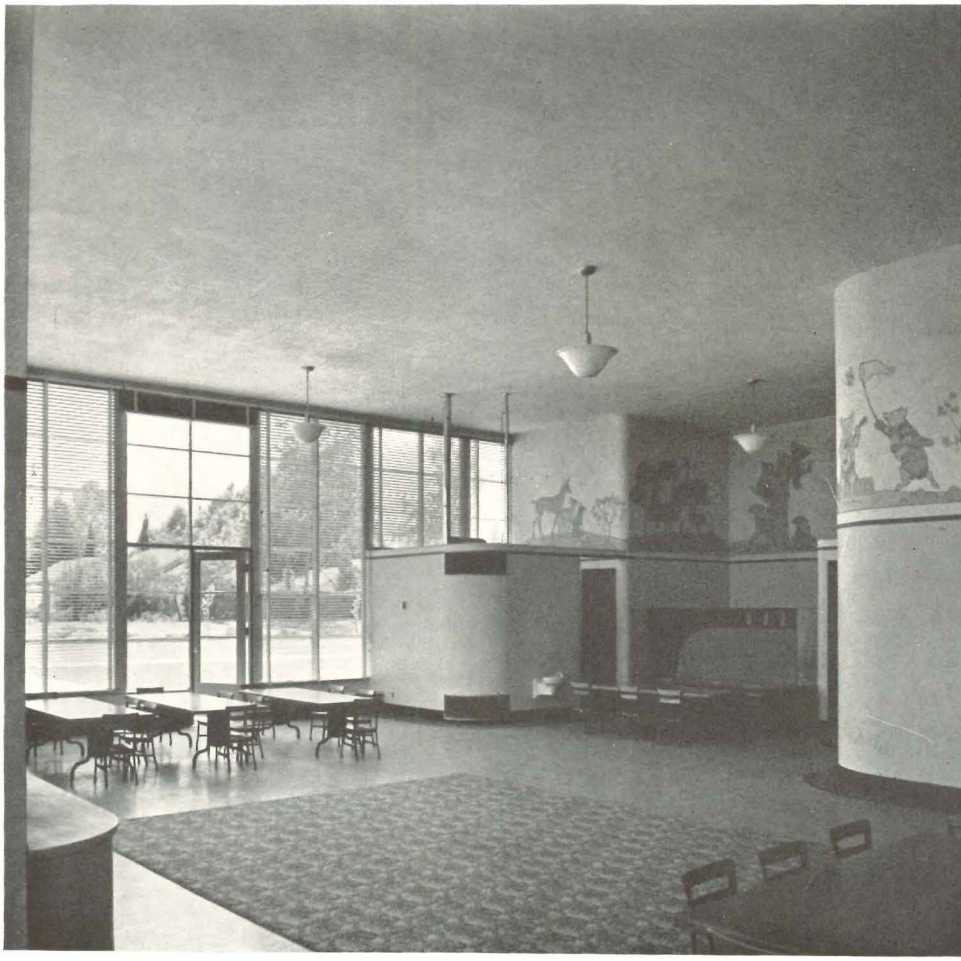
CONSTRUCTION is reinforced concrete, with 8-in.-thick exterior walls and interior bearing walls. Except for a skin coat, interior walls were not plastered or furred. Exterior surfaces were lightly honed without attempting to eliminate form marks. Plywood forms were used on an average of four times each; in order to accomplish this, classroom plans had to be standardized to a certain extent.

Exterior surfaces are finished with pale green stucco wash, applied in two coats above the sill line. Darker green oil paint was used below. Ceilings are lathed with 1-in. insulating lath, and plastered.

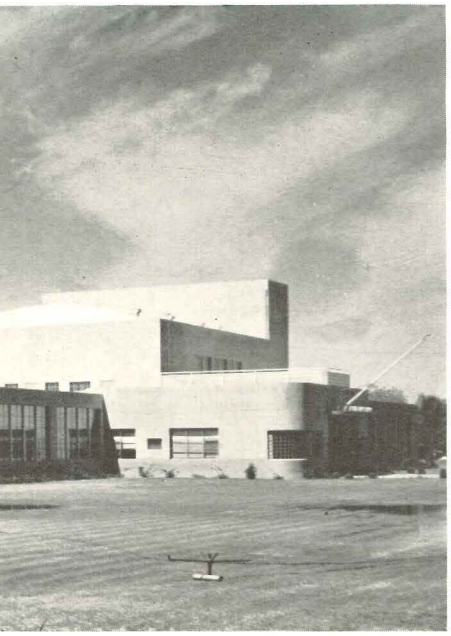
East classrooms have walls of light pastel green color which softens the bright natural light. Classrooms in the north wing have walls of light pastel ivory and reflect a greater amount of light. The ceiling of the shop is painted with aluminum to reflect the light to work planes.

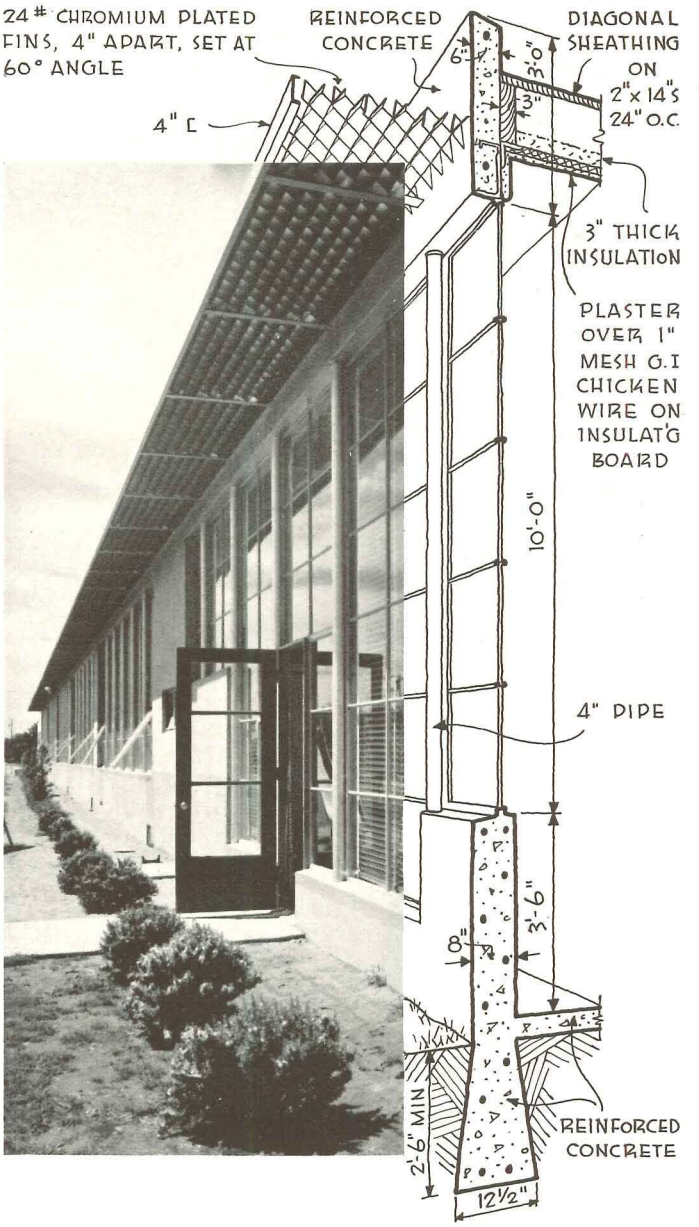
Lighting fixtures except in kindergarten and shop are flush ceiling units. In the east wing, classrooms have one row of three ceiling lights near the inner wall. In the north wing, there are two rows of six units per room.

Rooms have unit ventilators and heaters controlled both individually and by time clock. Fans deliver about 50% fresh air and 50% recirculated air into the classrooms at the rate of 1500 CFM.

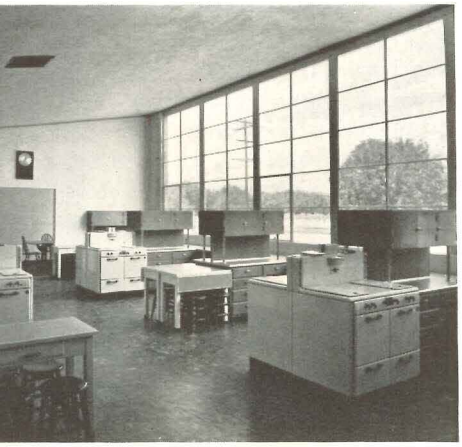


Kindergarten has low window sills, play alcove, coat alcove, and toilets.

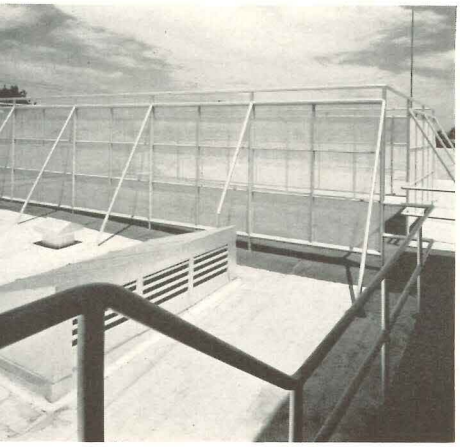


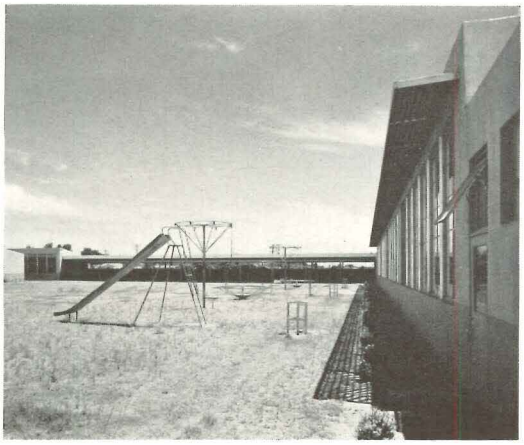


Detail of wall construction and diamond-grid cornice which is used on east wall to cut off direct sun rays from classrooms without darkening interior of the rooms



Home economics laboratory





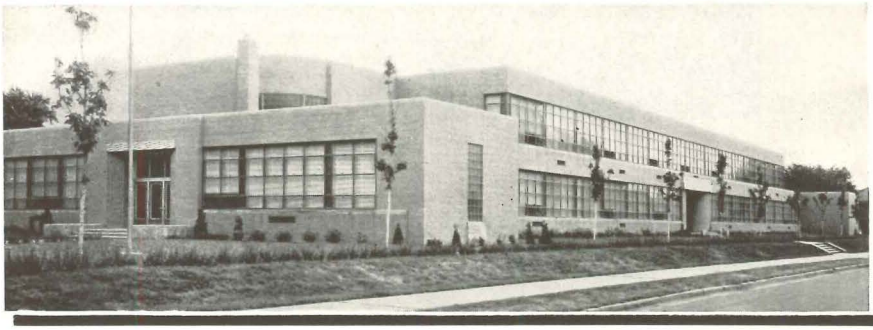
At left, sun deck on roof of administration unit; center, semienclosed playground; at right, apparatus in central playground

SIX NEW COMMUNITY SCHOOLS FOR ONE CITY

Fromader **1**

2

Fromader **3**



4

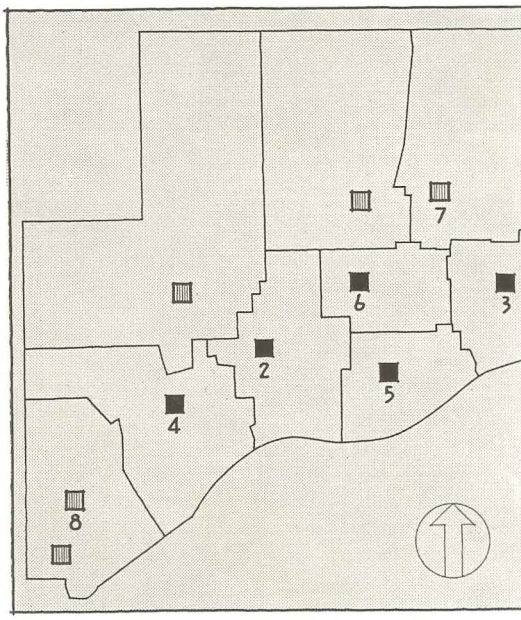
5

Paul Eberling **6**

THIS EXTENSIVE building program was part of a complete revision of Davenport's elementary school system. Facilities for adult use were considered an important part of the program.

Incorporated in the curriculum are provisions for satisfying physical, mental, and emotional needs of the pupils; for such studies as arts and crafts, drama, gymnastics, literature, music, and science; and for recreation and exercise. There are community rooms, with adjacent kitchens, for adult use. Classrooms are provided for children from kindergarten age through upper elementary grades.

Kindergarten and primary rooms are self-contained units, independent of other portions of the schools. Each has a workroom, separate entrance, and segregated outdoor play area. Kindergartens have appropriately dimensioned equipment; clocks are mounted at child height; and lively color is used in the



Map shows new school districts with buildings close to population centers. CHILDS and SMITH were chief architects. Associate Architects for each school: **1,** McKinley, and **4,** Monroe, KRUSE and PARISH; **2,** Jefferson, and **3,** Washington, SETH J. TEMPLE; **5,** Lincoln, HOWARD S. MUESSE; **6,** Madison, ARTHUR H. EBELING; additions to Hayes and Garfield (not illustrated), RAYMOND C. WITAKER.

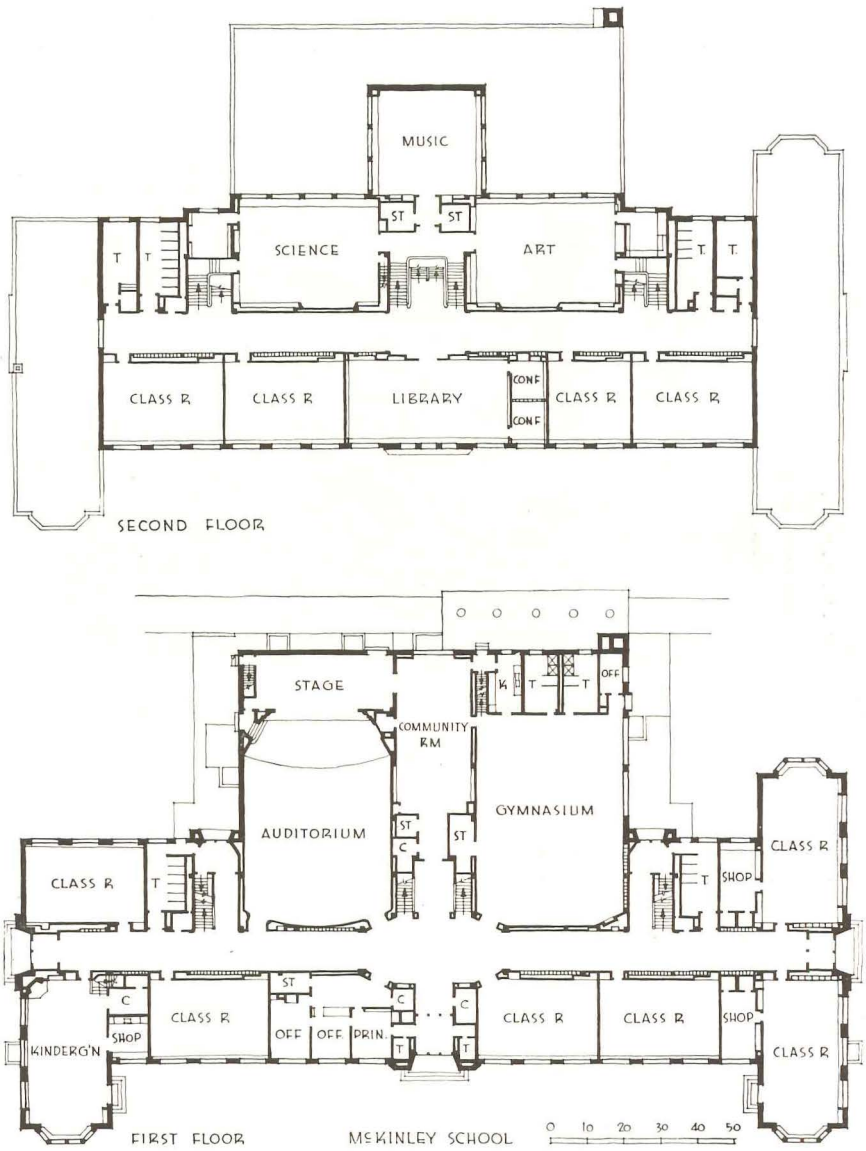
This fall, Davenport, Iowa, opened six new school buildings which replace 12 obsolete structures. Additions were made to two more. Several others were retained without change.

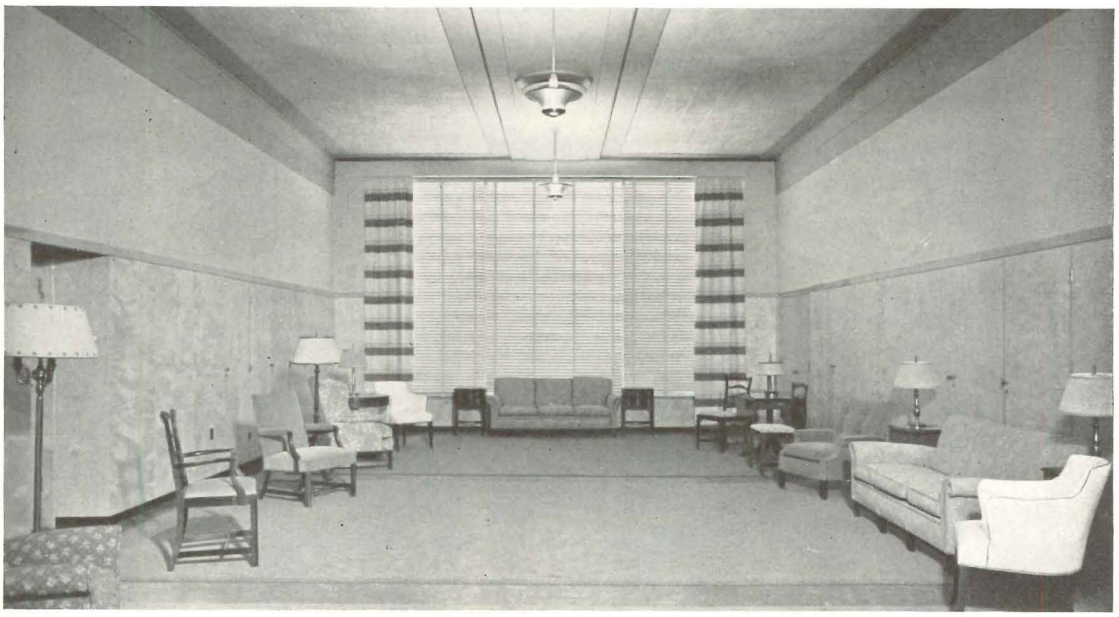
finish of furniture, walls, floors, fireplaces, play balconies, aquaria, etc.

Community kitchens are so located as to be accessible from the community room, gymnasium, and separate service entrance.

Gymnasia and auditoria are of approximately equal size. In addition to areas previously listed, the first floor houses lower elementary grades. Upper elementary classrooms are on the second floor, as are the library and conference rooms, science room, and other laboratories.

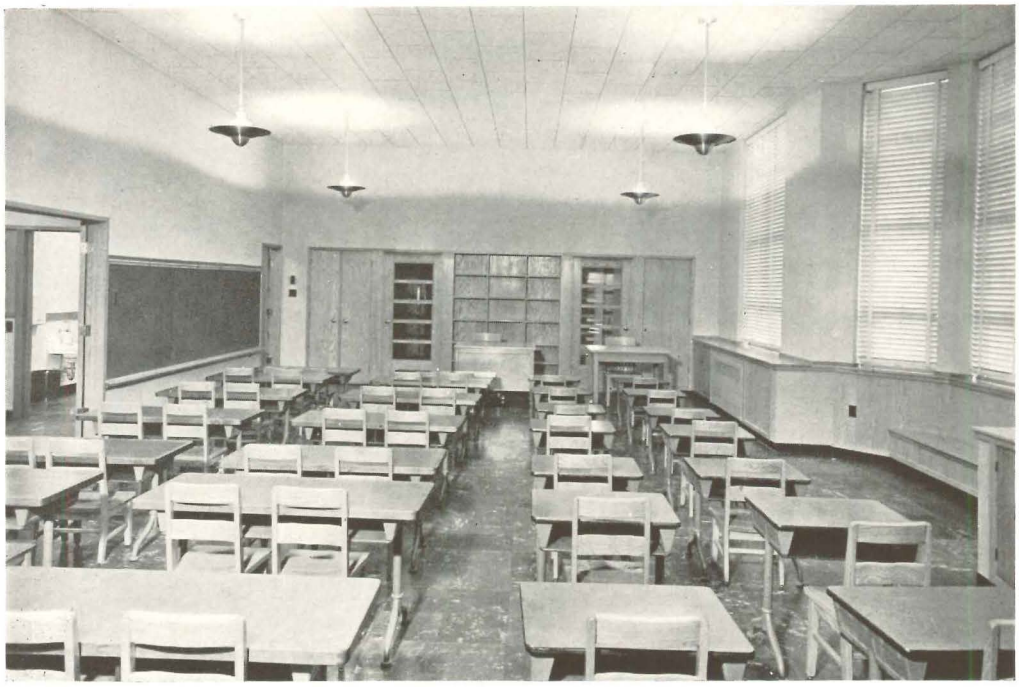
Construction is "fireproof," with load-bearing exterior walls and reinforced-concrete floors and ceilings. Structural steel framing is used in auditorium, gymnasium, and community room. Ceilings in these rooms, and in other appropriate areas, are of acoustic tile. Other ceilings generally are of painted building board which has some acoustical properties.





Fromader

Community room in Washington School, typical of those in six new buildings, is used for adult meetings and houses a branch library. Bookshelves are concealed behind oak paneling.

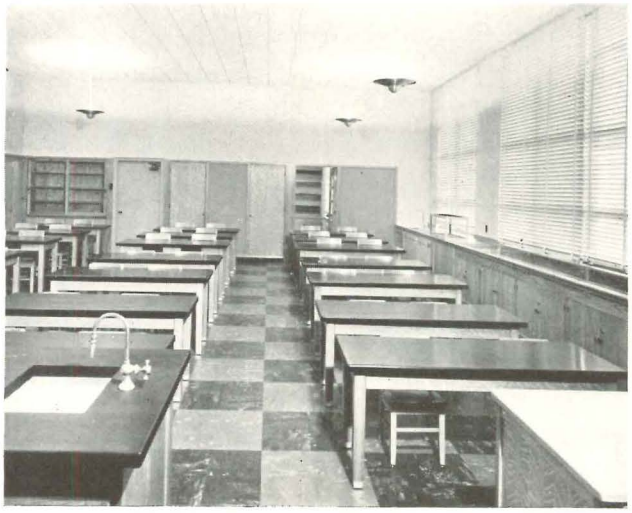


First-grade room in Washington School has portable equipment. Lavatory is at left.

SIX DAVENPORT SCHOOLS

TYPICAL CLASSROOMS are designed for portable furniture. Ceilings are painted in light colors to reflect natural and artificial light. Indirect fixtures are used. Conduit is provided for future "electric eye" lighting controls, and for a public-address system, with connections for a future master station in the principal's office. Heat is furnished by stoker-fired boilers which generate steam for a vacuum heating system. Each classroom has a unit ventilator, and a separate system is operated for the auditorium, gymnasium, and community room.

Science rooms are painted in light colors on upper walls and ceilings. Interior walls contain glass-fronted cabinets for displays, and shelves, closets, and filing cabinets concealed behind wood paneling. Work sinks line the window walls. Each science room has an adjoining workroom.



Washington: Science room has graduated furniture.

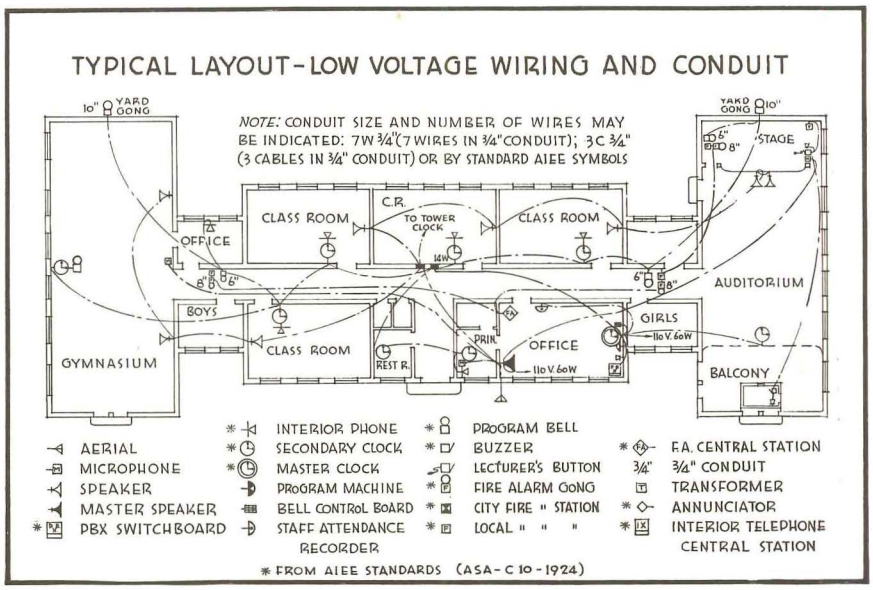
McKinley's kindergarten has fireplace and play balcony.

LOW-VOLTAGE SYSTEMS for SCHOOLS: 1-TELEPHONE

GENERAL

Information in these sheets was collected by Jule Robert Von Sternberg, Architect. Sources include J. A. Kavanagh, George Perley, and S. D. Conley, engineering specialists, and the firm of Tooker and Marsh, school architects. Data is intended to form a basis for planning, specifying, and supervising installation of low-voltage electrical systems for schools.

Four intercommunicating systems are commonly used: 1, *telephone;* 2, *sound distribution;* 3, *fire alarm;* 4, *program control.* A fifth, television, is sometimes provided for. Central control over all systems is ordinarily exercised from the administrative suite, either from the principal's office or from a special control room. Working drawings have to be checked to make certain that wall thickness or furred spaces are adequate.



TELEPHONE SYSTEMS

1. Common talking, selective ringing system is controlled through a button mat, usually on the school office desk. Use is confined to schools of 60 or fewer classrooms.

2. Selective ringing, selective talking system is controlled through PBX board in school office; permits communication between any two phones. Usually used in schools having 60 or more classrooms, or smaller schools if additional installation expense is not objectionable. Can be connected to public lines.

3. Auditorium system connects phones on stage and in projection or light control booth; has no connection with other school telephone systems.

4. Two-way, loud-speaker sound distribution system, not strictly a telephone system, employs two-way classroom loud-speakers and the school sound distribution system. It permits communication between school office and classrooms only.

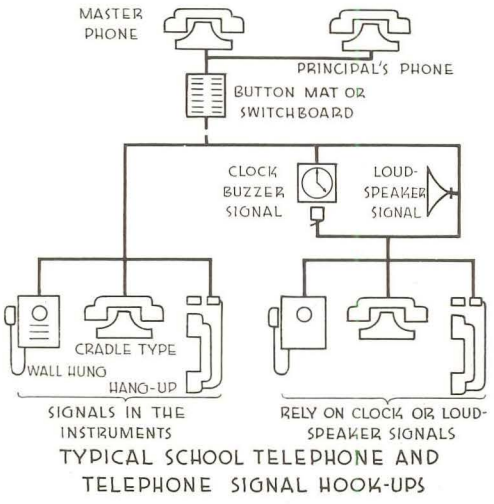
EQUIPMENT & INSTALLATION

Telephone buzzer may be contained in instrument or in bell box, or telephone signal may be sounded in classroom clock buzzer, or as a high frequency note in classroom loud-speaker. Use of clock buzzer permits use of common telephone and program bell control board and combining of both wirings in single conduit; loud-speaker signal permits common telephone and sound bell board and combined wiring conduit.

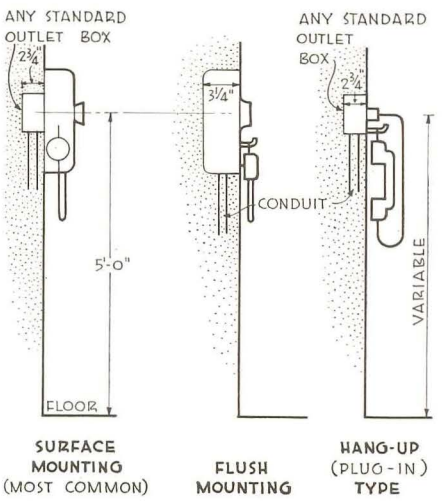
Combined telephone-and-program-control bell board is usually located in master clock or adjoining cabinet. Combined telephone-and-sound bell board is usually located in sound distribution cabinet.

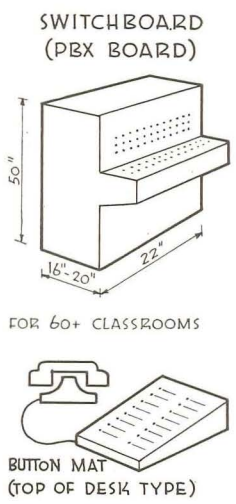
Most used telephone receiver is wall-hung, set either semi-flush or surface. Next is cradle desk type, particularly in school offices. Next most common is the hang-up or plug-in type, whose receiver may be unplugged and kept in locked desk.

Rectifier cabinet is best located in electrical room or engineer's office in basement. Like other basement installations, this is preferably surface-set with exposed conduit, because condensation created in conduits concealed in concrete basement walls tends to rot wire insulation.



TYPICAL SCHOOL TELEPHONE AND TELEPHONE SIGNAL HOOK-UPS





ARCHITECTURAL RECORD
TIME-SAVER STANDARDS
OCTOBER 1940

LOW-VOLTAGE SYSTEMS: 2—SOUND DISTRIBUTION

FUNCTIONS

1. Receive and relay radio broadcasts throughout school. **2.** Transmit phonograph recording, change records. **3.** Relay programs of local origin from one to other parts of the school. **4.** Transmit messages from school office to classes. **5.** Permit classroom "listening-in" supervision. **6.** Permit 2-way "telephone" conversations between general office and classrooms. **7.** Act as P.A. amplifying system in gymnasiums and auditoriums. **8.** Provide program signals. **9.** Provide telephone signals. **10.** Make phonograph records. **11.** Act as amplifier for sound movies shown in classroom projector.

SYSTEMS

1. Single channel: permits transmission of only one program at a time. Standard master unit contains one radio receiver, phonograph turntable, microphone, loud-speaker control board. Location: school office. Scope: small schools (up to 40 classrooms).

2. Double channel: transmits two programs simultaneously. Standard master unit contains two radio receivers, etc. Location: school office. Scope: large schools (20-plus classrooms), or smaller schools making intensive use of "sound" teaching.

3. Three channel: transmits three simultaneous programs. Unit contains two radio receivers, etc. Location: school office. Scope: largest schools only.

EQUIPMENT & INSTALLATION

Aerial: "Balanced" aerial provided with each master radio unit should be installed according to manufacturer's instructions; usually on masts, at least 10 ft. clear above roof.

Master sound distribution unit: Three types are available. Single channel units may be top-of-desk consoles, or waist-high floor type. Double channel units usually wider and higher floor types. All units require special wall outlet boxes; sizes vary with type of unit, number of speakers, manufacturer.

Amplifying system: Should provide 30 to 50 watts per channel for less than 80 room speakers; 100 watts per channel for 80 to 120 room speakers.

Microphone: Microphones used in school or principal's office: dynamic type. Dimensions approximate: 2½ in. wide, 3 in. high, 3½ in. deep, excluding pedestal.

Microphones used in auditorium or gymnasium for sound reenforcing should be of velocity type. Dimensions approximate 2½ in. wide, 6 in. high, 2½ in. deep. Microphone wall plugs are required on auditorium stage, and in gymnasium wall, in convenient locations. Outlets require single gang switch boxes, with single gang cover plates.

Loud-speakers, classroom: Dynamic type, flat baffles. Location: front wall facing class, just above blackboard, height 7 ft. 6 in. Speakers are tilted downward at about 12° angle with vertical.

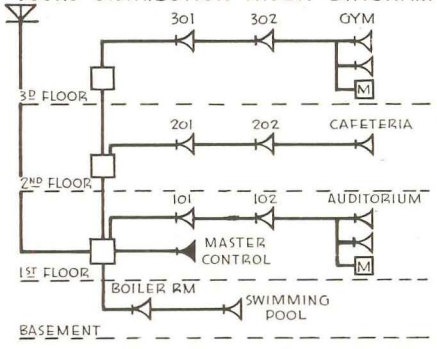
Loud-speakers, auditorium: Dynamic speakers with directional baffles or horns. Auditorium speakers are usually best located over middle of proscenium. (Alternate position: flanking proscenium.) General rule: Height of speaker should be such that center horizontal axis strikes seats two-thirds of room length from speaker. Where auditorium is wide and shallow, flat baffle speakers may be substituted for directional horns. These ordinarily flank the proscenium. Speakers may be concealed behind decorative grilles. For unusual installations, consult sound engineers or manufacturer's representatives.

Loud-speakers, gymnasium: Dynamic speakers with directional horns may also be used here. Directional reproducers with voice amplification only, however, are less costly, less versatile.

Wiring: Two wires are required from each speaker to central unit. Recommended cable consists of rubber insulated wires protected by metal covering, which also is an electro-magnetic shield.

A 110-volt, 60 cycle AC wall receptacle powers the master unit, which requires a separate circuit.

TYPICAL RADIO AND SOUND DISTRIBUTION RISER DIAGRAM

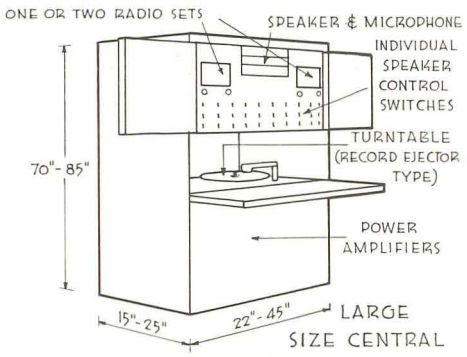


LOUD SPEAKERS

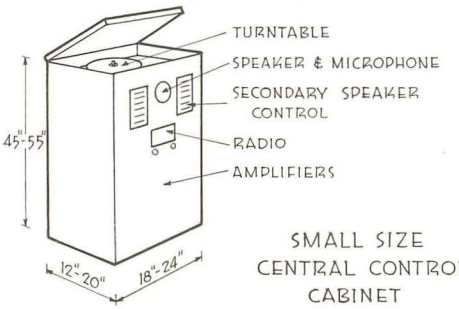
ROOM	SPEAKER
CLASSROOM	8" PM DYNAMIC
LARGE CLASSROOM	10" " "
LABORATORY	8"-10" " "
GYMNASIUM	10"-12" DIRECTIONAL REPRODUCER
* AUDITORIUM	2/12" PM DYNAMIC
* AUDITORIUM WITH BALCONY	2/12" WITH HORNS

* CONSULT MANUFACTURER REGARDING SIZE AND POSITION OF SPEAKERS

CENTRAL CONTROL CABINET

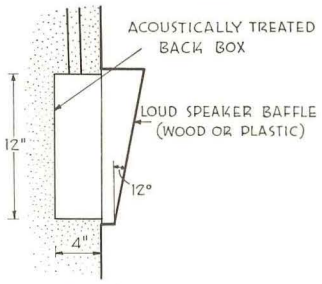


LARGE SIZE CENTRAL CONTROL CABINET

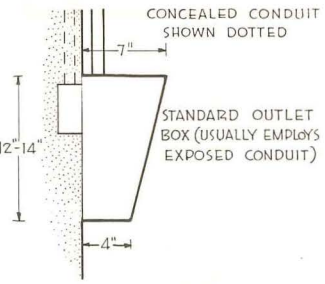


SMALL SIZE CENTRAL CONTROL CABINET

LOUD SPEAKERS



SEMI-FLUSH TYPE



SURFACE TYPE USED IN EXISTING BUILDINGS

SYSTEMS

1. Non-coded: No distinguishing rings to identify station. Once pulled, alarm continues to ring until re-set. This oldest, cheapest installation is less used today.

2. Coded: All gongs strike coded signal —usually 4-4: four strokes, four times— then shut off, except for buzzer which continues until station is re-set. System is widely used in all size schools.

3. Station-coded: Each station has identifying stroke pattern, thus locating pulled box. This system may be connected to punch recorder set in glass case near building entrance. This registers the number of pulled box; firemen responding to alarm check with this to locate fire. System is useful only in very large schools.

4. Station-coded with municipal alarm: Same as 3, this system is further connected to municipal fire alarm system. Pulled station automatically relays alarm through street box to fire department. System is most effective in communities in which fire department checks and maintains school alarm systems.

All systems are supervised by low current passing through them at all times. Failure of any part is registered on control panel. Local or state laws frequently influence choice and size of system.

EQUIPMENT

Fire alarm stations

1. Non-coded station, set semi-flush or on surface, is simplest. Flush model fits over single gang switch box, or outlet box cover, 1¾ in. deep or more.

2. Coded box, semi-flush or surface, may be key-operated for fire drills to avoid breaking glass window.

3. Station coded, for use with municipal alarm, has two doors, one of which is used in fire drills to avoid sending false city alarm.

Stations with gongs mounted above them should be located in: (1) *corridors* near every stair, no more than 100-150 ft. apart; (2) *auditorium stage;* (3) *gymnasium;* (4) *boiler room.* Box always "fire alarm" red; never recessed or hidden by wall breaks; always in path of exit.

Gongs

1. *Electro-mechanical,* is spring wound, tripped by electric impulse. Used in D.C. or battery operated systems, because of slight current loudness required.

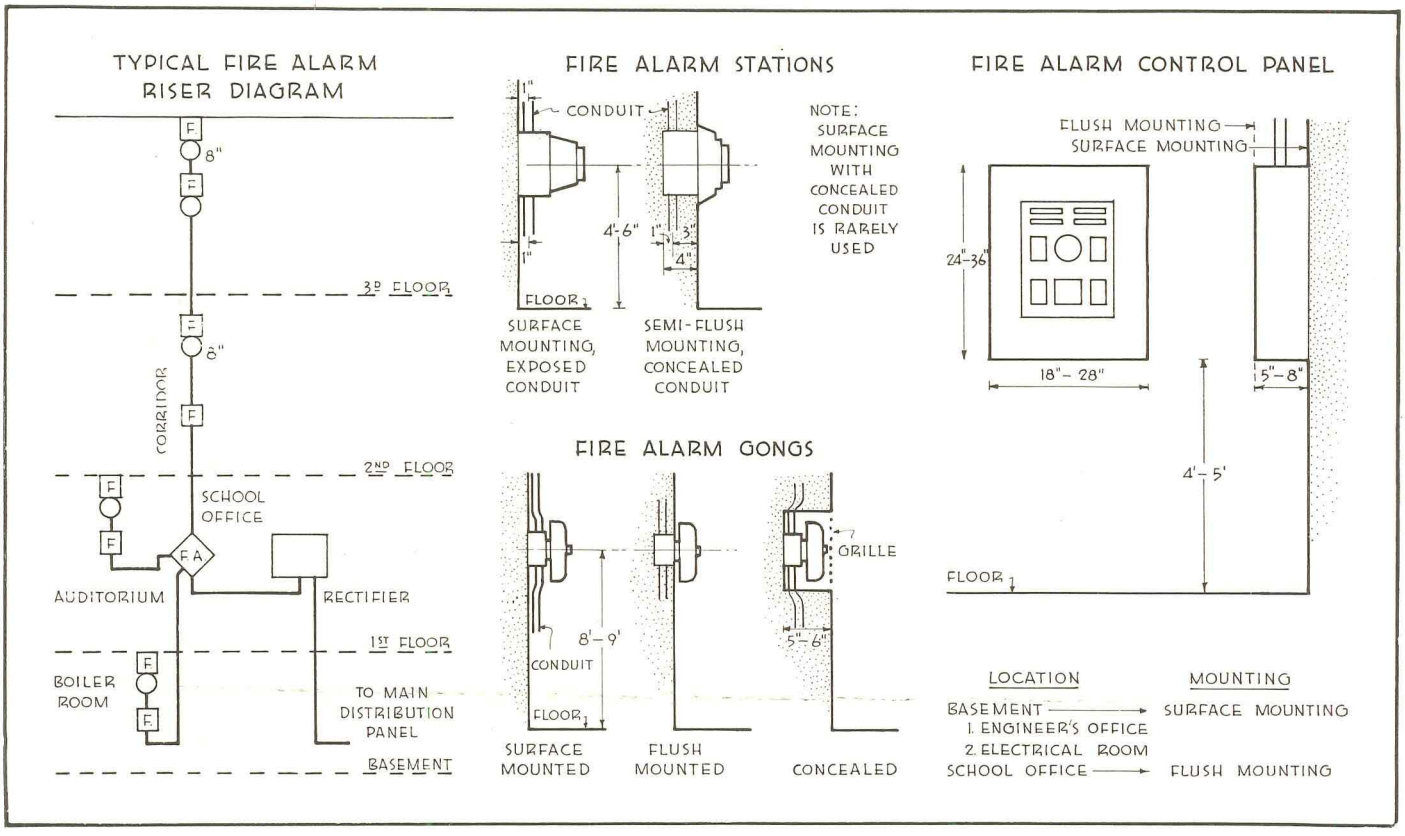
2. *Electric:* Operated by A.C., D.C., or batteries. Usually operated on A.C. Gongs 10 in. in diameter, mounted over two-gang outlet boxes set flush in wall.

Batteries were formerly required in all alarm systems because of undependability of electric current. Today, some cities no longer require them. Where lighting current is not dependable, storage batteries are needed. Size and number of batteries are determined by system: for electro-mechanical gongs, provide 2 volts per gong; add 4 volts for line resistance; 6 volts for supervision. For single stroke electric gongs: 4 volts per gong; add 4 volts for line resistance, 6 volts for supervision. Battery racks are kept in basement electrical room. Recharging should also be provided for.

Fire control panel contains relays, switches, meters, and visual and audible disarrangement signals, and is preferably located in school office where signals will be quickly observed. May also be put in engineer's office or basement electrical room.

City box: In system with city alarm, city-type box is placed on exterior wall of building near entrance. This box should conform in appearance and type to municipal requirements.

Fire-detecting equipment consists of thermostatic devices for recording sudden extreme rises in temperature and for setting off alarms.



LOW-VOLTAGE SYSTEMS: 4—PROGRAM CONTROL

SYSTEMS

Program control systems vary with number of circuits provided: 2, 4, 6, and 8. A single circuit permits setting one set of signals that will ring all clocks and bells simultaneously. Additional circuits permit introducing a variety of schedules, not applicable to all rooms. Average day schools require 2 to 5 circuits. Evening schools, or schools with complex classroom schedules, may rarely require as many as 8.

EQUIPMENT

System consists of master clock, secondary clocks, program control.

Master clocks employ three types of movements:

1. Impulse self-regulating, secondary clocks individually regulated by electric impulses.

2. Impulse self-regulating, secondary clocks individually regulated by counterweights.

3. Synchronous electric movements in secondary clocks, system-regulated by adjustment of current.

Program controls are available in two types:

1. Metal disc type, which employs metal pins in metal discs which activate program circuits. Most used, most flexible.

2. Paper tape type, which employs a ribbon of punched paper to set contacts, and is not easily altered with schedule changes. Often used in communities where earlier installations are similar.

Master clock units and program controls are always located on surface or recessed in wall of school office. In smaller schools, program control is placed inside master clock cabinet; elsewhere, in a separate adjoining cabinet. Master clock cabinets are available in two types: floor type, wall type. Wall type is recommended for reduced vibration. When wall-hung, both program control and program-bell control board cabinets should be adjacent, preferably with bottoms lined up with master clock.

Program-bell control board contains a series of buttons serving each program clock buzzer or bell, for out-of-schedule rings. Regular program rings are provided for by plugs set alongside bell buttons in various circuits.

Secondary clocks: Classroom clocks usually have black numerals on aluminum faces, with convex glass cover, to reduce reflections.

Clocks should be located as follows: **1.** opposite or adjacent to windowed wall; **2.** near door, if possible; **3.** towards front of class—observed by both teacher and class; **4.** on wall in which conduits can be easily installed.

Auditorium clocks are usually set semi-flush, sized to fit into decoration; often have marble or metal dials with raised metal letters. Best locations are front face of balcony, and rear wall.

Gymnasium clock should be protected by: metal screen, wire-glass, or shatterproof glass. They should be placed high on the wall, out of direct line of thrown balls. Gongs are used instead of buzzers.

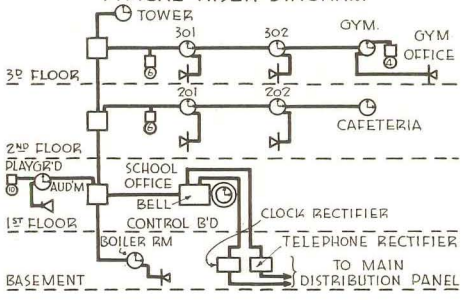
Corridor clocks may be used instead of classroom clocks to cut costs. These are hung from the ceiling or wall, on chains or brackets; double-faced clocks are most common.

Boiler room, swimming pool clocks should be moisture-proof. Tower clocks, if of glass, should have sectional dials to permit replacement of parts.

Master relay cabinet provides current for program control system. Master relay, enclosed in cabinet, is usually adjacent to master clock, although it may be placed in the electrical room in the basement.

Program control system may also operate a number of accessory timing devices, including: time clocks for teachers, correspondence time stampers, time locks, watchmen's recording systems; sometimes operates an automatic toilet-flushing system.

TELEPHONE, CLOCK AND PROGRAM CONTROL TYPICAL RISER DIAGRAM

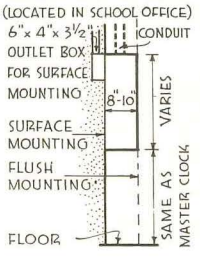


PROGRAM BELLS

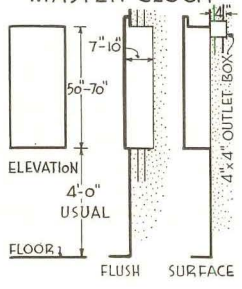
NOTE: INSTALLATION SAME AS FIRE ALARM GONGS: FLUSH, SURFACE, CONCEALED.

LOCATION	BELL DIAMETER	RECOMMENDED TYPE
CORRIDOR	6"	FLUSH OR CONCEALED
LONG CORRIDOR	8"	" " "
GYMNASIUM	4"	" " "
AUDITORIUM	4"	CONCEALED
(ON STAGE)	4"	SURFACE
SHOPS	4"	FLUSH
PLAYGROUND	10"	SURFACE, PROTECTED BY WIRE SCREEN
BOILER ROOM	4"	SURFACE
SWIMMING POOL	4"	FLUSH

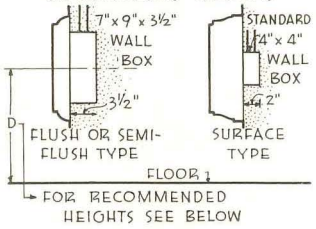
PROGRAM CONTROL PANEL



MASTER CLOCK



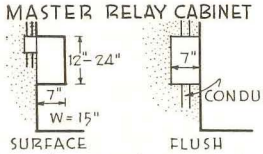
SECONDARY CLOCKS



SECONDARY CLOCKS (OPERATED BY MASTER CLOCK)

LOCATION	DIAL DIAMETER	REMARKS
CLASSROOM	10"- 12"	
CORRIDOR	12"- 14"- 16"- 18"	USUALLY DOUBLE FACE
AUDITORIUM	16"- 18"- 24"	
OFFICE	8"- 10"- 12"	
GYMNASIUM	14"- 16"- 18"	PROTECTED BY: WIRE GLASS, SHATTERPROOF GLASS, WIRE CAGE
SWIMMING POOL	10"- 12"- 14"	MOISTURE PROOF
BOILER ROOM	10"- 12"- 14"	MOISTURE AND DUST PROOF
TOWER		DIAL DIAMETER = 1 FOOT FOR EVERY 10 FEET OF HEIGHT

MASTER RELAY CABINET



(ENGINEER'S OFFICE OR ELECTRICAL RM) (SCHOOL OFFICE)

ALTERNATE LOCATION: INSIDE MASTER CLOCK CABINET (IN SMALL SCHOOLS)

RECOMMENDED CLOCK HEIGHTS

CLOCK DIAMETER	OUTLET HEIGHT
10"	8'-6"
12"	9'-0"
14"	10'-0"
16"	10'-6"

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• • •

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NEW YORK COURT AWARDS ARCHITECTURE TO ARCHITECTS

Rules no one but registered architect can contract to perform architectural services

A FAST-GROWING PRACTICE — that of building, planning, and remodeling concerns performing architectural services —has been effectively spiked by a recent decision of the New York Court of Appeals, affirming a decision of a lower court which had held that only an architect can contract to perform architectural services.

This history-making case—the American Store Equipment and Construction Corporation vs. Jack Dempsey's Punch Bowl, Inc.—has the distinction of being the first involving the practice of architecture as a profession to go to the highest court in New York State.

The case developed out of a refusal of the restaurant to pay for architectural services for which it had contracted with the building company. Although it conceded that the services had been rendered, it refused payment on the plea that the builder was not licensed to perform them.

The builder countered that it had performed various services, such as planning, designing, and decorating the restaurant—which is located in the Times Square region in New York City—and that it was entitled to its stipulated fee. When it was brought out at the trial, however, that at least a part of this alleged work, labor, and services was architectural, Supreme Court Justice Rosenman dismissed the complaint, holding that the illegality was injurious to public health and morals.

The plaintiff then appealed the case, first to the Appellate Division, then to the Court of Appeals, which affirmed the court of original jurisdiction without opinion.

Although few architects were aware of this litigation, each of them had an important stake in its disposition. For on the outcome of these appeals rested the future status, in New York at least, of the profession. In a number of cases involving other types of licenses, the Court of Appeals has allowed recoveries even though the plaintiff has been unlicensed, holding that the act was merely "malum prohibitum," or not a crime against public health and morals. If the Court had so held again, architecture would have been stripped of its status as a profession, equal with law and medicine, to become the foil and handservant of every building contractor.

The decision of the court, however, restores the practice of architecture to architects. No firm or other organization can contract to perform architectural services, other than a registered architect. In addition, such organizations that do contract to perform architectural services may not recover for their services.

Nor may such firms agree to provide "free" architectural service as a part of their contract. In Mr. Justice Rosenman's opinion, published in the New York Law Journal, March 4, 1940, he wrote as follows:

"The plaintiff contends, however, that even if it did perform certain architectural services, nevertheless it can recover for all those portions of the contract not involving such services, and that the architectural services, if any, amount only to about 5% or 10% of all the services undertaken to be rendered. However, there is no means of segregating the good from the bad portions of the contract in this case. The contract was entire and indivisible: to plan, contract, and furnish a complete unit. If the plaintiff had sold the interior furnishings and decorations, the contract could have been separated at least to the extent of permitting recovery for the merchandise sold. Here, however, were only services, ideas, and supervision. They cannot be separated into different classes—legal and illegal. . . .

"To sustain the legality of the balance of the agreement would lead to widespread disregard of the licensing statutes. It would be easy for any construction contractor to thwart the purposes for which the licensing of architects was enacted by merely providing in his contract that architectural services would be given gratis, so long as the contractor were awarded the contract itself."

This decision came at a propitious time. The growing assumption of architectural responsibility by corporations and other unlicensed organizations is a vicious, dangerous threat to the ethical

and economic structure of the profession. It not only deprives architects of business to which they are rightly entitled, but relegates the function of architect to a new low in subservience.

The Jack Dempsey instance is only one of a string of hundreds of such jobs. On almost every Main Street in New York State—and in increasing numbers across the entire country—combined building and architectural corporations have planned and erected structures, such as stores, restaurants, markets, and similar commercial buildings. To "comply" with the law, many have employed their own architects. Others, however, have flipped the architectural service to a co-operating architect after having contracted to provide it.

Justice Rosenman's decision in this case helps round out a growth that has been developing since 1927. Prior to that year, Article 7-A of the General Business Law was the only statute relating to architects. This merely prohibited a person from assuming the title of architect without first securing a certificate of registration. Any one, under this law, could practice architecture as long as he did not call himself an architect.

In 1927, Article 7-A of the General Business Law was repealed and was superseded by Article 56 of the Education Law. This however, also permitted architectural practice by unlicensed persons.

In 1929, the practice of architecture was given the legal status of a profession. In that year, Sections 1475-1484 of the Education Law required that the very practice of architecture required a license. Section 1476 of this law provides that "In order to safeguard life, health, and property, no person shall practice architecture in this State . . . unless such person shall have secured from the regents a license as architect . . ."

There are several exceptions, however. It does not prevent licensed engineers from performing architectural work, nor does it apply to new building costing less than $10,000, nor to remodeling jobs costing no more than that when no structural changes are involved. Some corporations may also practice architecture. These are limited to architectural corporations incorporated prior to 1929 which have licensed architects as their chief executives. None of these exceptions, however, applied in the Jack Dempsey case. —J. R. Von Sternberg

(*This section continued on next page*)

HOUSING POTENTIALS OF 1940 COMPARED WITH 1917

Research finds present emergency more favorable to private building industry than 1917-18

PRIVATE INDUSTRY has the capacity to provide the major part of the housing needs of our defense program but immediate action is necessary if we are to avoid the delays and mistakes that seriously crippled America's war effort in 1917-1918. This finding is included in a special research report now being prepared for the Housing Committee of the Twentieth Century Fund, the first section of which—reviewing our World War experience and citing parallel needs today—was recently made public by Evans Clark, Executive Director of the Fund.

"The housing crisis of the last war may lead us to think that the government is the only resort in an emergency," says the research staff. "Yet a careful study of that period does not prove it. Only in a comparatively few places did the ordinary processes of supplying houses break down sufficiently to create a necessity for direct governmental operation. These places were centers of high concentration of war activities where competition for labor and materials was intense, where transportation was overtaxed, and where the certainty of a decline in industrial operations after the emergency discouraged private enterprise.

"Even in the most intense year of war activity, however, and after the governmental housing agencies had been set up, over 90% of the total 200,000 dwelling units started represented private operations. It is also possible that if the need for housing had been clearly revealed in advance of the crisis there might have been less difficulty in maintaining housing production."

The research report finds that the private building industry faces the present emergency with more favorable factors than in 1917-1918. "No general labor shortages in construction or manufacturing threaten us. Building materials of all kinds are readily available . . . There is, moreover, no likelihood of a general shortage of funds to lend for sound housing operations. In contrast to the last crisis, there is real momentum now behind the house-building program . . . Today, the skill of designers and the capacity of builders are both much greater than they were 23 years ago. This is especially true in the low-priced field."

Warns of critical situation

However, the research staff sharply warns against undue optimism. "With all the advantages of the present situation," says the report which was prepared under the direction of Miles L. Colean as head of the research staff, "we may still be confronted by many critical situations. Industrial expansion has hardly begun, yet the names of many of the trouble centers of the last war are heard again: Newport News, Camden, Quincy, Bath, and the arsenal towns.

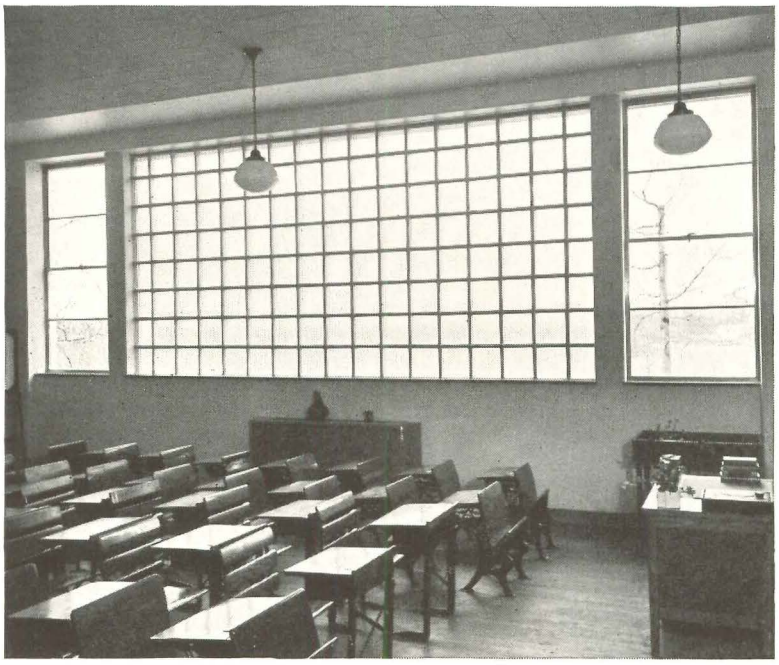
"The experience of the last war, as well as these first warning signals from the present emergency, show clearly that the vital work of providing adequate shelter for the workers in defense industries must parallel, and not lag behind, the expansion of those industries."

The report gives striking examples of how failure to do this seriously ham-

(*Continued on page* 114)

Light that Saves Young Eyes . . .

Insulation That Saves Taxpayers' Money



IN THIS NEW INDIANAPOLIS SCHOOL, the architects, Graham & Knowlton, used Insulux Glass Block because ". . . the amount of light admitted is about 85% of the direct light admitted by plain glass, but the amount of light transmitted to the back wall is far in excess . . . hence uniformity of light distribution is improved. A strong argument is greatly decreased heat loss with corresponding saving of fuel."

Schools get both when you plan with INSULUX

Insulux Glass Block solve not one but many problems of school planning. That's why modern schools in every state use Insulux to light classrooms, halls, stairs, gymnasiums, auditoriums and cafeterias.

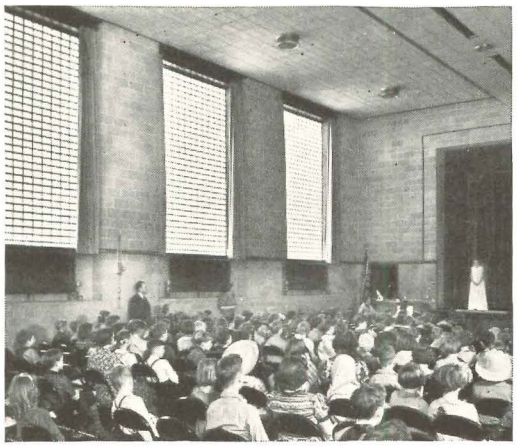
Insulux panels give better *distribution* of diffused, shadowless light throughout rooms. Pupils in distant rows get ample light; those near panels need not squint from objectionable glare.

New Insulux light-directional block, used above eye-line, are perfect for schools. They refract light to the ceiling, which reflects it downward, as shown in diagram below.

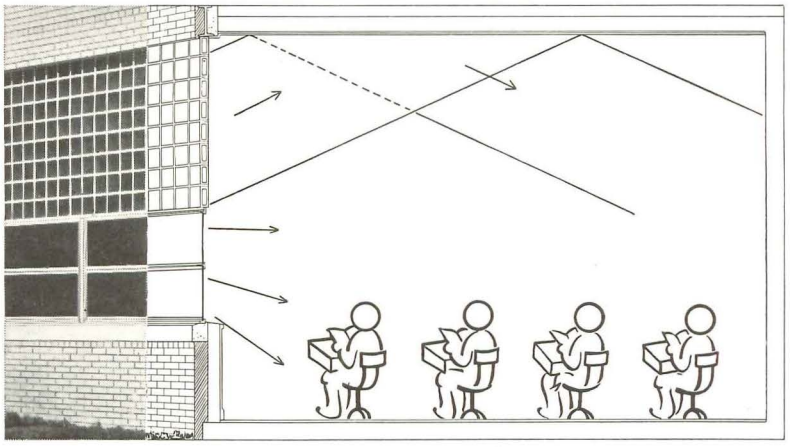
School expenses are lowered, too. The high insulation value of Insulux helps cut heating bills. Maintenance, cleaning and repair bills are reduced.

More, Insulux gives privacy . . . deadens street noises . . . lessens outside distractions.

We will gladly render helpful technical aid to architects planning school installations. Owens-Illinois Glass Company, Insulux Division, Toledo, Ohio.



IN SCHOOL AUDITORIUMS, libraries and gymnasiums, Insulux Glass Block provide ample light without costly heat loss. Insulux adds to school architectural beauty.



BETTER LIGHT for every pupil in rooms like this, with light-directional Insulux Glass Block above steel sash. The block throw light to ceiling, which reflects it evenly over room. Light-directional block are used on any exposure without objectionable glare.

OWENS-ILLINOIS

INSULUX *Glass Block*

THERE ARE PLACES IN EVERY BUILDING THAT *NEED* INSULUX

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CITY_____ STATE_____

1940 Housing Potentials and 1917

(Continued from page 112)

pered the production of war materials in 1917-1918. The research staff cites a shipbuilding plant at Sparrow's Point, Md., which was "equipped to produce nearly two ships more a month than it was then building. It was unable to do so because of lack of living quarters for the 2,500 men needed." Bridgeport, Conn., is cited as another place where "lack of living quarters added to a critical labor shortage" in 1917-1918. The Department of Labor, in trying to place women workers in war industries, reported that "fully 50% refused to take jobs because of the housing conditions in places where there were war orders."

Summarizing the World War experience, the research report says, "No advance effort had been made to estimate the housing needs of workers in the war industries. There was no effort to enlist the full resources of the building industry while there was still time for these resources to count . . . There was much groping after facts and duplication of effort on the part of many different federal bodies, no one of which had any authority to co-ordinate the others. Finally, after severe crises had developed, the government itself financed and built houses."

The government's activities were carried on by two agencies, the Emergency Fleet Corporation, which operated primarily in shipbuilding centers where the need for housing was most acute; and the United States Housing Corporation.

Other services important

Even more important than the actual construction of homes were some of the other services carried on by these agencies. They conducted registration and rental services to bring existing accommodations into the market, they stimulated private building and remodeling, and they acted to extend and improve transportation facilities to bring more dwellings within the work-commuting area.

The research staff reports that the two housing agencies "together were able to take care of something like 360,000 workers. This figure may be roughly broken down in the following way: 46,000 workers housed by direct government construction (assuming two workers per dwelling unit); 30,000 by private builders through priority licenses (estimated in the same way); 100,000 by placements through the homes registration service, and probably, over 184,000 through transportation improvements.

Two-point control urged

Looking to needs of the present defense program the research report says, "The chances of maintaining private housebuilding should be greater than in 1917 and 1918. We can see . . . the probable greater speed, flexibility, and economy of private as against public housing operations. This does not mean, however, that the government will not need to concern itself with housing. On the contrary, it will be vitally concerned from two points of view:

(I) Aid to private operations by removing obstacles that destroy initiative, by offering inducements to go ahead even in an uncertain situation, and by guiding defense activity so as to avoid risks that would be too great for private enterprise;

(Continued on page 116)

Another Architect

speaks of OIL BURNING SYSTEMS FOR SCHOOLS

THOMAS STAPLETON, *New York Architect, noted for many fine buildings including those in Palmer Square at Princeton, expresses these ideas on Oil Burning Systems.*

"Efficiency in the modern classroom results from the right type of heating system just as truly as it results from good teaching facilities. My own experience and that of my engineers show that oil heating systems provide healthful living conditions for the pupils, are easy to operate, clean, quiet, and extremely economical. Reports from occupants and school officials bear out these views. In regard to the Petro Systems, I have found the equipment first rate and have been fully pleased with the service they have rendered."

Among the many comments similar to Mr. Stapleton's which Petro has been proud to deserve it is notable that the satisfaction expressed is with the System as a whole as well as the burner.

Experts concede that each Petro Industrial Oil Burner is an excellent precision mechanism; but its ultimate value—its permanent reduction of firing costs—is enhanced by the carefully co-ordinated details of its application and installation

It is therefore pertinent to quote from a copyrighted report signed by a committee of representative Architects after an investigation of Petro's manufacturing and installation practices and records of performance: "In specifying oil burners the architects and engineers should carefully consider (1) that the original cost of oil burning equipment is only a fraction of the total amount that will be expanded for fuel oil following its installation, (2) that the slightly higher cost of carefully engineered and skillfully manufactured equipment will be returned many times through lower operating costs; and (3) that such development work and manufacturing practice as this report has described can only be obtained in the products of an old, well established and financially strong manufacturer; and (4) most important of all, that architects and engineers will greatly profit by soliciting advice from the manufacturing headquarters of this company and taking advantage of an experience obtained over many years and the entire country-wide field of oil heating. **** In the opinion of this committee an architect or engineer could safely specify that a Petro oil burner was to be installed after a preliminary survey by an accredited representative of the company, in full confidence that when operated according to the instructions of the company, the installation would prove both efficient and economical." (Complete Copy of above mentioned Report will be sent on request.)

CAPACITIES: to 100 gal. per hr.—336 boiler h.p.—47,000 sq. ft. steam E.D.R.

Petro Industrial Burners for Automatic operation with preheated No. 6 oil, or with No. 5 or lighter oils, are available in seven sizes, Models W-2½ to W-8 inclusive. Each burner is a self contained assembly of motor, fan, pump, rotary cup atomizer and interlocked air and oil adjustments.

In the use of preheated No. 6 oil, the Petro Thermal Viscosity System is an integral part of a Petro installation, insuring reliability of operation and fuel ecoomy.

Semi Automatic and Manually controlled Model W Burners and "Mechanical" type units are also available to meet circumstances which do not require automatic operation.

To the Architect in domestic building, Petro offers a complete line of burners for use with existing heating plants and complete oil fired boilers and winter air conditioners.

Petro's Engineering Division will gladly answer questions. The Petro Industrial Equipment Catalog will be sent promptly on request.

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STAMFORD ***--Makers of good Oil Burning Equipment since 1903--*** **CONNECTICUT**

1940 Housing Potentials and 1917

(Continued from page 114)

(II) Direct housing operations in situations where private initiative is unable to function."

The survey of the housing needs of the defense program is being supervised by the Committee on Housing of the Twentieth Century Fund. The Chairman of the Committee is Henry E. Hoagland, Professor of Business Finance at Ohio State University, formerly Director of the Home Owners' Loan Corporation, and a former member of the Federal Home Loan Bank Board. The other members of the Committee are: Lillian M. Gilbreth, engineer and Professor of Management, Purdue University; Frank P. Graham, President of the University of North Carolina; Henry I. Harriman, former President of the Chamber of Commerce of the United States; Arthur C. Holden, architect, of Holden, McLaughlin, and Associates; John A. Lapp, publicist in labor relations and former Chairman of the Bituminous Coal Labor Board; and William I. Myers, head of the Department of Agricultural Economics, Cornell University, and Director of the Federal Surplus Relief Corporation.

NEW MATERIALS AND EQUIPMENT

(Continued from page 56)

Coat compartments are opened. The entire two-in-one unit is 15 in. wide, 21 in. deep, and 73½ in. high. It is made of heavy-gauge furniture steel, spot welded, and has rubber door bumpers. Penn Metal Corporation of Penna., Philadelphia.

New Nail is Tighter than a Screw

A NEW tough nail that won't pull out —has held better than a wood screw of the same length in tests conducted by its manufacturer—is offered for use where strength, corrosion resistance, and holding power are essential. Made of Monel metal, its shank is ringed with sharp, annular grooves, set at such an angle that they ease into the fibers of the wood on the down drive, but wedge tightly into them when pulling pressure is exerted. This new nail, it is claimed, will not stain the wood into which it is driven. Anchorfast Nails, Independent Nail & Packing Co., Bridgewater, Mass.

New Angle on Unit Heaters

A NEW, two-faced, V-type unit heater that throws two streams of heated air at right angles to each other is the equivalent in performance of two standard units, its manufacturer claims. Triangular in plan, two sides consist of heating cores and louvers, while the third contains motor, fan, inlet and outlet connections. The use of a common blower and connections make for reduced installation costs and savings in piping, fittings, and electrical conduit. It is available in single, two, and four speed models varying in capacity from 150,000 to 694,750 Btu per hour. Kisco V-Type 'Q-T' Heat Recirculator, Kisco Company, Inc., St. Louis, Mo.

Approved Termite Shield

A SIMPLE, economical foundation termite shield, consisting of a laminated 3-oz. copper and Sisalkraft sheet, has just been approved for use in all fully excavated buildings by the FHA, according to its manufacturer. It may be laid over any portion of a building that is excavated. When used for this purpose, the material also acts as an effective damp coursing. Copper Armored Sisalkraft, Sisalkraft Company, Chicago.

Why 3 DESIGN DECADES Have Chosen Medusa White

The past decade of design has chosen Medusa White as one of its outstanding building materials. But Medusa White was also selected by the previous ten years of design and by the decade before that. Architects, for more than 30 years, have selected Medusa, the original white Portland cement, to create buildings in stucco and cast stone that have outstanding individuality and charm.

On this page are shown two examples of the use of Medusa White stucco in the past design decade, one the beautiful home of the radio comedian and movie star, Bob Burns. Architect H. J. Knauer, contractor James E. Denham and plastering contractor Ross Green utilized Medusa White stucco manufactured by the Standard Stucco Co. of Burbank, Calif. . . . A. N. Gaefler recently remodeled his Hollywood Terrace, using Medusa White stucco applied by A. D. Hoppe, plastering contractor and supplied by the Blue Diamond Co. of Los Angeles.

Medusa White stucco is the most versatile of all building materials. It meets all color and texture requirements for stucco and creates marvelously beautiful cast stone trim. In the next design decade, use Medusa White, that has so faithfully served during the past 30 years. Send the coupon below for the Medusa White Stucco book.

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Medusa Products also made in Canada by Medusa Products Company of Canada, Ltd., Paris, Ontario, Canada

(Continued from page 84)

attic in posing problems and supplying solutions; the scope of their treatment runs from small houses to factories; stairway types range from simple straight flights to elaborate convolutions. All structural details—preliminary strings and framing to final bevels, face molds, and finishes—are treated according to "rules which have come to be accepted among craftsmen and designers as standard."

LESSONS IN ARC WELDING. Published and distributed by the Lincoln Electric Co., Cleveland, Ohio. 135 pp., 5½ by 8½in. Price, $.50 postpaid in U. S. A.; elsewhere, $.75.

USED in the Lincoln Arc Welding School as a textual basis for practical instruction, this series of 60 lessons is intended in the main for actual students and practitioners, though it has considerable incidental value for other readers. The first lessons are concerned with elementary "musts-and-don'ts", description of various types of Lincoln welding equipment, and such primary operations as manipulating the electrode, striking an arc, and running a horizontal bead. Thereafter the lessons graduate into butt, lap, and tee welding in various positions; study of the several "Fleetweld" (shielded arc) processes; and light, ferro, soft, stain, hard, and alloy welding, etc. In keeping with the book's essential character as a student's manual, questions, answers, and collateral references are provided.

APPROACH TO PLANTING AND THE SELECTION OF PLANT MATERIALS. United States Housing Authority, Federal Works Agency, Washington, D. C. Mimeographed. 72 pp., 8 by 10 in. Free upon request.

THIS EXCELLENT monograph from the USHA's technical staff states its purpose thus: "The word challenge is a hackneyed word, but it is almost literally true that designing for public housing is now a challenge to the profession of landscape architecture. Not since the time of the park movement, six or eight decades ago, when landscape architects designed the great naturalistic parks that are still the pride of so many cities, has so rich an opportunity come to the members of the profession to serve the profession and themselves.

"Public housing needs the peculiar ability of the landscape architect. And the profession itself needs the stimulus of work in which there is no tinge of dilettantism, work that is very far from fashionable "conspicuous waste." Land-use planning for housing projects must meet vital human needs; it is equally clear that hard work and an active imagination are required to determine what those needs are and how they can be met within the economic limits of public housing. This is what makes housing a challenge. If landscape architects meet that challenge they will come to all phases of their work with a much surer orientation. Along with this moral advantage they will have a technique of land use that will apply to many kinds of designing. They will have gained, also, a much more lively knowledge of modern thought concerning the correlation of land and shelter."

While the monograph is directed specifically at local authorities and their landscape designers, it should prove equally valuable to all landscapists and particularly to all architects. For here is not only a wealth of highly useful data —based on the USHA's nationwide experience with a wide variety of sites and geographic conditions—but actually a philosophy of democratic design.