

JANUARY 1949

ARCHITECTURAL

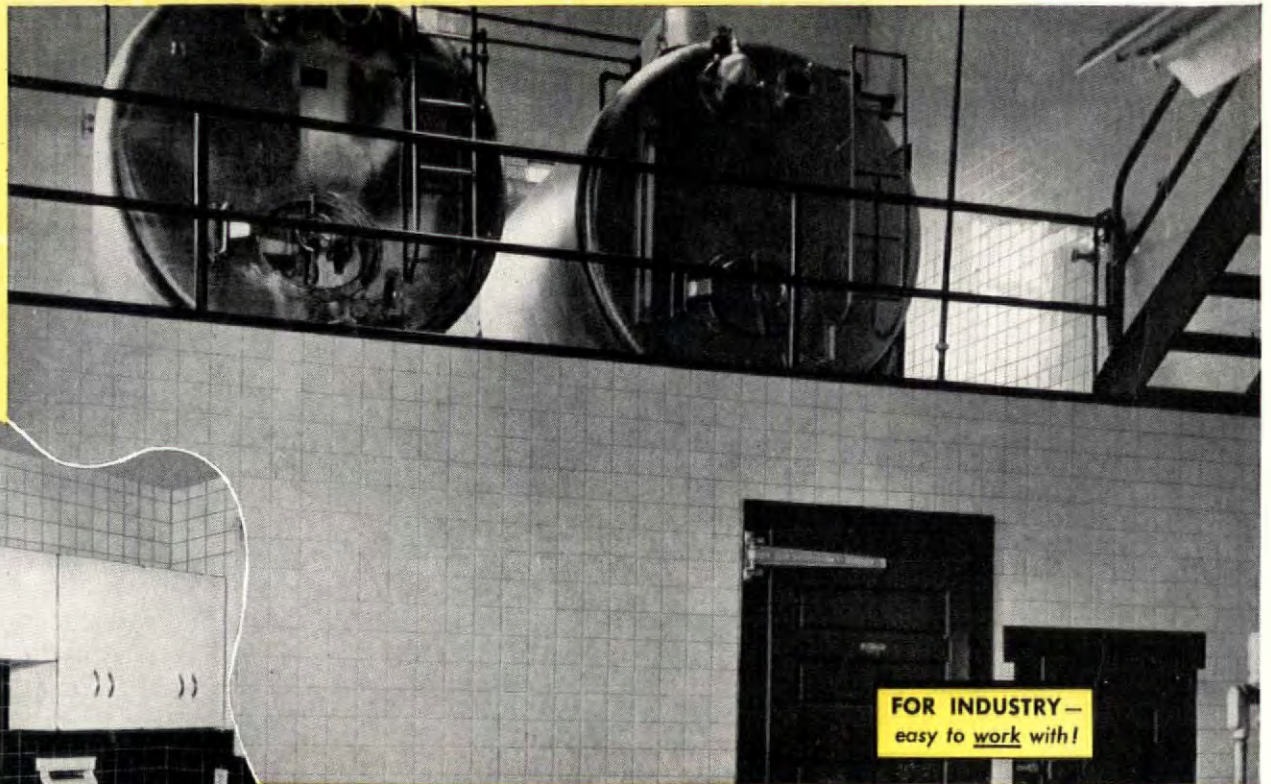
forum

MAGAZINE OF BUILDING

25



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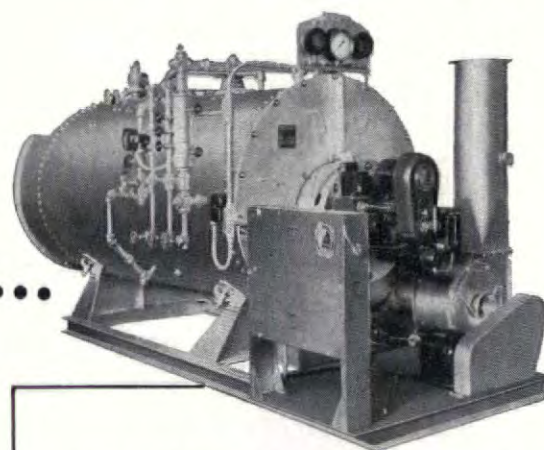
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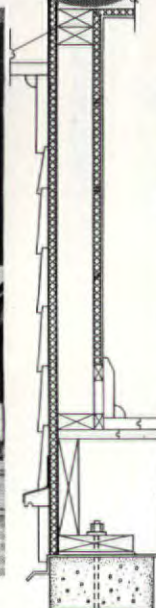
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ARCHITECTURAL **forum**

MAGAZINE OF BUILDING

JANUARY 1949

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THE *LUSTRON* HOME

A contribution to American building

What do the crowds that have thronged Lustron demonstration homes mean to the building industry? What significance is there to the enthusiasm of the public for Lustron's "new standard for living"?

During the past few months, the public has been invited to visit Lustron demonstration homes in New York, Washington, Chicago, Detroit, Milwaukee, St. Louis, Des Moines, Indianapolis, and other communities.

People have driven hundreds of miles on special trips for the express purpose of inspecting these first new Lustron Homes. Many others have included a specific city in their itineraries because of the opportunity offered to see this new idea in a better home for more people at lower cost.

Why is all America talking about the Lustron Home?

The Lustron Home is one house on today's market that truly establishes "a new

standard for living." Public demand has established beyond question its inherent value and its marketability.

The modern method of manufacturing the Lustron Home has enlisted the support of many thousands of new advocates of mass-production techniques in housing.

Lustron's durability, low maintenance cost, modern features and advanced engineering have established its investment value to lending agencies.

Its universal appeal has significantly demonstrated the need for the revision and modernizing of outmoded building codes.

Lustron's contemporary design has been enthusiastically accepted by residents of established communities and provides a new prototype for group developments.

Lustron as an educational force in building

One of Lustron's initial contributions to building—the disassociation of house cost from land-and-site-improvement costs in the public mind—has already been substantial.

The public is gradually beginning to accept the fact that every piece of ground is unique and that mass sales by the industrialized housing industry will accrue by virtue of a clearly established *house* price, distinguished from the traditional *house-and-lot* pricing of residential construction.

Building is beginning to think "big." In attracting well-financed, completely integrated builder-dealer organizations, the Lustron idea has provided the means for speedy mass construction of houses in many communities. These builder-dealer organizations are "horizontal" in character, embracing the functions of construction, financing, real estate and land development, which has been long recognized and urgently needed as a new pattern of distribution for residential building.

Many forward-thinking contractors, real estate firms, and other businessmen who are interested in presenting the Lustron Home in their own communities have applied for franchises as Lustron builder-dealers. © L.C.

It's America's "new standard for living"

LUSTRON CORPORATION, Box 2023 K
Columbus 16, Ohio

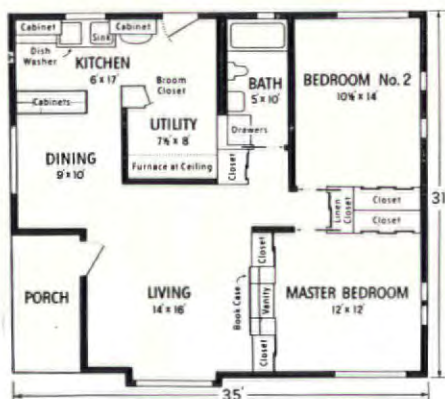
Chicago: On Opening Day, lines formed early, were four abreast, four blocks long when police were asked to limit crowd since all could not go through house before closing time.



Miami: Florida likes the idea of a house impervious to scorching sunlight, salt air, termites. Lustron's porcelain enamel steel construction is a "natural" here.



Millions of people are seeing the benefits of mass production, unit assembly, and engineering "know-how" applied for the first time to home building.



Closets with sliding doors, cabinets, cupboards all "earn their keep," contributing to generous floor area.

New York's well-known "sidewalk superintendents" got a new kind of "eyeful" watching the Lustron Home go up. And they came back to see the completed home—many two and three times.



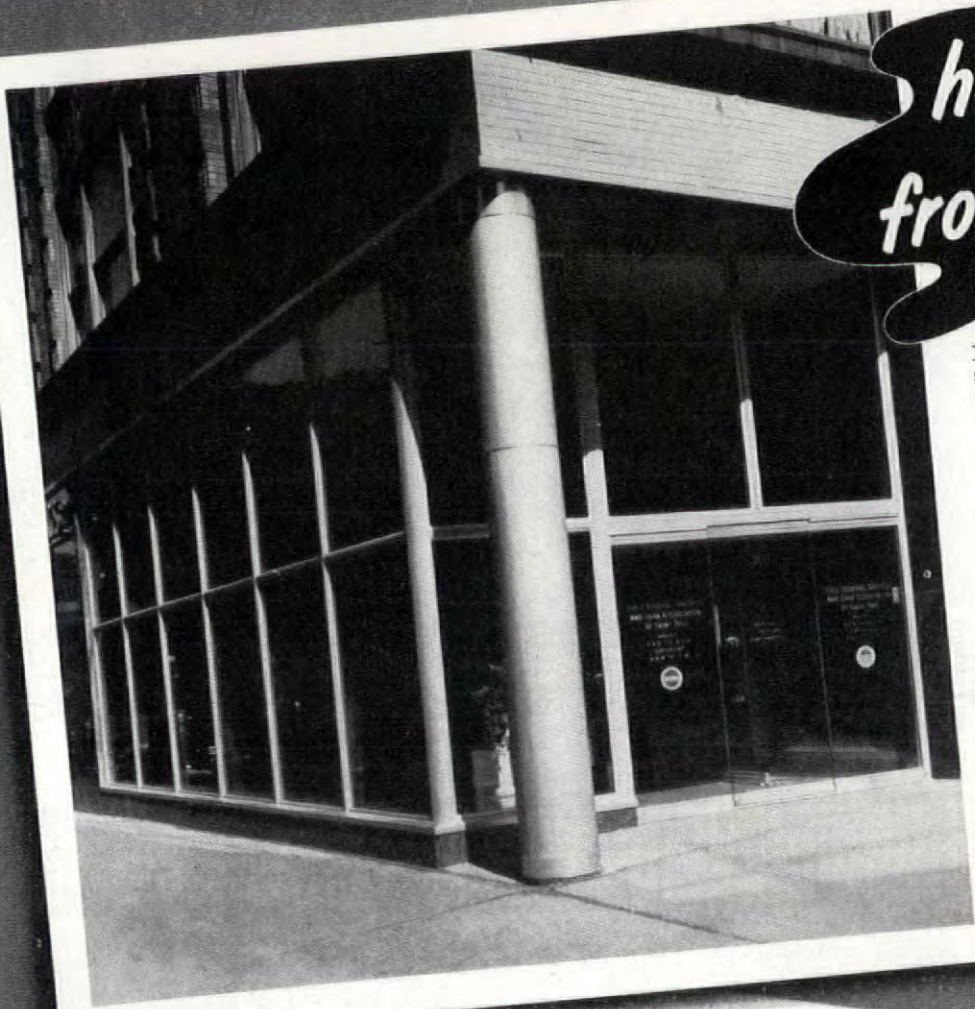
Milwaukee: They came... they saw... they liked it! More than 90% of people interviewed approved new advantages of Lustron's basic ideas.



Washington: Throngs in the nation's capital included leading figures in government as well as thousands of home seekers in crowded city.

More Glass means

*here's proof
from "Pittsburgh"*



IN BANKS OR BAKERIES... shoe stores or hat shops, "open vision" fronts help achieve the same end — more business. "Pittsburgh's" complete line of quality glass products and "Pittsburgh's" trained and skilled installation crews have helped to create talked-about "open vision" fronts across the country. So when you're selling store fronts, remember — your job will be easier when you mention "Pittsburgh" Products — and the store will be a better one if you use them.

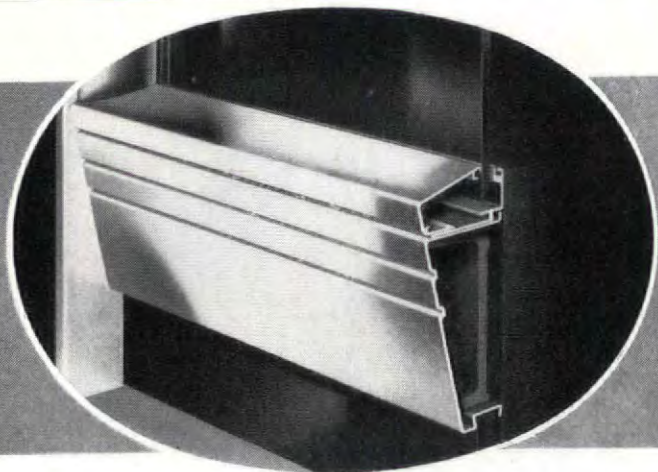
MODERN HOMEOWNERS want mirrors such as this. Every modern home needs them. While the full-length door mirror tops the popularity list, other practical applications are: over living room mantels... in kitchens and entrance halls for quick spruce-ups. "Pittsburgh" mirrors not only increase the appeal of your homes, but help increase your profits as well.



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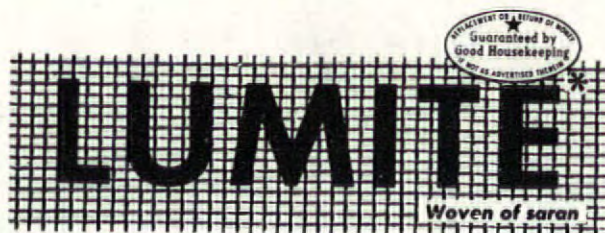
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December 8, 1948

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Chicopee Manufacturing Corporation - Lumite Division
47 Worth Street
New York, New York

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Cordially yours,

Leonard K. Thomson

Leonard K. Thomson
Manager

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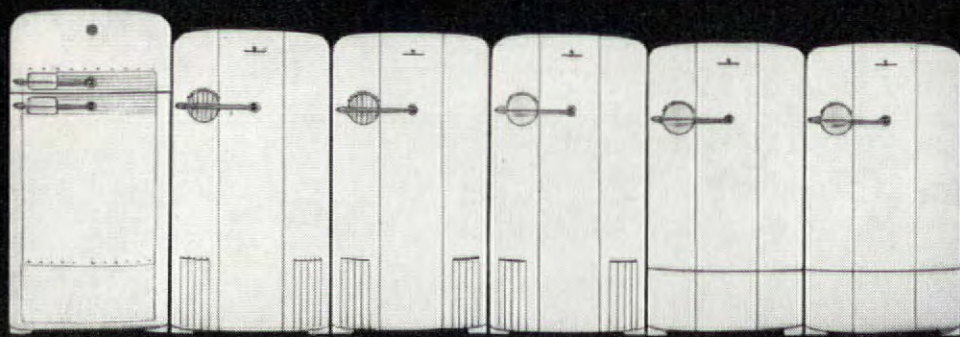
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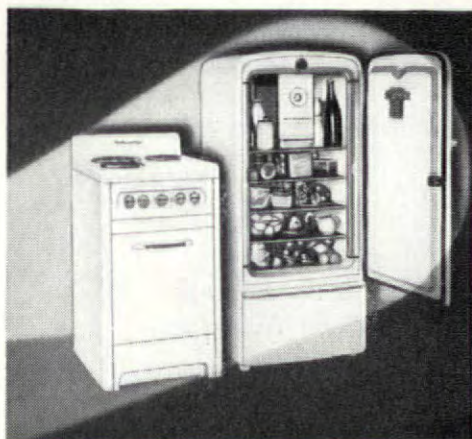
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STEVENS HOTEL, CHICAGO
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39"

4 Ranges and
Home Freezer
ALL ONE WIDTH!

NEWS

WASHINGTON

Public housers may pump for more than T-E-W contains p. 11

OUTLOOK

1949 Prices will level off at year-end figure p. 11

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Cooperatives face full future with VA push, NAREB endorsement p. 12

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New York firm gets UN contract p. 15

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A.I.A. will give Frank Lloyd Wright its gold medal p. 14

BUILDING MONEY

RFC's Fannie May getting heavier p. 14

Lenders see revived second mortgage activity p. 14

BUILDING YEAR. In 1955 or 1960, when the great American postwar building fever has burned itself out and can be considered only in retrospect, 1948 will be characterized the year of the fever's climax. Private industry, freed from the last of the government war controls which held it for seven years, had worked at breakneck speed to meet the nation's still-swollen housing needs; it achieved an amazing record—925,000 housing starts. To accomplish this, it had contended with the still-present obstacles of rising prices and scarce materials. It had utilized the tools and techniques of mass production: April saw the first mass-produced industrialized steel house (Lustron); the U. S. put up its 100,000th prefabricated house in September; from Beaumont to Boston the country was dotted with developments of 500 units or more. Its record in physical volume would probably not be surpassed (although an increase in buildings materials prices—see below—would probably permit 1949 to exceed it in dollar volume).

Perhaps incongruously, but in perfect keeping with the incongruity of the times, it was the year of public housing's most clear-cut victory. The nation's voters had dramatically upset the predictions of all the political prophets that the Democratic Administration would be buried under an avalanche of objection to government-in-business (including the housing business.) Those who had assailed the 80th Congress for its watered-down version of the Taft-Ellender-Wagner Bill considered the vote a popular mandate for public housing.

The year spotlighted some disturbances that would have to be resolved in 1949. Typical of them: the all but complete disappearance of 4 per cent money for veterans' houses. (In spite of intensified lenders' pleas, VA announced at year's end that it would not authorize an increase to four and one-half per cent.) Some believed that 1948 had seen the VA Home Loan Program's last full year of operation.

WASHINGTON

PUBLIC HOUSING FOR SURE

The question now is: will it be more than T-E-W specified?

Nobody, of course, even questioned the fact that the 81st Congress would enact the public housing and slum clearance portions of the Taft-Ellender-Wagner Bill. The only question was: would it pump for liberalization of those parts which public housers found too confining?

There was mounting pressure for such action. A delegation from the U. S. Conference of Mayors (which represents the country's larger cities) stopped by the White House to suggest that the President ask for 800,000 units instead of the 500,000 prescribed in T-E-W. Edward Weinfeld, president of the National Public Housing Conference, boldly proposed that the number be upped to one million—and accomplished in four years instead of the five the act calls for it. He also wanted to eliminate the amendment which would restrict public housing to those who couldn't afford private housing. The conservative American Municipality Association (composed of state leagues and municipalities and reaching about 1,000 cities and towns) came out for the first time with an endorsement of public housing—although it said nothing about stepping up the program.

The new Congress would probably also:

► Liberalize RFC's secondary market for home mortgages (see p. 14).

► Extend FHA's 608 rental housing program past its March 31 expiration date.

► Extend the rent control program (with perhaps some strengthening amendments).

* * * *

As the new Senate meets to debate these matters and the others making up its 1949 agenda, it will sit under the same temporary steel framework which has braced the chamber's sagging, condemned roof since 1939; but it will be the last Congress to do so. The Consolidated Engineering Co. of Baltimore was awarded a contract for a \$2 million reconstruction job on the Senate chamber. The reconstruction, to be completed in 1951, will replace the chamber's skylighted and iron-trussed roof with reinforced concrete slabs and structural steel beams supported on steel trusses, improve the chamber's murky, outdated lighting system (but not with fluorescent lighting). One notable omission from the improvement plans: a loud speaker system, which the modern day Websters and Calhouns feel would be too complete a break with their oratorical past.

OUTLOOK

PRICE STRUCTURE

1949 will see a general 5 per cent increase over 1948

The experts were pretty much agreed that 1949's construction expenditures would exceed 1948's (see chart, p. 12). Private residential construction would be down, but public housing was sure to make up the difference and then some.

What about building materials prices? Would 1949 be the year for the slump that had been freely predicted? The year 1948 had produced a few faint signs that prices were cracking. Lumber prices were down—at least slightly—over most of the country. December quotations on soil pipe in Dallas, Chicago and Atlanta were lower than similar quotations in 1947. A couple of cities reported a gentle dip in the price of Portland cement.

But these were isolated signs. As each one appeared there had been some hopeful inclination to accept it as the forerunner of a general trend; but by year's end the trend had not materialized. Such still scarce items as structural steel continued to rise substantially. The Bureau of Labor

Statistics reported that the year ended with a general 5 per cent increase in building materials prices over the figure it had started with.

Best guess on 1949 prices was the one advanced by BLS: prices will stay at about the same level they were at the end of 1948 (resulting, therefore, in an overall 5 per cent increase over 1948). The big drop would wait, apparently, until 1950 at least, although some federal economists thought that Builders could promote the beginning of it now by applying the "squeeze play." Housing Boss Foley had been urging Builders for several months to begin in earnest exerting a "downward pressure on prices" by buying materials closer at hand, thus cutting down on transportation costs.

HOUSES

CO-OPS: FULL STEAM AHEAD

FHA tries to tie its co-op program to VA home loan

The FHA was serious about developing its newest program—cooperative housing. It appointed an administrative officer to handle that and its lagging yield insurance program: Thomas S. Gray, an attorney who has worked in rental housing both with FHA and private industry.



GRAY

under the two programs.

For his first assignment, Commissioner Gray began studying the ways and means for tying in FHA co-ops with the Veterans Administration Home Loan program. Such a procedure would work, he thought, if the cooperative development consisted of individual or row houses. One hitch developed before the first week of study was completed: the FHA semicolon corps said it had detected a flaw in the law authorizing 95 per cent loans to veterans. It ruled that a group of veterans would get only the 90 per cent granted to anyone else.

The new commissioner was enthusiastic about cooperatives' future. Already near completion was one 800-unit veterans' project in New York (tax exempt because it came under the New York Housing Authority Act.) Other tentative projects were scheduled for Chicago, Detroit and Atlanta.

(Continued on page 14)

The new administrator's job, explained FHA Commissioner Franklin D. Richards, will be to coordinate the setting up of the necessary corporations, charters, by-laws and contract documents

OPERATION CHICAGO

Government, private agencies house their medical units in one area

"It has the character of a civic plan," an Illinois state official wrote in 1917. He was describing an exciting vision he had of an immense tract of land in the heart of Chicago dedicated to healing the state's sick and schooling the state's physicians. The years that followed were kind to his vision: in the territory surrounding the old Cook County Hospital on Chicago's west side new hospitals and medical schools began to appear. Three universities built their hospital facilities there. The county put up other structures. By 1941, there were six hospitals and seven schools, with a combined net worth of \$80 million. The area had taken the shape of a medical district—but one without a specific, well-defined plan.

In 1941, the state legislature created a Medical Center Commission, empowered it to improve and manage the district and coordinate the building activity of all agencies constructing medical facilities in the area, granted it operating expenses and funds for land acquisition.

The newly-created commission extended the boundaries of the area to 300 acres. It began buying up the land within those boundaries not already owned by medical groups, sold it to agencies with medical building plans. It undertook a persistent battle against the slums eating away the area's edges. At the same time, working with the institutions owning land in the district, it developed its master plan for the largest concentration of medical facilities in the world. As federal, state, county, city and private agencies moved in with plans for new hospitals and schools, the commission zoned their land, approved their plans. It plotted parks and off-street parking areas.

Last month the first two buildings located by the master plan were under construction—both University of Illinois facilities. Three other structures—a Veterans Administration Hospital and the State Department of Public Health's tuberculosis hospital and institute for tuberculosis research—are in the final planning stages. Planned for future construction are the buildings listed at the right. (Flexible and incomplete stage of the Commission's present plans accounts for minor discrepancies between the large site plan and the inset.)

In addition, the Commission is trying to attract private capital to develop a housing program for district employees.

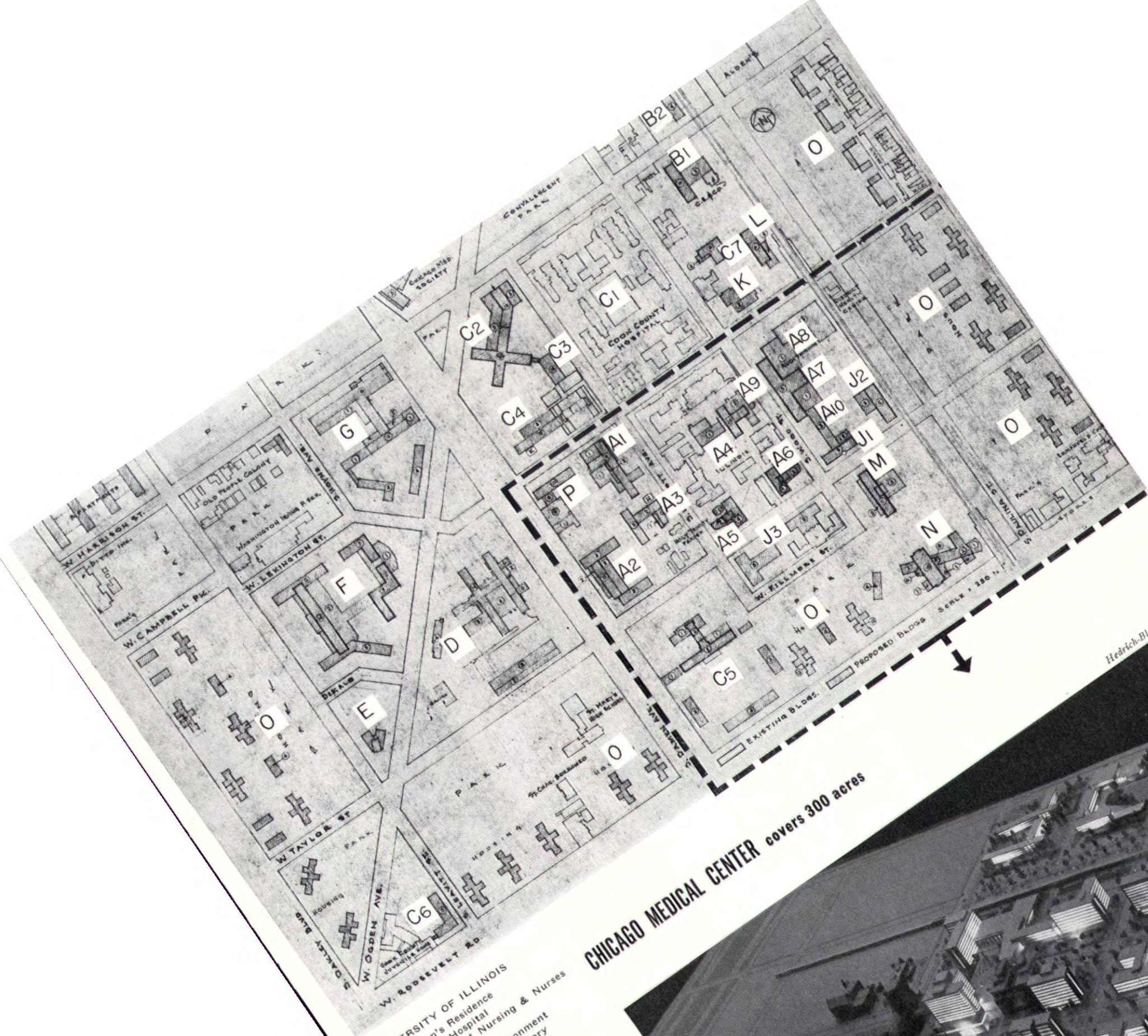
The project is an example of how many architects can work together on one overall plan, resulting in a unified center and a variety of design. Programing and planning one University of Illinois project are: Holabird & Root & Burgee; Sargent & Lundy, Engineers; Pace Associates; Perkins & Will; Schweikher & Elting; Naess & Murphy.

PROBABLE VOLUME OF NEW CONSTRUCTION EXPENDITURES IN 1949*

Type of Construction	Expenditures in millions		Per cent Change
	1949	1948**	
Total New Construction	\$18,750	\$17,775	+ 5.5
Private Construction	13,750	13,735	+ .1
Residential Building (nonfarm)	6,500	7,100	- 8.5
Nonresidential Bldg. (nonfarm)	4,050	3,600	+12.5
Industrial	1,300	1,380	- 5.8
Commercial	1,450	1,260	+15.1
Warehouses, office & loft bldgs.	450	350	+28.6
Stores, restaurants, garages	1,000	910	+ 9.9
Other nonresidential	1,300	960	+35.4
Religious	325	230	+41.3
Educational	325	245	-32.7
Social & recreational	275	215	+27.9
Hospital and institutional	175	115	+52.2
Hotels and miscellaneous	200	155	+29.0
Farm construction	450	500	-10.0
Public Utilities	2,750	2,535	+ 8.5
Railroad	350	350
Telephone and telegraph	725	675	+ 7.4
Other	1,675	1,510	+10.9
Public construction	5,000	4,040	+23.8
Residential Building	150	65	+130.8
Nonresidential Building	1,375	970	+41.8
Educational	700	525	+33.3
Hospital and institutional	375	200	+87.5
Other nonresidential	300	225	+33.3
Military and naval facilities	175	150	+16.7
Highways, streets and roads	1,700	1,550	+ 9.7
Sewage disposal and water supply	550	450	+22.2
Miscellaneous public service enterprises	125	105	+19.0
Conservation and development	750	600	+25.0
All other public construction	175	150	+16.7

* Joint estimates by the Bureau of Labor Statistics, U. S. Department of Labor, and the Office of Domestic Commerce, U. S. Department of Commerce. New construction includes major additions and alterations.

** Estimates cover the first 10 months of 1948, and forecast the remaining 2 months.



CHICAGO MEDICAL CENTER covers 300 acres

UNIVERSITY OF ILLINOIS

- A1. Men's Residence
- A2. Staff Hospital
- A3. School of Nursing & Nurses
- A4. Dormitory
- A5. Physical Environment
- A6. Research Laboratory
- A7. Pediatrics Hospital
- A8. Maternity Hospital
- A9. Library & Museum
- A10. College of Public Health

PRESBYTERIAN HOSPITAL

- B1. School of Nursing & Nurses
- B2. Dormitory
- B3. Hospital Expansion

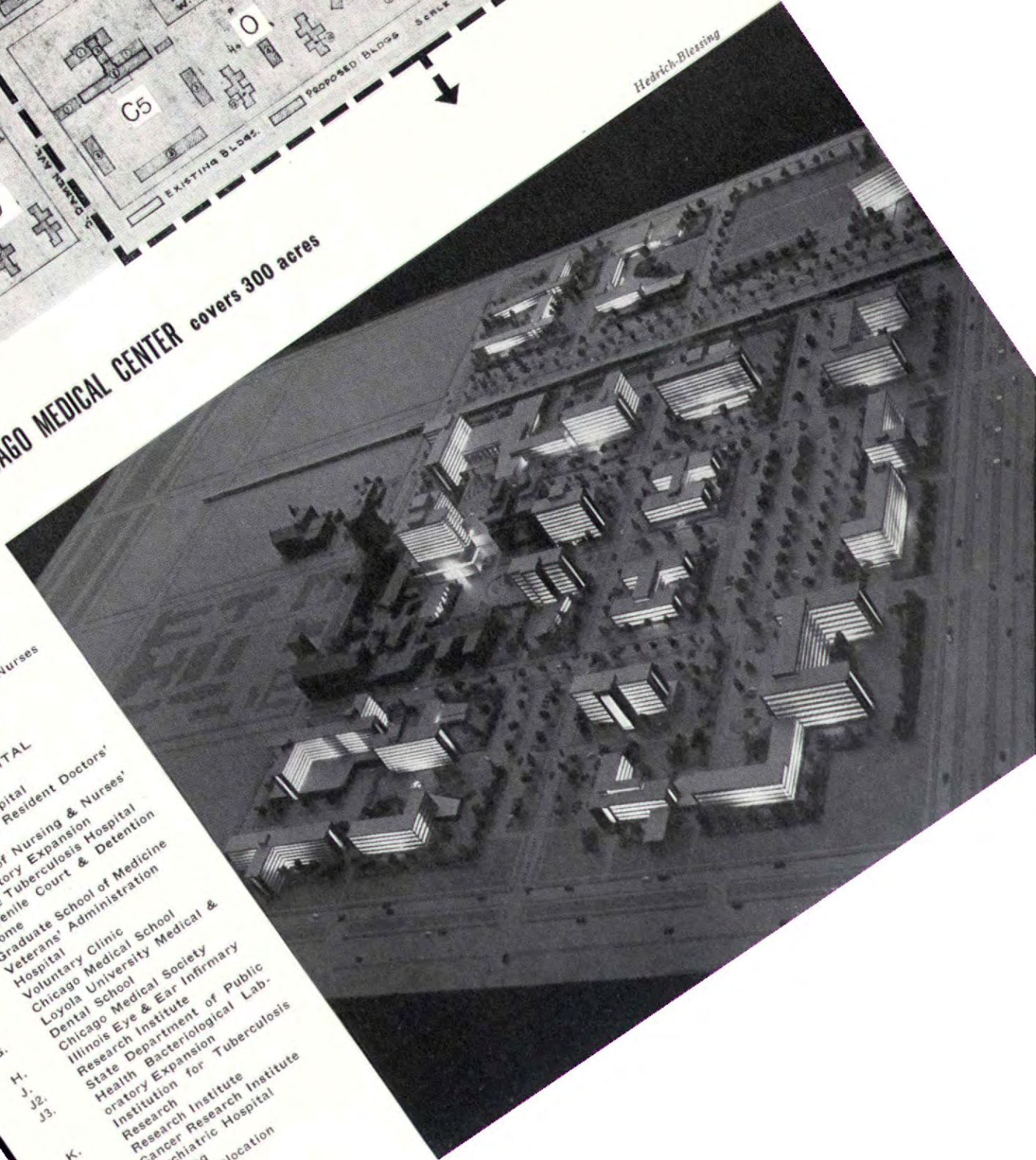
COOK COUNTY HOSPITAL

- C1. Hospital
- C2. General Hospital
- C3. Internes & Resident Doctors' Building
- C4. School of Nursing & Nurses
- C5. Dormitory Expansion
- C6. State Tuberculosis Hospital

GRADUATE SCHOOL OF MEDICINE

- D. Home
- E. Veterans' Administration
- F. Graduate School
- G. Hospital
- H. Voluntary Clinic
- J1. Chicago Medical School
- J2. Loyola School
- J3. Chicago University Medical & Dental School

- K. Chicago Medical Society
- L. Loyola School
- M. Chicago Eye & Ear Infirmary
- N. Research Institute
- O. Illinois Department of Public Health
- P. State Bacteriological Lab. Expansion



Hedrich-Blessing

SURPRISE ENDORSEMENT NAREB tries a compromise with the public housers

Most surprising endorsement of cooperative housing came from the National Association of Real Estate Boards. The endorsement, which Executive Vice President Herbert Nelson said NAREB would urge in program form on the new Congress, had all the earmarks of a NAREB compromise with the public housers.

The kind of co-op venture Nelson had in mind would be patterned after that which has operated successfully in Sweden for a number of years—direct government loans and grants to cooperative housebuilding groups (but with “the basic first mortgage financing in private hands”). Nelson would like to see a program on the same scale as Sweden’s—which would mean about 250,000 units a year in the U. S.

Sweden’s cooperative home societies, Nelson hurriedly explained, are “not organized by the government, but are self-generated.” The occupants have long-term leases which ultimately are charged by public ownership. Said Realtor Nelson: “A constructive plan of this type can be devised for our country. It can achieve lower rents than public housing because of the enormous load of administrative and management costs which public housing must bear . . . It may be the only road to home ownership for millions of our families.”

There was no immediate public reaction to Nelson’s suggestion from other members of private building groups. Privately many of them wondered how it could be defended in light of the implication that Nelson was worried about the government subsidies to public housing but not to home renters. They would approve government subsidies to home builders but not to home renters. Columnist Drew Pearson, who charged that the NAREB wants its program “administered by state and local authorities, which real estate interests can control . . .” The NAREB will talk its idea over at its January meeting in Washington. If it decides to submit it to the 81st Congress, it might look for help from the American Legion, which proposed a similar bill last year.



Life Photo by Ralph Crane

AWARDS FRANK LLOYD WRIGHT A.I.A. will give belated honor to world's great architect

Frank Lloyd Wright holds honorary membership in the Academie Royale des Beaux Arts d'Anvers, the National Academy of Cuba, the Instituto Central de Archi- tects in Mexico, and the National Academy of Finland. He is “extraordinary honor member” of the Akademie der Kunst in Berlin. He has received the Royal Gold Medal of the Royal Institute of British Architects from King George VI, and high honors from Holland, Switzerland and the Soviet Union.

And now, finally, the architectural profession in his own country is about to give

belated recognition to the man whom many consider to be the greatest living architect. The American Institute of Architects announced that it will award Wright its Gold Medal at the A.I.A.’s convention in Houston next March. It will be the first time that the Institute has given its highest honor to a non-member.

The A.I.A.’s decision is a follow-up of its convention resolution last spring . . . the next Gold Medal should go to Wright. A.I.A.’s younger, liberal members who took seriously the Institute’s failure to recognize greatness in their profession.

CHARLES MAGINNIS Artists Fellowship awards him for “con- tribution to art”

Last year’s winner of the American Institute of Architect’s Gold Medal, Boston Architect Charles D. Maginnis, took honors in art. The Artists Fellowship in New York awarded him its Benjamin West Clinedinst Medal for his “distinguished contribution to American Art.” The fellow- ship’s Gari Melchers Gold Medal, which it presents annually to a layman “Friend of American Art,” went to Henry R. Luce.

BUILDING MONEY RFC’S DAUGHTER Can the government become the main source of building funds?

Fannie May was getting heavy. Ever since the Congress last summer gave her permission to begin buying half the mortgages on FHA-insured and VA-guaranteed construction, the Reconstruction Finance Corp.’s daughter (known formally as the Federal National Mortgage Assn.) had been taking on weight regularly. In August—the first full month of operation under the new law—she bought \$16,367,000 worth of mortgages; the figure increased steadily each month. She wound up the year holding \$160,387,000 worth of mortgages.

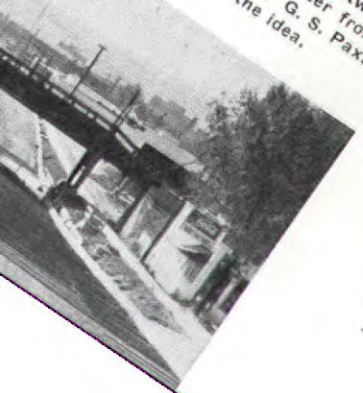
There were immediate cries that her size was a disgrace. One Washington spokesman for private building groups grumbled that the RFC was becoming a “thinly disguised direct government lender operating under the name of a corporation.” Long Island Home Builder Alfred Gross (see p. 16) scolded bankers for their attentions to Fannie May. Said he: “I decry the direct participation by the Federal government in the mortgage business. Investing institutions should be farsighted enough to see the danger in this trend. Many others were worried about the possibility of the government facility becoming the main—even the sole—source of funds. Were their fears justified? At present, FHA and VA are insuring and guaranteeing roughly half the nation’s total non-farm residential construction. If Fannie May were to buy up the complete amount she is entitled to, she would be purchasing close to \$90 million worth of mortgages every month—covering one-fourth of the total amount of non-farm residential construction. And there is a good possibility that the new Congress will raise the percentage of mortgages she is permitted to buy from 50 (which some say discriminates against metropolitan areas) to 75.

Those who contend that Fannie May is not dangerously fat at all, but just pleasingly plump, advance two arguments: first, that when times get normal again, lending agencies won’t be nearly in the hurry they’re in now to dump half their portfolios on the government; and second, that Fannie May, unlike some government children, can take care of herself perfectly. To prove this, they point to a little known fact: RFC’s bouncing daughter, after ten years of buying and selling mortgages, has made a profit of more than \$20 million.

SECOND MORTGAGES Bankers see revived activity during next year

Was the second mortgage market, happily dormant since the depression years, beginning to bloom again? There were some un- easy indications that it was. Many bankers

FIRST HIGHWAY to utilize the principles of radiant heating was opened in Klamath Falls, Ore., early this month. The four-lane, 450-ft. stretch was transformed from a dangerous road area into a snow-melting highway by laying in the concrete a network of iron pipe through which hot water from an underground spring circulates. G. S. Paxson, bridge engineer, developed the idea.



and real estate men thought they saw the first stirrings of its revived activity last year; moreover, they believed that, barring a definite break in the real estate market, second mortgage deals would be more common in the year ahead. Carl Distelhorst, of the American Savings & Loan Institute, packaged the opinion of some: "It hasn't been an aggressive market. The seed is germinating, though." Others were more specific. Said William Orem, a Washington realtor: "If the builder holds his price, we will be taking more second trust paper."

What second mortgages there were in 1948 were taken out, for the most part, by sellers of used houses and builders of new ones; few banks touched them. Builders in New York's Westchester County indicated in an informal poll that although they were not taking back second mortgages now, they would do so if they found it necessary. Some who had already "found it necessary" were reaping a heavy harvest: real estate brokers buying up second mortgages in St. Louis were charging premiums as high as 15 and 20 per cent.

Observers who viewed the situation worriedly, remembering the tragedies of junior mortgage financing in the twenties, might find some consolation in the substitutes for second mortgages that were beginning to crop up. Typical example was a procedure used by Savings and Loans in various parts of the country: They granted mortgages covering the full selling price of the house less the down payment—on the condition that the seller assign the customary lag (selling price less down payment and first mortgage) in a savings account with the S&L, to be released when the mortgage had been paid up to twice that amount. That procedure developed last year and is on the increase. Explained one St. Paul, Minn., S&L official: "Here you give the buyer his financing and the only thing you ask is that the seller carry some of the risk for a while."

NEW YORK OFFICE BUILDING reverts to vertical style



New York's tallest building since the war, reflecting the pre-war enthusiasm for the vertical style, will rise soon on the site of the colorful old Murray Hill Hotel. A 36-story, white brick structure, it will house offices, cost an estimated \$20 million. The Metropolitan Life Insurance Co. granted a 20-year mortgage loan of \$12.5 million to 100 Park Ave., Inc., the organization which is erecting the building.

Ely Jacques Kahn and Robert Allan Jacobs designed the building, which will cover an entire block front on Manhattan's Park Avenue. Other features:

- ▶ 60-ft. entrance.
- ▶ 40-ft. deep lobby, finished with marble walls, terrazzo floors, stainless steel and ornamental plaster.
- ▶ All glass front.
- ▶ Full air-conditioning system.
- ▶ Large, closely-spaced double-hung windows.

Contractor is the George A. Fuller Co. Louis Adler and S. D. Leidesdorf are president and chairman of the board of 100 Park Avenue, Inc.

SAN FRANCISCO RENTAL HOUSING development will provide 700 units

Another giant rental housing development was under way. The mayor of San Francisco and other city officials turned up with pitchforks and spades last month at nearby Lake Merced to break ground for a 700-unit project undertaken by the Stoneson Brothers Construction Co.

The development, which will be completed in about 18 months, will include four 10-story concrete apartment houses, 10 three-story frame buildings, park areas, playgrounds and

a community shopping center. Community laundries equipped with washing machines and driers will be located throughout the 56-acre project.

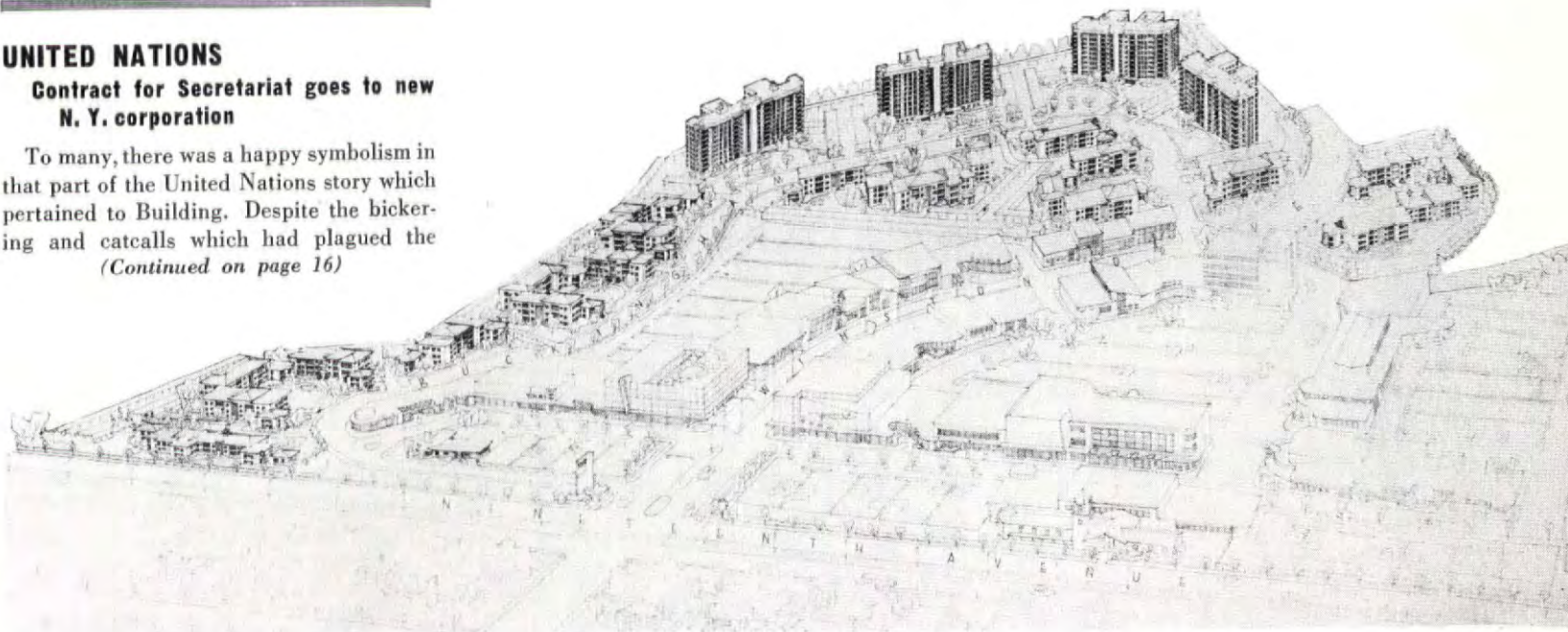
Forty per cent of the 683 apartments will have four-room units, 40 per cent five rooms, and 20 per cent six rooms. They will rent for \$25 per room. Each will be furnished with electric range and steam heat, and will be constructed with tile floors. Architect is Angus McSweeney.

JOBS

UNITED NATIONS

Contract for Secretariat goes to new N. Y. corporation

To many, there was a happy symbolism in that part of the United Nations story which pertained to Building. Despite the bickering and catcalls which had plagued the
(Continued on page 16)



organization's attempts to become a family of nations, and often threatened the complete dissolution of its political structure, plans for the construction of UN's physical home had progressed smoothly and steadily.

Last month, right on schedule, Secretary General Trygve Lie announced the names of the contractors who will build the 39-story Secretariat Building and complete the foundations for the whole project on New York's East River. They are: The George A. Fuller Co., Turner Construction Co., Walsh Construction Co., and Slattery Contracting Co., all of New York.

The four companies, which united to form a corporation to complete the job, had offered a joint bid. The amount of the bid was undisclosed, probably was for \$25 million, and bonded for an estimated \$30 million. (UN officials, obliged to build the entire project on the \$65 million loan granted by the U.S., were delighted at this evidence of the builders' willingness to make firm plans.)

Said Lou R. Crandall (of the Fuller Co.), president of the new corporation: "This will be a joint venture in the real sense of the word, not just a set-up where one company does the work and the others are active only in the financial aid."

Foundation work for the Secretariat, which will house all the UN facilities now at Lake Success, was scheduled to begin early in January. The builders estimated the skyscraper center of the world capital would be ready for occupancy in the late summer or fall of 1950. With its towering home under construction, who could believe that the family would dissolve?

* * *

Le Corbusier was wearing his bruised feelings on his sleeve. The United Nations, he told a Paris press conference, hadn't even

called him back to supervise the construction of UN Headquarters—and from plans which were "mainly my own work." He made no mention of the UN Design Board's other nine members.

UN Secretary General Trygve Lie, to whom Le Corbusier explained that his presence in New York was "technically and esthetically necessary," prepared a reply. Planning Director Wallace K. Harrison said he would stick by a letter he had written the French architect last year, in which he had stated: "I am delighted that you feel that you are the one who designed the United Nations Headquarters. It pleases me equally that other members of the Board have that same satisfaction. After all, the combined work was to be symbolic of the unity and selflessness of the United Nations. . . ."

MATERIAL

LUMBER

Dealers try to encourage proper use among their customers

As the lumber market began to level off, customers were getting choosy. They shopped around for the best grades, passed up the ungraded and unsorted stock. A lumber survey committee of the Department of Commerce reported an "increasing accumulation of lower grades of lumber in mill and retail stocks."

Lumber men decided it was time to talk turkey—and economics—to their customers. They set about to inform them of the proper use of all grades of lumber.

H. V. Simpson, executive vice-president of the West Coast Lumbermen's Associa-

tion, was convinced that such "proper use" was the "only way out if we're going to give people low cost housing." Said he, in a report which the association considered to be its "most important . . . since the end of the war":

"Nowadays lumber is being graded a lot closer on the basis of practical usability;" using each grade for the work it can do is "common sense economy."

Lumberman Simpson had a practical illustration in mind: No. 3 Douglas fir, selling for about \$30 a thousand feet cheaper than No. 1, could be used successfully for sheathing, sub-floors and roof boards, with full FHA approval. Other uses, permitted in all but seven of the 53 FHA districts: studs, plates, fire stops, bridging and cripples.

PEOPLE

NEW POSITIONS

Dewey, Gross ask aid; Kemper retires; Robbins hired

Long Island House Builder Alfred Gross called for government help for private builders in order to provide housing for the \$2,000 to \$4,000-a-year income group. On small houses sold to veterans, carrying FHA mortgages of \$10,000 or less, he asked:

▶ That interest paid on such loans be exempt from federal income tax.

▶ A 40 year amortization period on the loans.

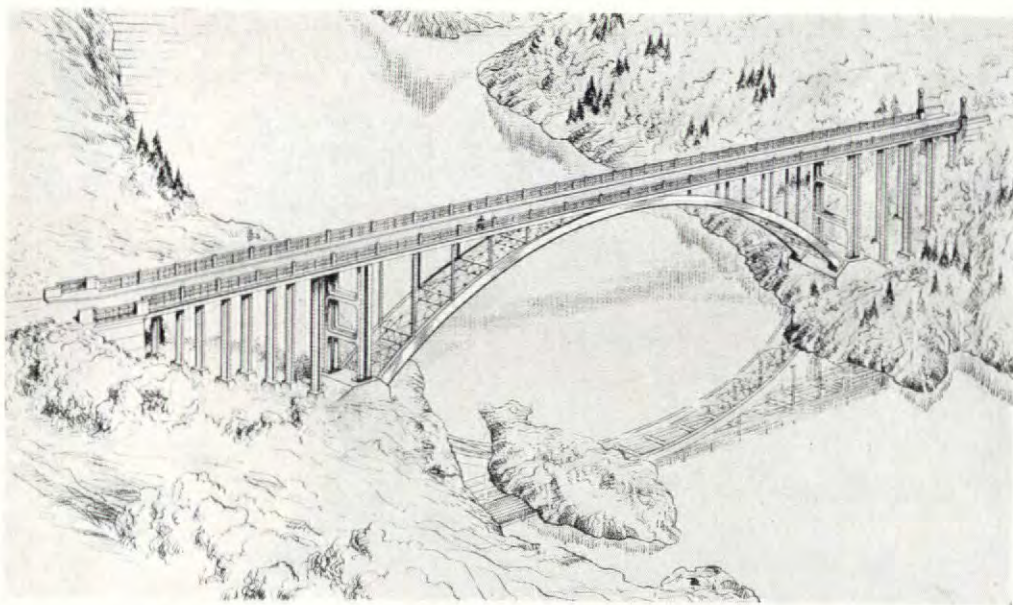
▶ That the FHA waive its insurance fee on them.

Builder Gross thought rental housing in the \$35-\$75 a month range could be provided through Title VI's Section 608 if municipalities would exempt such housing from taxes for a 20-year term, and if the federal government would permit the floating of 3¼ per cent bond issues, exempt from federal income tax, to finance such suites.

Edward C. Kemper retired from his position of Executive Director of the American Institute of Architects. His 35 years of A.I.A. service paralleled the organization's growth from 37 chapters and 1,159 members to its present 88 chapters, 6 state associations, 6 state organization members, and 7,800 individual members.

Succeeding him will be Edmund R. Purves, Director of Public and Professional Relations of the Institute.

Thomas E. Dewey, whose views on public housing two months ago were a subject of major speculation, finally cleared the whole thing up. He said that he would ask the New York state legislature (at just about the time many had believed he would be addressing the U.S. Congress) to up the state's public housing subsidies from \$13 million to \$25 million, and recommend a \$300 million bond issue for that and slum clearance. (Continued on page 18)



FIRST ALL-ALUMINUM highway bridge in the world will span the Saguenay River in Canada. Construction has already started on the 400,000 lb. structure, which has a 290-ft. arch span with a rise of 47.5 in., and a roadway 24 ft. wide, of precast slab construction. Its overall length is 504 ft. Similar construction of steel would weigh about twice as much. The Dominion Bridge Co., of Montreal, is contractor.

Why not draw on Carrier experience?

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Carrier doesn't build just units—it builds complete air conditioning for any need. It may be a Weathermaker for a suite of offices or a retail store, or a Weathermaster System for a multi-room building.

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Micartabord, $\frac{5}{32}$ " for corridors
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 $\frac{7}{8}$ " and $1\frac{1}{4}$ ", for furniture tops;
Micarta Sheet, laminated to plywood,
 $\frac{1}{16}$ " for desk fronts and tops.*



*Check these **34** Uses for*

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Micarta tops for tables, bars and
fountains. Micarta bar and fountain
fronts, where careless customers so
often snuff out cigarettes. With
Micarta, no damage results.



Micarta for table tops, and fixtures.
Micarta for its sheer decorative
qualities. Micarta for gleaming, clean
appearance easy to keep that way.

Micarta for sink and counter tops in
kitchens, serving pantries, diet
kitchens — wherever stubborn
resistance to wear and sanitary
cleanliness are essential.



*How many ways
do you employ this tough,
beautiful material?*



HAVE you thought of Micarta* as ideal, chiefly for table and counter tops? If you have, consider how extensively this bright, colorful, good-looking, easy-to-clean plastic laminate is going into operating rooms, toilets and bathrooms, kitchens, elevator cars, and scores of other places in homes, stores, bars, restaurants, hotels and institutions.

Wherever long-time attractive appearance is important, Micarta offers stubborn resistance to wear, abrasion, marring and abuse.

In fact, Micarta requires virtually no maintenance. It is unaffected by boiling water, household cleansers, detergents, dilute acids, condiments, milk, grease, food products, and barber and beauty shop preparations (including hydrogen peroxide up to 8 hours) and even nail polish and remover.

Micarta is highly resistant to cigarette burns but for complete protection, a special cigarette-proof grade is made. This is important in public eating and drinking places where stubs are allowed to smoulder on table tops, or are snuffed out against bar and counter fronts.

1/16" MICARTA SHEET

This form is the type used as a "work surface" by fabricators who have the necessary bonding equipment, and is incorporated into table tops, bar tops or counters for:

Uses

Bars
Barber shops
Beauty parlors
Coffee shops
Dinettes
Furniture tops
Kitchen cabinets
Kitchen sinks
Laboratories
Laundries
Lunch rooms
Restaurants
Retail stores
Rumpus rooms
Soda fountains
Utility rooms
Work surfaces

Sizes 30" x 84"
30" x 60" 36" x 84"
36" x 72" 48" x 96"

7/8" and 1 1/4" MICARTA PANEL

This is 1/16" MICARTA SHEET bonded to special cores of Philippine mahogany-faced plywood. It saves fabricators the trouble and expense of doing their own bonding.

Uses

Same as those listed at left, plus occasional use as a structural material.

Size
48" x 96"



MICARTA
is manufactured by
WESTINGHOUSE
and sold, for
decorative purposes
only, by
UNITED STATES
PLYWOOD
CORPORATION

5/32" MICARTABORD

This type is used generally as a wall surfacing material. It is easy to apply over finished walls.

Uses

Back bars
Bathrooms
Beauty parlors
Corridors
Counter fronts
Diet kitchens
Elevator cars
Filling stations
Operating rooms
Restaurants
Specialty shops
Stores
Toilets
Wainscoting
Walls
Washrooms
And as kick plates
and push plates

Size
48" x 96"

COLORS

TRUWOOD

This is a special type of MICARTA SHEET with a true wood veneer top sheet in:

Korina Primavera
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Other woods on special order. (Truwood is not available in Micartabord)

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Bisque Wedgewood Blue
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Beige Chinese Red
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Pink
Green
Yellow
Copper

FINISHES All colors and all types of Micarta are supplied in highly polished mirror-finish or in satin finish.

The type of *service* determines the type of Micarta you'll want to use. Check the table in the panel above.

WORKABLE: Micarta can be worked by hand tools on the job. It can be sawed, trimmed, planed and drilled. For samples, added information, prices, deliveries, etc., use coupon below.

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try these "demolition" tests: **Try to score it**
Try to dent it
Try to stain it
Try to spoil it

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I WANT TO GIVE MICARTA THE "THIRD DEGREE". Without any obligation whatever, send me, *free*, a sample of Micarta so I can see for myself how beautiful, tough, wear-resisting and abuse-proof Micarta really is:

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in 1948 to reach these leaders through the FORUM.

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of the people in building who count.



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its leadership is
also yours to use . . .

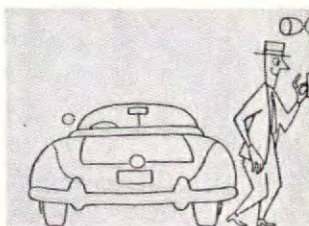
... IN 1949

Light the path ahead

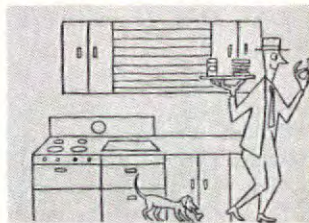
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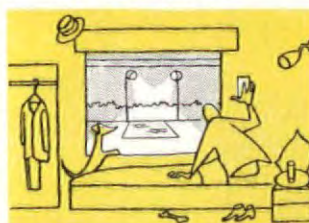
use this
Remote Control Relay System
 instead of conventional switching
 for greater
CONVENIENCE • SAFETY • COMFORT
 . . . at very reasonable cost



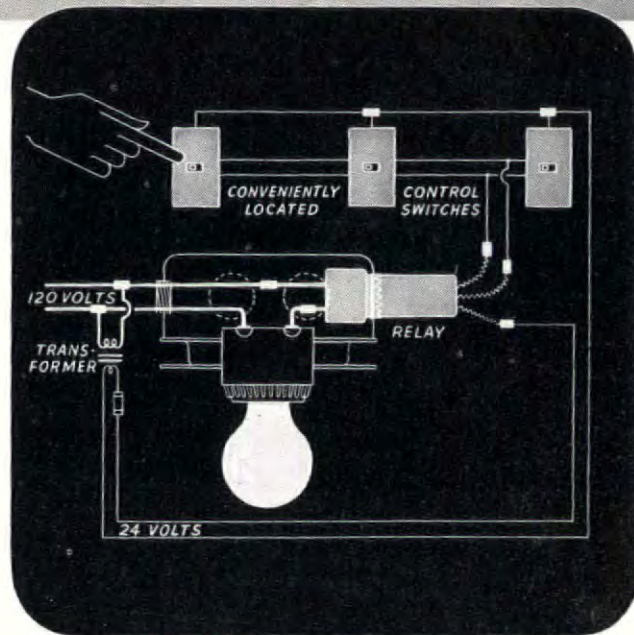
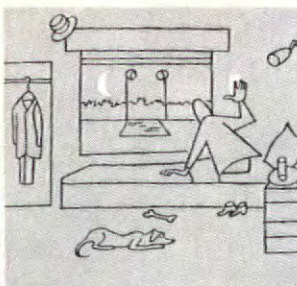
**LIGHTS OFF IN GARAGE
 AND ON IN KITCHEN**



**LIGHTS OFF BEHIND
 AND ON AHEAD**



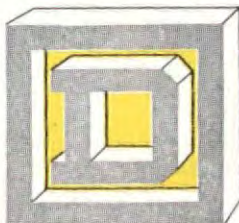
**LIGHTS ON FOR A LOOK
 THEN OFF ALL OVER**



• The above sketch shows how remote control relays are installed in knockouts of outlet boxes. The relays are controlled from any number of conveniently located switches operating on a 24 volt system. Only the load circuit wiring is at 120 volts.

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Ira S. Robbins added another to the long list of housing titles he has held during the last 20 years: executive vice-president of the Citizens' Housing and Planning Council of New York, Inc., an organization formed to "bring together all of the points of view and interests concerned with housing and planning." At present Robbins is counsel for the plaintiff in a New York City law case challenging the right of the city to use housing funds for the construction of public schools near public housing projects.

CITIES

BUILDING CODES

Survey finds almost half of U. S. cities have either outdated codes or none

The sad condition of building codes in nearly half the cities throughout the U. S. has been painfully obvious—at least to everyone connected with Building in those cities. Last month the National Bureau of Standards' Building Technology Division chronicled that condition. In a survey of the nation's 2,094 cities having populations of over 5,000, it found:

▶ 385 cities have no codes at all; 18 are covered by state regulations only, 65 by fire-limits ordinances, 88 by permit ordinances.

▶ 184 cities have codes 25 years old; 418 are more than 20 years old. (One code—that of Fall River, Mass.—is 44 years old.)

▶ Less than 10 per cent of these code-deficient cities are doing anything about it.

Larger cities, the survey found, have an easier time keeping their codes up to date than do the smaller (and consequently poorer) ones. Only 13 per cent of the cities with 100,000 populations have codes more than 20 years old; 25 per cent of all the larger cities with antiquated codes are revising them.

* * *

New York's Governor Thomas E. Dewey said his state was "in the Seventeenth Century" as far as building codes were concerned. Many of the 178 municipal codes throughout New York (which has no state code) are "blocking housing," he said, by excluding "all advances in the use of such materials as steel and plywood." He wanted his legislature to meet the problem "head on" by planning a step-by-step program

leading to an eventual statewide code of modern standards.

MILWAUKEE

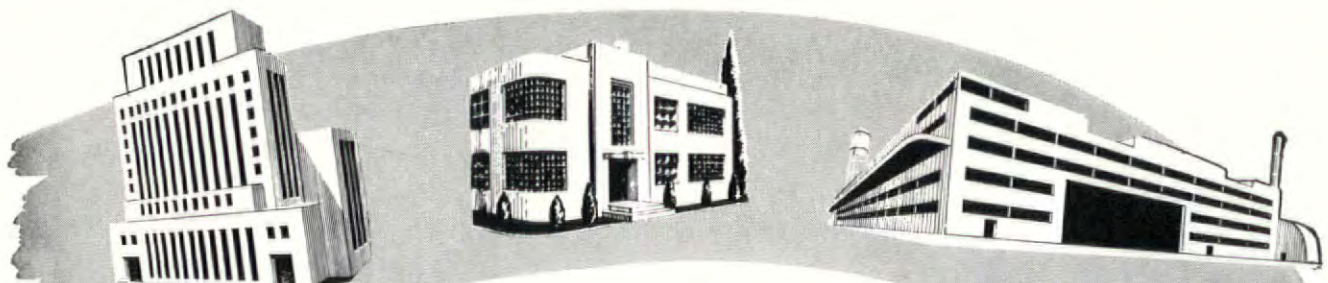
City attempts to build houses cheaper, discover high cost of construction

Milwaukee, toying with the idea that a city can build housing more cheaply than private groups can, had decided to test that theory: it would build 12 experimental houses for \$8,000 each. But when the bids came in last month, they averaged close to \$12,000.

The Milwaukee *Journal* gave the city government an "A" for effort, but scornfully spelled out the reason for the plan's failure: "There is no magic that makes a single family house planned by the city cost any less than a similar house planned by a private builder."

Chief targets of the *Journal's* scorn, however, were 14 aldermen who had twice blocked attempts to promote housing through the use of Milwaukee's urban redevelopment law. Scoffed the *Journal*: "Most of them talk as though they want to do something to ease the housing shortage, but

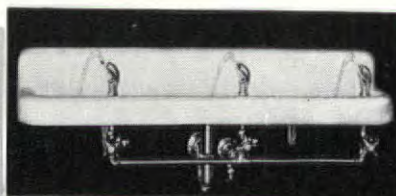
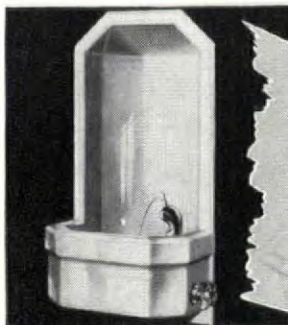
(Continued on page 20)



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Whether it's public buildings, schools, warehouses, industrial plants, churches, hospitals . . . in fact, in any edifice where people gather . . . Halsey Taylor Drinking Fountains meet the need for health protection! Their many distinctive sanitary features make these modern fountains the specification for '49.

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A-1



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Yes, put this Complete Kitchen—range, oven, refrigerator, sink, shelves and drawers—in 8 square feet of floor space. Cut construction costs by \$1,000.

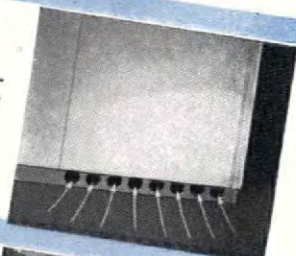
Let us show you how delightfully adaptable Pureaire Kitchens are to your plans. Mail coupon today for brochure showing typical floor plans and installations.

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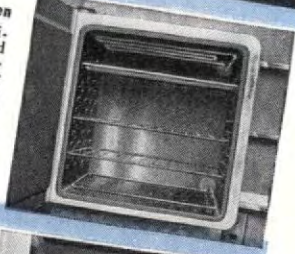
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Available in two models, and three sizes, for installation in large, average, or small size kitchens, built with standard, thick, or thin wall construction. Write for complete information.

ON DISPLAY IN BOOTH 195, NATIONAL ASSOCIATION
OF HOME BUILDERS EXPOSITION, CHICAGO



Formerly F. A. Smith Manufacturing Co., Inc.
ROCHESTER 2, N. Y.

they turn down proposals by which private capital would cooperate with the city to clear blight and build modest rental housing. What is the alternative? Do they want to build single family houses at \$12,000 each, or put a \$4,000 city subsidy into a house to make an \$8,000 price possible? Or do they want to spend millions of city funds on public housing as their only attack on the problem?"

MIAMI

Construction, horse racing level off together

Miami stepped breathlessly into its winter season, but found the pace not quite so breathtaking as it usually is. The first few days of frolic indicated a serious buyers' resistance in the sun and fun market. About one-fourth less spectators were attending the races than last year—and betting little more than half as much. Local amusement advertising was down almost 30 per cent. There had been at least five recent bankruptcies among amusement retailers.

But what really worried the observers were the dips in real estate prices and new construction. About 30 per cent less permits for one- and two-room houses were issued in 1948 than the year before. The value of the October and November building permits was one-third less than the value of those issued during those two months last year. Old houses in the \$20,000-or-more group had lost about 25 per cent of their market value. Lending institutions were tightening up on mortgage loans; one mortgage company decided it could no longer do without a department to handle delinquent accounts.

DETROIT

Building invitation to John Hancock turned down twice

Detroit was irked. For the second time, John Hancock Insurance Co. turned down a Detroit invitation to build a housing project in the city. The first invitation, extended also to three other insurance companies, had been issued—and refused—several months before. Shortly after that, however, John Hancock had offered, at the request of Ford Motor Co., to undertake a large housing program in nearby Dearborn (Mich.)

When the voters of Dearborn turned thumbs down on the idea last November (because Dearborn's Mayor Orville Hubbard had convinced them the project would permit Negroes to infiltrate the city), Detroit polished off and reshaped its request: Would John Hancock transfer its proposed project from Dearborn to Detroit? John Hancock polished off its

(Continued on page 22)

East Side, West Side, All Around Indianapolis



Main Office of Indiana National Bank, Indianapolis. Equipped when originally designed by D. A. Bohlen & Son with Webster Steam Heating System. In 1947, Strong Brothers, heating contractors, modernized the installation by installing Webster Moderator System.

The Indiana National Bank, successor in 1865 to the business of the Indianapolis branch of the State Bank of Indiana, organized in 1834, has been a Webster customer for over 34 years.

Ever since a Webster Vacuum System was installed in the main office building in 1914, Webster Equipment has been purchased, keeping the bank properties abreast of the latest developments in comfort and economy in heating.

In 1947, a Webster "Controlled-by-the-Weather" Moderator System with Outdoor Thermostat was installed in the main office building. Pre-fabricated Webster Convactor Radiation with integral supply valve and trap was used.

Webster Systems of Steam Heating are also installed in three recently constructed branch office buildings.

An important factor in the success of these installations was the close association that has existed between bank management under President Russell L. White, Architect, D. A. Bohlen & Son, and Webster Representative, S. E. Fenstermaker.

The story of Webster heating in Indiana National Bank illustrates how Webster serves their customers. Let us help you with your heating.

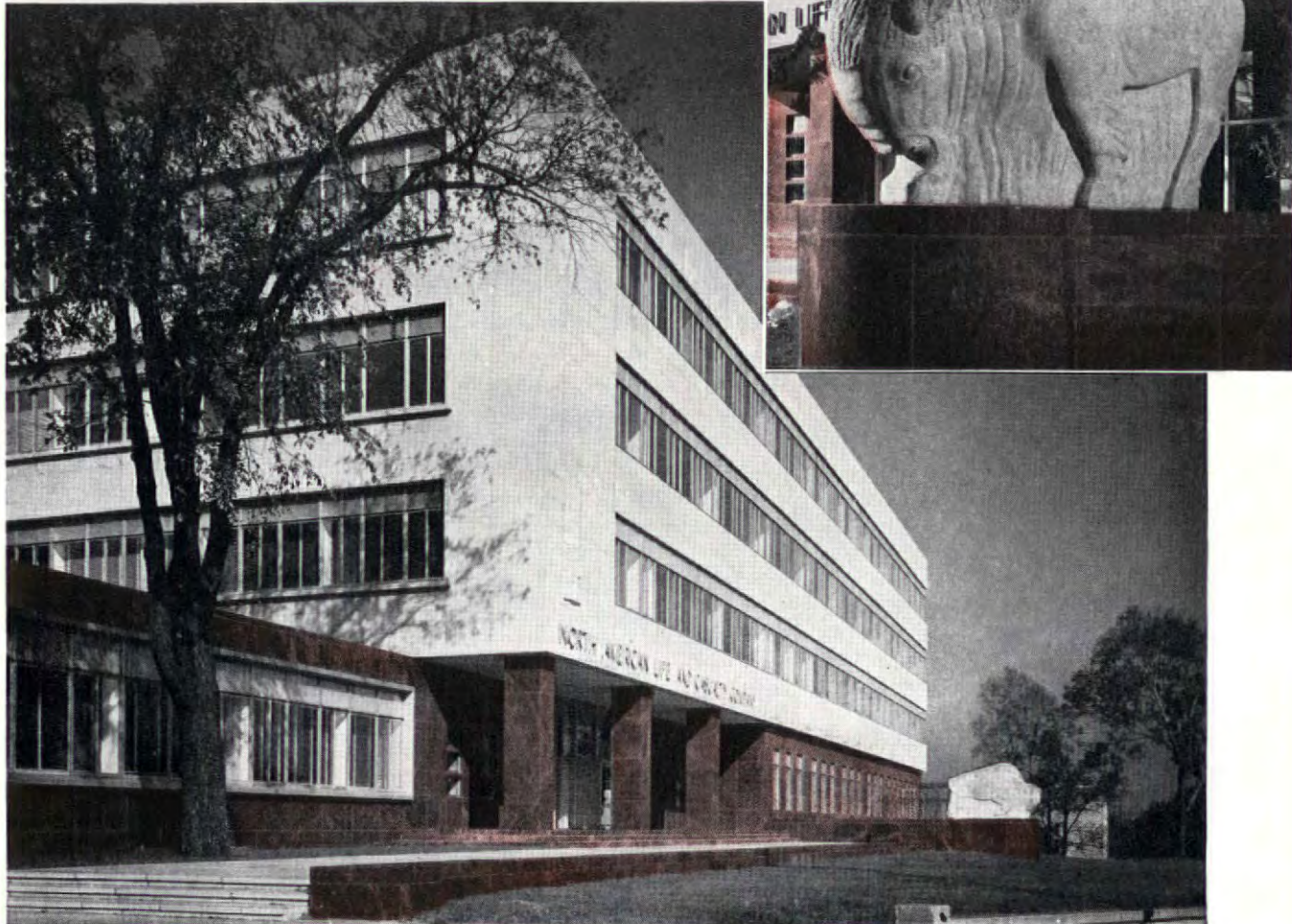
Address Dept. AF-1

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SOLID

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New home of the North American Life and Casualty Company, Minneapolis. Polished Rainbow Carnelian granite used for first floor facade, approach and retaining walls. Thirteen-ton granite bison carved from the same granite by sculptor, John K. Daniels. — Lang & Raugland, architects.

SSOLID AS A GRANITE BISON. Here is an implication; an excellent one for an insurance company to convey. It doesn't have to be expressed in words. There is the bison for all to see and the impression of solidity and strength is unmistakable.

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An interesting, helpful file of information—"Ideas in Granite" is yours for the asking. Address: Desk A-2, Cold Spring Granite Company, Cold Spring, Minn.

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first refusal, which had been based on the contention that the company already held large mortgage loans in the area and that building costs would not permit the erection of multiple dwelling units under a fair return program.

Why had John Hancock felt then that a housing investment in Dearborn would offer a fair profit? Executive Secretary James Inglis of Detroit's Housing Commission said he had an answer: The Ford Co., wanting additional housing near its factory area, had offered to sell the insurance company a large block of property at a "ridiculously low price."

BALTIMORE

Housing court's efforts to clean slums are successful after 16 months

Baltimore's Housing Court, which forces landlords under threat of fine to keep their places sanitary (FORUM, Dec. '48), had done a great deal to clean up Baltimore slums. After 16 months of court operation, slum property owners were beginning to repair substandard dwellings without waiting for the city to take court action.

The Baltimore *Sun* acknowledged the court's progress with a hearty backslap. But at the same time it warned the city not to count on the court to take care of all its housing ills. Said the *Sun*:

"The Housing Court has done much to improve sanitary conditions in Baltimore. It has not, however, done too much to improve housing in Baltimore. A court cannot create better housing. Baltimore, in its justifiable enthusiasm for its Housing Court, must remember that while outside toilets have been moved inside, they have been moved in many cases inside small unventilated closets or behind makeshift partitions in cramped kitchens. . . ."

Not until the \$5 million redevelopment loan which Baltimore citizens voted last November (FORUM, Nov. '48) has been converted into slum clearance projects, the *Sun* warned, "can Baltimore boast that it is doing anything permanent to improve its housing conditions."

NEW YORK

Mumford, Moses slug it out over density of Metropolitan's project

When Metropolitan Life raised eight 13-story buildings on 61 acres at the edge of Manhattan's East River, some 24,000 people acquired housing they desperately wanted and U. S. planners acquired what seems likely to stand as the cause célèbre of the decade. How difficult it is for the planners to bring their case against Stuyvesant Town to the public was apparent last month (Continued on page 24)

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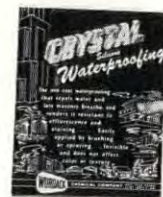
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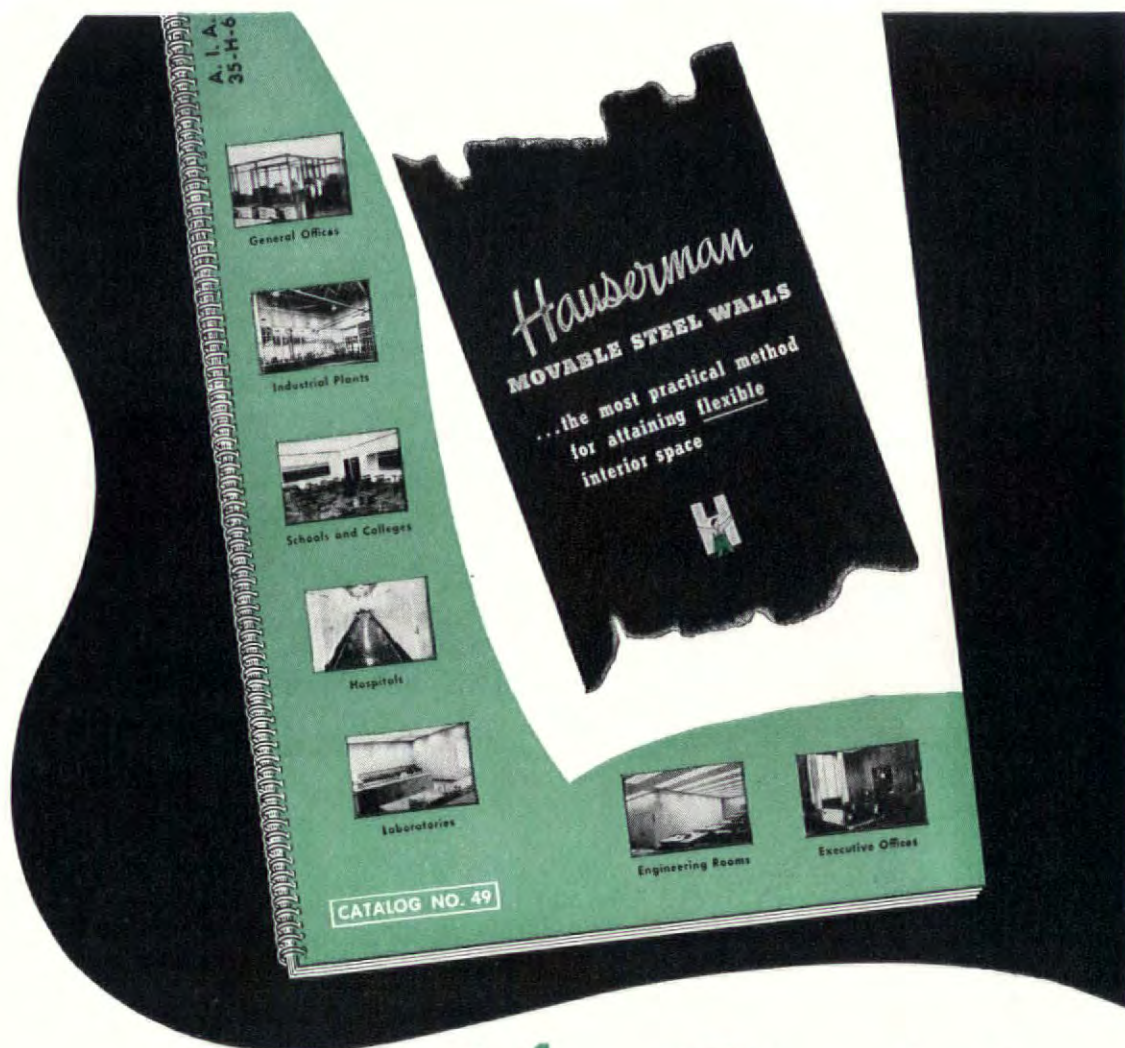


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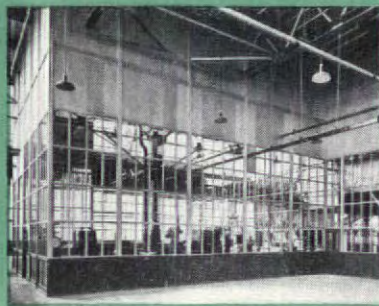
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when Lewis Mumford stated it in the *New Yorker* magazine. Mumford's argument was familiar to all professionals: supplied with large public aid in tax exemption and the power of eminent domain, why hadn't Metropolitan come through with bigger public dividends in the form of lower density, better planning?

Said Mumford: "Instead of lowering the density in the area, the proprietors of Stuyvesant Town, abetted by the City of New York, have established a pattern of greater congestion. If New York were completely rebuilt in this fashion, even Mr. Robert Moses, who has had a lot to do with setting this pattern in housing, would perhaps cry Uncle!"

Mumford's article not only provoked the predictable acid letter of reply from Moses, but also dozens of letters from Stuyvesant Town tenants who wanted Mumford to know exactly how happy they are with their high density. Said Mumford sadly: "Like almost all New Yorkers, who have spent most of their lives in cramped, sunless, dusty, and even garbagy blighted areas, they have no proper basis for judging Stuyvesant Town."

The *New Yorker* published Moses' lengthy retort, but Mumford had the last word in a litter of footnotes and epilogue. Sample:

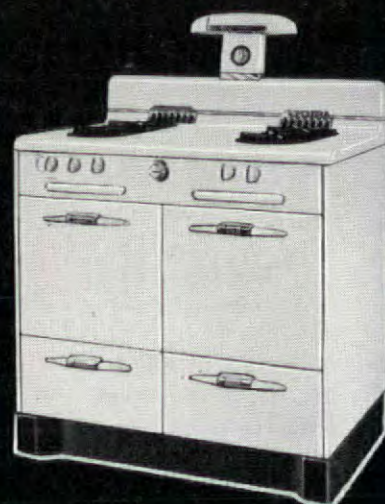
Moses: "The Metropolitan does receive partial exemption to enable it to bring rentals to \$17, but the city collects the same taxes it received in the same area before, and Mr. Mumford's funny arithmetic is based on the assumption that some private Santa Claus was lurking just around the corner and aching to buy this enormously expensive property, tear down and throw away all the old tenements, rebuild the slums and pay the city full taxes."

Mumford: "If the city receives in taxes on this huge, fully rented project only what it received from the demolished slum properties, containing less than half of Stuyvesant Town's population, the Santa Claus seems to be Mr. Moses."

Moses: "It is a sad bird who fouls his own nest. People who don't like New York anyway... will be happy to think there is a dreadful mess at Stuyvesant Town... Smarter visitors, not poisoned by jaundice and envy, whom we have guided along the new East River Park from Bellevue to Corlear's Hook, have frankly expressed amazement and real admiration at the almost unbroken series of modern multiple houses for people of small and moderate means, built by a combination of public and quasi-public enterprises."

Mumford: "The policy of maintaining existing high densities and of creating fresh areas of congestion is nothing less than urban malpractice..."

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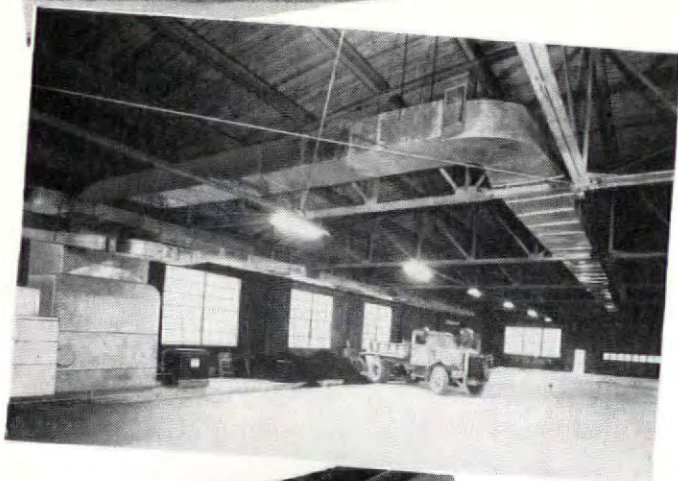
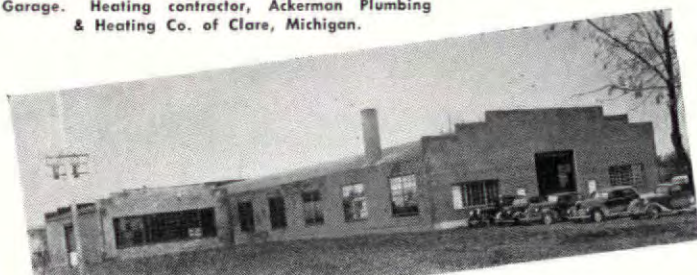


Mr. Henry Ackerman* of Ackerman Plumbing & Heating Company.

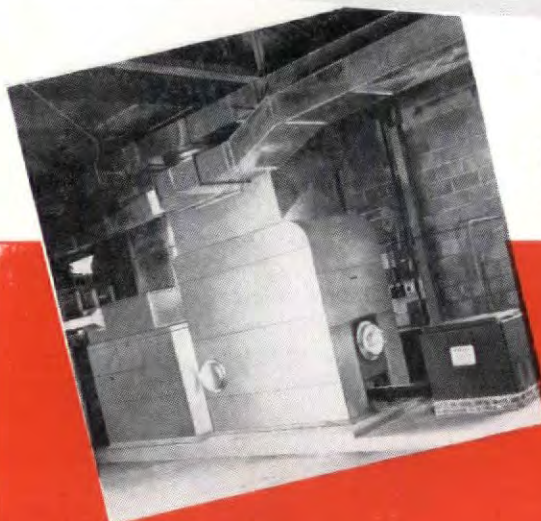
*"I saved \$3500
for my client..."*

on installation costs by recommending and installing WARM AIR instead of wet heat"

View of Clare County (Michigan) Road Commission Garage. Heating contractor, Ackerman Plumbing & Heating Co. of Clare, Michigan.



Interior view of one portion of Clare County Road Commission Garage.



A Jackson & Church "PowerRated" stoker-fired heater is satisfying a heat loss of 1,600,000 Btu's at low cost. Unit handles 15,000 cfm.

"The Clare County (Michigan) Road Commission has informed me that I saved the County \$3,500 by recommending and installing warm air heat for their County Garage. This represented a 30% reduction over the lowest bid for wet heat.

Daily operation cost reports indicate a further savings. The unit installed was a Jackson & Church — "PowerRated" model CC-2000, stoker fired, with an output of 1,600,000 Btu's per hour. The unit works perfectly. The furnace and blower handle 15,000 cfm with frequent air changes, ample humidification . . . plus filtering.

For 20 years I have been installing only wet heat for big jobs . . . but I have been converted to warm air heating because of the tremendous savings to the customer in installation and operating costs.

I like the extra features . . . filtered air-humidification — frequent air changes . . . that warm air heating gives. So do my clients."

* Statement of Mr. Henry Ackerman on file with Jackson & Church Co.



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There are many other features that contribute to the outstanding performance and dependability of these Penberthy Pumps. Among them are: motor specially impregnated to resist moisture, built-in overload protection, mercury switch, and scientifically balanced impeller. Penberthy Automatic Electric Sump Pumps are carried in stock by jobbers everywhere.



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MADE IN SEVEN MODELS AND SIZES

"Measure" issue brings response from Neutra . . . Mendelsohn . . . Welch . . . Chermayeff . . . Eken . . . Ketchum . . . Eckbo . . . others . . . Harvard design questioned and defended

MEASURING "MEASURE"

Forum:

We are returning herewith the November '48 issue of FORUM.

We find nothing in it that even approaches architectural work. It is neither instructive nor entertaining. You seem to have gotten as far afield from usefulness to the profession as could be possible—or have your editors gone completely berserk?

ALBERT O. LARSON

Larson & McLaren, Architects
Minneapolis, Minn.

Forum:

From our point of view the November issue of FORUM is the best single issue to come from the architectural press in America in a long time. Many of us who read the *Architectural Review* have been hoping that the journals in this country would somehow take the measure of the *Review* and even outdo it. The November issue of FORUM is the first convincing evidence that this has been accomplished.

This issue will be required reading for most of our 120 students . . .

BUFORD L. PICKENS, Head
School of Architecture
Tulane University

New Orleans, La.

Forum:

. . . For 15 years and longer I have myself been endeavoring to put similar thoughts into readable form, and now I have the pleasure to find it so well done. I can understand what work and how much conviction it needs to accomplish this sort of thing. It is not just a courteous formula if I congratulate you on this real contribution to professional literature.

RICHARD J. NEUTRA

Los Angeles, Calif.

Forum:

. . . "Measure" is not the easiest reading imaginable, even for one who is actively engaged in the business. You have put in capsule form so many provocative ideas and methods of measurement, that at moments one gets bewildered by the sheer possibilities.

In the final analysis, the best test of the effect of your issue is whether or not it can stimulate conservative and sometimes backward developers to the need for action. After finishing the articles, I was left with a feeling that I wanted to do something

about it. Whether or not we will be able to, remains to be seen. One thing is certain, we shall undertake to practically evaluate what you have written.

. . . I am not so sanguine as to believe that the approach indicated will necessarily produce more houses, nor do I know yet that it will produce better houses cheaper. The one thing of which I am certain is that there are many ideas that grow out of the reading of these articles that point to such a prospect . . .

PHILIP M. KLUTZNICK, President
American Community Builders, Inc.
Chicago, Ill.

Forum:

. . . "Measure" is one of the most outstanding numbers that has ever been published in the architectural field. I read it and certainly will not let it get out of my possession . . . I can appreciate the immense amount of thought and work that went into its making.

GEORGE N. LAMB, Secretary
Mahogany Association, Inc.

Chicago, Ill.

Forum:

CONGRATULATIONS ON A SUPERB ISSUE SO BEAUTIFULLY ROUND SO BEAUTIFULLY FIRM SO BEAUTIFULLY PACKED.

JOHN ENTENZA, Editor
Arts and Architecture

Los Angeles, Calif.

Forum:

YOUR NOVEMBER MEASURE IS A SUPERB CONTRIBUTION BUT I FEEL YOU MAY HAVE THE CART BEFORE THE HORSE. IT MIGHT HAVE BEEN BETTER FIRST TO HAVE MEASURED THE MENTAL AND EMOTIONAL CHARACTERISTICS OF THE PROFESSIONALS IN BUILDING AND THEREBY TO HAVE ESTABLISHED THE NECESSITY FOR YOUR MEASURE OF THE INSTRUMENTALITY OF TOMORROW'S ARCHITECTURE.

FOSTER GUNNISON
Gunnison Homes, Inc.

Albany, Ind.

Forum:

Congratulations on FORUM's efforts to "measure" the factual basis for today's architecture.

Every architect's function is to act as co-ordinator for an intelligent team of technicians whose combined knowledge and experience supplies the basic, factual approach to building. Design today is essen-

tially a complex process that refines careful analysis first, of objectives; second, of structure, materials and equipment; and third, of visual and psychological requirements. It is only after these fundamentals have been mastered that a final solution can be achieved.

FORUM's review of the basic factors that determine today's design is a reminder to all of us that there is no easy road to success—that every problem encountered must be re-examined on its own merits, that every standard established today, must be challenged tomorrow.

This approach—and not a futile and self conscious cataloguing of current "trends" and "styles"—is the only one that will produce buildings worthy of some future architectural historian's careful attention.

MORRIS KETCHUM, JR.

New York, N. Y.

Forum:

. . . "Measure" is certainly a masterpiece. This will be a very valuable document for posterity and I am honored that you thought well enough of my "minimum" [house] to use it . . .

KENNETH WELCH

Denver, Colo.

Forum:

Congratulations on the outstanding job of summarizing the major functional and esthetic potentialities of American building today, in such a clear and imaginative fashion. Such a stimulating projection of practical theory has been long needed in American architectural publications . . .

GARRETT ECKBO

San Francisco, Calif.

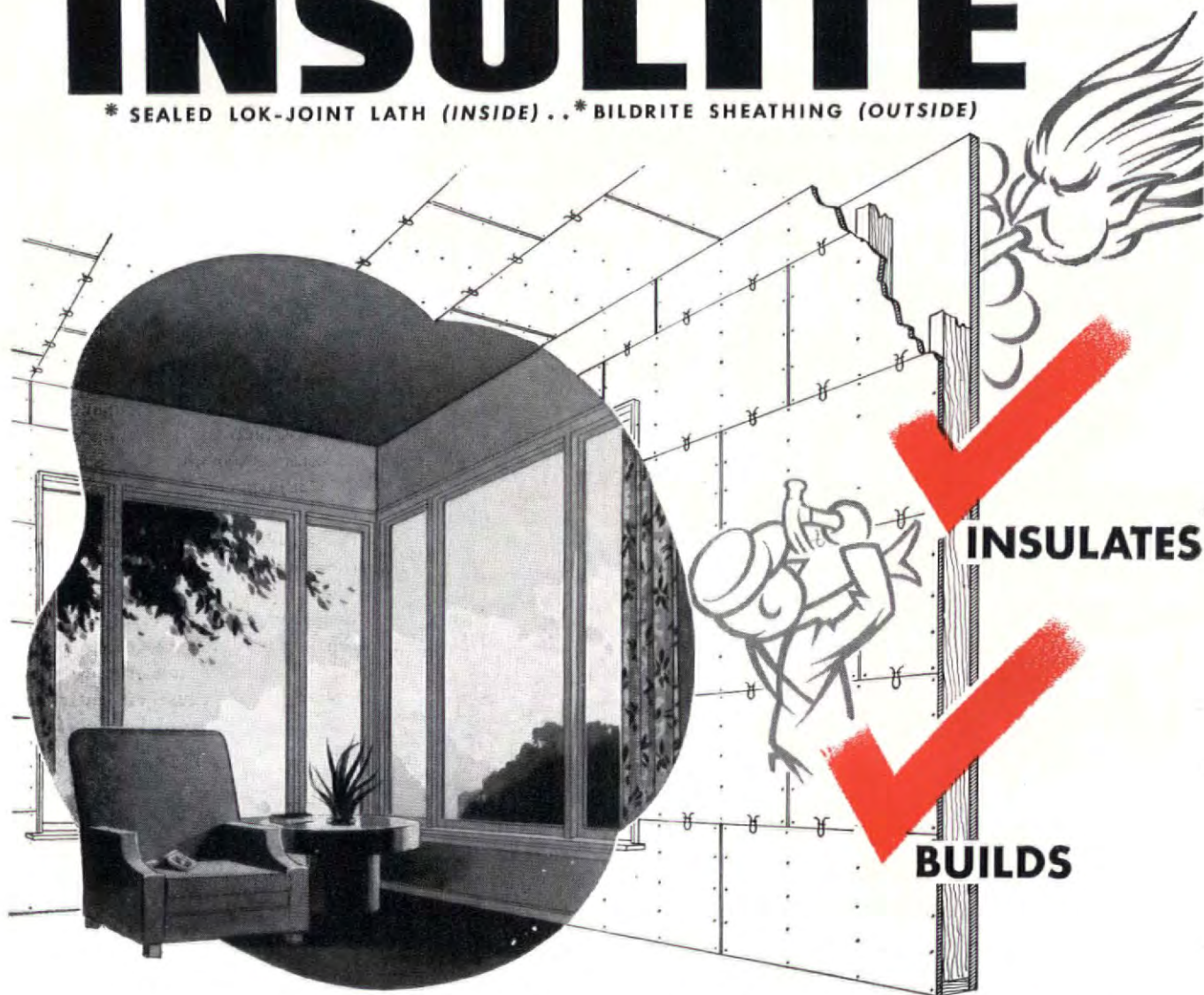
Forum:

CONGRATULATIONS . . . I COULD NOT HELP CONTRASTING THE PRESENT STATUS OF SCIENCE, MATERIALS, AND EQUIPMENT WITH WHAT WE ENCOUNTERED IN DESIGNING OUR FIRST TRULY CONTROLLED-CONDITIONS INDUSTRIAL PLANT 20 YEARS AGO. REGRET YOU DID NOT GIVE GREATER EMPHASIS THAT IT WAS AMERICAN INDUSTRY WHICH CREATED THE DEMAND FOR PLANTS WITH CONTROLLED ENVIRONMENT. WITHOUT INDUSTRY'S APPRECIATION OF THE ECONOMIC AS WELL AS PHYSIOLOGICAL IMPORTANCE OF CONTROLLED-CONDITIONS THIS WHOLE SUBJECT WOULD STILL BE ACADEMIC RATHER THAN THE LIVE REALITY IT IS. YOUR ARTICLE CERTAINLY DEMONSTRATES THAT CONTROLLED

(Continued on page 30)

DOUBLE DUTY INSULITE

* SEALED LOK-JOINT LATH (INSIDE) .. * BILDRITE SHEATHING (OUTSIDE)



You give your client *double value* when you build this wall—*inside* and *outside*—with Double-duty Insulite. It *insulates* as it *builds* . . . TWO duties for the price of one. On the outside; Bildrite Sheathing not only provides superior bracing strength, but extra insulating value. On the inside; Sealed Lok-Joint Lath does more than provide a firm strong plaster base—it makes an *insulated* plaster base—warmer in winter, cooler in summer. The two together guard against inner wall condensation.

Refer to Sweet's File,
Architectural Section 10a/9

INSULATES AS IT . . .
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INSULITE DIVISION
PAPER
MINNEAPOLIS 2, MINNESOTA

MINNESOTA & ONTARIO
COMPANY



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trade mark, U.S. Pat. Off.

6R LIND

ENVIRONMENT CANNOT BE SECURED BY AN INDEPENDENT APPROACH TO END OF THE DIVERSE PROBLEMS OF HEAT, LIGHT, SOUND, ETC. ALL ARE INTER-RELATED AND AS YOU POINT OUT THIS IS NOT A JOB FOR "SPECIALISTS WHO HAVE NOT BEEN INTRODUCED." IT REQUIRED THE COMPLETELY INTEGRATED EFFORTS OF ARCHITECTURAL, ELECTRICAL, MECHANICAL AND STRUCTURAL DESIGNERS.

A. T. WAIDELICH, Assistant Director
Research Division
The Austin Co.

Cleveland, Ohio

Forum:

... The new FORUM contains at least four articles of great import. They are not articles to be quickly read but are so full of substance as to require the reading that would be given to a textbook, and I am sure that they are immeasurably beyond the subject matter ordinarily contained in an architectural magazine.

There can be no doubt at all that the new FORUM will create a tremendous effect if it is held to these very high standards. I, myself, feel that I would want to read these articles a second or perhaps a third time before I had gotten all of the meat in them.

It is my feeling that the Architectural FORUM is now embarked on a pathway to great success.

ANDREW J. EKEN, President
Starrett Brothers & Eken

New York, N. Y.

Forum:

The staff of the Department of Architecture wishes to commend FORUM on its November issue.

Because of the adaptability of this issue to classroom use, we would like to know if it would be possible to obtain 70 copies to be used as a reference text for architectural design in our department.

KNUTE A. HENNING
Department of Architecture
School of Engineering
North Dakota Agricultural College
Fargo, N. D.

Forum:

... I have always felt that the architect's profession is potentially the most complex and, in a cultural sense, the most inclusive of all professions. This "monograph" on human welfare certainly extends that impression. We have known since the

days of Vitruvius that when an architect sits down to describe his problems in extenso, he is likely to end up with a cultural bird's-eye view of his civilization.

The cross section of contemporary science, technology, and art so expertly alloyed under your rubrics of *Heat, Light, Sound, Enclosure, Esthetics, Houses, and Space*, is an absorbing and notable exposition of these broad concerns of the builder with many departments of knowledge.

My teaching in the general field of environmental physiology, and in a broad sense, ecology, brings me into constant contact with all the topics you have covered and, of course, in a research sense I am much concerned with thermal problems. I am sure that my students will find this issue considerably more than a magazine article.

My congratulations on a very splendid book. I am sure that only a technical person could appreciate the thought and labor which is required for such a production.

L. P. HERRINGTON, Research
Associate Professor

Yale University
New Haven, Conn.

Forum:

... May I hope that a future analysis of the other half of the "Design Bubble" (*Measure*, p. 101) will be forthcoming. (See cut below.—Ed.)

For no matter how talented the designer, if he is unable to penetrate the fog of ignorance, doubt, mistrust and disbelief that form the mental atmosphere of the client,

how, in this world of super-salesmen and filthy lucre is our hero (with wife and child or twins) to exist?

R. B. CUTLER

Staten Island, N. Y.

Forum:

... It is about time that a thoroughly competent survey be made to interpret the needs of humanity so far as housing is concerned. Certainly our approach to such an analysis has been infrequent and usually involved a very small segment of housing needs.

The ("Measure") articles present many thought-provoking conclusions concerning functional needs of the occupants in terms of heating, ventilation, lighting, colors, etc. It appears such an obviously sane approach to the adjustments of these fundamental needs for assuring personal comforts for mankind, that it appears almost shocking that we haven't attempted this sort of analysis in the past.

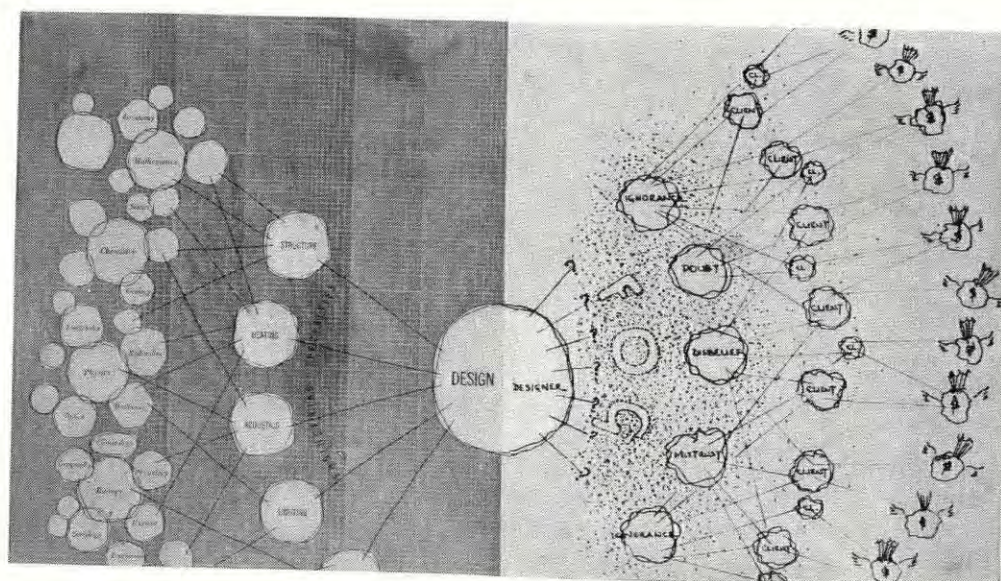
Congratulations on creating an issue which certainly deserves to be placed in the files for future constructive use and reference in the cause of better design, construction and use of housing for mankind.

F. S. CANNON

Indianapolis, Ind.

Forum:

... The whole issue should have been done long ago, and now that you have done it once, I hope you'll have a sort of "Measure" department in FORUM every month so
(Continued on page 32)



New Beauty Treatment for Commercial Interiors!



† LEADERALL

**Illumination over all
...from wall to wall!**



NEW FOR OLD!

A CEILING OF LIGHT ...AT ANY HEIGHT!

The new look for high-ceilinged rooms . . . A magic means of bringing high ceilings down to modern levels . . . and an economical means of "decorating" them, permanently, in the modern manner. (Leader tie-rods are adjustable and also are available in extreme lengths for long "drops.")



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NO OTHER OVERALL-TYPE FIXTURE CAN MAKE THIS CLAIM**



† PATENT APPLIED FOR

Only †LEADERALL brings you all these valuable features:

Reduces the cost of finishing new ceilings . . . Featherweight unit-frames . . . Translucent moulded plastic (fire-resistant) louvers permit many more apertures per foot for maximum "sifting" of lamp rays and greatest shielding of lamps (45° visual cut-off) . . . Insures highest quality of light for greater beauty and greater durability . . . Lightweight construction eliminates structural strains . . . Destaticized plastic louvers—dust-resistant, stay-white* plastic . . . Adjustable tie-rods . . . Units instantly removable for cleaning or for quick re-lamping . . . Complete rigidity—moulded units withstand rough handling by maintenance men.

*Furnished, on special request, in colorfast hues for color schemes.



Light LIGHT... all in *white!

The lightest weight over-all type fixture on the market, thanks to LEADER'S exclusive, one-piece moulded translucent plastic louvers. They are inflexible. Absolute uniformity, and more louvers per foot, achieving greater shielding of lamps, plus better diffusion of light, and no weight stress or strain on ceiling structure!



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A revolutionary application of fluorescent lighting—light by the square yard. An overall speedway of man-made sunbeams that speeds up worker efficiency. Calm, cool brilliance uninterrupted . . . A cheerful, May-morning sky throughout the year. Super-rich beauty, plus a new high in abundant light that's kind to eyes.

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home
heating
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and

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boost
new
home
values

with 

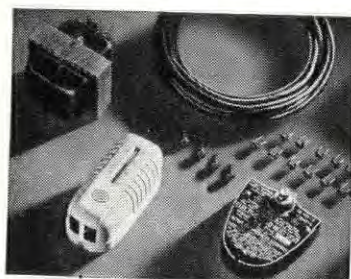
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as to keep people up to the very latest thinking along these lines. We . . . hope you'll properly regard this as only the beginning.

G. M. LOEB

New York, N. Y.

Forum:

. . . I hasten to congratulate you on an outstanding job and ask you to forward two dozen copies for the students' use here at the Institute . . . Our own curriculum includes precisely the same objective view of a contemporary architect's instruments as you have presented.

. . . I am absolutely confident that, until we are accustomed to thinking in terms of our real environmental control potential, our endless discussions and digressions about esthetics will remain empty and meaningless. Needless to say, this basic aspect of architecture has been hopelessly neglected both in schools and by the professions. I am pretty sure that in the long run, in the immortal words of the late Eric Gill, "beauty will look after herself" in spite of the pundits.

SERGE CHERMAYEFF, President
Institute of Design

Chicago, Ill.

Forum:

. . . From the viewpoint of a low cost house builder, many of the statements relative to poor lighting, ventilation, heating, design, et cetera about which you lampooned people like ourselves are true; but the bad part about it all is that we continue in the same old groove. Our architect endeavors continuously to convince us that some good, true contemporary design would be appreciated by the American public. Of course, he is right; but the sad part is that his efforts, and yours, would be for naught when the Federal Housing Administration, bankers, and insurance companies got through penalizing the loan because the house did not conform to neighborhood types, and also the types that are imbedded in their minds. If you and the A.I.A. would beam some of your efforts toward the personal education of these groups, I am sure we would find the public ready to purchase the finished product. . . .

As I look at the overall article, as a small house builder, I feel like the poor street urchin window shopping on Fifth Avenue—that is, all the articles are beautiful, but they are not for me. I would like very much to project my thinking ahead of the average man, but too many others dictate how I am to fill my pocket-book.

I am not criticizing your stumping for some new, or rather advanced, concepts of the measure of the wants of man. In fact, if it were not for people like yourself who push these new things, I am sure we would still be trying to copy the Cape Cod salt box instead of our present project of ranch houses.

All in all, it is a swell issue, and I hope you continue to be ahead of the group; so why not try to devote an entire issue to each of the following: heating, lighting, structure—in fact, any subject that is tied directly with housing only.

ANDREW S. PLACE,
Secretary-Treasurer
Place & Co., Inc.

South Bend, Ind.

Forum:

Reference is made to the decibel scale diagram ("Measure", p. 128). In the legend for this diagram you state that "each unit on the scale is double in intensity to the next lower one." Actually the increase in intensity of one decibel is 26 per cent and not 100 per cent. A 10 decibel rise corresponds to an intensity increase of 10 times. This is a minor point over the general range of architecture, but becomes important to us in the acoustical business in explaining to architects the reasons for acoustical treatment and the results to be expected.

We found the article to be extremely good and it will be of value to us in our work.

W. C. FLEMING
Acousti Engineering Co. of Florida
Jacksonville, Fla.

Forum:

I want you to know how excellent and timely the last issue of Forum was. I am certain its implications will be of real merit to the profession.

LESTER C. TICHY
New York, N. Y.

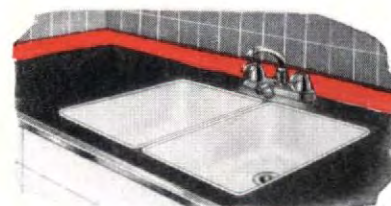
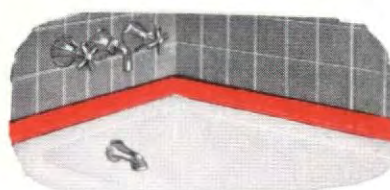
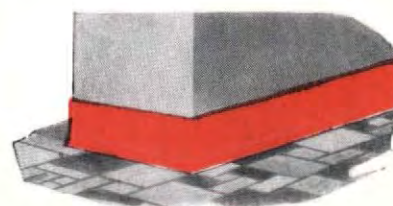
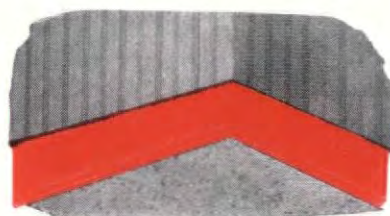
Forum:

Since the beginning of time, the architect was the man who studied, designed and supervised his building. Because he formed in his mind the prime idea, set it going and made it work, he is the active—the commanding force integrating material, structural and formative elements to an architectural whole.

That the Greek architect made this unifying principle visible and generally conceivable was his outstanding professional

(Continued on page 34)

Now! a new building material!



Sloane Quality *Koroseal** **cove base and cove molding**

- **Jewel Colors**
- **Never Needs Painting**
- **Lasts a Lifetime**



Now you can have Koroseal, the miracle plastic, in Cove Base and Cove Molding—in mirror-bright colors.

Koroseal laughs at rot, stain, grease, acid, alkali or moisture . . . gives a permanent, watertight fit. It's non-inflammable . . . virtually dent-proof . . . non-porous, provides no hiding place for germs or dirt.

You save on construction costs—installation is easy and inexpensive—and no painting is required!

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 The exclusive interlocking grid core within the Rezo door allows constant air circulation, adds extra strength, and provides greater rigidity.

Manufactured by the
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achievement; that he succeeded in reflecting the translucent light of Attica—the lucid atmosphere of common ideals in the transparent nature of his Temple, was his supreme artistic test; that he created his Temple—outside and inside—as a sacred unity, as an image of his race and region—his nation and society, was his historic, his universal testament.

That the Medieval architect was able to blend his new though feeble knowledge of mathematics and mechanics with the practical experience of generations of stone builders, to coordinate the heterogeneous throng—his team of builders, artisans and workmen, the multitude of details built or carved into a systematic composition—a powerful tectonic synthesis, was the outstanding achievement of his professional ingenuity; that he made his material structure the visible carrier of his immaterial—his sacred superstructure, succeeded in reflecting the sensitive light of France in the transcending sight of his Cathedral, was his supreme artistic test; that he created his Cathedral as the very image of his time's historic prominence—his nation's revolutionary destiny, is his universal testament.

Today, when Science seems to have conquered the forces of Nature, knotted together the four corners of the world and is just out to bridge the planets, size and magnitude of our buildings have increased a thousand-fold—and so has the perceptive faculty of our brains, building technique has become immensely complex—and so have our ways of communication.

The process of building has always been equal to the knowledge of the time, the architect was always the *spiritus rector*. To maintain this high and time honored status, the architect's education must enable him to devote his ability, physical energy and mental courage, his entire life and being to the conquest of all material facts pertaining to his idea. For only when he is capable of transforming the diversity of the changing world of man into the unchanging unity of the cosmos, is he entitled to call himself: architect—the true creator of the tectonic organism.

That is, in my opinion, what "Measure" tried to convey and succeeded in doing.

I hope that FORUM will continue expounding general principles instead of merely compiling individual architectural explosions.

ERIC MENDELSON

San Francisco, Calif.

FORUM will welcome further comment on "Measure" from its readers.—Ed.

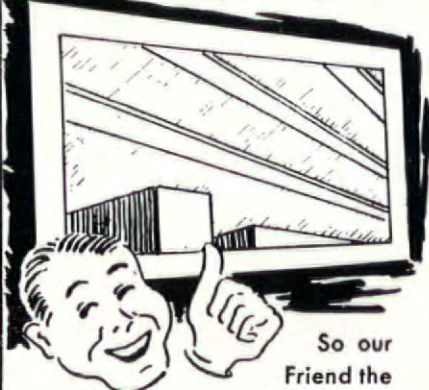
(Continued on page 36)

The COLD CATHODE STORY by COLONIAL

ONCE upon a time, there was an Architect. He had Troubles! He had to find Lighting Fixtures better than any he'd Heard About because his Client demanded Ideal Light with practically No Maintenance or Replacement Problem!



Cold Cathode Lamps were the Answer. You see, Colonial Fixtures produce Better Light . . . Five Times Greater Lamp Life Expectancy. The average Colonial Lamp is still In Business after 15,000 Hours — Five Years of Lighting!



So our Friend the Architect was very Happy. And the Moral of this Story is Obvious: Colonial can solve a Lot of your Problems too! Inquire Locally, or write Directly to Us.

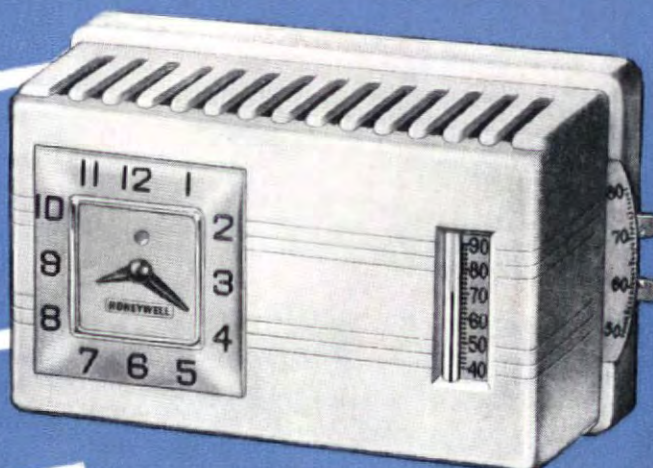
COLONIAL ELECTRIC PRODUCTS, INC.
 Foremost Developers and Producers
 Engineered Cold Cathode Lighting
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Modern Standards

FOR MODERN HOMES

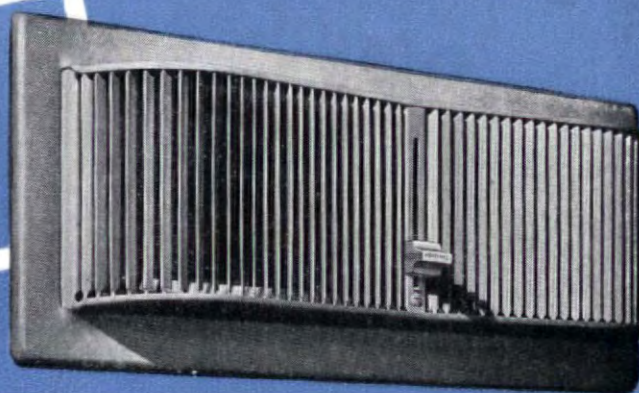
THE FUEL SAVING CHRONOTHERM

... Honeywell's famous electric clock thermostat—the finest ever built—assures carefree heating comfort and fuel economy.



THE NEW AIR DIFFUSION REGISTER

... affords a draft-free, even flow of air to every nook and cranny of the room—for either high or low wall forced air installations.



ALWAYS specify *Honeywell* to provide the homes of your clients with the latest features in heating comfort.

With Honeywell's new Chronotherm—the finest electric clock thermostat ever built—homeowners enjoy the most carefree heating comfort they have ever known, plus substantial fuel savings. At bedtime, Chronotherm automatically lowers the temperature, or entirely shuts off the heat supply. Then, in the morning, heat is restored before the family arises. The

result—never a worry about heating plant operation, with fuel economy as well.

For all forced air installations, the handsome new Honeywell Register puts an end to discomforting blasts of air. Instead, an even blanket of air is diffused to every corner of the room. Cold spots are eliminated—so are unsightly wall and ceiling streaks. And installation costs are drastically reduced. Minneapolis-Honeywell, Minneapolis 8, Minnesota . . . In Canada: Leaside, Toronto 17, Ontario.

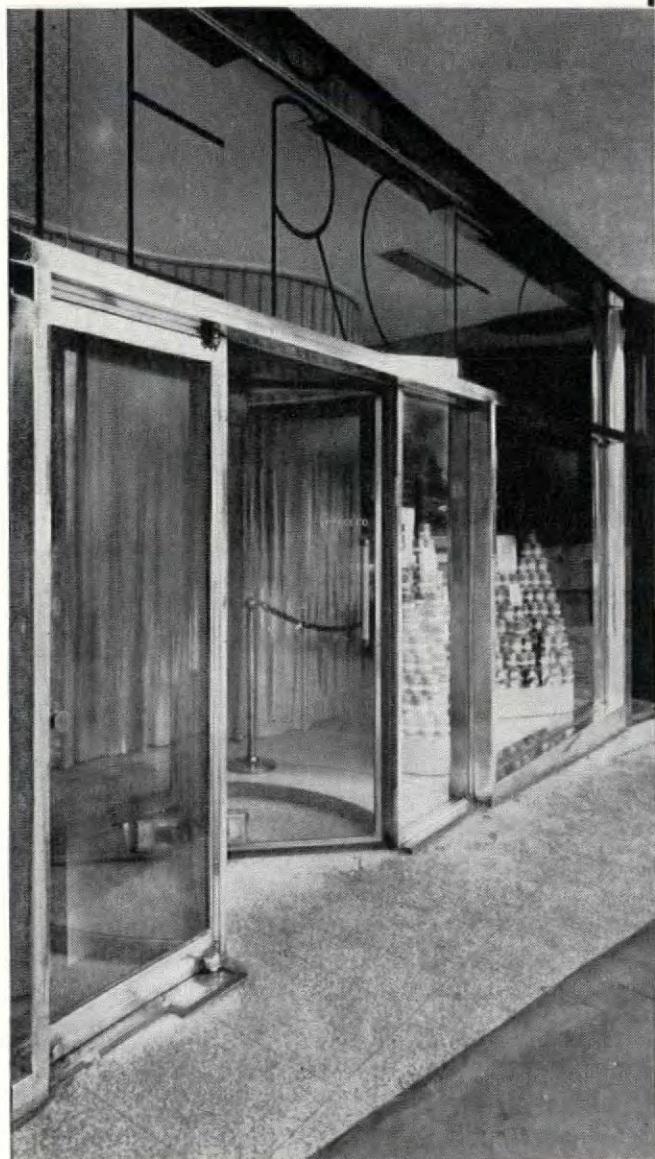
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Enhance appearance, increase wear-resistance and provide an entry way where the hazard of slipping has been banished (especially on wet days) by using ALUNDUM* Aggregate for terrazzo or concrete . . .



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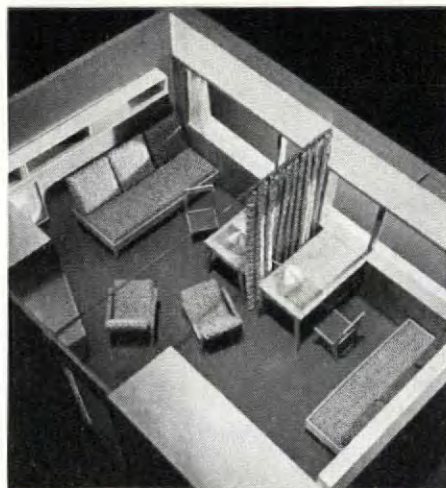
*Trade-mark Reg. U. S. Pat. Off.

FLEXIBILITY AT HARVARD

Forum:

The published photograph of the model of a typical two-man dormitory room of the proposed Harvard Graduate Center (FORUM, Nov. '48) shows windows, desks and reading lamps symmetrically disposed about a dividing curtain or partition. It would seem that this arrangement is not going to meet the fundamental requirement that the light should fall upon the desk from the left-hand side, except for left-handed persons, when the direction should be reversed.

Under the present circumstances with respect to the windows one student would have to be right-handed and the other left-handed; while at night with respect to the lamp the students would have to change places. It would be erroneous, of course, to assume that there will be the same number



of right-handed and left-handed students.

Obviously what is required is a situation where a student could interchange desks with beds at will and plug in outlets for the reading lamp at both ends of the dividing partition. This will require a deeper room which could be achieved without increasing the area of the room by reducing the perimeter. This would also be a structural economy.

Of course, the present design may be defended on a higher consideration of esthetics, which reminds me of the "non-functional" days at school when, designing an aquarium, the professor said, "To hell with the fish—make a composition." Could we say that the Harvard Graduate center is modern, but not functional?

ISADORE ROSENFELD

New York, N. Y.

Reader Rosenfeld sent a copy of his letter to The Architects' Collaborative, designers of the Harvard project. TAC member Norman Fletcher sent the following response to FORUM.

—Ed.

(Continued on page 40)

USE Mars Lumograph .. the only pencil

That Combines These 8 Tests of Pencil Superiority

1—America's ONLY imported drawing pencil — made by craftsmen with generations of specialized experience.

2—Extra-dense lead of resistant opaqueness — approaching blackness of India ink.

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Try Mars-Lumograph. Compare results. At your dealer's. Write direct for nearest supplier, or order sample dozen direct from Dept. 2-A for \$1.50.

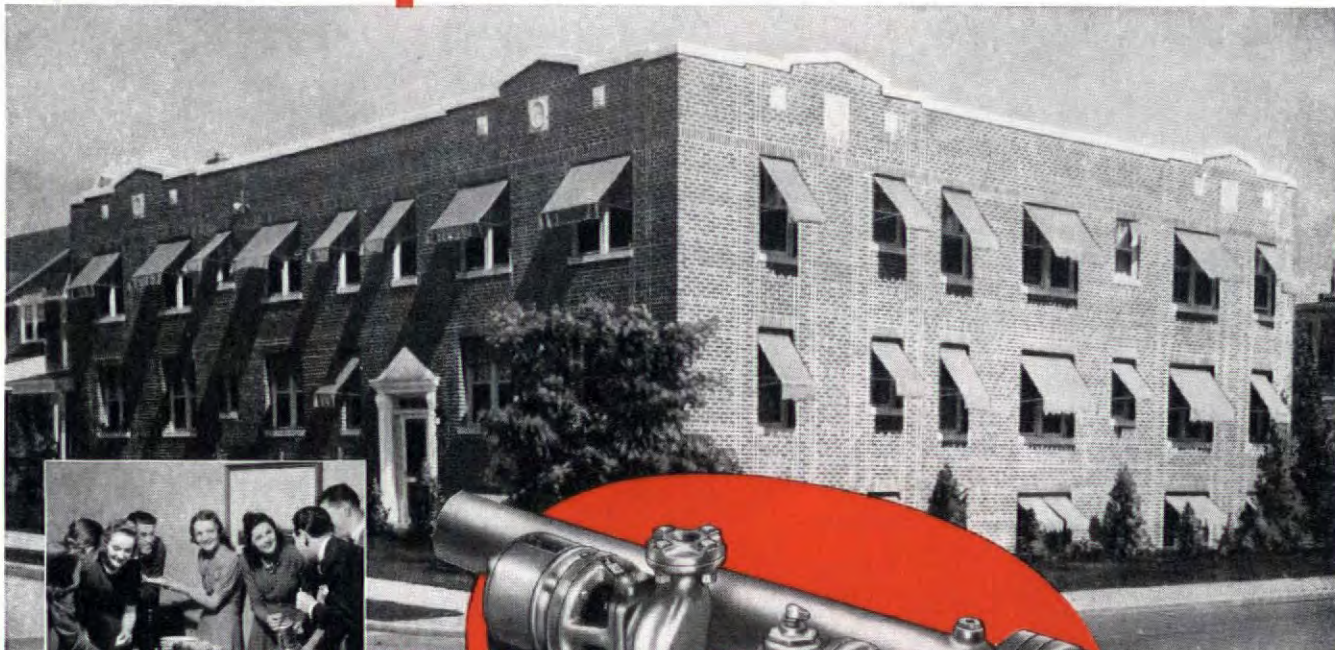
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*Twelve Zones
of Comfort...*



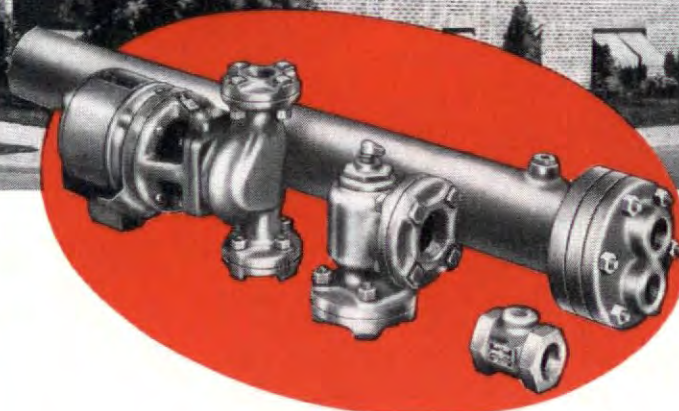
Hydro-Flo[®] Heating

**gives each tenant
individual control of temperature**



PLUS AMPLE HOT WATER ALL YEAR 'ROUND

The Water Heater unit of a B & G Hydro-Flo System furnishes abundant hot water, night and day, summer and winter. It is heated by the same boiler that heats the building.



The simplicity of B & G Hydro-Flo Heating equipment assures dependable operation and insignificant maintenance. Basic units consist of a B & G Booster Pump, Flo-Control Valve, Water Heater and Monoflo Fittings.

Temperature regulation in apartment houses has always been notoriously inadequate—resulting in tenant discomfort and extravagant waste of fuel. B & G Hydro-Flo Heating—a forced hot water system—provides an easy solution to the problem.

The apartment house illustrated here was constructed with a B & G Hydro-Flo System, divided into twelve heating zones. Each apartment was served by a separate zone; hence, each tenant could set his thermostat for any desired temperature without affecting the comfort of other building occupants.

B & G Hydro-Flo Heating adds further to comfort by its sensitive control of the heat supply. *It automatically changes the rate of heating to meet changes in the weather . . . saves fuel so often wasted by overheating.*

There are no limitations to the application of B & G Hydro-Flo Heating. This forced hot water system is being used today on a nation-wide scale in small low-cost homes, factories, institutions and commercial buildings.



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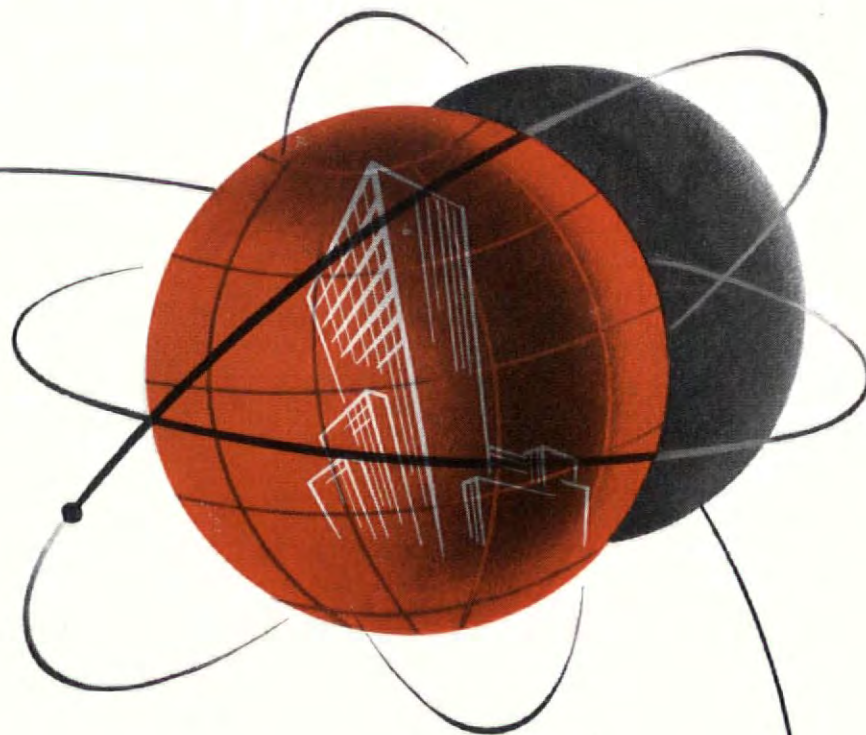
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*Traffic
Timed*

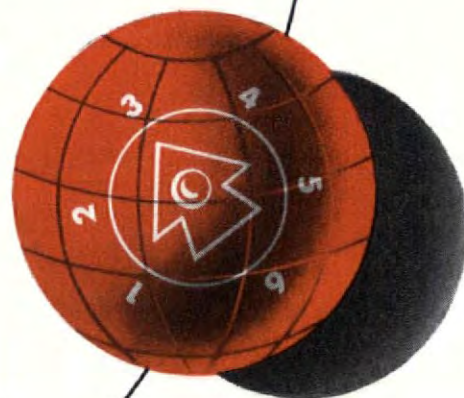


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Set up those happy new years for you and your clients. Simply specify Moultilite! You can get the facts from Sweets, or from our new four-color catalog. Write TODAY for your copy to: THOS. MOULDING FLOOR MFG. CO., 165 W. Wacker Drive, Dept. AF-1, Chicago 1, Ill.

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Flexible-Reinforced MASTER ASPHALT TILE

When it comes to FLOORS... come to

THOS. MOULDING

Smart designs and Moultilite's beauty make this floor in Herberger's, Edina, Minn., a distinctive, sales-making background for merchandise displays.



Forum:

In reply to Mr. Rosenfield's letter re the Harvard Graduate Center, we would like to say the following:

The basic requirement around which the room was designed was flexibility. The first flexibility that was aimed for was the ability to divide double rooms into single rooms. This requirement seemed logical since the proportion of double rooms and single rooms had not been set and it may vary in the future. By careful planning of the room and the closets, by a concentration of the heat risers in the center mullion of the window wall, and by keeping a standard structural system throughout we have achieved this flexibility. Since a single room cannot be narrower than say 8 ft., the minimum dimension making it possible to achieve the above flexibility would be 16 ft. (ours is 18). A deep room, proposed by Mr. Rosenfield, which is also 16 ft. wide would be obviously out of the question.

As to the second flexibility, we aimed for various arrangements of the furniture within both the double and single space. . . . The beds, desks, and chairs are not fixed. We have, in fact, five excellent furniture plans for the double space and three for the single space. In one of these both desks face the window which many authorities agree is the most glareless lighting condition. If the students so desire, they can place the desks so that they are both getting light over the left shoulder. The lamps are movable so there is no problem about the direction of light at night.

Structural economy is achieved first by keeping a standard structural bay with equal beams (no asymmetrical bays cross-wise of the building which may be necessitated in a deep room solution); and secondly, by a flat slab construction fitting well with the depth of our room and eliminating beams. We believe that there is more light in the room design than meets Mr. Rosenfield's eye (over the left shoulder—or is Mr. Rosenfield left-handed?).

NORMAN C. FLETCHER

The Architects' Collaborative
 Cambridge, Mass.

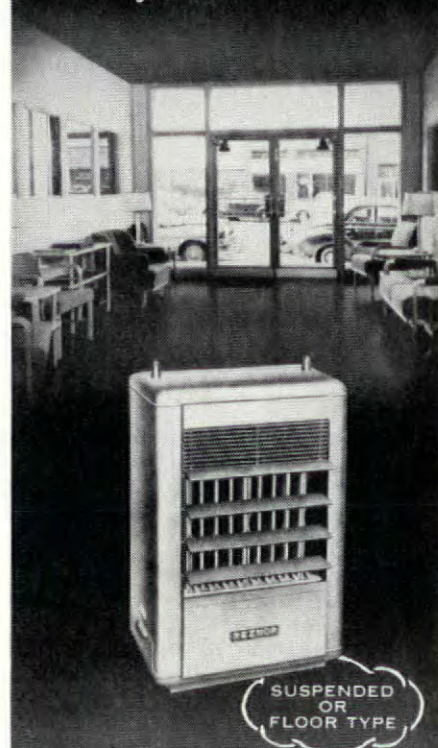
CAPACITY REVISION

The FORUM, (October, '48), p. 13, shows cut of proposed new building to be erected in Washington, and also a floor plan. . . .

I would greatly appreciate knowing the outside dimension of the contemplated building. Also, to know the floor area per foot to be used by the garage, and the width of the ramp. It may be possible that your figures show a misprint as to the number of cars that can be parked in 135.

(Continued on page 44)

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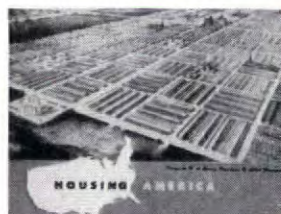
● Yes, everything's right here for the 32,700 people who are housed in this modern, mid-Manhattan community. That's the way the Metropolitan Life Insurance Company planned it.

57 separate apartment buildings, ten to fifteen stories high, shopping areas, parks, playgrounds, underground garages—everything needed for modern living by 11,255 families—*without an inch of space used in fuel storage or fuel consumption for comfort heating or service water.*

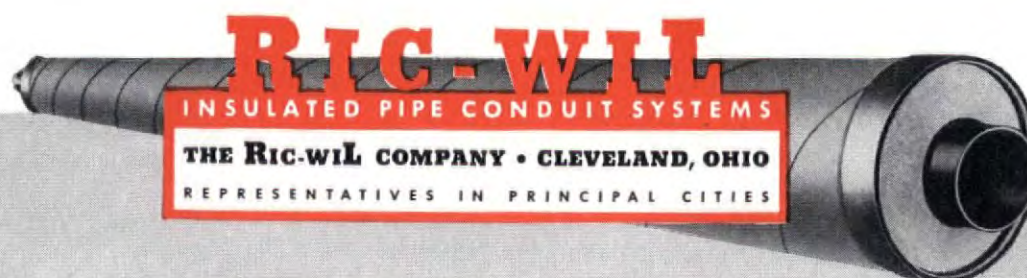
Instead of fuel this modern city takes delivery of the end product it wants—*heat*—in a form that's most convenient for its needs. It thereby minimizes fire hazards. 650 million pounds of steam, produced at the New York Steam Corporation's East River Power Station, is delivered annually to Stuyvesant Town and Peter Cooper Village.

Underground, throughout the area, there's a network of steam lines distributing this heat to every point where it's needed—in quantities and at pressures required. All of this "ready-made heat in its most convenient form" is distributed underground in these communities in Ric-wiL Insulated Piping Units.

Architect: Irwin Clavan, Consulting Engineers: Meyer, Strong and Jones, General Contractor: Starratt Bros. & Eken, Heating Contractor: Baker, Smith & Company.



"Housing America", a Ric-wiL book on mass housing and central heating is free to everyone having a bona fide use for it. Write for Form 4804. Address the Ric-wiL Co., Dept. 49.



TYPE EAC

NEW *Aerofuse*

Effective Area Control provides on-the-job adjustment of air delivery

What is Effective Area and why control it?

Effective Area is the net area of a diffuser through which air can pass. The distance a ceiling diffuser will throw a given quantity of air depends on its Effective Area. For a given volume, the smaller the Effective Area, the longer the throw . . . the larger the Effective Area, the shorter the throw. *Hence, it is obvious that adjusting the Effective Area varies the throw of air from the diffuser.*

How is Effective Area controlled with the NEW Aerofuse?

The NEW Type EAC Aerofuse is designed to block off — partially or completely — the outer passage of the diffuser. Manually operated by means of a lever an auxiliary ring slides on an inclined plane . . . can be raised or lowered to vary the Effective Area. When in closed position, ring completely seals off outer air passage, reducing the Effective Area of the diffuser by approximately 40%.

What does this mean to diffuser performance?

Unlike conventional ceiling diffusers where a *fixed* Effective Area means a *fixed* throw, the Type EAC Tuttle & Bailey Aerofuse — equipped with Effective Area Control — provides a simple method of varying the performance of the diffuser. This assures accurate control of throw *on the job* . . . air delivery tailored to meet the specific requirement.

Smaller neck sizes?

Because of design changes it has been possible to reduce the neck diameters of the Type EAC Aerofuse Diffuser. Therefore, for a given Effective Area, the neck diameter of the new type is considerably smaller than that of previous models. A distinct advantage that means savings in installation costs.

Easy to install?

An Aerofuse duct ring is attached to the duct collar. Diffuser is then slipped into place. Four screws, inserted in the outer ring, are screwed into the duct ring. Thus diffuser can be installed or removed from below the ceiling. A simplified installation method that cuts time, means less trouble on the job. Entire center section easily removed to facilitate installation or maintenance.

Appearance?

Smartly designed, the Type EAC Aerofuse will harmonize with any style of interior decoration. The ideal choice for installation at the all-important distribution end of air conditioning systems in offices . . . department stores . . . modern industrial plants . . . hospitals . . . schools . . . where appearance *as well as* performance counts.

equipped with **EFFECTIVE AREA CONTROL**

DIFFUSER

NO. 4 DAMPER

See the
NEW AEROFUSE
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9th International
Heating and Ventilating
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Booth No. 920

**EFFECTIVE AREA
CONTROL**



Featuring **EFFECTIVE AREA CONTROL**, an exclusive Tuttle & Bailey development, the new Aerofuse answers the need for a ceiling diffuser that will provide complete on-the-job adjustment of air delivery.

Those responsible for specifying and installing air conditioning systems have long recognized the limitations of conventional diffusers. Although available in a range of sizes, only approximate requirements of air delivery could generally be met . . . and if conditions changed after installation of diffusers, correct air distribution could not be obtained.

With the **NEW Type EAC Aerofuse Ceiling Diffusers** — installed with the Tuttle & Bailey No. 4 Damper — air delivery can be minutely regulated to meet specific requirements by two simple adjustments: (1) Effective Area Control is adjusted to vary the distance air stream will travel; (2) No. 4 Damper is adjusted to provide the required volume at new Effective Area setting.

Complete adjustability in the field that assures positive, job-tailored control *at the vital point of air delivery!*

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LETTERS



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000 sq. ft. of parking space, unless the 135,000 sq. ft. does not include the ramps and passageways.

W. J. STRASSBURGER

Pittsburgh, Pa.

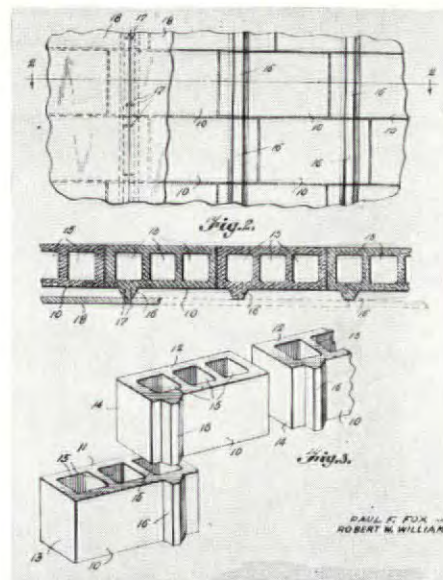
Architect Leroy Werner advises that he gave FORUM the wrong set of figures. The correct garage capacity and area: 385 cars, 136,500 sq. ft.—Ed.

MATERIALS STANDARDIZATION

Forum:

I was very much interested in the comment under "Materials Standardization" (FORUM, Oct. '48), regarding furring strips on concrete blocks.

From the attached drawing, you will observe that the wish expressed has been accomplished. You will note from this drawing that by a series of lugs placed on building blocks continuous furring strips are formed on the interior of a wall, so



that plaster lath can be applied without the use of wood furring strips.

For your information, these blocks are known as *pre-furred* building units. The patents and application for same are owned by Pre-Furred Building Units, Inc., 5119 28th Ave., Hillcrest Gardens, Washington 20, D. C., which company is now in the process of granting licenses to various cinder block manufacturers throughout the U. S. to manufacture this block in volume.

The United Clay Products Co. are the licensees in Washington, Baltimore and vicinity, and these blocks are being produced in this particular area.

J. E. MCPHERSON, Vice President
United Clay Products Co.

Washington, D. C.

(Continued on page 48)



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PLASTIC SURFACING

Ideal for concrete forms.
Excellent for many general
industrial and residential
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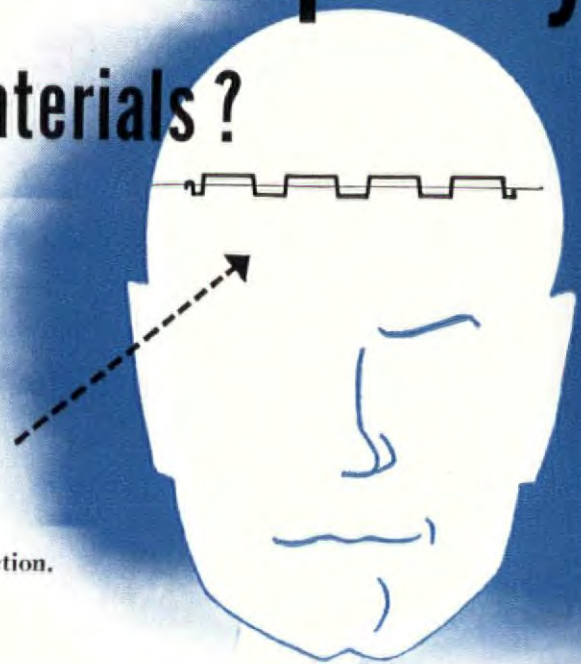
Do you think contemporary deserve contemporary materials?

Each era has expressed its thinking in its own materials.

Steel is the distinctive material of this era.

Steel sheet formed like this is in its strongest structural shape.

This is the shape of a Robertson Q-Unit. Q is for quick. All Robertson Q-products have *Speed* of erection. They are modern building materials. They meet today's conditions for they reduce to a minimum the uncertainties of field erection.



Q-PANEL

A Q-Panel is fundamentally a Q-Unit engineered to meet the modern idea that walls should be hung, like curtains, now that steel framework has assumed the loadbearing function.

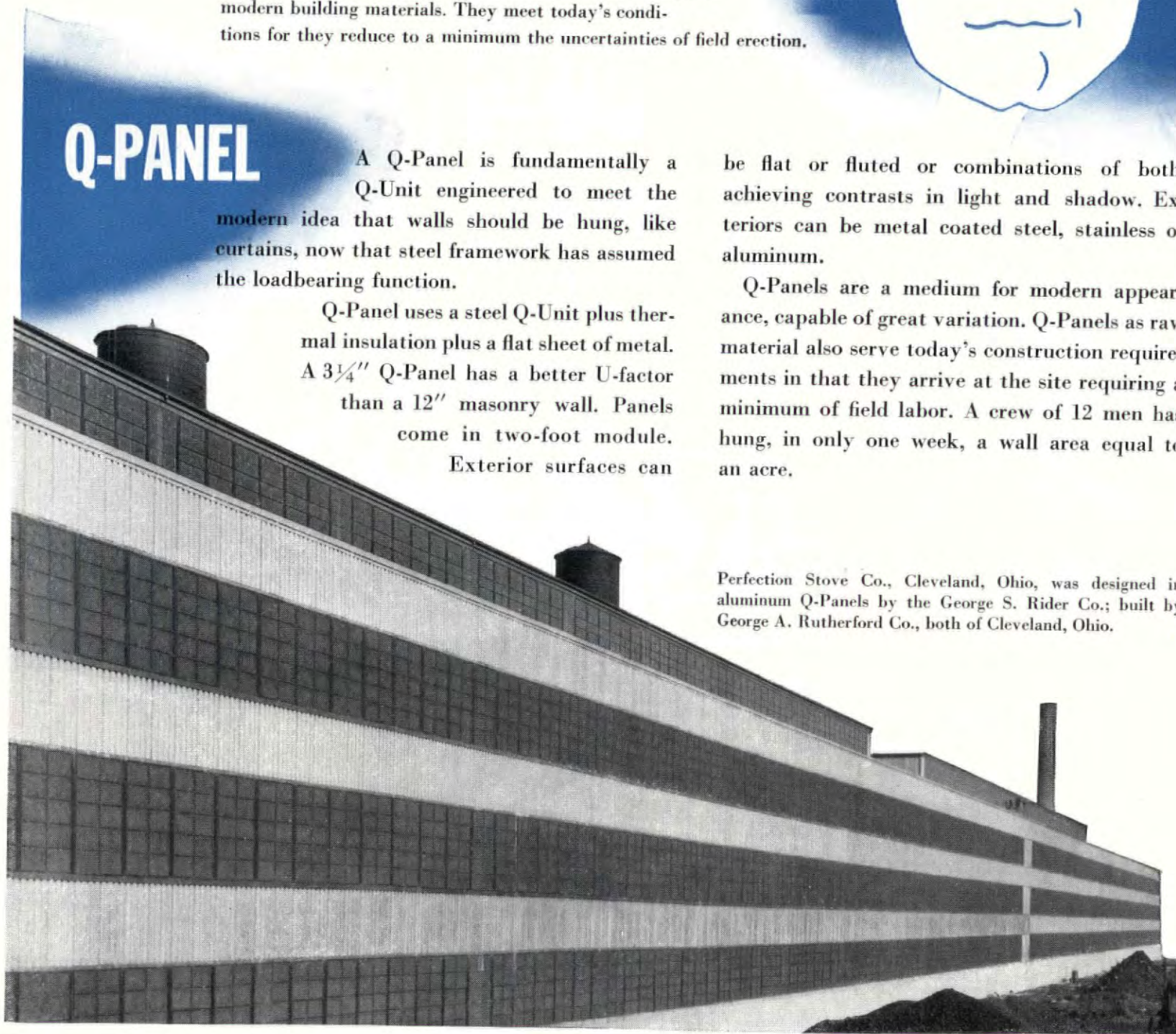
Q-Panel uses a steel Q-Unit plus thermal insulation plus a flat sheet of metal. A $3\frac{1}{4}$ " Q-Panel has a better U-factor than a 12" masonry wall. Panels come in two-foot module.

Exterior surfaces can

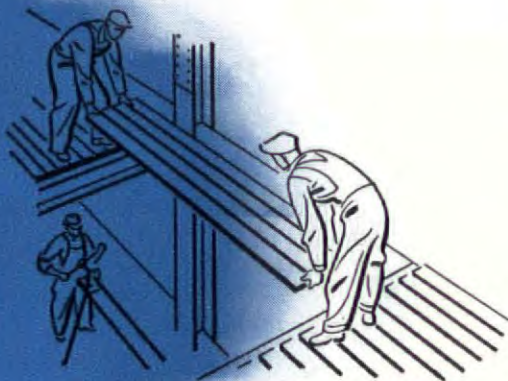
be flat or fluted or combinations of both, achieving contrasts in light and shadow. Exteriors can be metal coated steel, stainless or aluminum.

Q-Panels are a medium for modern appearance, capable of great variation. Q-Panels as raw material also serve today's construction requirements in that they arrive at the site requiring a minimum of field labor. A crew of 12 men has hung, in only one week, a wall area equal to an acre.

Perfection Stove Co., Cleveland, Ohio, was designed in aluminum Q-Panels by the George S. Rider Co.; built by George A. Rutherford Co., both of Cleveland, Ohio.

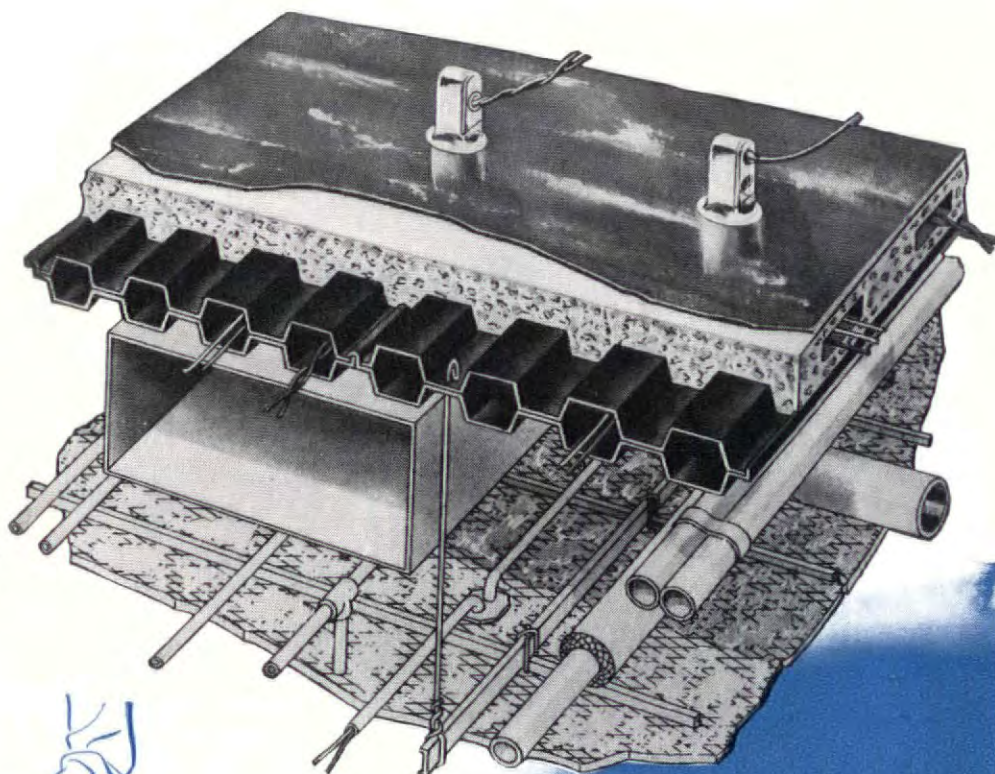


thoughts



QUICK-IN

QUICK-CHANGE



Q-FLOOR

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is provided with permanently flexible floor layouts, protected from electrical obsolescence for as long as it stands. To see Q-Floor Fittings, visit any General Electric construction materials distributor's.

Q-Floor reduces construction time 20 to 30%. Two men can lay 32 sq. ft. in half a minute. Construction is dry, noncombustible. No preset inserts required. No other floor materials offer you such flexibility of design.

Robertson Q-Panels and Q-Floors are contemporary building materials. They do everything earlier materials did and they satisfy those extra demands peculiar to today's buildings.

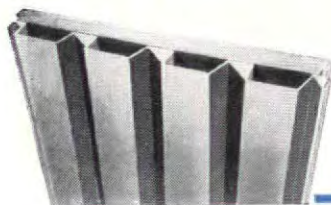
For general information call a Robertson representative. For literature, write

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Close-up of Q-Panel

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SCHOOL DESIGN

Forum:

I teach grade and high school art in one of the newer and more beautifully designed school buildings in the country. Nevertheless, even here I claim that there are a few architectural features that could be improved. Since the points I have in mind are faults common to most school buildings, I hope that the suggestions below may be incorporated in future school building designs.

1. The location of the Fine Arts room. Although a considerable share of the art department's duties are on the stage of the auditorium and in the gymnasium, these rooms are usually placed at opposite ends of the building and on different levels. We are called upon to decorate the gym elaborately at least four times a year for dances. Consequently we have many a long trot with our supplies of paints, wire, crepe paper, etc. Also the distance makes it very difficult to supervise the work there.

2. Wall materials. The walls in the gymnasium are of brick as they are in so many other gyms, making it impossible to fasten our decorations to it. The cafeteria walls too are frequently brick and here again the art department is often requested to place health posters. Scotch tape seldom holds to brick more than 24 hours. Could not there be inserts of other material, such as corkboard, placed at intervals in the lower 12 ft. of wall in which one could drive a thumb tack or nail? How about placing a narrow strip of such material too above the blackboards in the classrooms so that visual teaching aids may be tacked to it? It is against the rules of most schools to place thumbtacks and sticker tape into the walls or woodwork.

3. Panels for pupils' murals. In coordinating the grade work with art, the children make many a mural. Why not incorporate in the wall of a corridor on each floor (if not possible in each classroom) at least one horizontal strip 4 x 10 ft. of a material, light in color, which would take both tempera paint and colored chalk, and which could be cleaned off as easily as a blackboard? I would suggest, too, adequate lighting above it.

4. Built-in display cases. I would like to see more built-in-the-wall display cases in the corridors and in the classrooms both, in which could be placed either the children's work, or exhibits of unusual items, foreign and otherwise, which the children frequently and proudly bring from home.

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Haverstraw, N. Y.

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Why are so many older hospitals grim, colorless places? Tradition, or inertia, or whatever it was that caused this unhappy situation is fast being overcome by architectural designers who recognize the actual therapeutic value of color and beauty to the sick . . . and to those who serve the sick.

Today, architects the world over are using Formica* to prove that a cheerful material can be more sanitary and less costly to maintain than the drab, uninteresting interiors of the past.

For instance, here in the Good Samaritan in Cincinnati, Formica is on walls and window stools in training wards, corridors and nurses' dormitory rooms. Formica's smooth, tough, long-wearing surface actually repels dirt . . . what dirt might adhere to its non-porous surface wipes clean with the swish of a damp cloth.

Formica is unharmed by alcohol, mild acids, alkalies and boiling water.

See 1949 Sweet's Architectural File (section 13i, catalog 4) for more Formica information . . . and for availability of actual Formica color and pattern samples of your own selection. Copyright 1949, The Formica Co., 4631 Spring Grove Ave., Cincinnati 32, Ohio.



*Trade Mark Reg. U. S. Pat. Off.



Four husky children grew up on these floors, yet they still look as if they were just put down.

Walked on for a generation — yet these floors don't show a scratch!

BACK in 1929, a suburban New Jersey residence was floored throughout with Goodyear Wingfoot rubber flooring. Over the years a family of six has walked on these floors. The picture shows their high-shine, unblemished, attractive appearance today — after a generation of hard use.

Service like this is typical of Wingfoot flooring, even under much heavier use than you'll find in a home. That is why you can specify it with confidence for public buildings, stores and offices where *durability* is

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Wingfoot rubber flooring is available in fourteen multi-tone and plain colors to harmonize with any decorative scheme. It comes in sheet or tile — can readily be worked into patterns and feature strips as well. You can plan floors in as many color designs and patterns as you wish.

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when cleaned with commercial compounds. It is resistant to fire, alcohol, ink and stains. A damp mop keeps it clean.

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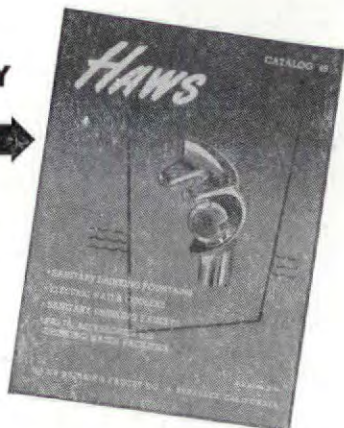
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Ideal for side-hill jobs. Throw more light into basement.

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Behind the scenes with FORUM contributors



LANG & RAUGLAND, designers with Johnson & Backstrom Associates, of one of the Midwest's newest and best office buildings (p. 75) is a Minneapolis partnership in practice since 1922. Raugland, a graduate of the University of Minnesota, doubles in architecture and engineering. Lang got his architectural training at the University of Pennsylvania.



HOLABIRD & ROOT & BURGEE is the new name of the time-honored Chicago firm which was organized in 1882 as Holabird & Roche, changed in 1927 to Holabird & Root after the death of the original partners. New partner Joseph Burgee has been with the firm since 1923. A typical job is the Standard Oil Research Lab. (p. 82).



PAUL DAMAZ, who has surveyed the status of French reconstruction for THE FORUM (p. 88), is a young town planning expert and former editor of France's leading architectural magazine, *L'Architecture d'Aujourd'hui*. Damaz graduated from the University of Paris into a German prison camp where he taught out the war as the camp school's professor of Planning and Architecture. He is currently working in New York on the United Nations Headquarters.



WARNER-LEEDS is the two-year old New York partnership of Charles Warner, Jr. and Harold Leeds. Their work includes, besides the Paris Theater (p. 94), shops, clinics, schools and the 300-room Hilton hotel now under construction in Puerto Rico. Leeds is a graduate of New York University, Warner of Columbia. The latter has taught at both Columbia and Cornell.



JOSEPH STEIN, 32-year-old designer of the Connecticut country house (p. 100) is a Harvard-trained architect with a Dartmouth degree in sociology. Stein set up his own practice in Waterbury, Conn. in 1948 after four war years with the Army Corps of Engineers, a collaborative design venture into speculative building with George Nemeny and New York experience in the offices of Robin & Vogel and Percival Goodman.



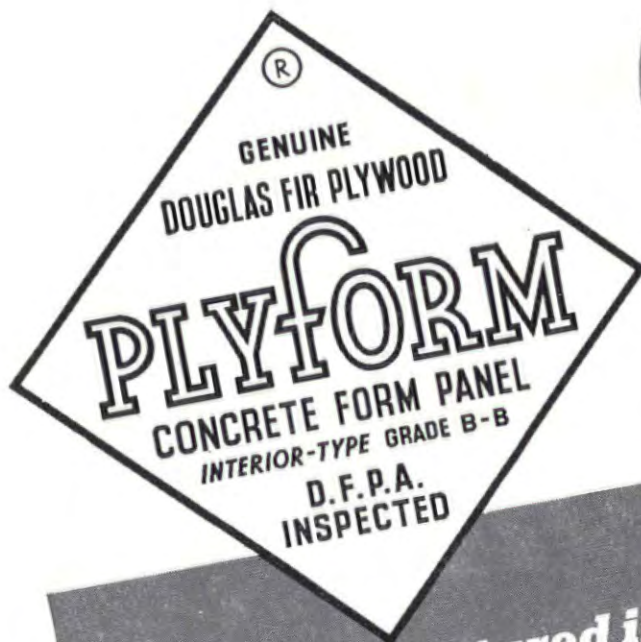
O'NEILL FORD and JERRY ROGERS (p. 103) combine the advantages of both agrarian and mechanized civilization in their San Antonio office. Headquarters are a farm but transportation is a private plane used to bridge the 400-mile gaps often found between jobs in Texas. Ford started his career in 1926 by studying old Texas houses as a basis for modern yet regional design.



SAMUEL GLABERSON, a New York architect born in St. Louis, Mo., has been in practice since 1936 with a three-year war interlude designing army and navy bases and defense housing for firms such as Antonin Raymond and Henry Churchill. One of his more recent jobs is the remodeling of an old stable in Brooklyn Heights into a bachelor's apartment (p. 112). Glaberson studied at the University of North Carolina and N.Y.U.



A. WILLIAM HAJJAR, assistant professor of architecture at Pennsylvania State College, combines academic duties with a select private practice, accepting only those clients who will appreciate progressive ideas. In this category is the small remodeled house (p. 114). Hajjar is a 1940 graduate of Carnegie Tech, received his Master's degree from M.I.T. He has taught at Washington State College and worked in the Spokane office of Whitehouse & Price.



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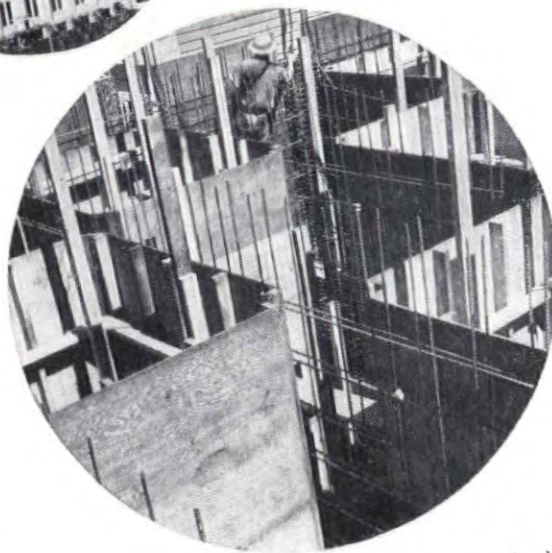
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U. S. Commercial Standard CS45-48

PLYFORM—the multiple re-use concrete form panel of Douglas fir plywood—is now manufactured to meet new grade specifications, adopted to make this preferred material more readily available. PlyForm continues to be manufactured with the same highly moisture-resistant (but not waterproof*) glues which have served so successfully for more than a decade.

PlyForm continues to offer the advantages which have made it so popular—speed and economy of application . . . freedom from form joints and resultant concrete fins . . . smooth, easily finished, paintable concrete surfaces. PlyForm also offers special, superior ply construction for added durability.

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*The highly moisture resistant glues used in PlyForm permit multiple re-use of panels (as many as 10 to 15 are not unusual). For the greatest possible panel re-use, however, specify Exterior-type Concrete Form grade of Douglas fir plywood. It has the same B (Solid) faces and the same special ply construction as Plyform, but is manufactured with completely waterproof resin adhesives. Exterior-type Concrete Form panels may be used and re-used until the wood is literally worn away.



PlyForm continues to be sanded on both sides. Panels are edge-sealed with a distinctive green sealer, and are mill-oiled unless otherwise specified.

PlyForm is produced in strict accordance with the new U. S. Commercial Standard CS45-48, which provides that both faces shall be of B (Solid) veneer—a new quality of veneer, smooth and firm, but which may contain small, tight knots, tight splits and circular repair plugs.

Actual use of the new PlyForm grade shows that it fully meets the requirements for virtually all concrete construction. For special architectural concrete, requiring the highest possible finish, the architect or contractor may specify Exterior-type or Interior-type Douglas fir plywood in grades having "A" (Sound) face veneer—or one of the new resin-impregnated overlay panels which have a dense, hard facing bonded to the plywood. For more specific data, including a copy of U. S. CS45-48, write the Douglas Fir Plywood Association, Tacoma 2, Washington.

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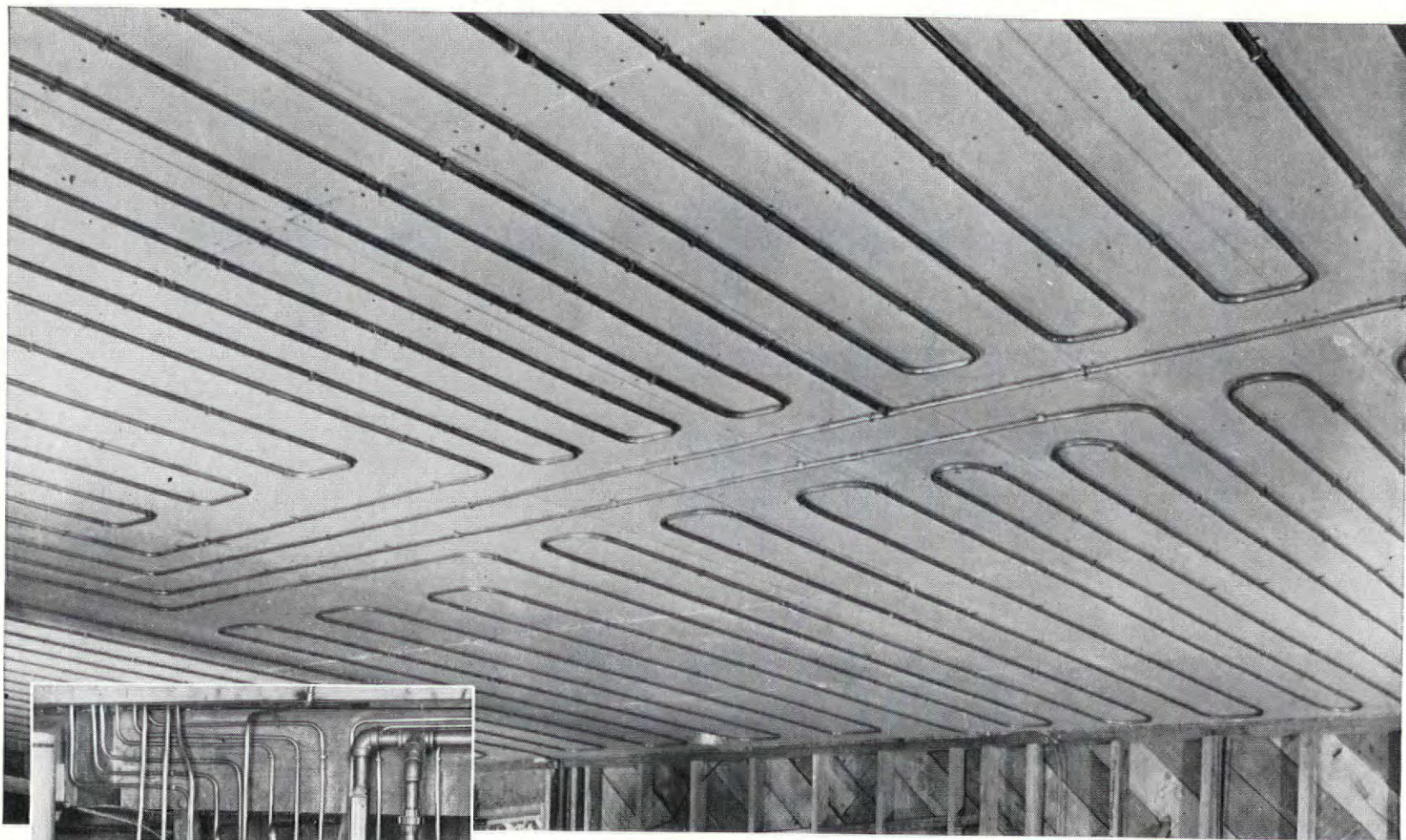
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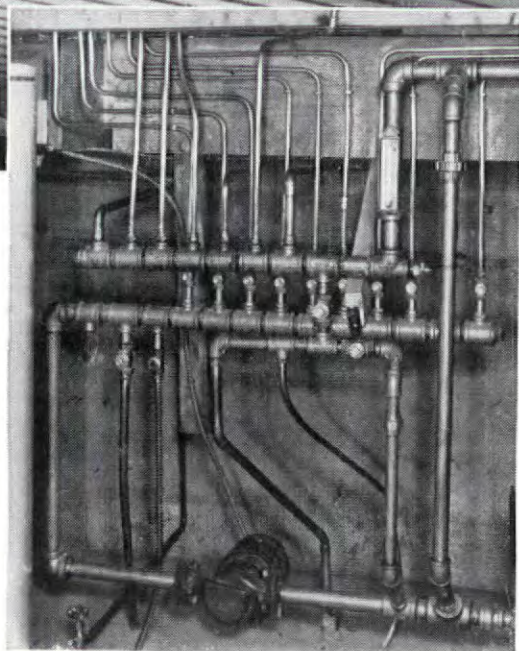
Panels



IN SEATTLE THE REVERE QUALITY AT \$21,000



Radiant panel heating system uses Revere copper water tube exclusively. Note the perfection of the plan, above, a symmetry easily obtained with this tube that lends itself so beautifully to the skilled hand.



Revere Copper Water Tube is not only trouble-free, but exceptionally easy to install. A beautiful installation such as the one above, from the house in Seattle, speaks of quality and makes a house easier to sell or maintain.

THE basic program of the Revere Quality House Institute is the furtherance of architect-builder relationships in order to provide quality housing in quantity at moderate prices. However, even in the more expensive houses there are often questions of quality. For that reason more than ordinary interest surrounds the Revere Quality House in Seattle, which is a custom-built dwelling, not in mass production. Including land, it was priced at \$21,000, and there was no difficulty whatever in selling at that figure. The house was opened to the public on November 14. Everyone who visited it was immediately conscious of its beauty and the high quality of every detail, from the special hardware to the mathematical precision evident in the Revere copper water tube lines in the radiant panel heating and plumbing systems.

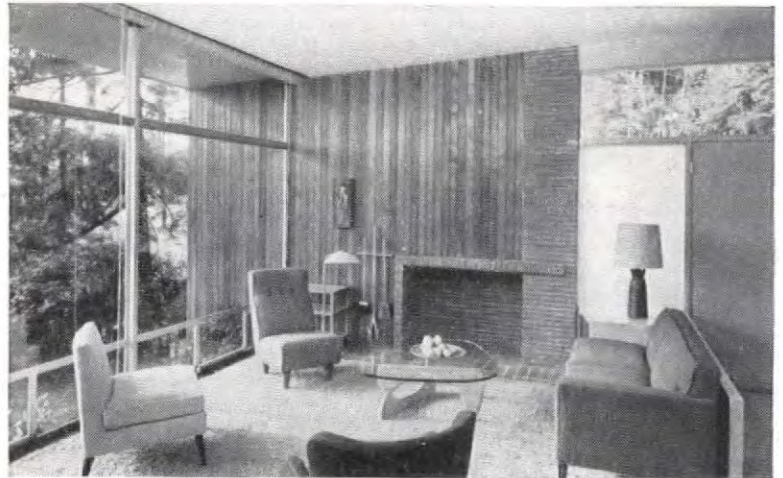
A considerable part of the extra expense of this house is attributed to painstaking care in selecting materials not only for their enduring quality, but for their aesthetic appeal. In addition, excavation was more expensive than usual due to the desire to avoid damage to the natural ground cover of an exceptionally beautiful site.

This, then, to most of the nation is a rather high-priced house, but it is still a Revere Quality House, demonstrating that when an architect and a builder collaborate in a search for quality, they can achieve it. Commensurate quality, though on a lower plane, is of course possible in more moderately-priced mass-production developments.

QUALITY HOUSE demonstrates..



Northwest House in Wedgwood Park, Seattle. Designed by Chiarelli & Kirk, Architects, Seattle. Veterans preference by the builder, Albert Balch, Seattle. Furnished by Del-Teet Furniture Company, Seattle.



Above, one view in the living room of the Revere Quality House in Wedgwood Park, Seattle, Washington. Here you see only a part of the large picture window; almost the entire south wall of the room is glass.

HOUSE ON A HILLSIDE

The outstanding design feature of this house is its tri-level arrangement, suggested by the sloping site. In this house, the entrance is on the middle level, which contains the hallway, living room, dining room and kitchen. Half a level up are the bedrooms, bath, and multi-use room. A window at eye-level in the kitchen is at floor level in the adjoining multi-use room, permitting unobtrusive supervision of the children's activities. On the lowest level is the carport, storage room and recreation room. This arrangement makes it easy to entertain, to do housework, watch the children at play, enjoy privacy on each level, and yet avoid tedious stair-climbing.

Picture windows in the south wall of the living room are an attractive feature, overlooking the wooded site. These and all other windows have aluminum frames constructed of extruded shapes. Northwest cedar siding is unusually handsome, having been hand-selected for color and grain. Living room is partly paneled in cedar. Many other features of this unusual house are admirable, and well worth study.

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SOME QUALITY FEATURES

- Siding is northwestern cedar, hand selected for color and grain, in natural finish. One wall of the living room is paneled in cedar.
- Roof is built-up, four ply, with sheet copper gravel stop.
- Flashing, copper, Revere Home Flashing System.
- Gutters and leaders, Revere copper.
- Heating, radiant panel, with 1/2-inch Revere Copper Water Tube in ceilings. Oil-fired furnace.
- Plastered walls have volcanic ash as one of the plaster ingredients, this material being locally abundant and having some virtue as insulation and acoustic control. It is also highly fire-resistant.
- Windows have sturdy, non-corroding aluminum frames constructed of Revere aluminum extruded shapes.
- Drain tile around exterior of house to conduct water away from basement. Exterior walls below grade are damp-proofed.

- Hardware is bronze, especially designed and selected.
- All brickwork best grade Roman brick.
- Sheeting in roof, floors and walls installed diagonally, for best bracing effect.
- Ceilings have 4-inch rockwool insulation.
- Eating bar has formica top for long life and easy cleaning.
- Water heated by a Seidelhuber automatic electric storage heater, 52-gal. capacity, guaranteed for 20 years, with welded tank made of Revere's non-rusting Herculoy bronze.
- Inlaid linoleum in kitchen, Koroseal on bathroom floor and base.
- Three coats of paint throughout, two coats of varnish on natural woodwork.
- Chromium bathroom fittings; enameled cast iron laundry trays; automatic temperature and pressure control on shower.
- Square D remote control wiring system throughout. Recessed lighting.
- All plumbing, Revere copper water tube; Revere copper waste pipe; connections provided for Bendix washer.



This is an independent, non-profit organization sponsored by Revere Copper and Brass Incorporated as a public service, and co-sponsored by The Architectural Forum. John Hancock Callender, Architect, is Executive Secretary. In 1948 seven different architect-builder teams have constructed seven Revere Quality Houses in seven different sections. Associate Member Teams can be organized. Submission of houses to the Institute is welcomed. In order to qualify as a Revere Quality House it is only necessary to meet the standards of the Institute. The Institute seal, shown above, has a very definite value in assisting sales of houses which are authorized to display it.

REVERE QUALITY HOUSE INSTITUTE

John Hancock Callender, Architect, Executive Secretary
P. O. Box 1134, Grand Central Station, New York 17, N. Y.



James J. Chiarelli, Architect, Seattle
Paul Hayden Kirk, Architect, Seattle
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LOUISIANA ENGINEERING SOCIETY ANNUAL MEETING, St. Charles Hotel, New Orleans, La., January 13-5.

NINTH INTERNATIONAL HEATING AND VENTILATING EXPOSITION, International Amphitheatre, Chicago, Ill., Jan. 24-8.

"YOUR HOUSE: BUILDING, BUYING OR REMODELING," a series of 10 evening lectures at Columbia University, N. Y. C., covering available new materials, construction, mechanical systems; beginning in February.

A 2-year program of architecture at THE DEPARTMENT OF INDUSTRIAL ARTS, Kent State University, Ohio, expanding its present work in engineering, aeronautics, ceramics, metalwork and woodwork; Joseph Morbito, Director.

AN URBAN PLANNING TOUR OF SOUTH AMERICA sponsored by the Planning and Housing Division of Columbia University, June 20-August 27. Itinerary (including over 10,000 miles by air) will provide stops and research tours in Havana, Barranquilla, Bogota, Cali, Quito, Guayaquil, Lima, Callao, LaPaz, Santiago, Valparaiso, Buenos Aires, Montevideo, Sao Paulo, Rio de Janeiro, Caracas, and San Juan. All travel and living expenses are included in the fee of \$1,775. Applications (with a deposit of \$100) should be addressed to Professor J. Marshall Miller, 504 Avery, Columbia University, New York 27, N. Y. before March 15.

NEW BROOKLYN DESIGN LABORATORY.



Reception room (above) and individual workroom (right) combine to place good design within range of students and commercial artists.

The fine and industrial arts continue to approach one another. Brooklyn Museum, New York, announces the opening of the Edward C. Blum Design Laboratory for study and analysis of the museum's collection of art works—ancient and modern. Eight private workrooms, a well-equipped storage room for materials and objects in use and the laboratory itself (with cutting tables, sewing machines, potter's wheel, hand loom and microscope) bring designers within working distance of fine prototypes, stimulants either to creation or cribbing. The \$50,000 necessary (Continued on page 60)

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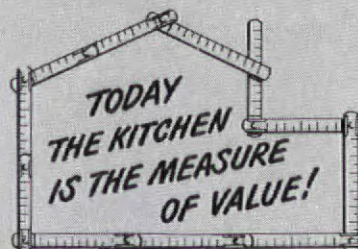
extra value needed to justify today's prices. Financing is easy because in most states the cost of kitchen and house can be combined in a "package mortgage."

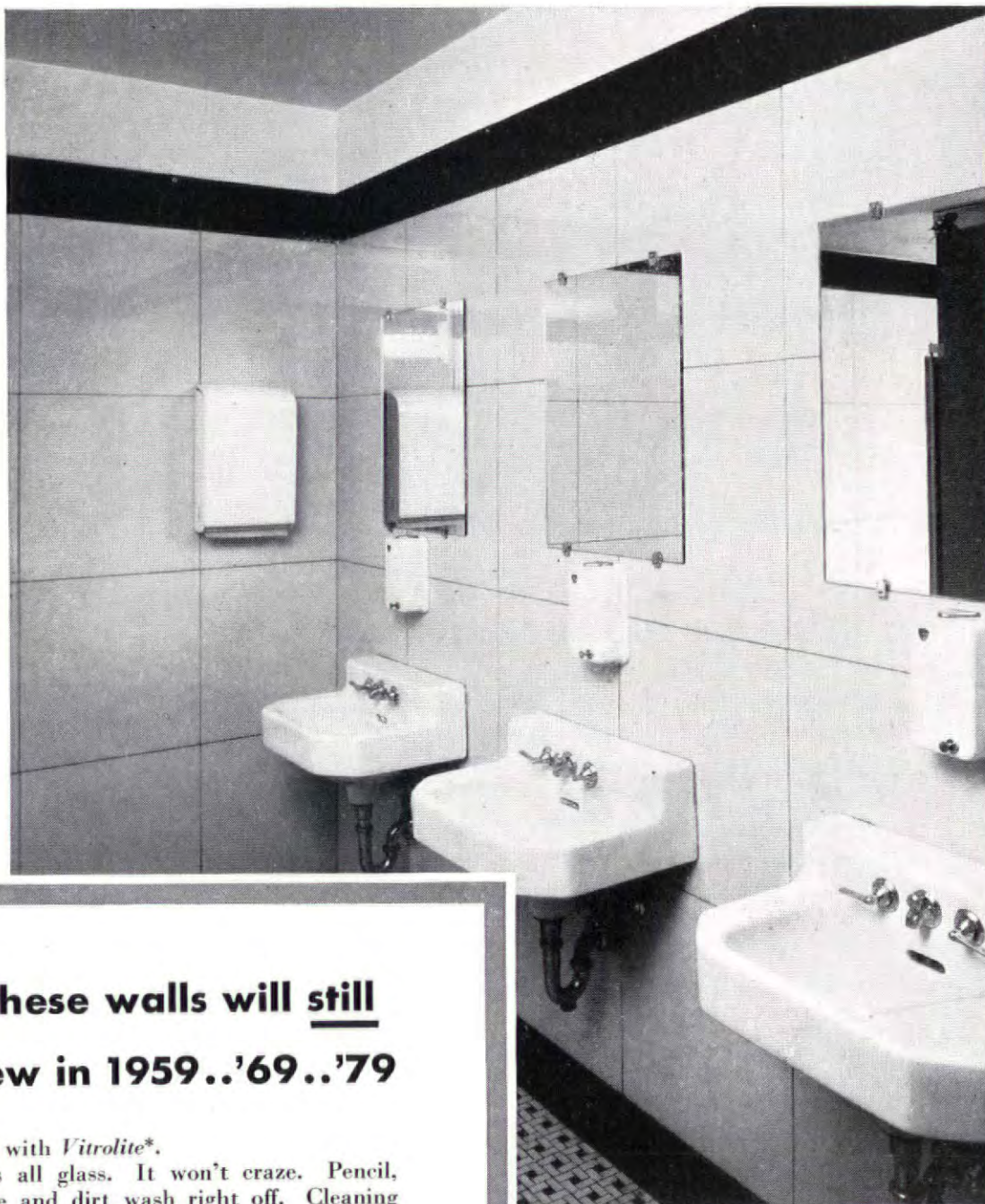
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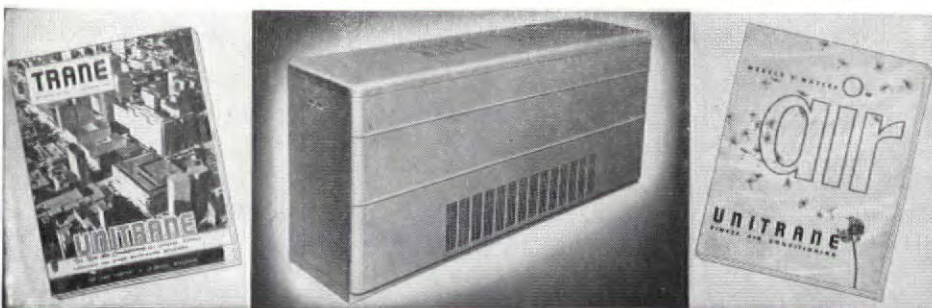
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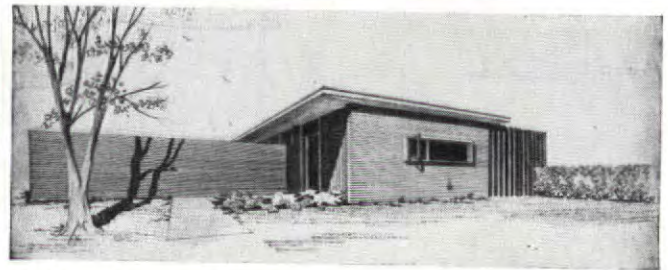
Manufacturing Engineers of Heating, Ventilating and Air Conditioning Equipment—Unit Heaters, Convectors, Radiators, Heating and Cooling Coils, Fans, Compressors, Air Conditioners, Unit Ventilators, Special Heat Exchange Equipment, Steam and Hot Water Heating Specialties. IN CANADA, TRANE COMPANY OF CANADA, LTD., TORONTO.

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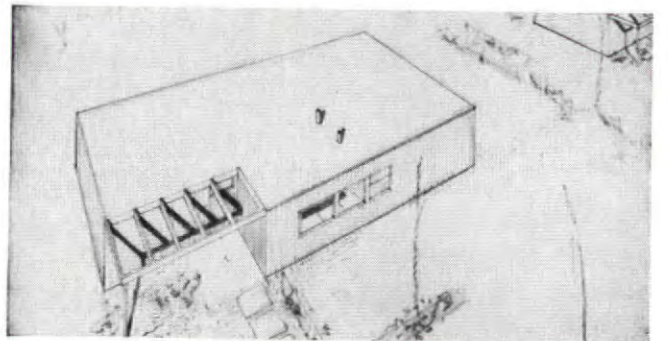
to provide this small but adequate workshop was contributed by a group of large department stores throughout the country. Architects Brown, Lawford & Forbes planned the laboratory; Barr & Lane, Inc., were builders.

AWARDS IN LOW-COST HOUSING CONTEST.



Architect Joseph's winning house has exterior storage wall

Both registered architects and students were enlisted in New York State's effort to stimulate interest in good design for inexpensive housing (within the means of families earning \$46-58 a week). Prizes were offered in two categories: the single-family dwelling and multi-family development. In the registered architects division, Seymour Joseph and Louis Mannier won top honors (\$1,000 and \$500 respectively) for the single-house design. The firm of Sargent, Webster, Crenshaw & Folley and Gerhard Graupe and Serge Klein (in collaboration) were judged best in the multi-family group.



Student Marlo's design makes the most of a compact 737 sq. ft.

The field of undergraduate honors was cornered by Pratt Institute, Brooklyn. Pratt student Albert Marlo won the \$200 first prize in the single unit division. Joseph Franco rated second (\$100). In addition, Mr. Franco ranked first in the multi-family section, while Joseph Zito, Jr. was runner-up. Entries were rated on their economical and efficient use of space as shown by site plan and orientation; free and multiple use of interior space; simplicity of structure; concentration of utilities and feasibility of future additions.

CIVIL SERVICE ARCHITECTURAL EXAM

Graduates of any accredited U. S. architectural school with six years' experience are eligible to compete for the position of San Francisco architect (salary \$500 entrance to \$600 maximum a month). Duties of the position include preparation of designs for public structures and alterations; their correlation with engineering work; contacting material, technical and department men; directing draftsmen; general specifications. Receipt of applications closes April 16, 1949. Information may be obtained from the San Francisco Civil Service Commission, City Hall, San Francisco, Calif.

(Continued on page 64)

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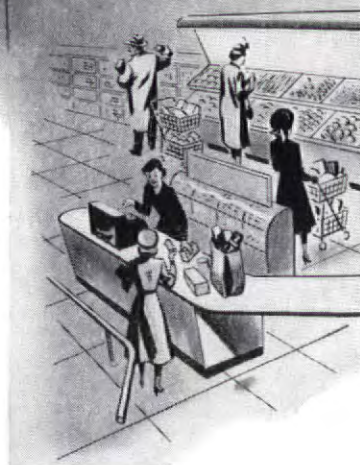
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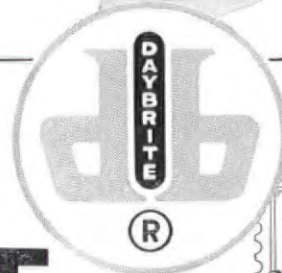


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9	9	5	1	0	0	0	0	S
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1	4	5	*
4	1	5	*

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...and PRINTS**

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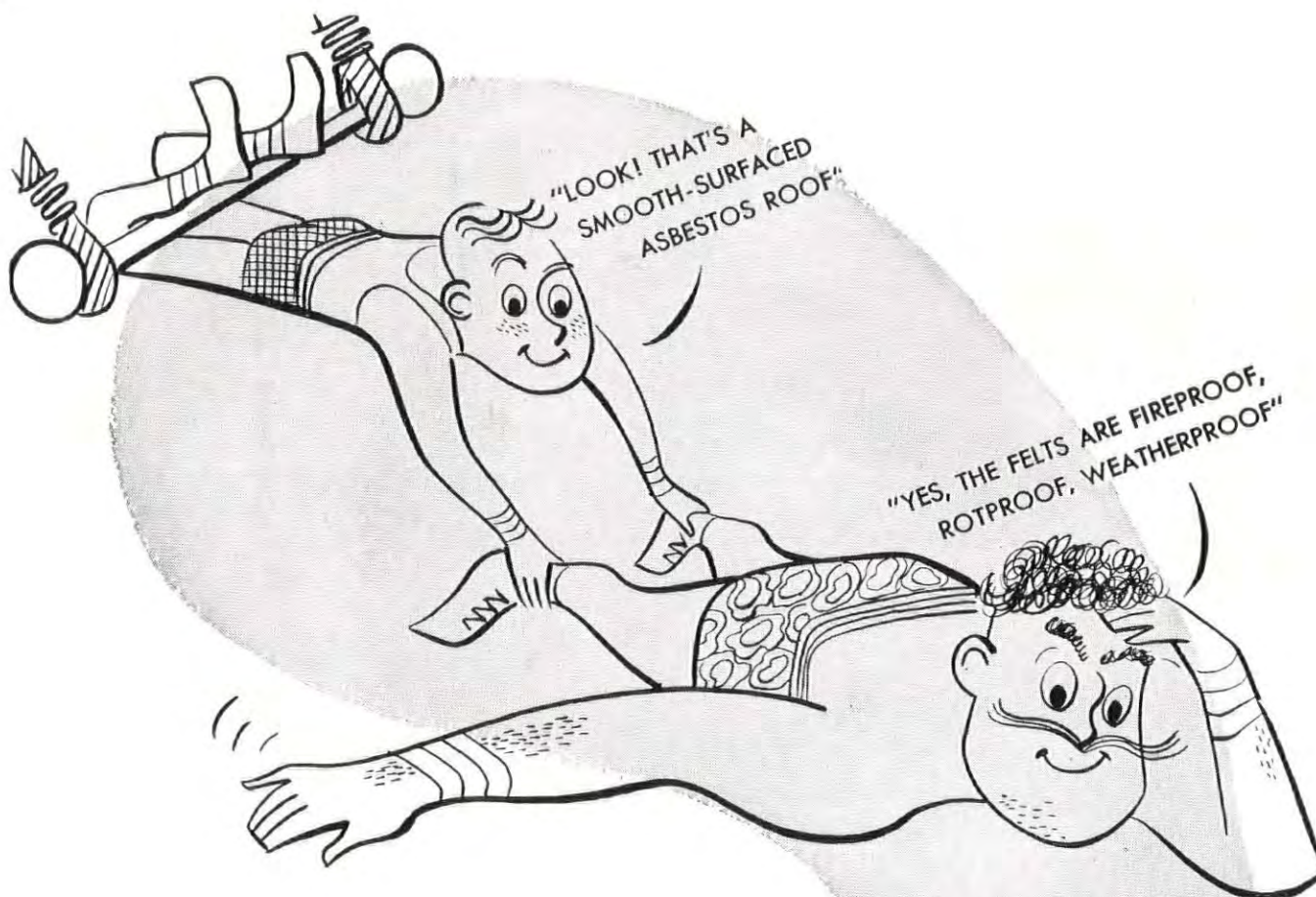
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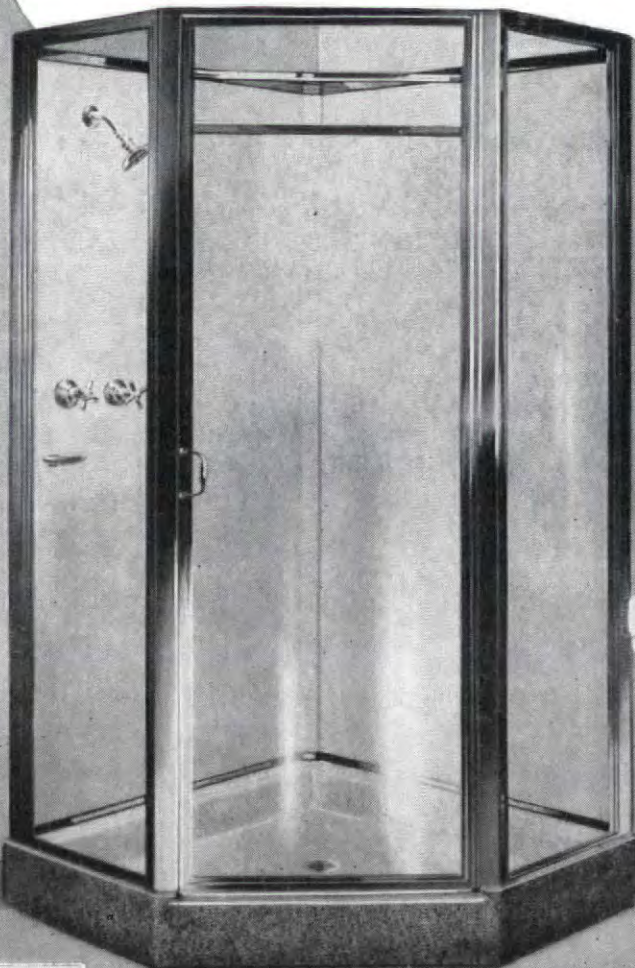
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COMPETITIONS

THE LEBRUN TRAVELING SCHOLARSHIP (\$2,800) offered by the New York Chapter of the American Institute of Architects. Applicants must be U. S. citizens between the ages of 23 and 33 with at least 1½ years of practice as an architect or architectural draftsman. The award must be used for six months study (at least) outside the continental limits of the U. S. Applicants must be nominated by a member of the American Institute of Architects before January 21, 1949. Inquiries should be directed to the LeBrun Scholarship Committee, 115 East 40th St., New York 16, N. Y.

JAMES HARRISON STEEDMAN MEMORIAL FELLOWSHIP (\$3,000) for a year's travel and study abroad. Special condition of the contest is one year's residence in St. Louis. Other requirements: diploma from an accredited U. S. architectural school and one year of work in an architect's office; age span 21-31. The competition will consist of a 15-consecutive-hour preliminary sketch followed by a six-week development period. Application blanks are obtainable from the School of Architecture, Washington University, St. Louis, Mo., and must be filed before January 31st.

"WELDED BRIDGES OF THE FUTURE," an award program for bridge or structural engineers. A welded two-lane deck highway bridge supported on two end-piers 120 ft. apart (size, steel and loading must be specified) is the project in this contest offering prizes of \$3,000, \$1,500 and \$750 as well as ten honorable mentions of \$100 each. Chairman of Awards is Wilbur Wilson, Research Professor of Structural Engineering, University of Illinois. Rules may be obtained from the sponsor of the contest, the James F. Lincoln Arc Welding Foundation, Cleveland 1, Ohio. Closing date is June 30, 1949.

APPOINTMENTS

ROBERT BEVERLY HALE, associate curator of the new Department of American Art at New York City's Metropolitan Museum. The creation of this new section is a consequence of the failure of last year's treaty between the three large art museums in New York—the Metropolitan, Whitney and Modern Art. Each has since decided to go its individual way. Mr. Hale will integrate the Metropolitan's present program of modern decorative arts with its growing interest in modern painting, sculpture and the graphic arts.

F. RAY LEIMKUEHLER, architect and school-building designer, as Chief Architect of the St. Louis Board of Education, a newly created post.

N. R. PATTERSON, of Patterson Steel Co., Tulsa, Okla., 1949 president of the American Institute of Steel Construction.

WALTER RUSSELL, of Peerless Cement Corp., chairman of the Board of Directors of Portland Cement Association.

ALEXANDER CORRIGILL, associate of McKim, Mead & White architects, 101 Park Ave., New York 17, N. Y.

J. GORDON KNAPP, mechanical engineer with the design firm of Joseph Palma, Jr., now Palma-Knapp Associates, 185 N. Wabash Ave., Chicago 1, Ill.

DON HENNINGFELD, mechanical engineer and designer, for Northern Light Co., Milwaukee, Wis.

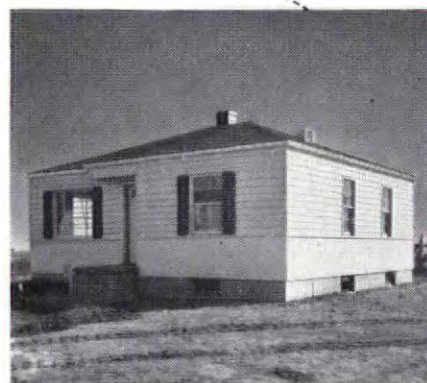
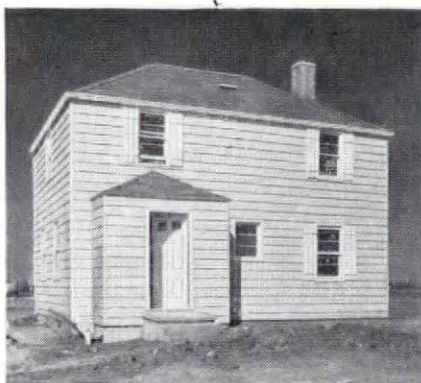
VINCENT MERRILL M.L.A., associate of Arthur and Sidney Shurcliff, landscape architects and town planners, 14 Beacon St., Boston, Mass.

(Continued on page 68)

Newton, Iowa



**1000-home project uses
KIMSUL* insulation throughout!**



Builders choose KIMSUL for its Low Cost — High Insulating Efficiency

Pictured here are three of the 35 different styles of houses being built at Newton, Iowa, employing streamlined construction methods devised by Chief Engineer J. Buford Jenkins. This is a 100% site-prefabricated project. Leaders of the non-profit organization financing it, say the houses will sell for \$8,000-\$10,000. It is expected that 1000 units will be completed within three years—all of them insulated throughout with KIMSUL.

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Cincinnati's new Terrace Plaza Hotel selects AMERICAN-Standard Plumbing Fixtures

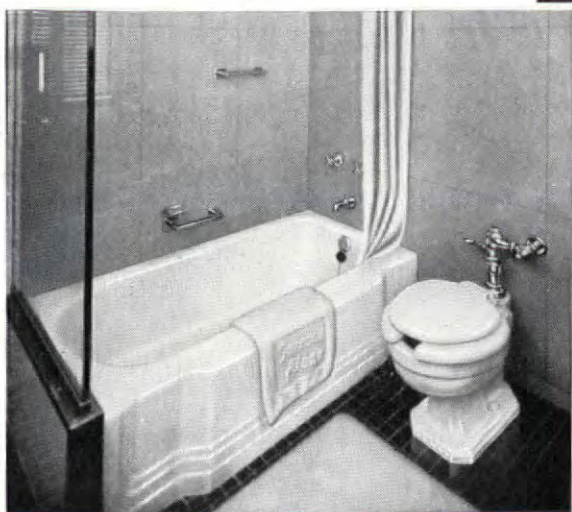
■ To the long, growing list of the nation's outstanding buildings having American-Standard Plumbing Fixtures, add Cincinnati's newest hotel, the Terrace Plaza.

Here the choice of American-Standard products offered a double advantage.

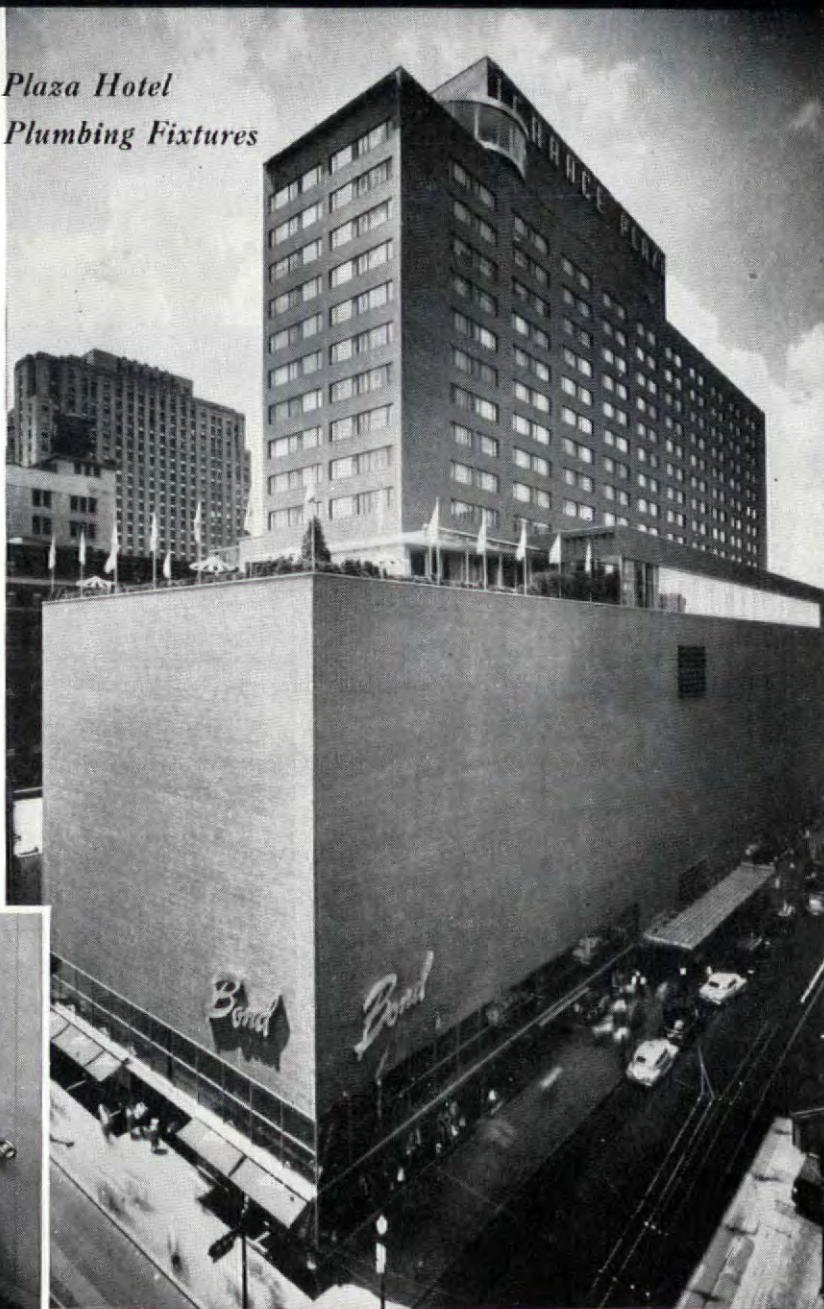
First, because of the many different styles, sizes and colors offered, the architects had the widest latitude in designing each of the distinctive bathrooms for the 324 luxurious rooms and suites in this ultra modern hotel.

And, secondly, by making it American-Standard "all the way," the owners were assured of uniform quality throughout the entire installation . . . quality that would be reflected not only in the smart styling of the fixtures, but also in their long, trouble-free service.

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Jaros, Baum & Bolles—Engineers
Frank Messer & Sons, Inc., Cincinnati—General Contractors
E. J. Nolan Corporation, Cincinnati—Plumbing & Heating Contractors
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American Stove Company's new home in St. Louis. Lighting problem of south exposure, always difficult, is solved with Insulux Glass Block (No. 351) in combination with clear glass inserts. Insulux bends light rays toward ceiling for maximum penetration into building. Architect: Harris Armstrong; Contractor: Gamble Construction Company.



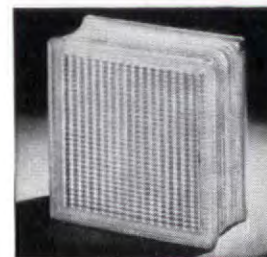
PHOTOGRAPH BY COURTESY OF ARCHITECTURAL FORUM

"Eminently successful daylighting," declares

Architectural Forum in a recent article. "Offices in this building do not rely on artificial daylighting except on exceptionally dull days, but are almost always entirely daylit."

It goes on to say, "as an example of up-to-the-minute application of known daylighting principles, this building would be difficult to surpass."

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F. L. McALEAVEY, architect, 2803 E. Central, Wichita, Kans.

WILLIAM ALEXANDER, designer, 6404 Hollywood Blvd., Hollywood, Calif.

HARRY SEIDLER, office of architecture and planning, 4 Wolseley Crescent, Point Piper, Sydney, Australia.

PAUL JAMES HUSTON A.I.A., 543 Bryant St., Palo Alto, Calif.

MICHAEL SAPHIER ASSOCIATES, industrial designers, 19 W. 44th St., New York 18, N. Y.

CHANGES OF ADDRESS

GEORGE NELSON, architect and designer, 20 W. 55th St., New York 16, N. Y.

DRAZEN & ASSOCIATES, consulting engineers (formerly Michael Drazen & Associates) 8135 Forsythe Blvd., St. Louis 5, Mo.

RINK & HOFFMAN, store planning and industrial designing, 314 N.W. 23rd Ave., Portland 10, Ore.

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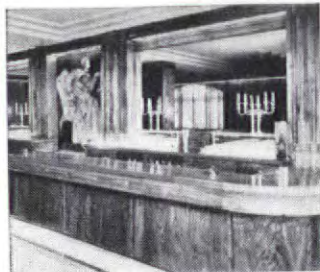
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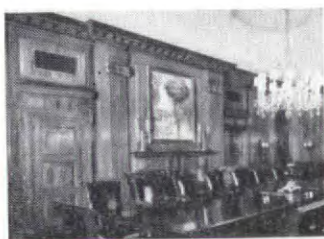
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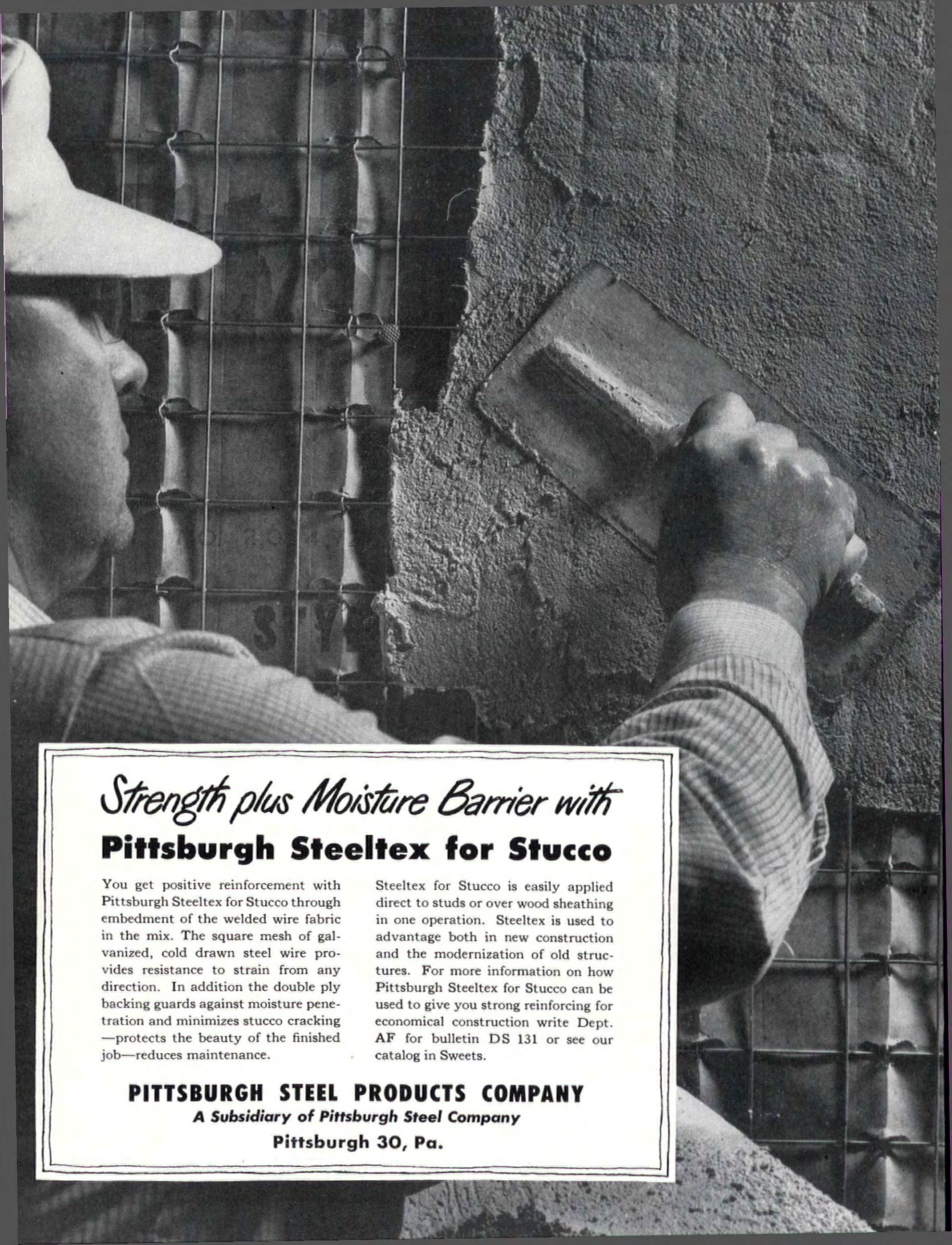
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TELEPHONE RACEWAYS IN THE MODERN MANOR

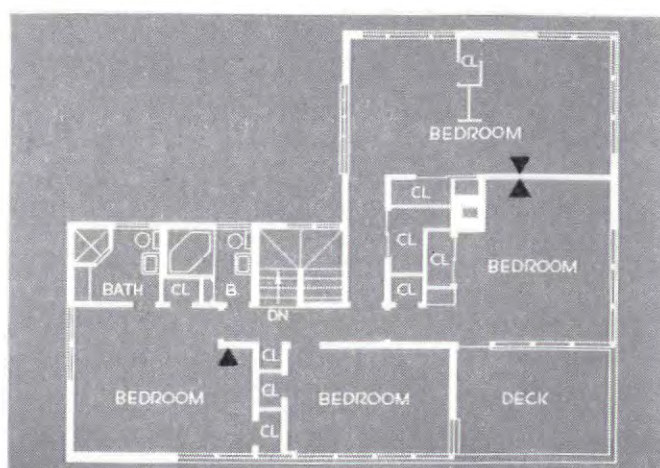
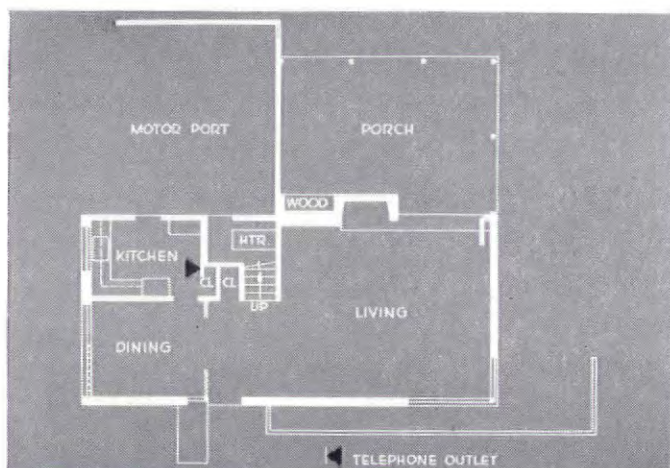
Today good building practice calls for built-in telephone raceways. They assure the owner against exposed telephone wires on walls and woodwork. They provide him with *planned* telephone facilities.

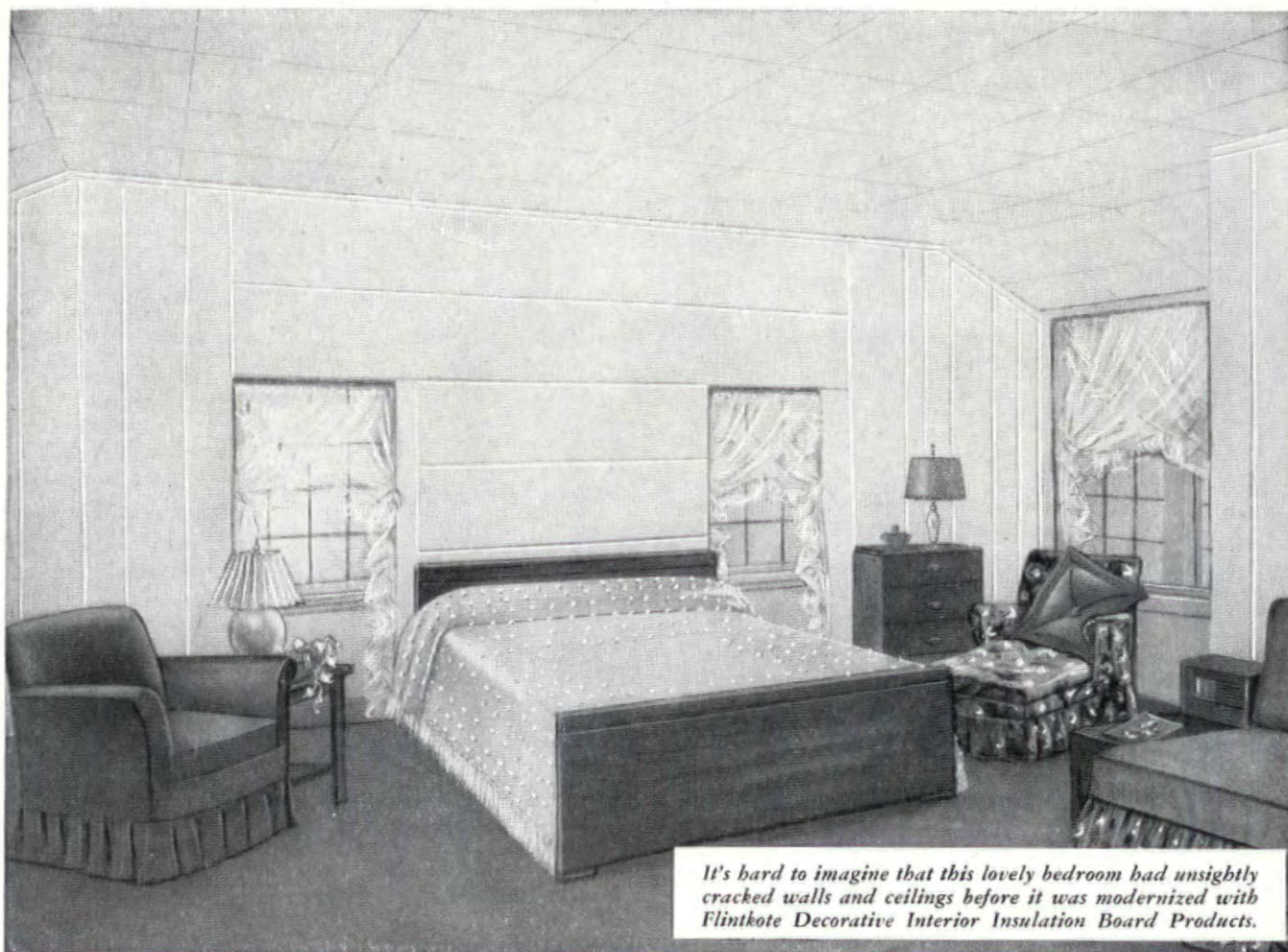
Raceways are easy and inexpensive to install during construction. A few short pieces of pipe or tubing will carry the wires within

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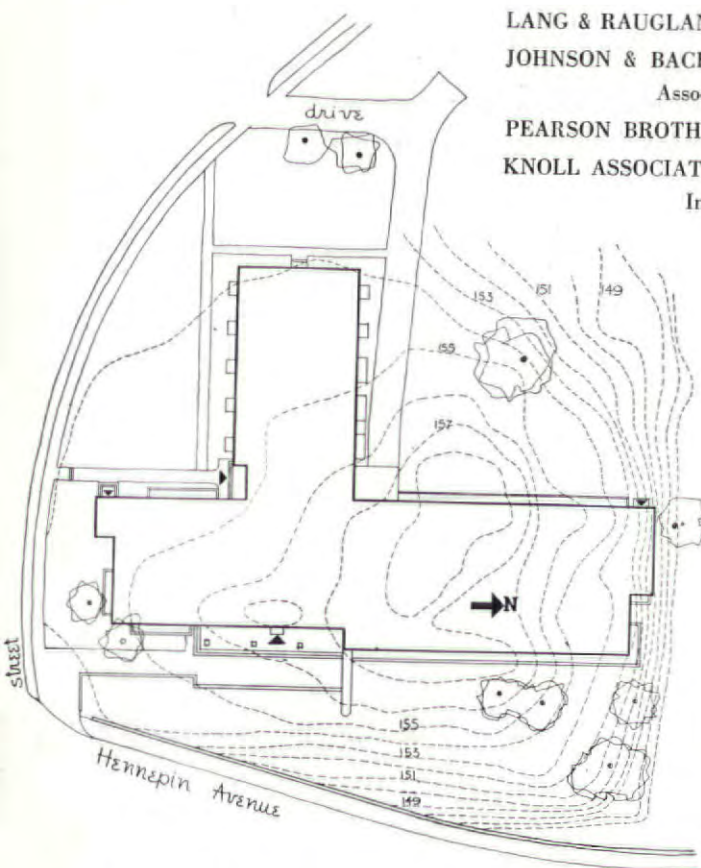
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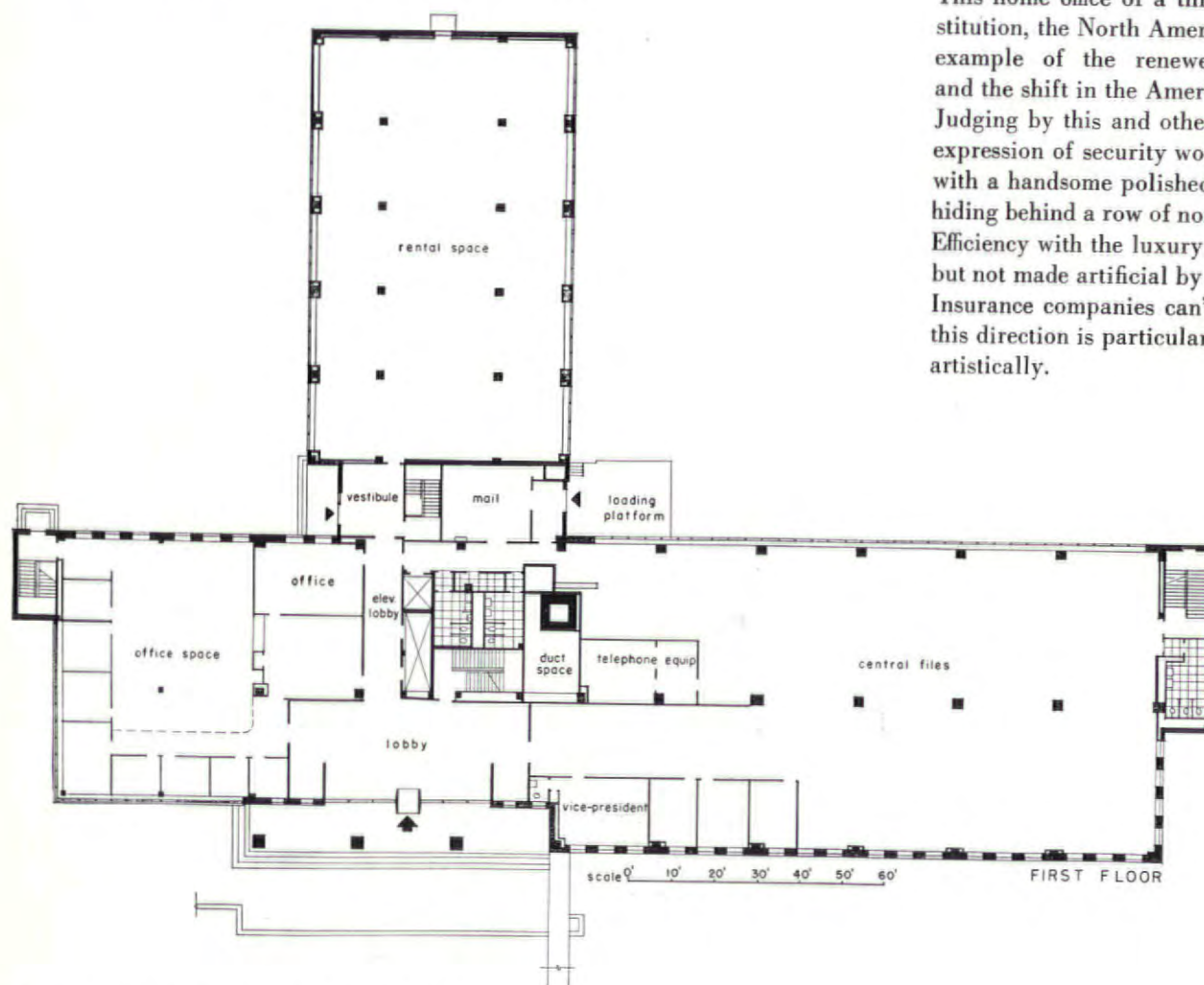


OFFICE BUILDING — North American Life and Casualty Company makes a

LANG & RAUGLAND, Architects and Engineers
JOHNSON & BACKSTROM,
Associate Architects and Engineers
PEARSON BROTHERS, General Contractors
KNOLL ASSOCIATES,
Interior Design and Furnishings



SET BACK ON LANDSCAPED PLOT, THE NEW BUILDING FACES A STREET WHERE 125,000 PASS EACH DAY



The home office building of an insurance company is usually one of its large investments. It should stand also as a symbol of the trust, the faith, and the earned increment which are three necessary ingredients for success in the elaborate structure of modern insurance.

How to symbolize this security architecturally has been an interesting problem all through the development of American architecture. For a long time banks, insurance companies, and other financial institutions looked to old age for impressiveness. Our financial tycoons pondered percentages in Greek temples, as a rule, and still do. (Wall Street remains a very religious area, architecturally.) Metropolitan Life, of course, has favored Gothic in the past and there have been a number of investing companies who turned to early New England architectural styles for a traditional aura of economy. But in the persistent quest of money-men and local and federal governing bodies for symbolism in architecture, most have seemed to prefer erecting massive limestone walls with an archaic Greek accent around their counting rooms and legislative chambers. By what may or may not have been coincidence, the decline of this sort of monumentality was beginning about the time in the late twenties when a good many of the financial temples were given a severe shaking. Between that time and the end of World War II there was relatively little building of financial headquarters. It wasn't necessary.

It is interesting to note now that building for financial institutions is again increasing, and it is interesting also to note the kind of symbolic structures which are going up. This home office of a thriving, relatively new insurance institution, the North American Life & Casualty Co., is another example of the renewed vigor of investing companies and the shift in the American esthetic expression of security. Judging by this and other recent examples, the new esthetic expression of security would seem to be efficiency. Efficiency with a handsome polished granite veneer, it is true—but not hiding behind a row of non-load-bearing Corinthian columns. Efficiency with the luxury and elegance of fine furnishings—but not made artificial by furniture of the past, however fine. Insurance companies can't be wrong, and their optimism in this direction is particularly heartening, both financially and artistically.

capital investment in Minneapolis

All photos by Photography Inc.



POLISHED GRANITE FACING ADORNS FIRST FLOOR FACADE

SPACIOUS, SIMPLY DETAILED ENTRANCE LOBBY FACING STREET IS GRACED BY SET OF MIES VAN DER ROHE BARCELONA CHAIRS



Confident of future growth, this company built a home outside now, with plans to add even more floors

At present much of this building, including the entire second story, is leased to outside firms, but if North American's recent history of expansion continues as expected, the company will double its number of employees (now 250) in the next 10 years and probably will have to pile additional stories on the strong frame. Footings and structure are built to take two additional floors on the main structure and five additional on the rear.

Main planning problem in an insurance layout is to have open space for the forests of files required to keep track of policies and policy holders. The first floor fills that need for the company today, with its large through-building central file room. On the fourth floor are administrative offices, an open area for agency and group departments, and rental space. Private offices there of the more important administrators have a panoramic view of Minneapolis unsurpassed in the city, overlooking Loring Park, several prominent churches, and the nearby Walker Art Center. On clear days the view includes the Minnesota State Capitol in St. Paul, 15 miles off. Offices have flush paneling at one end, plaster on the other, and corrugated structural glass at the corridor side; they are paneled in walnut, cherry, white oak, English oak, and mahogany.

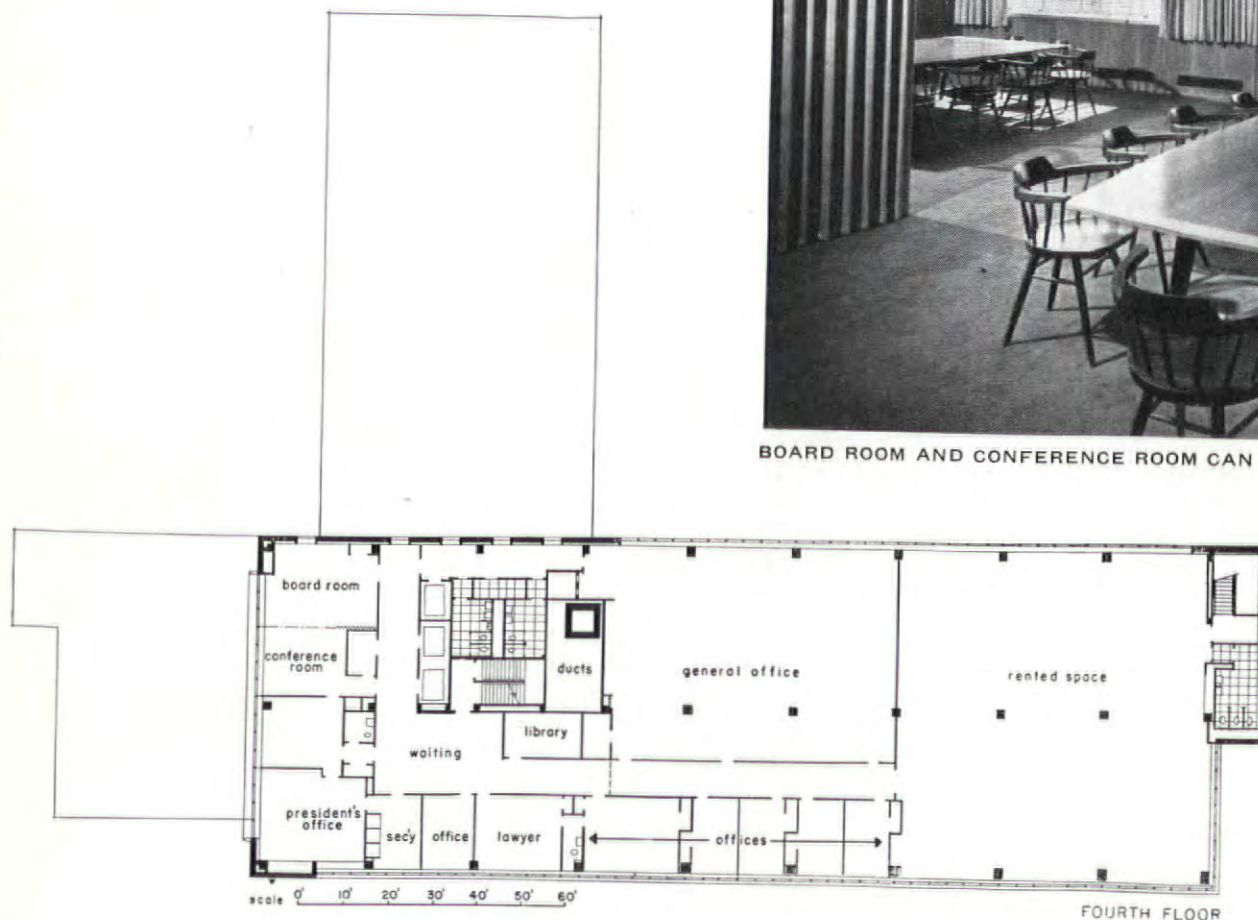
Offices and reception and recreational areas are greatly enhanced by the furniture, a varied selection of good pieces by contemporary designers. The wisdom of putting such selection in the hands of specialists is shown here.



PANELING, WINDOWS AND FURNITURE DISTINGUISH PRESIDENT'S OFFICE

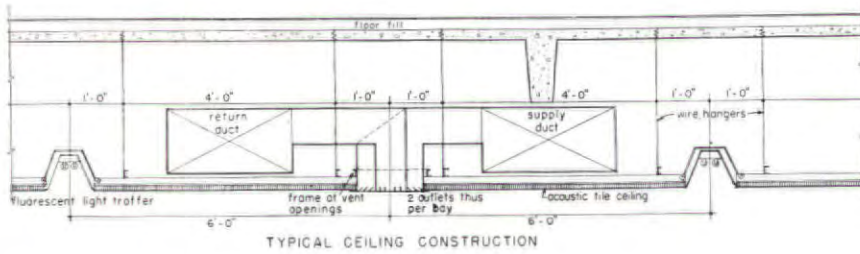


BOARD ROOM AND CONFERENCE ROOM CAN BE UNIFIED BY FOLDING WALL





EACH FLOOR HAS A SMALL RECEPTION AREA
EXTENDING ATMOSPHERE OF THE MAIN LOBBY



COOL AND WARM AIR ARE SENT INTO ROOMS THROUGH CEILING
OUTLETS; CONVECTORS AT WINDOWS SUPPLEMENT AIR HEATING



Large lounges and cafeteria, well furnished, show how space as well as materials were specified for comfort

Services and employee facilities, with a good-sized cafeteria and auditorium, occupy the basement floor. These two areas are separated by folding walls, which nestle into frames built around the intervening columns when the areas are to be used as one. The auditorium is used for training salesmen, and holding meetings, and recreation programs. In the cafeteria employees are served lunches at the token rate of a dollar per month, and here they also can drink coffee during their 15 minute morning and afternoon rest periods. A private dining room sits on the other side of the kitchen from the cafeteria; there is another separate lunch and locker room for maintenance employees, avoiding a mixture of denim and white collars. The multiplicity of lounges is planned to allow non-smokers to avoid the familiar blue haze of off-duty rooms.

Running up through the center of the building is a conveyor system for the vertical circulation of the blood of the insurance operation, file folders. The conveyor is operated by button, depositing the files automatically in plastic receivers on the proper floors.

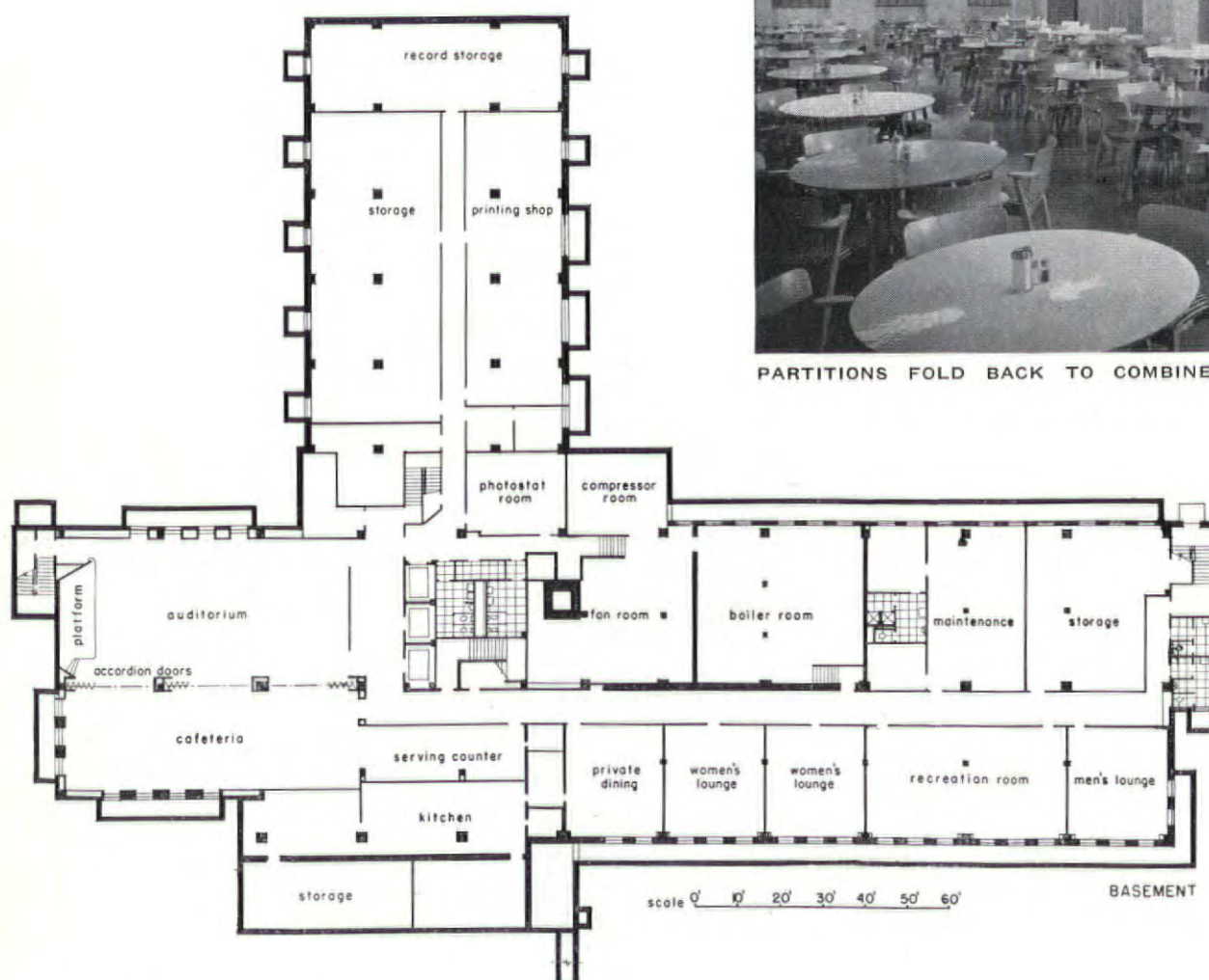
The building is heated by a combination of air conditioning and convectors, with the convectors placed under windows. Specifications were written with comfort, long wear, and easy maintenance as objects overshadowing economy. Total cost, which ran about \$1,900,000, left the company with a fair return on their investment, comparatively low "rent" for their own office space, and a big plus in institutional prestige.



ROOMY AUDITORIUM, ADJOINING THE CAFETERIA, IS FOR LARGE MEETINGS



PARTITIONS FOLD BACK TO COMBINE CAFETERIA AND AUDITORIUM



and long service



BASEMENT RECREATION ROOMS ARE SIMPLE AND SPACIOUS

VIEW OF FACADE FROM LOWER END OF SLOPE; PLOT IS FIVE ACRES AT BUSY CORNER



CONSTRUCTION OUTLINE: Structure: Exterior walls (first story)—polished Carnelian granite, Cold Spring Granite Co. Face brick—Belden Brick Co.; back-up—Chaska common brick, C. H. Klein Brick Co. Furring and interior clay tile—Mason City Brick & Tile Co. Plaster—U. S. Gypsum Co. (Upper stories)—Mankato gray stone, Rich-McFarlane Cut Stone Co. Face brick—Belden Brick Co. Plaster—U. S. Gypsum Co. Interior partitions—clay tile, Mason City Brick & Tile Co. Structural corrugated glass—Mississippi Glass Co. Ceilings—suspended; with acoustical pads, Celotex Co. **ROOFING**—20-year pitch and gravel, Barrett Co., covered with Minwax lead weathercap, Minwax Co. Inc. **SHEET METAL WORK:** Flashing—galvanized iron or sheet aluminum. Ducts—aluminum, Aluminum Co. of America. **INSULATION:** **ROOFS**—1½ in. rigid board, Wood Conversion Co. **SOUND INSULATION**—Celotex Co. **WINDOWS:** Sash—aluminum, Universal Corp. Glass—Pittsburgh Plate Glass Co. **ELEVATORS**—Otis Elevator Co. Hatchway doors—Dahlstrom Metallic Door Co. **FINISH FLOORINGS:** Office spaces and corridors—sheet rubber, Goodyear Tire & Rubber Co. Private offices—carpet. Other rooms—asphalt tile, Tile-Tex Co., terrazzo or quarry tile, B. Mifflin Hood Co. **WALL COVERINGS:** Toilets—ceramic tile, American-Franklin Olean Co. Kitchen—Natco facing tile, National Fireproofing Corp. Lobby—marble, Northwestern Marble Corp. Lobby and private offices—wood paneling, Aaron Carlson Co. **FURNISHINGS**—Knoll Associates, Inc. and Aaron Carlson Co. **DOORS:** Unit type metal door and frames—Trussbilt-Seims Co. Stock doors—Roddiss Lumber & Veneer Co. Special doors—Aaron Carlson Co. Aluminum doors, frames and ornamental aluminum trim—Crown Iron Works Co. Modernfold doors—New Castle Products Co. Glass doors—Herculite, Pittsburgh Plate Glass Co. **HARDWARE**—P. & F. Corbin Co., Oscar C. Rixson Co., Glynn Johnson Co., Stanley Works, Soss Mfg. Co. and Crown Iron Works Co. **PAINTS**—North Star Varnish Co. and Pratt & Lambert. **ELECTRICAL INSTALLATIONS:** Wiring system—iron conduit; Lo-X distribution power and light panels with disconnect switches, Bulldog Electric Co. Underfloor metal duct system—Walker Bros. Switches—Harvey Hubbell, Inc. and Bulldog Electric Co. Fixtures—Century Lighting Co. and Benjamin Electric Mfg. Co. **PLUMBING FIXTURES**—Kohler Co. Drains—Josam Mfg. Co. Soap dispensers—Crane Co. Suspended metal toilet stalls—Sanymetal Products Co. Water pipes—A. M. Byers Co. Hot water storage tank and heater—Patterson Kelley Co. Steam control valve for hot water heater—Fulton Syphon Co. Pump—Bell & Gossett Co. Drinking fountains—Kohler Co. Yard sprinkler boxes—Zurn Mfg. Co. Hose cabinets—W. D. Allen Mfg. Co. **KITCHEN EQUIPMENT**—assembled by K. Aslesen & Co. Dishwasher, etc.—Hobart Mfg. Co. Ranges—Garland Stove Co. Ovens—G. S. Blodgett Co. Water heater—A. O. Smith Corp. Walk-in cooler—United Refrigerator Co. Compressors—Servel, Inc. **HEATING AND AIR CONDITIONING:** Air conditioning system is used to ventilate in winter and cool in summer. Fans—Buffalo Fan Co. Coils—Trane Co. Humidified (pan type)—Buffalo Fan Co. Filters—American Air Filter Co. Compressors and pumps—Worthington Pump & Machinery Co. Cooling tower—Marley Co. Motors for fans—Louis Allis Mfg. Co. Aerofuse outlets—Tuttle & Bailey. Ducts—Aluminum Co. of America. Pneumatic controls—Minneapolis-Honeywell Regulator Co. Boilers—Cleaver-Brooks. Webster aluminum fin radiation with convector valves—Warren Webster Co. Standard recessed type convectors—Modine Mfg. Co. Thermostats—Minneapolis-Honeywell Regulator Co. Valves—Stockham Valve Co., Crane Co. and Warren Webster Co. Vacuum pump—Nash Engineering Co. **SPECIAL EQUIPMENT:** Mail distribution—Lamson vertical conveyor, Lamson Corp. Incinerator—Joseph Goder Co. Venetian blinds—J. K. Heymer Co. Conveyor shaft openings—Richmond Fireproof Door Co.

RESEARCH LABORATORY

Demand for oil grows daily while supply of high grade crudes is on the wane. New project expands facilities for basic research

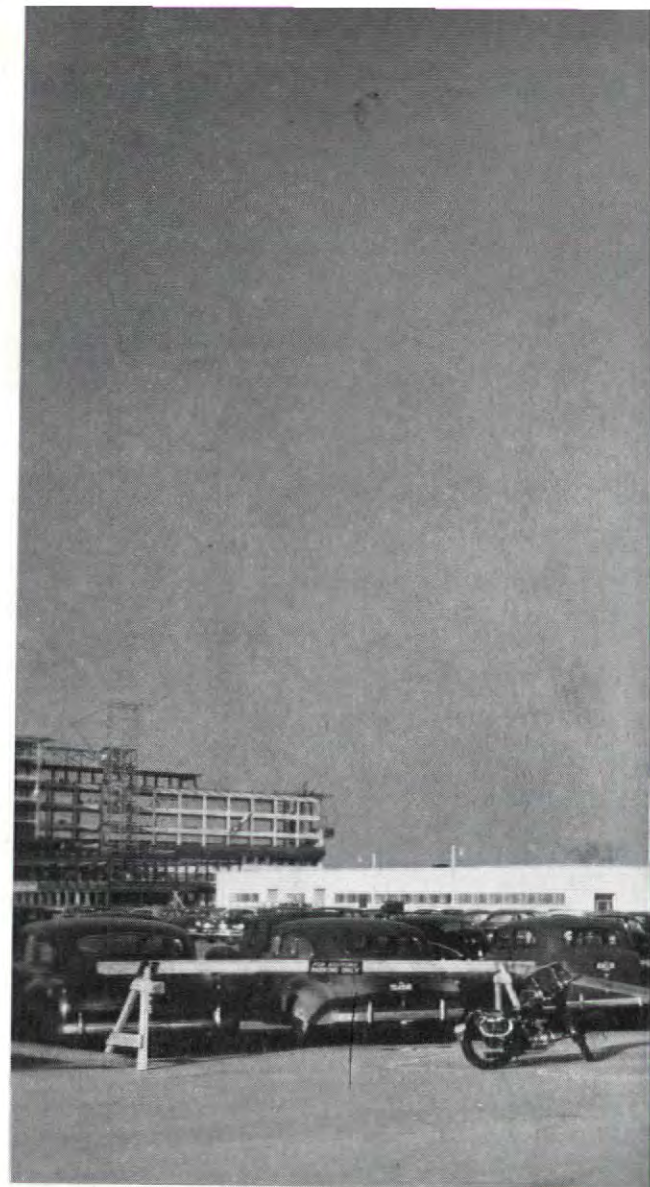
HOLABIRD & ROOT & BURGEE AND ASSOCIATES, Architects

GUST K. NEWBERG CONSTRUCTION CO., General Contractor

Things move so fast in the field of scientific research that extreme flexibility is a prime requisite for any laboratory building program. Standard Oil (Indiana) executives, department heads and scientists spent many hours, over a period of many months, with architects Holabird & Root & Burgee working over preliminary drawings for the Whiting Research Laboratory. The chemists and engineers were particularly hard put to give definite voice to their requirements because in many cases there was no precedent to follow; no building of a like nature ever had been built before.

Research in the main laboratory building is almost entirely of the basic or exploratory type. Subjects include new separation methods; chemicals from petroleum; small-scale work on hydrocarbon reaction; basic work on hydrocarbon properties; and studies of new analytical methods. In addition to the main laboratory there are three process laboratory buildings and a building for research in grease, insecticides, fungicides and other specialties. One process laboratory is used for pilot-scale experimentation on the conversion of raw materials into chemical products. A second is used for catalyst-development and hydrocarbon synthesis work. The third is for distillation and for other general process work.

Exteriors of all buildings are of buff face brick with design features accented by gray Indiana limestone and purple face brick. M. T. Carpenter, Executive Director of Research and T. F. Doll, Head Engineer of the Development Department were among Standard Oil personnel who were particularly active in working on the building with the architects.

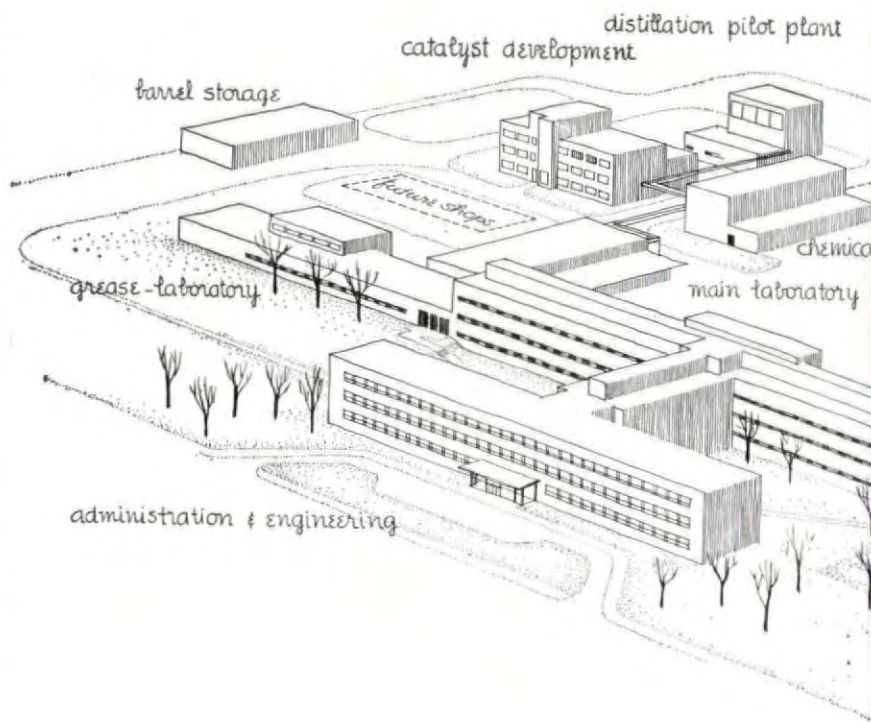


LARGE PARKING AREA IS BEHIND MAIN BUILDING

BRIDGES CARRY UTILITY PIPING SYSTEM TO ALL MAJOR BUILDINGS

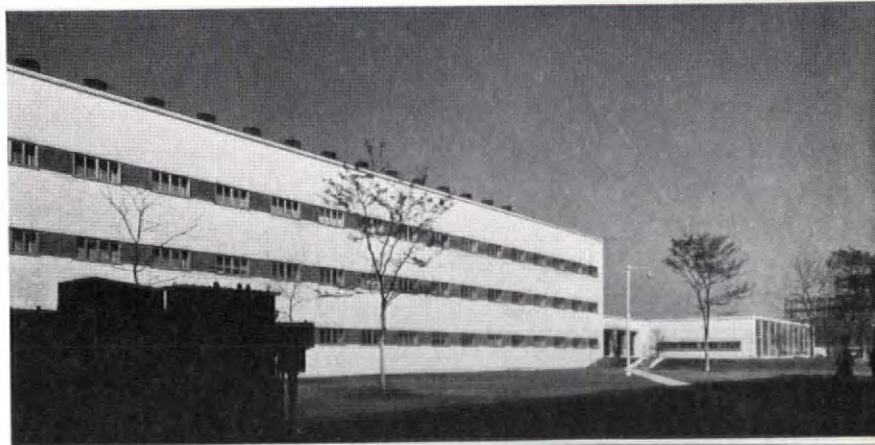
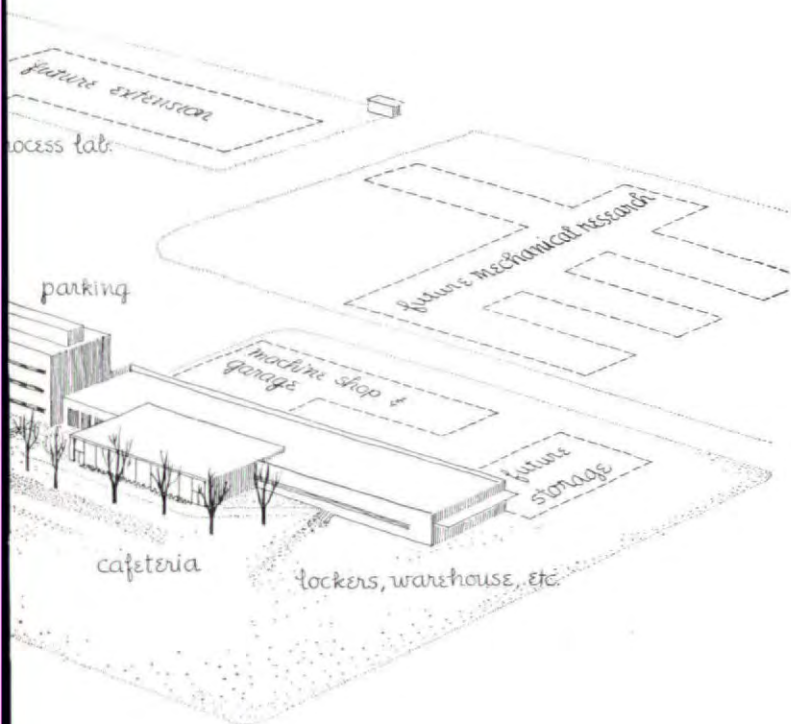


All photos by Hedrich-Blessing



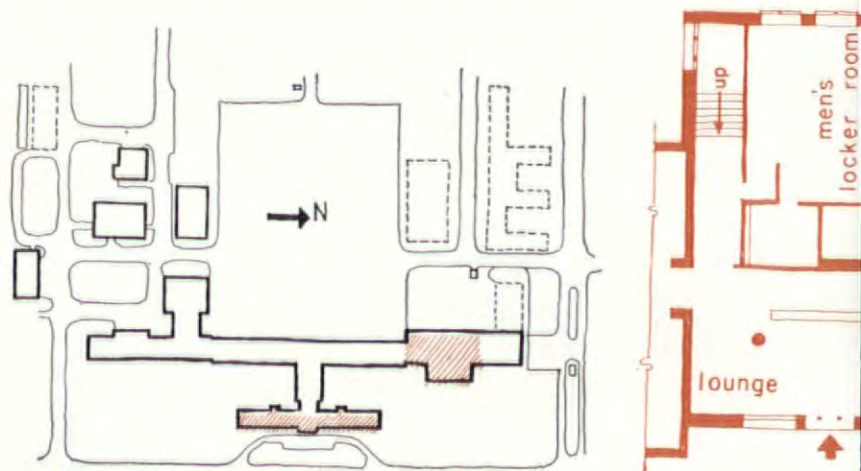


PROJECT EMPLOYS OVER 1,000 SCIENTISTS AND OTHER WORKERS. COURT SEPARATES LABORATORIES AND ADMINISTRATION BUILDING

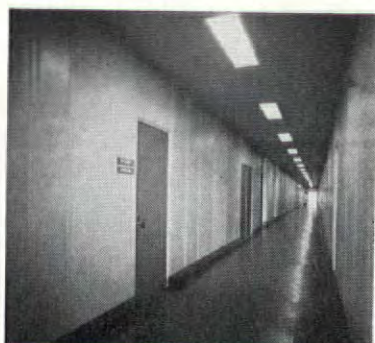


Special facilities in Whiting Research Center include breeding rooms for flies, cockroaches and greenhouse

Cold-rooms, hot-rooms, and fume hoods were among special requirements in the laboratory buildings. One of the cold-rooms provided goes down to minus 70°F. to permit exploration of dewaxing techniques and to investigate the behavior of airplane lubricants and other materials that may be forced to operate at extremely low temperatures. Other cold- and hot-room facilities are conveniently placed throughout the laboratories. The architects are particularly pleased with the solution to the fume hood problem. Exhaust fans are located in a monitor space above the third floor of the main laboratory building; the space also contains elevator motors as well as storage space for spare wall panels and doors. The site formerly was a swamp; part of the land, in fact, was under water. To avoid expensive waterproofing, basements are omitted and 6,400 sq. ft. of warehouse space is included in the cafeteria building. Future expansion will double this area. The administration building and main laboratory building, however, include small basement galleries above the high water line. These areas include all distribution piping and laboratory utilities and air conditioning equipment.



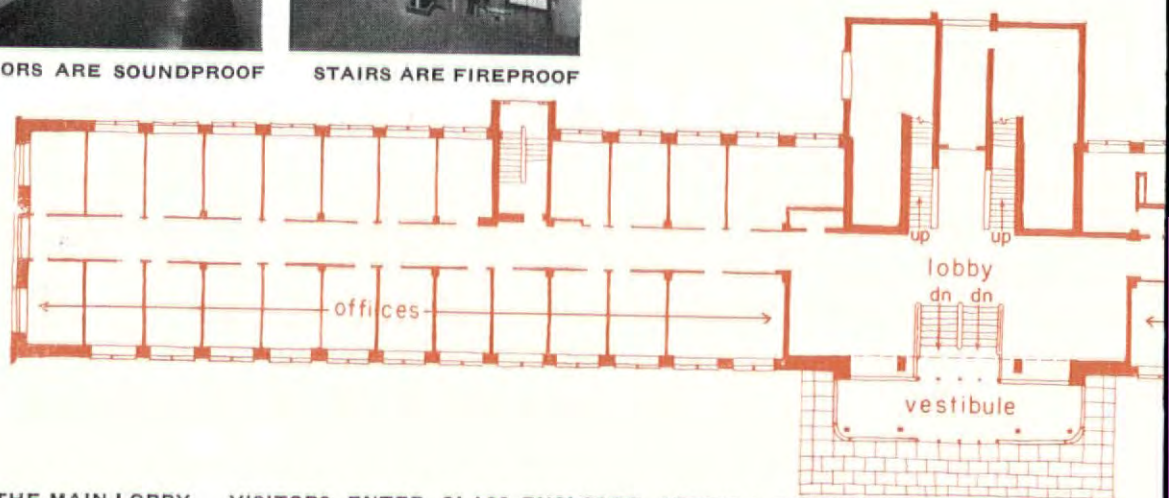
OFFICE AREA IS OPEN AND LIGHT



CORRIDORS ARE SOUNDPROOF



STAIRS ARE FIREPROOF

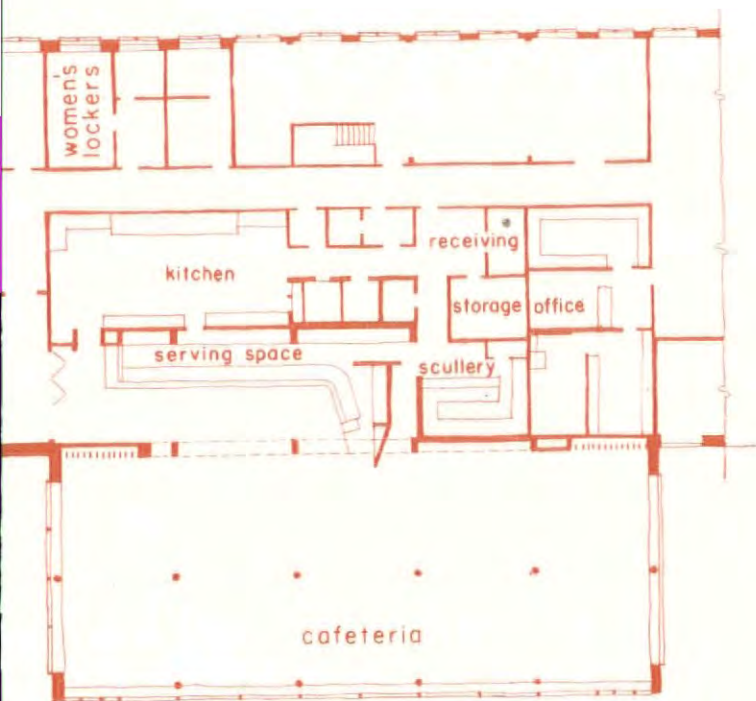


TRAVERTINE MARBLE IS USED FOR WALLS IN THE MAIN LOBBY

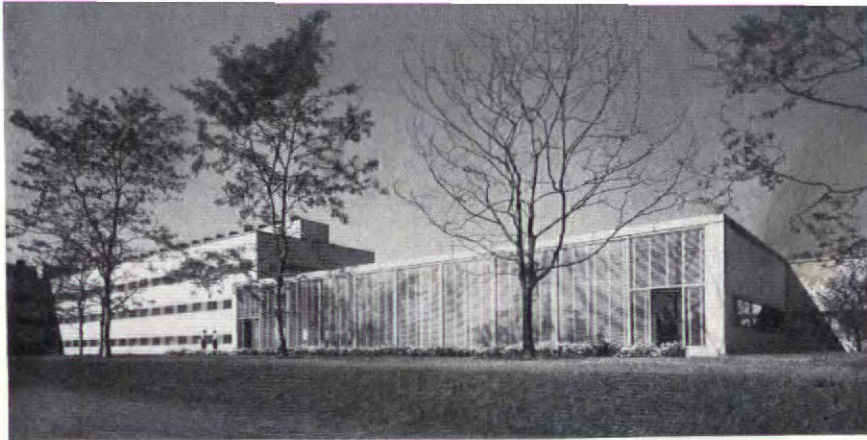
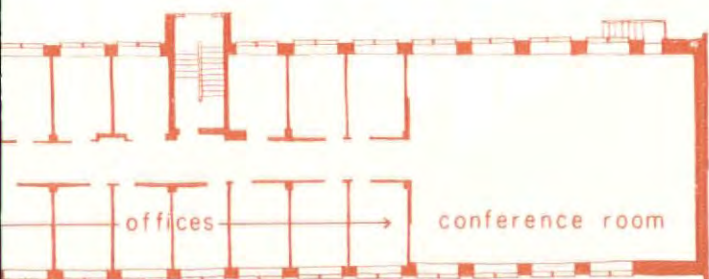
VISITORS ENTER GLASS-ENCLOSED PORTICO OF THE OFFICE BUILDING



for cultivating useful plants, weeds



scale 0' 10' 20' 40' 60' 80'



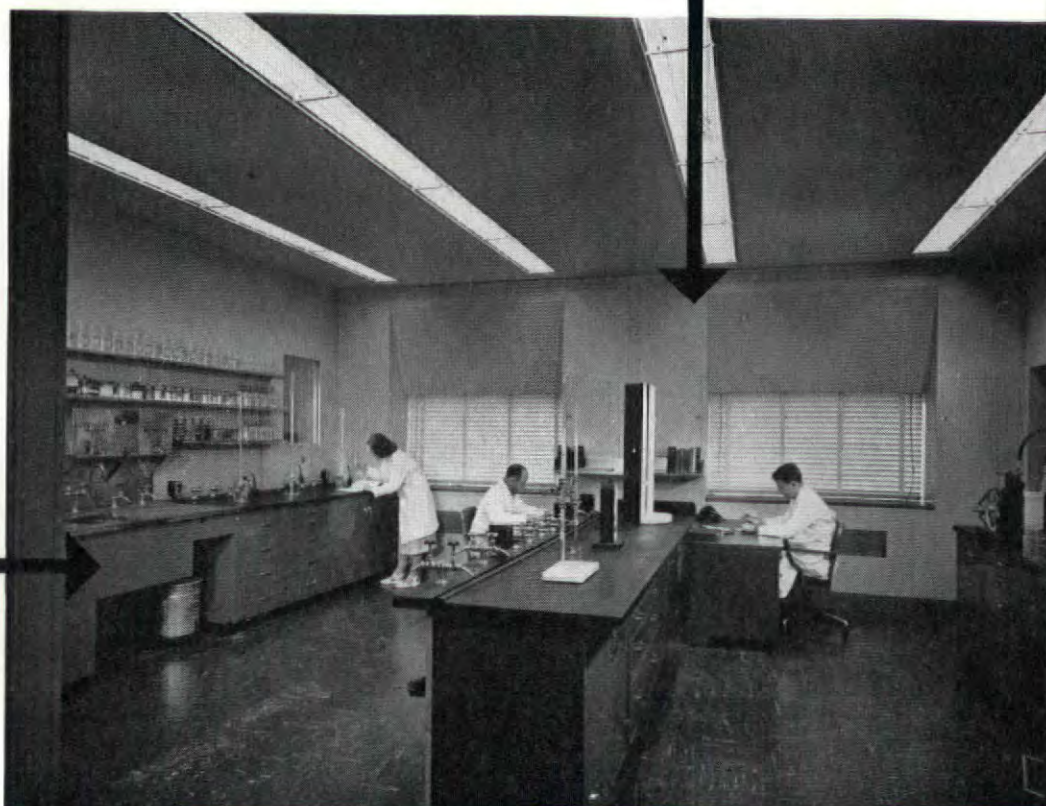
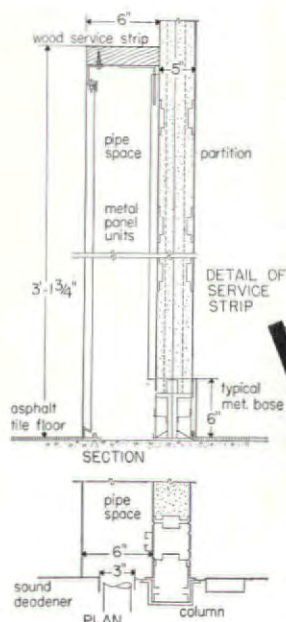
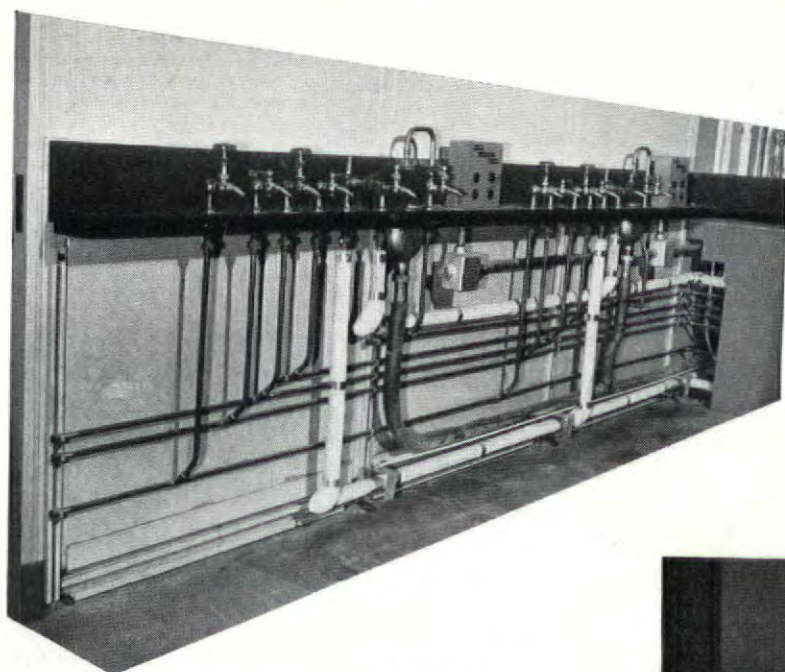
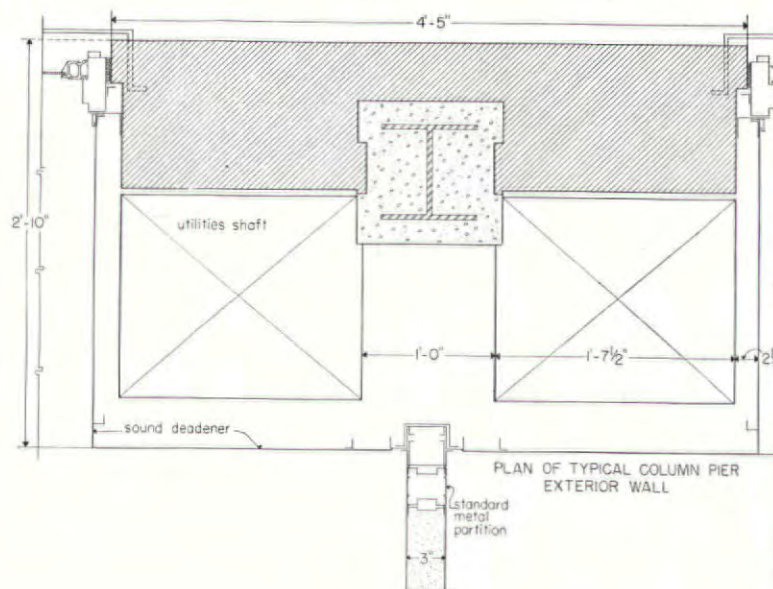
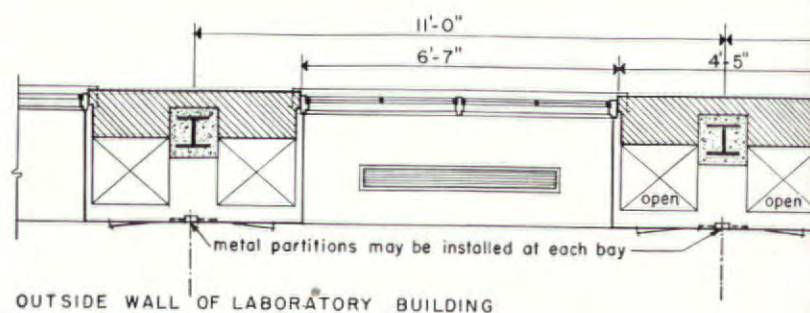
LOOKING SOUTH TOWARD CAFETERIA AND MAIN LABORATORY BUILDING

ATTRACTIVE CAFETERIA WILL SEAT 240 AT A TIME WITHOUT CROWDING

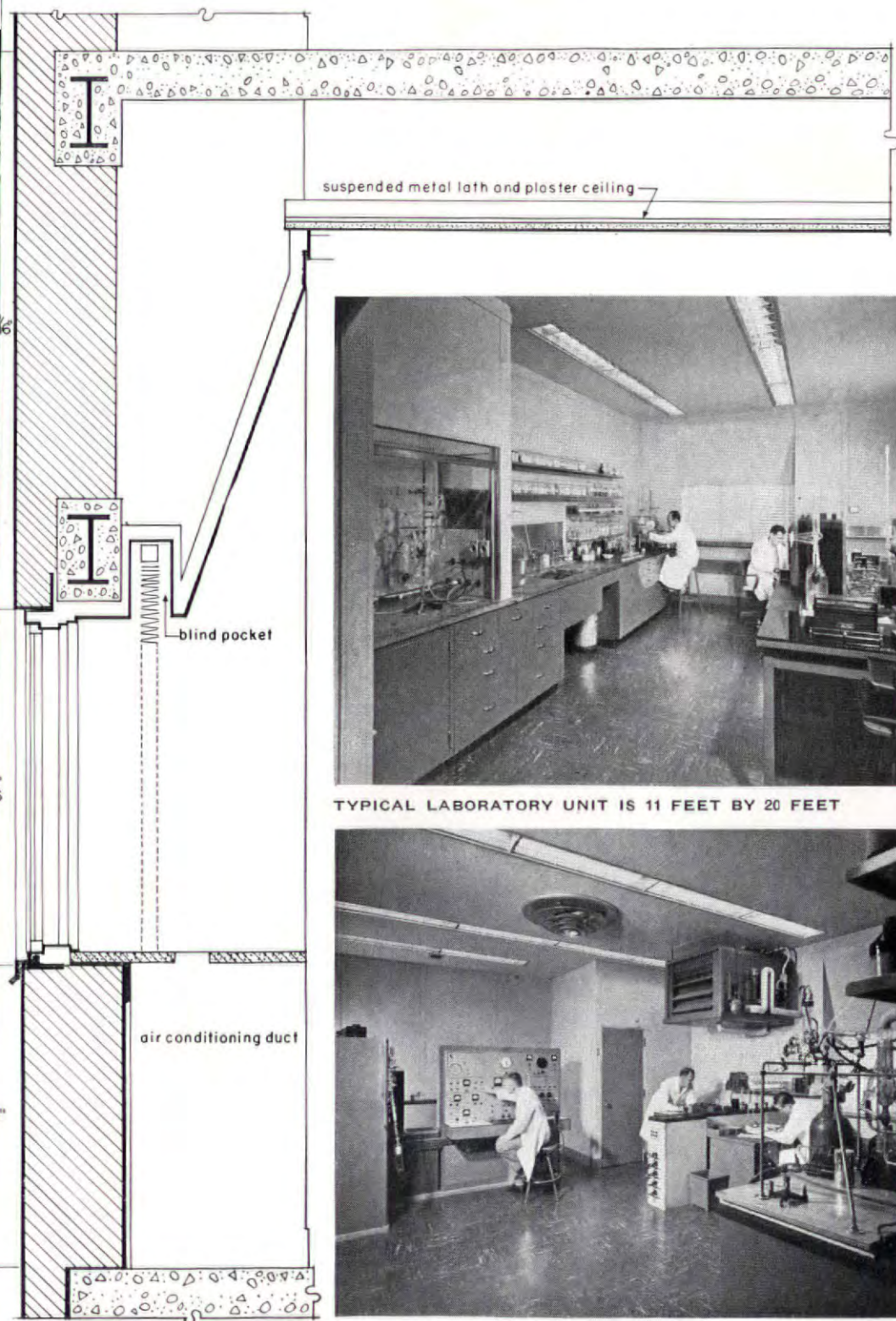
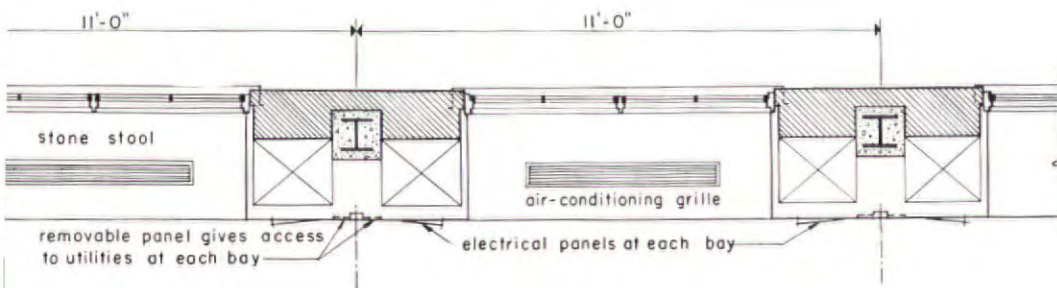


Specially designed prefabricated partitions, modularly placed utility lines give Standard Oil research project

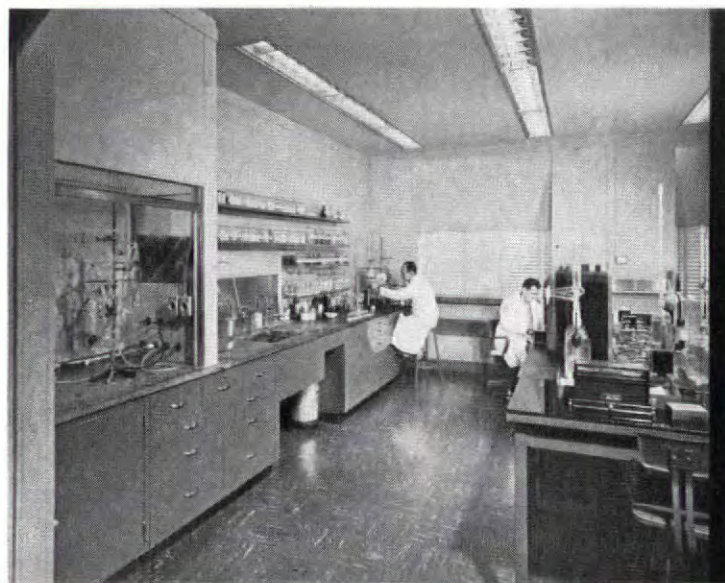
Chemical laboratories always are beset by the problem of providing bench tops that do not conduct heat too fast and are relatively "soft." Standard Oil's Whiting Research Laboratories are provided with carbonized birch rather than the fairly standard soapstone bench tops because these will provide a "soft" surface on which flasks and beakers can be set down without undue danger of cracking. In addition, carbonized birch is inexpensive and may be replaced rather easily. Most chemicals and apparatus will be stored below bench level but movable stainless steel reagent shelves also are provided on partition walls. Great spatial flexibility in laboratories is possible. Conventional laboratory utilities—water, gas, steam, electricity, compressed air, vacuum and drain—are available every 11 feet the entire length of the 453-ft. laboratory building. The corridor is off center so that single units are either 11 x 16 feet or 11 x 20 feet. This arrangement provides a number of small spaces suitable for offices or for laboratories that do not require extensive equipment on one side of the main corridor. A typical laboratory is made up of two 11-foot units for use by two chemists. Cross-run partitions, however, are movable. This means that offices and laboratories can be made any multiple of 11 feet in width. Fingertip operating escape hatches are furnished in the standard partition units so when an emergency arises, personnel has quick exit to the adjoining laboratory through a drop panel escape hatch.



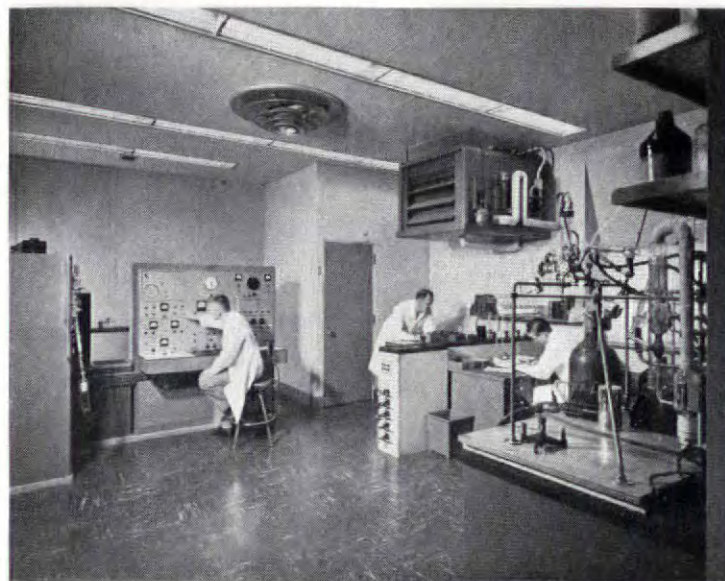
most up-to-date flexible space



WALL SECTION



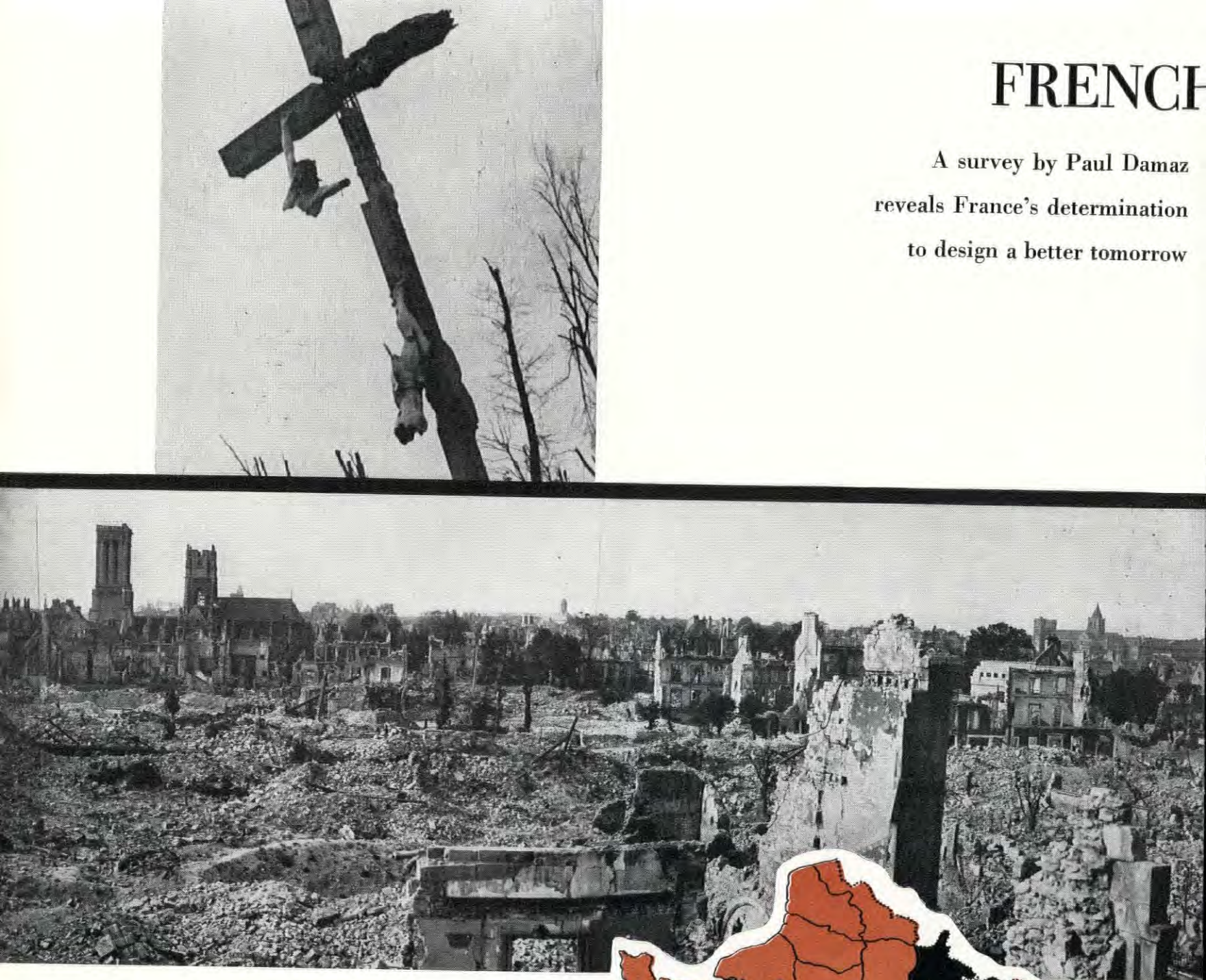
TYPICAL LABORATORY UNIT IS 11 FEET BY 20 FEET



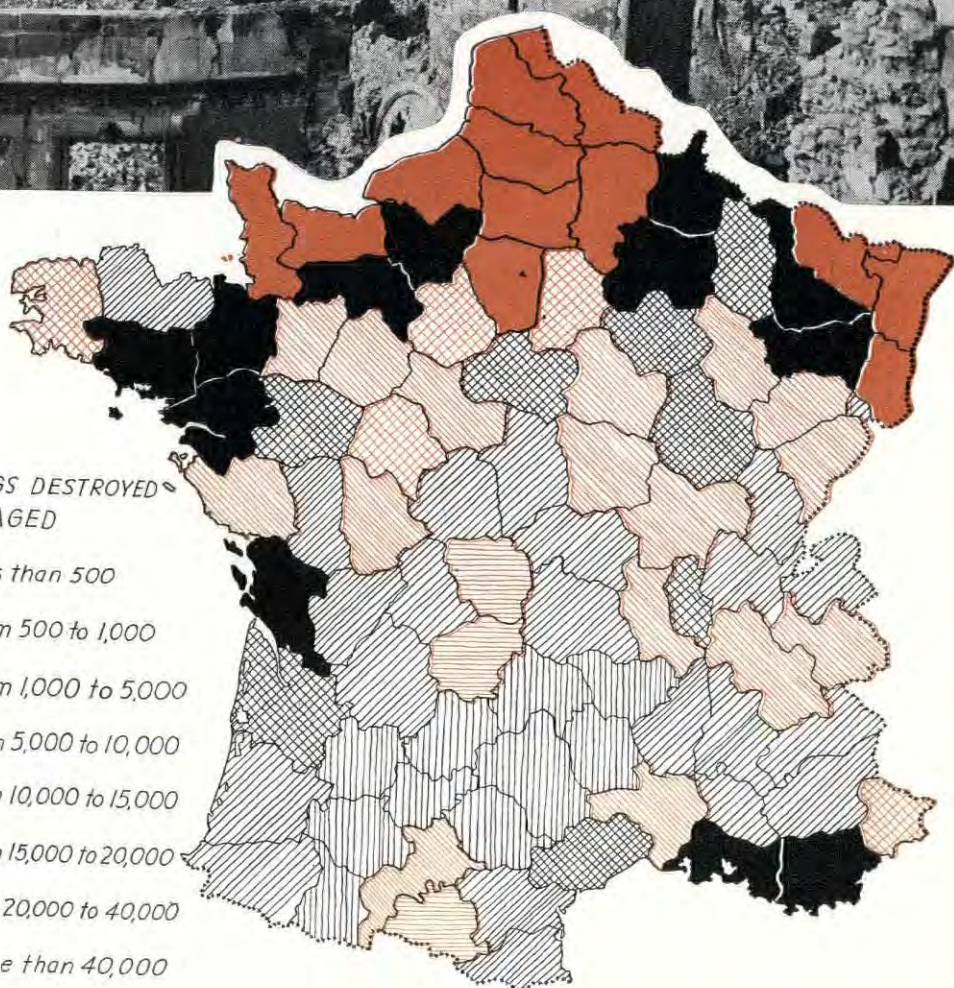
CONSTRUCTION OUTLINE: Foundations—reinforced concrete. Waterproofing—Korite, Standard Oil Co. **STRUCTURAL EQUIPMENT:** Marble, granite and various stone materials—Standard Mosaic Tile Co., Peerling-Sheddy Marble Co., Cold Spring Granite Co., American Blue Stone Co., Wisconsin Lannon Stone Co. and The Indian Hill Stone Co. Concrete fill—Waylite Co. Cement—Universal Atlas Co. Metal Partitions—The E. F. Hauserman Co. Wire screen partitions—Western Wire & Iron Works, Inc. Tile—Ludowici-Celadon Co., Claycraft Co. and Robinson Clay Products Co. Brick—Chicago Brick Co. and Bonner-Marshall Brick Co. Structural steel (main building)—Jos. T. Ryerson Co. Floors—concrete slab on non-encased steel beams. Floor hardeners—Dust-on Herundum, Truscon Laboratories. Terrazzo—Illinois Terrazzo Co. **ROOFING:** Johns-Manville Corp. Channel roof slabs—Federal American Cement Tile Co. Roof ventilators—Buck Mfg. Co. Roof and floor drains—Zurn Mfg. Co. **INSULATION:** Fiberglass—Owens-Illinois Glass Co. Celotex—The Celotex Corp. Pipe and block insulation—Johns-Manville Corp. Cold room insulation—Armstrong Cork Co. **WINDOWS:** Sash (aluminum)—General Bronze Corp.; (steel)—J. S. Thorn Co. Sash operators—Muskegon Metal & Mfg. Co. Plate glass and mirrors—Pittsburgh Plate Glass Co. Insulating glass—Libbey-Owens-Ford Glass Co. Glass blocks—Owens-Illinois Glass Co. **ELEVATORS:** Otis Elevator Co. Doors and frames—Security Fire Door Co. **FURNISHINGS:** Laboratory—Browne-Morse Co. DOORS: Hollow metal doors and frames—Niedringhaus, Inc. Metal clad doors—Richards Wilcox Mfg. Co. Rolling Steel doors—J. G. Wilson Corp. Bronze doors and frames—Ellison Bronze Corp. Cold room doors—Frisch Co. **HARDWARE:** Lockwood Hardware Mfg. **ELECTRICAL INSTALLATION:** Wiring system—Westinghouse Electric Co. and Graybar Electric Co. Circuit breakers—General Electric Co. Fixtures (indoor)—Solar Light Mfg. Co., Holophane Co., Graybar Electric Co., Benjamin Electric Co. (Outdoor)—American Concrete Co. Underground tile conduit—Ric-Wil Co. Pressure switches—Mercoid Corp. Motors (induction)—General Electric Co. Recording controllers—Brown Instrument Co. Busway—Westinghouse Electric Co. **PLUMBING FIXTURES:** American Radiator-Standard Sanitary Corp. Showers and valves—Speakman Co. Water closets and valves—Sloan Valve Co. Laboratory faucets—Chicago Faucet Co. Water coolers—Halsey Taylor Co. Metal toilet stalls—The Mills Co. Pipes and fittings—Jos. T. Ryerson Co., National Tube Co., Youngstown Sheet & Tube Co., Duriron Co., Jas. B. Clow, Chase Brass & Copper Co., Walworth Co. **KITCHEN AND CAFETERIA EQUIPMENT:** Alex Janows & Co. **HEATING AND AIR CONDITIONING:** Unit ventilators and heaters—Trane Co., American Blower Co. and Herman Nelson Corp. Centrifugal refrigeration—conduit Weathermaster system—Carrier Corp. Compressors—Ingersoll-Rand Co. Unit air conditions—General Electric Co. Air filters—American Air Filter Co. and Owens-Corning Fiberglas Corp. Air grilles and outlets—Tuttle & Bailey Co. Dehumidifier units—American Blower Corp. Cooling and heating coils—Aerofin Corp. Radiators—Trane Co. and Carrier Corp. Temperature controls, etc.—Minneapolis-Honeywell Regulator Co., Watts Regulator Co. and Moeller Instrument Co. Fans—American Blower Co. Thermostat traps—Sarco Co. Water heater and convectors—Adco, American District Steam Co. **SPECIAL EQUIPMENT:** Cranes—Harnischfeger Corp. Pumps—Nash Engineering Co., Yeomans Bros. Co., Dayton-Dowd and Ingersoll Rand Co. Fence—chain link, Cyclone Fence Div., American Steel & Wire Co. Fire escape stairs—Chicago Ornamental Iron Co. Time recorders—International Business Machines Corp. Motor starters—General Electric Co. and Westinghouse Electric Co.

FRENCH

A survey by Paul Damaz
reveals France's determination
to design a better tomorrow



BUILDINGS DESTROYED
OR DAMAGED



RECONSTRUCTION

"Towns are born, and grow throughout the ages; they deform under the assault of life." These words of Le Corbusier, written in 1945, epitomize the problem which faces French architects and builders today in planning a new architectural look for the devastated regions of the country. It is a platitude—yet in the case of France a brutal truth—that necessity has mothered progress. French buildings have "grown throughout the ages" longer than those of any European nation. In Paris, the average age of apartment buildings is 70 years. Only 1,500,000 houses were built in the country between the two world wars, despite the destruction of 1914-18.

What the erosion of time began, the great assault of the recent war finished. Approximately 2,000,000 people have been made homeless. Bombs irrevocably destroyed one-fifth of French real estate. Two-fifths of that which remains must be replaced because of bad conditions and age. France, cradle of the world's best known town planners but a country with little planning, is at last applying its theories of redevelopment on its own people.

To survey the objectives, problems, and techniques of French planning, The FORUM asked architect Paul Damaz, former editor of France's leading architectural magazine and currently at work in New York on the UN headquarters, to prepare the information which follows. The FORUM believes that this program can be a signal guide for American builders interested in rationalizing the urban development of their own country.

The rapid and haphazard growth of cities, as well as the influence of private property development on the physical plan of a community, are problems common to both the U. S. and France. French reconstruction, for all its urgency, has been a struggle to overcome historic attitudes—esthetic, social, financial. The debris of outmoded thinking as well as the rubble of bombed out buildings has had to be cleared before work can begin. The obstacles to planning in France will be familiar to architects and builders everywhere. Zoning ordinances based on former land use are so well entrenched in many instances that factories can still be built in the center of the city, and even in some residential neighborhoods. Land speculation on certain proposed reconstruction sites has paralyzed plans while they were still in the blueprint stage. The necessity to consolidate scattered or irregular parcels into integrated units invades the rights of private ownership, which has resulted in compromises with over-all plans. Ruined France, furthermore, will have to be rebuilt with meager resources. The illusion that persisted after World War I—"L'Allemagne payera" (Germany will pay for it)—is realistically absent. Finally, French planners have had to grapple with the question of esthetics and the divergent schools of planning. All in all, a challenging prospect.

Yet France has always been united by challenges. To meet the problems of reconstruction, the French

government has made town and regional planning an institution of the state, in the same order as its departments of education, hygiene or justice. Centrally organized, the project is developed and executed on a local and regional basis. At the national level, the Department of Reconstruction and Town Planning, assisted by the National Committee of Town Planning, undertakes the broad coordination of the planning activities. Working with this Department are a number of auxiliary services, charged with redevelopment (as opposed to reconstruction) projects, and land redistribution. Regional offices are set up for the inspection of master plans (for communities) and building plans (for individual structures). This service also supervises the local projects, and carries out the redistribution of land where necessary.

Every community that has suffered substantial war damage is required to develop its own master plan, or Reconstruction Project. Moreover, all resort towns and every community with more than 10,000 population is responsible for a Redevelopment Project. Preliminary plans in all cases must be approved by the municipal council, the regional commission, and the prefect; in cities exceeding 10,000 population, plans must be passed by the Department of Reconstruction and Planning. Because of lack of funds, priority is given to reconstruction, rather than redevelopment, projects.

THE PLANNERS

M. Damaz describes French planning as "the collective effort of a democratic country." France today, he says, "possesses a complete organization capable of directing the planning of its country. It already has a staff and a tool that many countries are still trying to organize.

"The men who have been entrusted with replanning the regions, towns and villages of France are in principle nominated by the mayor of the respective communities. The government has the right to guide the municipalities in their choice, and in practice most of the planners are proposed by the Department of Reconstruction and Town Planning.

"The planners who were known before the war, with the exception of a few 'revolutionaries,' condemned and boycotted by the overwhelming majority of the *Prix de Rome*s, were old architects who had specialized in *Urbanisme*, the French name for town planning. But they had remained at the stage of "urban esthetics" and landscape planning, and have no important place in today's reconstruction of France. On the other hand, the 'revolutionaries,' even though still opposed by the old school, are gradually being accepted by the authorities, and several of their projects have already been approved.

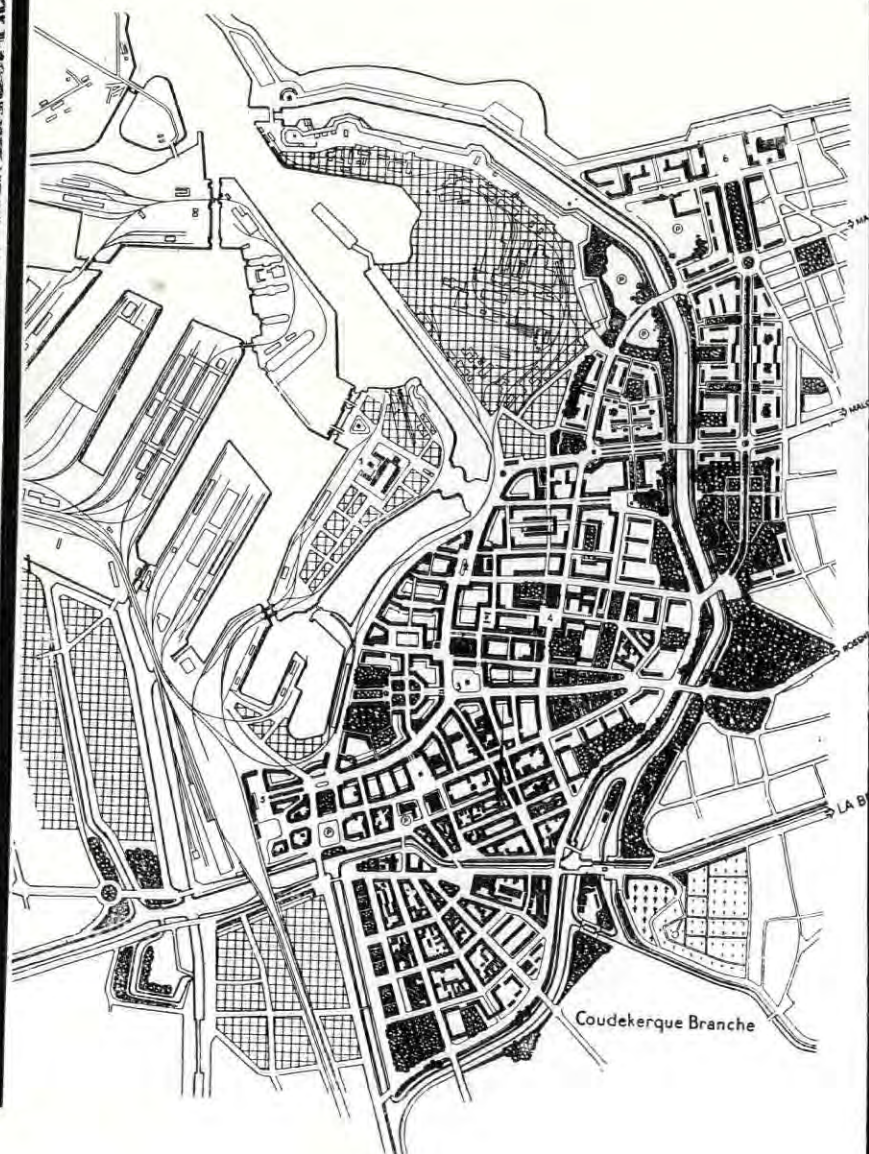
"A number of the new town planners graduated from the *Institut d'Urbanisme* of the University of Paris. This school was founded only a few years before the war, and its pupils have had no oppor-



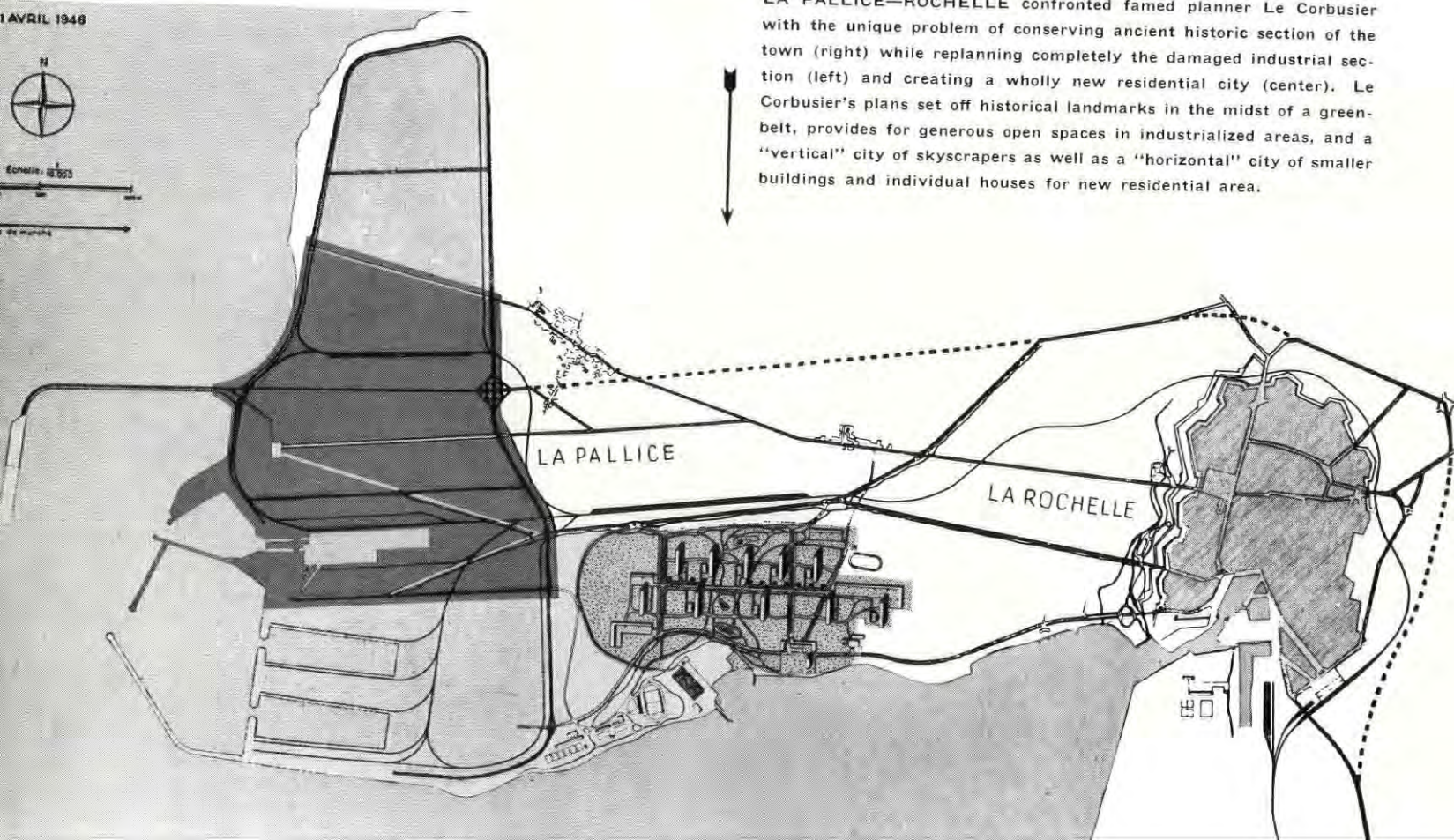
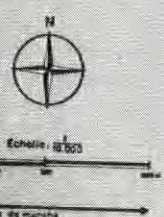
RUINED CAEN is typical of many heavily damaged French cities that are being replanned as well as rebuilt. Architect Jacques Lebreton's plan calls for a continuous parkway system around the city, merging with the open countryside; new circulation arteries for interior traffic; centrally located apartment buildings, oriented independently of main streets; and three new residential neighbors for individual and attached houses in the suburbs.



DUNKERQUE, port city on the North Sea, suffered heavily in the invasion. Devastated sections are shown by shaded areas (above). Reconstruction plans by Theo LeVeau (right) illustrates movement among French planners to open up hitherto crowded sections by liberal use of parks, malls, and sports areas. Once unsightly canal (at right of city) will be almost completely bordered by green spaces. Wide, freely articulated thoroughfares in central section of the new Dunkerque replace narrow, winding streets.



1 AVRIL 1948



LA PALLICE—ROCHELLE confronted famed planner Le Corbusier with the unique problem of conserving ancient historic section of the town (right) while replanning completely the damaged industrial section (left) and creating a wholly new residential city (center). Le Corbusier's plans set off historical landmarks in the midst of a green-belt, provides for generous open spaces in industrialized areas, and a "vertical" city of skyscrapers as well as a "horizontal" city of smaller buildings and individual houses for new residential area.

RECONSTRUCTION

tunity to make themselves known. Yet in spite of its old professors and their Beaux Arts approach, this school has produced a number of progressive planners who are making themselves a name in the reconstruction of the country.

"But most of the men responsible for the reconstruction and planning in France have shown interest in town planning only since the war. Because they were famous architects, the government has commissioned them to head the reconstruction of the most famous French cities. This will explain the traditional character, and the errors, in some of the examples that are shown. Town planning is a study too different from architecture and too complex to be improvised; experience in France has proved that a very good architect might fail as a town planner. However, these errors are unavoidable. It is not without risk that a country creates, in a few months, a staff of town planners capable of beginning some 2,000 different projects."

In general, M. Damaz says, the planners follow one of three general schools: 1) that of Le Corbusier, whose disciples, more elastic and compromising than the "master," have succeeded in applying the theories of the *Charte d'Athenes** to several of their reconstruction schemes; 2) the neighborhood unit idea, which stresses the role of the town planner as a sociologist rather than as builder, aims to evaluate the "social topography" of a community, and to redevelop it accordingly; 3) the empiricists, who insist that town planning is not an application of various theories, but that each problem has to be solved individually.

THE PROJECTS

French reconstruction envisages no clean sweep of old forms and methods, but rather a redesign of strategic areas where damage makes a master plan essential. U. S. planners, whatever their regard for French methods and ideas, will recognize in the problems of French reconstruction the image of some of their own cities. M. Damaz divides these problems into zoning, traffic, size of dwelling units, land redistribution, esthetics and finance.

Zoning

French master plans call for the separating of a town's functions into zones—industrial, residential, civic, business, etc. In practice, this principle has encountered great difficulties. In many cases individual property owners are opposed to surrendering—even at fair compensation—profitable enterprises in order to comply with the general scheme. French law makes no provision for mandatory relocation of industry that has not been previously destroyed. Happily, opposition to zoning is not universal among property owners. Consolidation of small parcels

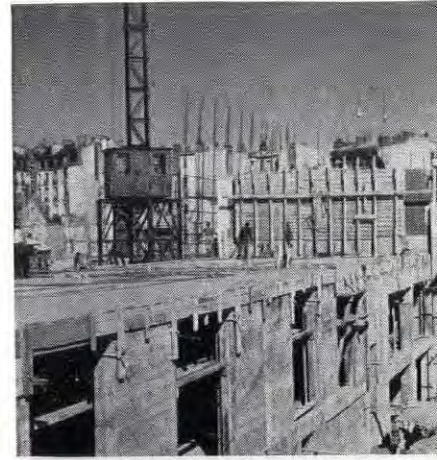
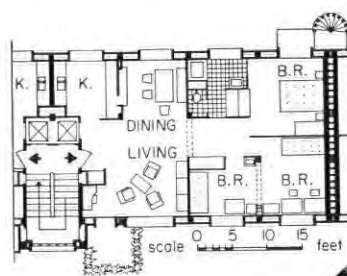
into larger tracts, capable of coordinated development, is taking place in many cities.

Traffic

Easing the traffic flow is a primary consideration, and a problem that has proved to be easiest to solve. Railway stations, frequently located in the heart of the city, have been pushed to the periphery, thus liberating valuable central areas and at the same time facilitating railroad service. Intersections of thoroughfares within the cities have been eliminated by diverting through traffic around, rather than leading it into, urban centers. Heavy traffic necessary to commerce has, wherever possible, been routed along exterior boulevards, avoiding the congested areas. In some towns, where merchants desired store exposure to passing traffic, local arteries have been laid out parallel to the main roads, giving the driver an optional route for shopping purposes. Elimination of the traditional corridor streets—except for the main roads—is widely advocated, and dwellings are grouped inside blocks, independent of the heavily traveled thoroughfares.

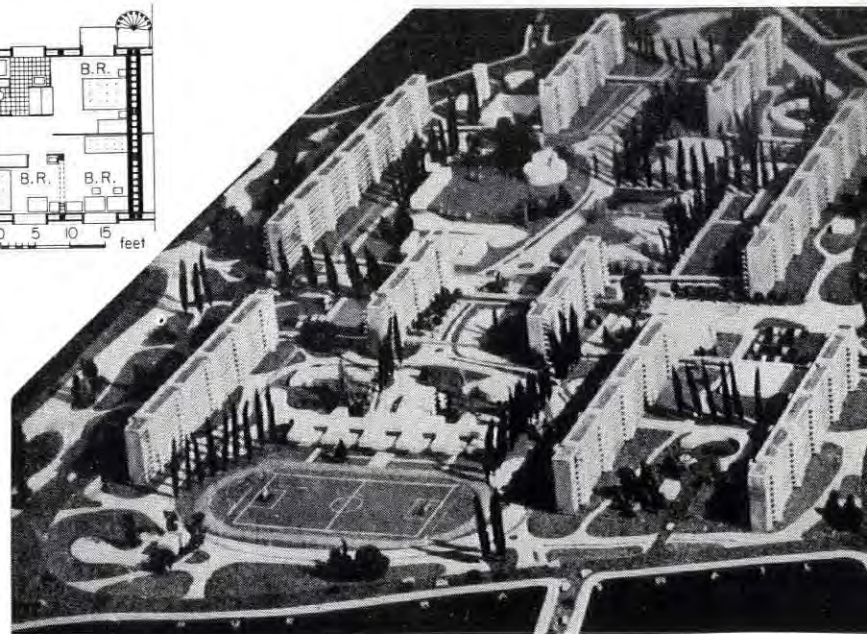
Dwelling size

The leading battle among French planners has always raged around the location and size of the dwelling unit. Le Corbusier's formula for vertical concentrations of people, in large apartment structures surrounded by open fields and gardens, has found many adherents among young planners. His influence is to be seen in the plans for Sotteville, Laon, Bizerte, Mayence, and the towns of the Saar. Here, tall apartment blocks and office buildings rise in the center of the cities, conspicuously detached from factory areas and slums, and bathed in sunlight and air. This does not mean that individual houses have been abandoned: they have merely been relegated to the suburbs. In some cases, as in the plan for St. Denis, a mixture of high and low construction is proposed.

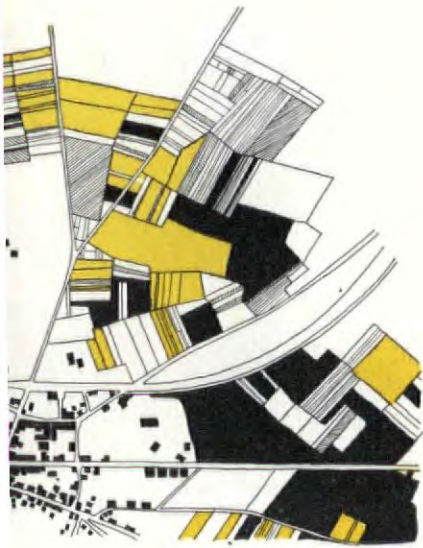


REINFORCED CONCRETE replaces old type masonry in French reconstruction. Scarcity and high cost of materials has slowed many projects. In spite of this, France has plans for 1,615 of its 1,900 damaged cities.

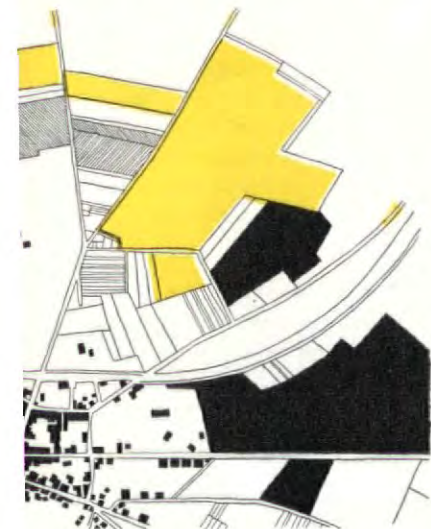
ROUEN shows influence of the Le Corbusier school with its tall multi-dwelling units separated by large areas of parks and playgrounds. Thoroughfares border, but do not invade these residential areas.



* The Athens Charter is a statement of the physical conditions considered essential and beneficial to modern urban life, and a condemnation of conditions regarded as destructive of urban health and happiness, as drawn up by the *Congres Internationaux d'Architecture Moderne* in Athens in 1937.



REDISTRIBUTION of rural property has resulted in larger tracts of land which can be more efficiently managed. In this example the area, before redistribution (above) consisted of 1,409 separate parcels, with an average of 11 parcels for each owner. Reallotment of the area (below) resulted in a reduction to 259 parcels and an average of two parcels for every owner.



Land Redistribution

France is today a country of small rural and urban holdings. Plans for redevelopment have demanded more efficient groupings of land, and the elimination of irregular boundaries which constitute a barrier to proper construction and building hygiene. To avoid dissatisfaction among real estate owners, representatives of this group have been given an active part in carrying out the redistribution. Although the reallotment is suggested by the Department of Reconstruction and Town Planning, the committees of landowners in each community are allowed to approve all changes.

Such a procedure has not only proved complicated, but it has entailed disturbing consequences for modern town planning, since individual reallotment can only be done on a corridor street pattern. As all land must be given back to the owners, moreover, no open spaces can be planned. Individual proprietors may erect buildings according to their own tastes—a factor which raises the cost of construction and precludes esthetic uniformity.

To avoid these obvious drawbacks, a great number of planners and architects have argued for an abandonment of the individual redistribution policy for one of collective reallotment, providing for the withholding of certain lands for open space. Although the proposal has not been officially endorsed by national authorities, the method has been applied in Mauberge with the full cooperation of property owners, tenants, and city officials.

Surprisingly—considering the natural conservatism of the French farmer—the principle of redistribution has made greater progress in the agricultural areas, especially in the north and east. The problem is highlighted by the fact that 70 per cent of the arable land in France consists of farms averaging 21 acres—an area too small for the most efficient mechanical exploitation. Redistribution of much of this property has been done by surveyors under the direction of the Community Commission, an association of local landlords. In realloting the acreage, consideration is given not only to the size of the farm, but also to its shape, orientation, distance to buildings and access to roads.

Esthetics

France is a country rich in historical memories and architectural monuments—and thus a nation divided between its archeologists and “demolishers.” The planners have had to steer a middle course. In most cases, they have adapted the monuments to their plans, clearing the surrounding space to afford a better view, or stressing their importance by opposing a structure of equal mass. Views have been opened toward old churches; historic parts of the towns have been conserved or restored; fortification walls have been put to use as promenades.

Unfortunately, some errors have been committed under the cover of archeology. Proposals have been made to rebuild town sections, for example, in the style of the seventeenth or eighteenth centuries. Cathedrals have been isolated from their surrounding

communities by clearing the square in which they are located of all other structures. Conservation of some ancient sections has been planned without regard for modern traffic conditions and improved methods of sanitation. “These errors,” M. Damaz says, “may be considered exceptions.”

Finance

Reconstruction in France has been hampered by the same inflationary forces that have dogged every aspect of recovery since the war. Urban real estate in particular has risen so greatly in some cities that the acquisition of land to properly replan an area is prohibited: the clearing of dense city blocks, the widening of traffic arteries, and the creation of open spaces can only be done by removing a certain per cent of the property involved from the so-called productive category. Speculators have not hesitated to buy up real estate intended for such purposes. As a result, many plans have had to be drawn on a minimum expenditure basis, sacrificing important elements of design. New construction, moreover, is clearly not productive from the private investor's point of view. Rents are frozen; materials are scarce, and France lacks the foreign currency with which to import them. In this respect, the Marshall plan is the main hope of the government in securing essential products.

However, the picture is not all black. For reconstruction of damaged areas, local governments have assumed all financial responsibility. Funds are usually procured by floating a loan or public subscription, guaranteed and amortized by the municipalities or departments. Encouraged by their success, the government has recently floated a national reconstruction loan. Independently of this, it is also building multi-story dwelling units to be turned over to those made homeless by the war.

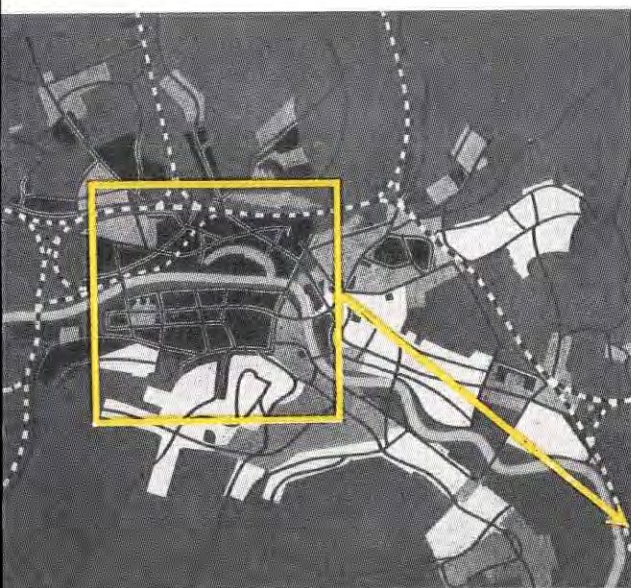
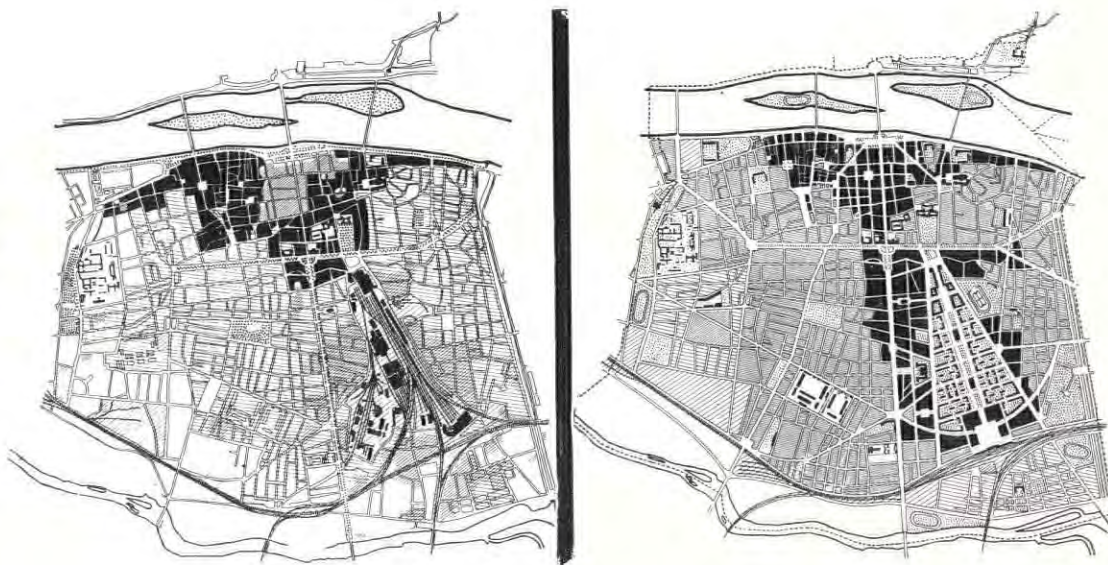
THE RESULTS

Nearly 1,900 communities in France suffered some degree of damage. Of these, 1,615 have begun plans for reconstruction: 500 of these plans have been finally approved. By contrast, plans for redevelopment projects have lagged. Although 3,233 communities have been designated as requiring a master plan, only 310 such projects have been taken under study, and but two adopted. Regional groups (of 12 to 20 local communities) however, have organized a total of 128 planning committees throughout the country, and out of 125 plans under study, eight have been put into operation.

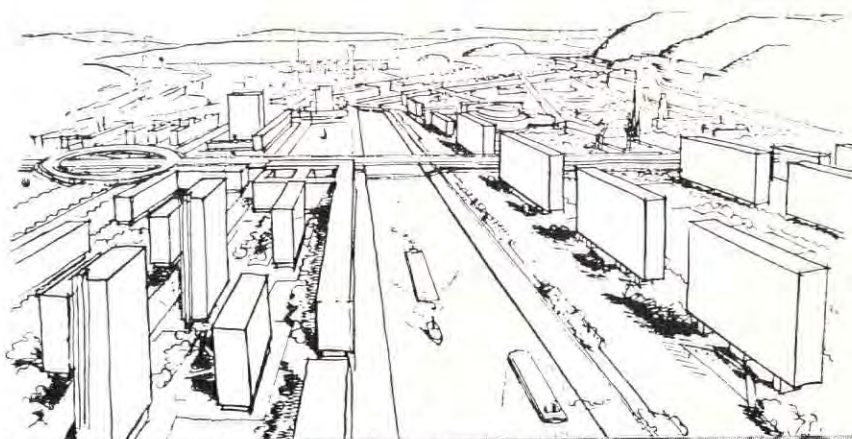
The real measure of progress in French planning cannot be told in statistics alone. It is inherent in the enabling legislation that has been passed, and the hundreds of architects and planners who have begun work. The new France will not be the France of Le Corbusier, the empiricists, or the adepts of the neighborhood: it will be an eclectic France, vital enough to utilize the best of the new schools, yet traditional enough to maintain its taproots. Above all, say the planners, it will be a better France. Back of the visions, the people are at work.

RECONSTRUCTION

TOURS, famous for its landmarks, was also host to extensive railway system (left). Reconstruction plan keeps railroad at the edge of the city and reclaims track and warehouse space for large garden-type residential district. Area will be virtually a suburb in center of the city; business and industrial sections are readily accessible, yet completely separated from new residential area.



SARREBRUCK, 80 percent destroyed during the war, is being replanned by followers of Le Corbusier and adherents of the Athens Charter. Designed as a linear city, with the river as the main axis, Sarrebruck will bear little resemblance to the conglomeration of factories, stores, and houses that characterized it before the war. Plans call for (a) elevation of its flood lands, (b) careful zoning, with industry separated from residential areas; (c) creation of open spaces within the city; (d) the rehousing of the population in three different types of dwellings: 12-story flats for 500 persons each, in the center of the city; neighborhood units at the periphery for individual homes; 8-story flats with a capacity of 100 persons each which will also have shopping facilities. Library, university, cathedral, cultural and civic buildings are all located outside, but near central section of the city.



CINEMA IN NEW YORK

A small neighborhood movie is breaking precedents in design and investment

PATHE CINEMA CORP., Theater Lessee

WARNER-LEEDS, Designers and Associated Architects

EMERY ROTH & SON, Building Architects

RUTHERFORD L. STINARD,

Heating and Ventilating Engineer

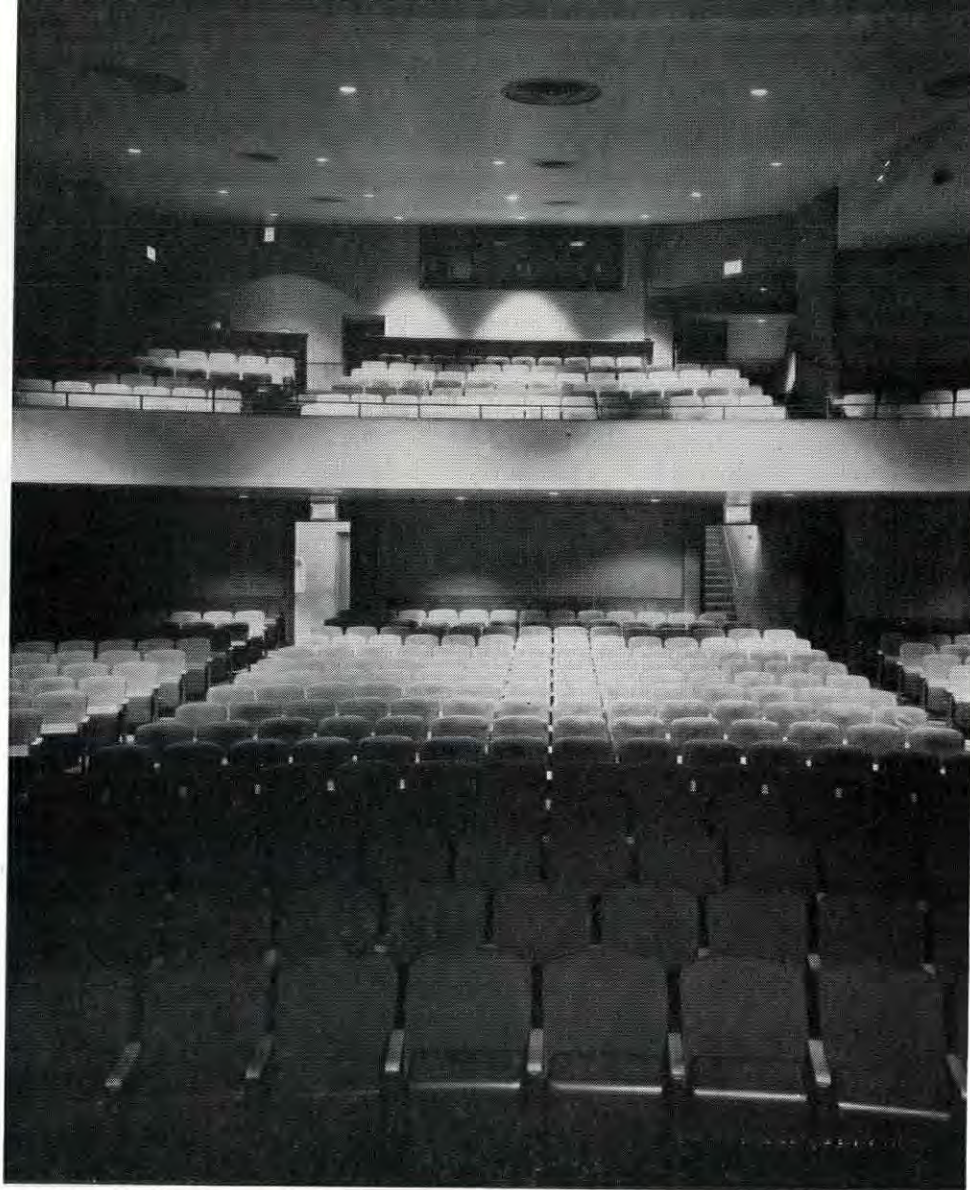
DIESEL CONSTRUCTION CO.,

General Contractor and Owner

Manhattan's first new postwar motion picture house is, besides an excellent design, an uncharted venture in real estate and movie merchandising. Sponsored by the French Pathé syndicate in an effort to up its U. S. take (now lower than in South America's pint-sized Colombia), the cinema restricts its fare to special films, caters to an uptown audience of the cultivated and well-heeled. Its location on the rim of Manhattan's plushy Plaza, facing Central Park, was thus a deliberate choice. The Paris theater is the first cinema to be erected in this dignified neighborhood and its site dictated still another first: in order to afford the huge tax bill attached to its valuable property, the three-story theater is topped by 12 floors of offices, taking parkside advantage of a local code which allows construction of a building above any auditorium which seats more than 229 persons. The success or failure of the Paris theater will govern Pathé's tentative plan for building similar movie houses in key cities throughout the U. S.

If architecture has anything to do with box office, the new theater should give Pathé the green light. On a tiny plot, the designers have managed to provide a 571-seat auditorium, a downstairs restaurant-lounge and the maximum in seating comfort, visual and acoustical performance. The hyperbolic curve of the auditorium floor downward toward the screen, together with staggered seating, provides excellent visibility from all areas. Curved walls broken into a series of chords, and a ceiling sloped up toward the rear of the balcony throw sound from behind the screen deep into the theater. Upholstered seats, carpeted floor and insulated rear wall act as sound absorbers.

Exits and stairs were a particular problem since the New York building code required two exits for the theater, two for the building proper, two for a basement restaurant and one for service. The ingenious solution which provides all this in only 65 ft. of frontage (see diagram, right) relies on much dovetailing and combining. The main theater lobby is at the center flanked by two separate entrances serving both the building and the downstairs restaurant. One also serves as a direct exit for the front area of the theater and secondary mezzanine, the other as a service exit. One of the required corridors connecting upper offices with these entrances has been run between ceiling trusses to avoid taking space from either the theater or the office building.

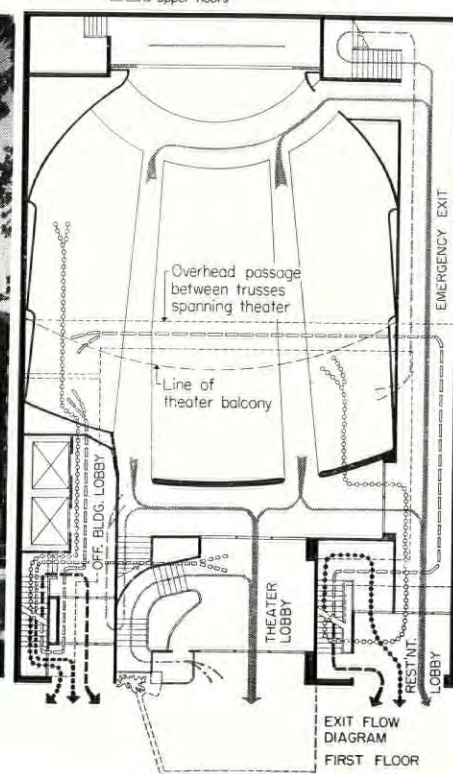


UNADORNED INTERIOR WITH QUIET RECESSED LIGHTING IS NEW LOOK IN THEATERS

Lionel Freedman: Pictorial Services

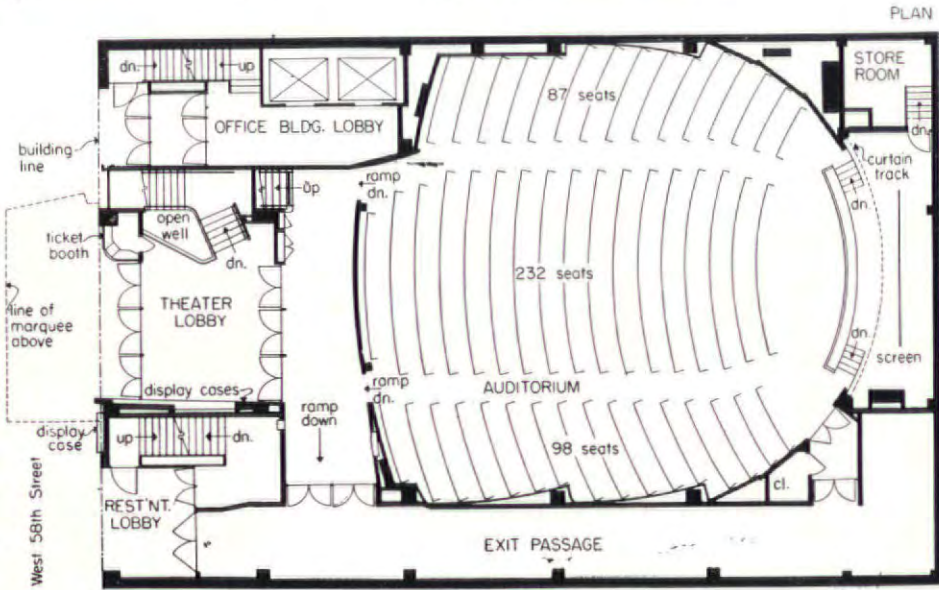
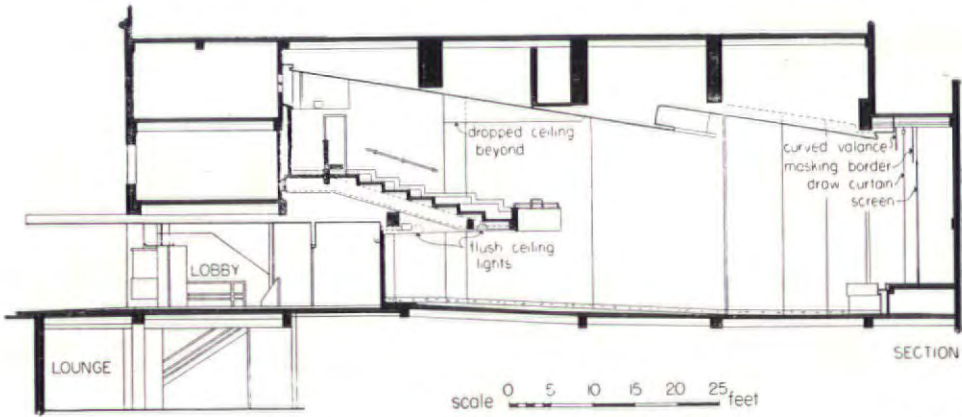


LEGEND: THEATER
 — first floor
 --- balcony
 - - - - - cellar
 OFFICE BLDG.
 - - - - - first floor
 - - - - - upper floors
 RESTAURANT
 ***** first floor
 oooooo cellar
 OFFICE BLDG. SERVICE
 ***** first floor
 oooooo cellar





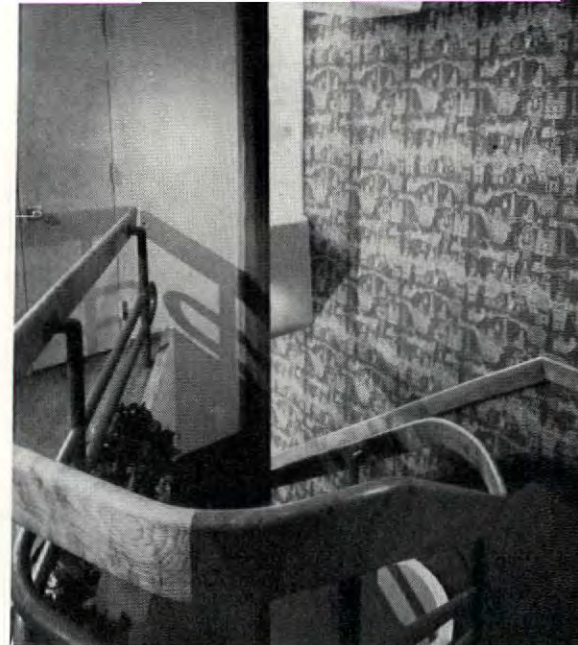
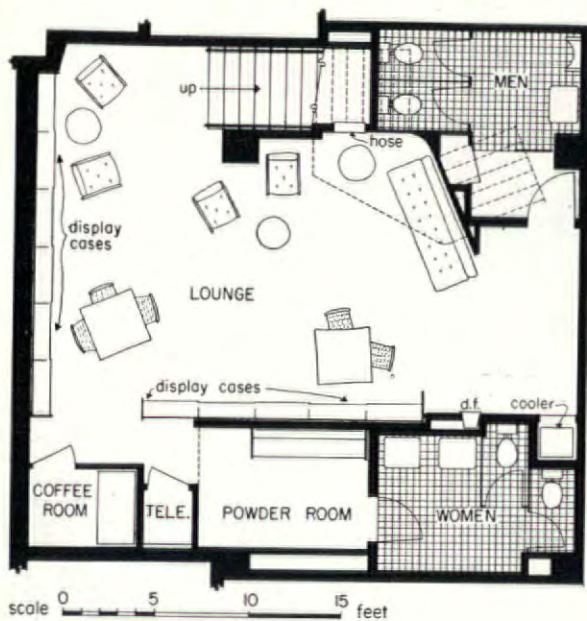
FIFTH AVENUE ASSOCIATION, FEARFUL OF GARISH BROADWAY LIGHTS, DICTATED MODEST SIGN FRONT



SERIES OF CURVES PROVIDES TOP VISUAL AND ACOUSTICAL PERFORMANCE. UPHOLSTERED SEATS ARE SPACED 35-40 IN. BETWEEN ROWS



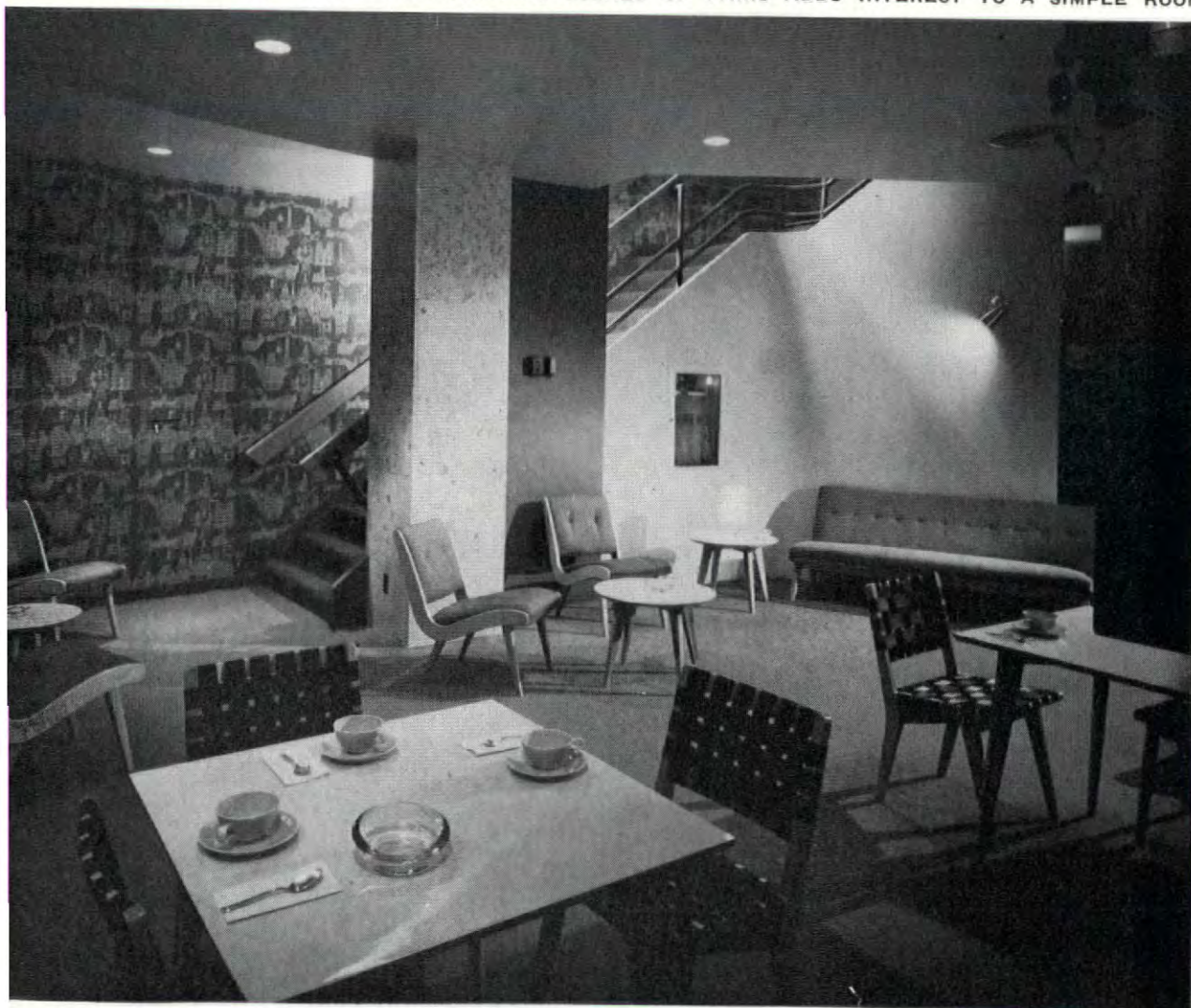
Basement restaurant is added attraction



THEATER USES BIRCH WOODWORK THROUGHOUT

The downstairs restaurant lounge is equipped with a complete kitchen for serving coffee and bouillon to theater patrons and catering buffet luncheons to women's clubs. The glass front of the theater allows passersby on the street a view of the lounge through its open stairwell. Opposite the stairway in the lobby is a panel of ten glass display cases containing a small-scale exposition of French arts, products and services.

STEINBERG MURAL WALLPAPER SHOWING SCENES OF PARIS ADDS INTEREST TO A SIMPLE ROOM



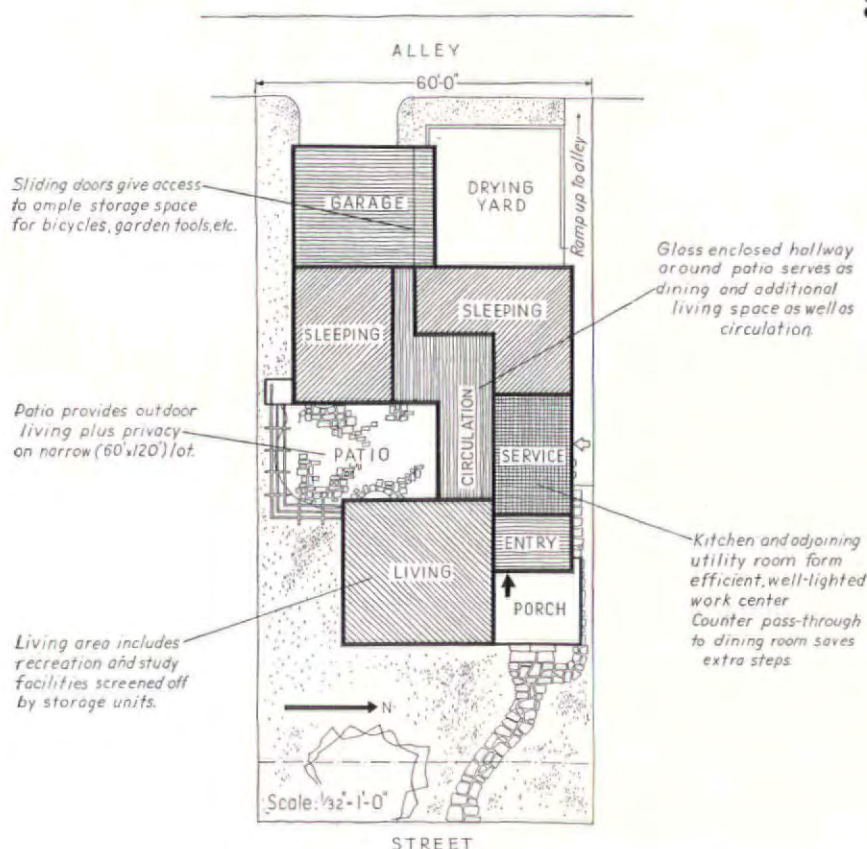
CONSTRUCTION OUTLINE: Sound insulation—Johns Manville Corp. **WINDOWS:** Glass— $\frac{1}{4}$ in. polished plate, Pittsburgh Plate Glass Co. **WALL COVERINGS:** Lounge—oak Flexwood, U. S. Plywood Corp. Orchestra promenade—Wall-Tex, Columbus Coated Fabrics Co. Lobby stairway—Paris wallpaper designed by Saul Steinberg. **FURNISHINGS:** Auditorium seats—International Seat Corp. Lounge furniture—Knoll Associates. Auditorium curtain—Metlon Fabrics; fabrication by Bil-Art Studios. Chairs (powder room)—Finsven, Inc. Display cases—stainless steel, Superb Bronze & Iron Co. Interior doors—flush steel, Atlantic Metal Products, Inc. Exterior doors—Herculite, Pittsburgh Plate Glass Co. **HARDWARE:**Sargent & Co. and Superb Bronze & Iron Co. **LIGHTING FIXTURES:**General Lighting Co., Gotham Lighting Co., Century Lighting, Inc. and Seaport Porcelain Metals, Inc. **PLUMBING FIXTURES:**American Radiator-Standard Sanitary Corp. Kitchenette equipment (lounge)—Murphy Cabranette, Dwyer Products Co. **HEATING AND AIR CONDITIONING:**Chilled water system for the cooling season combined with steam for heating at other times. Theater offices, projection booth, lobby and lounge systems are independent of the main building system and of each other. Refrigeration condensing unit—Carrier Corp. Water cooler—Patterson-Kelly Co. Pumps—The Ketcham Pump Co. Air conditioning units and fans—The Trane Co. Filters—American Air Filter Co. Automatic controls—Johnson Service Co. Ceiling diffusers—The Anemostat Corp. of America. Registers and grilles—Waterloo Mfg. Co.

HOUSES



Charles R. Pearson

Designed for city living, the plan of this small house centers around a semi-enclosed garden



PAUL THIRY, Architect

J. G. WATTS CONSTRUCTION CO., Contractor

CHARLES H. McDONALD, Owner

Though urban living in Seattle is a good deal pleasanter than in many other cities it still involves the problems of privacy for outdoor living, if to a lesser degree. The owners wanted a one story house and were particularly eager for the design to include pleasant outdoor living space. Taking these factors into consideration, architect Thiry evolved this admirably integrated plan. The house covers the maximum land permitted under the Seattle building code. As shown in the plot plan, its various functions are clearly defined and grouped around a central circulation core opening to the patio. The distance from the service area to the drying yard is accounted for by the narrowness of the lot and the need for locating the sleeping area on the quiet side of the house.

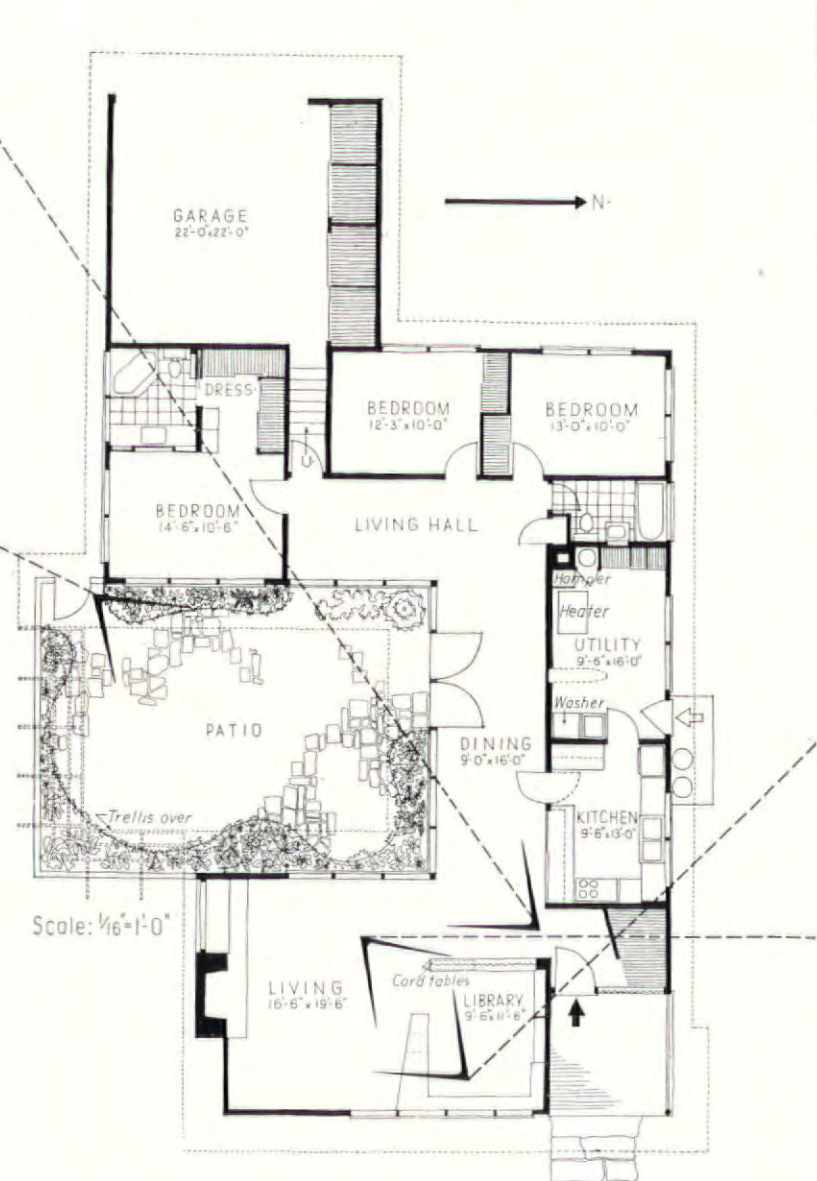


U-shaped plan and patio provide good indoor-outdoor relationships, unite as well as illuminate

Charles R. Pearson



Wide corridors, particularly glassed-in ones, always give a house added spaciousness as well as a certain air of elegance. That they are also highly efficient goes without saying. In this instance, however, having the dining area and "living hall" opening wide to each other seems a somewhat dubious planning device particularly since the back bedrooms have no private baths. All interior walls are birch plywood with a natural finish. Ceiling is plaster with copper coil radiant heating. Floors are of a yellowish tan tile. The well tailored appearance of the house from without and within illustrates architect Thiry's excellent detailing and is characteristic of his work. Also, most of the furniture was designed by him. Exterior plywood and frames are stained yellow. Brickwork, cornice, etc., are painted white.



Bathroom walls are of structural glass

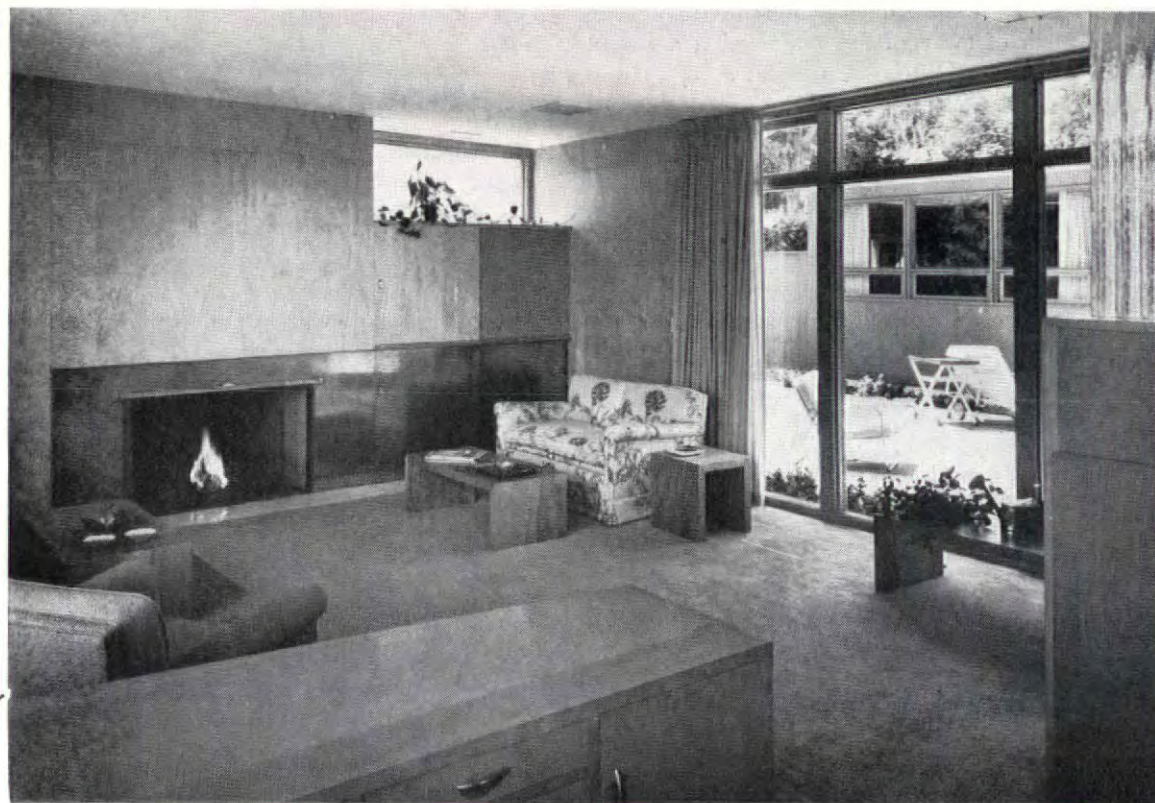
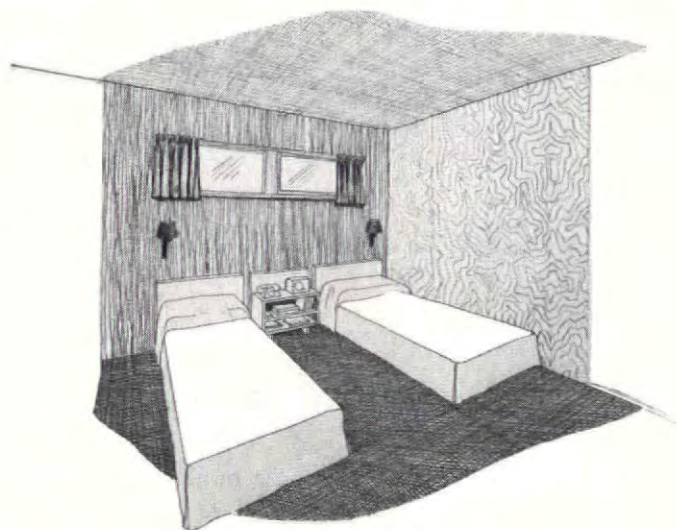
Mirror wall conceals medicine cabinet above each chest of drawers

Bedside table has bookshelves, space for radio & telephone

2 built-in wardrobes have sliding doors

Obscure glass panel borrows light from bathroom

2 built-in chests (7 drawers in each)



BUILT-IN DESK SEPARATES LIBRARY FROM LIVING ROOM. HIGH PLANTING WINDOW FACES SOUTH

LIBRARY WINDOW IS THE ONLY ONE THAT FACES THE STREET



CONSTRUCTION OUTLINE: Exterior walls—plywood, Aberdeen Plywood Corp., studs, Fiberglass insulation, Owens-Corning Fiberglas Corp. ROOFING—built-up asbestos cap sheet, Certain-teed Products Corp. WINDOWS: Glass—plate, Libbey-Owens-Ford Glass Co.; corrugated—Mississippi Glass Co. FINISH FLOORING—asphalt tile, Armstrong Cork Co. WALL COVERINGS—birch plywood, Wheeler-Osgood Co. PAINTS—National Lead Co. HARDWARE—Schlage Lock Co. and Stanley Works. KITCHEN EQUIPMENT: Range and refrigerator—electric, Westinghouse Electric Corp. Dishwasher—electric, Hotpoint, Inc. Ventilating fan—West Wind Corp. LAUNDRY EQUIPMENT: Washing Machine—Laundromat, Westinghouse Electric Corp. BATHROOM EQUIPMENT—American Radiator-Standard Sanitary Corp. Shower—glass wall, Carrara, Pittsburgh Plate Glass Co. HEATING—hot water, radiant type system, copper coils in ceiling, West Coast Heating & Plumbing Co. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—electric, A. O. Smith Mfg. Co.

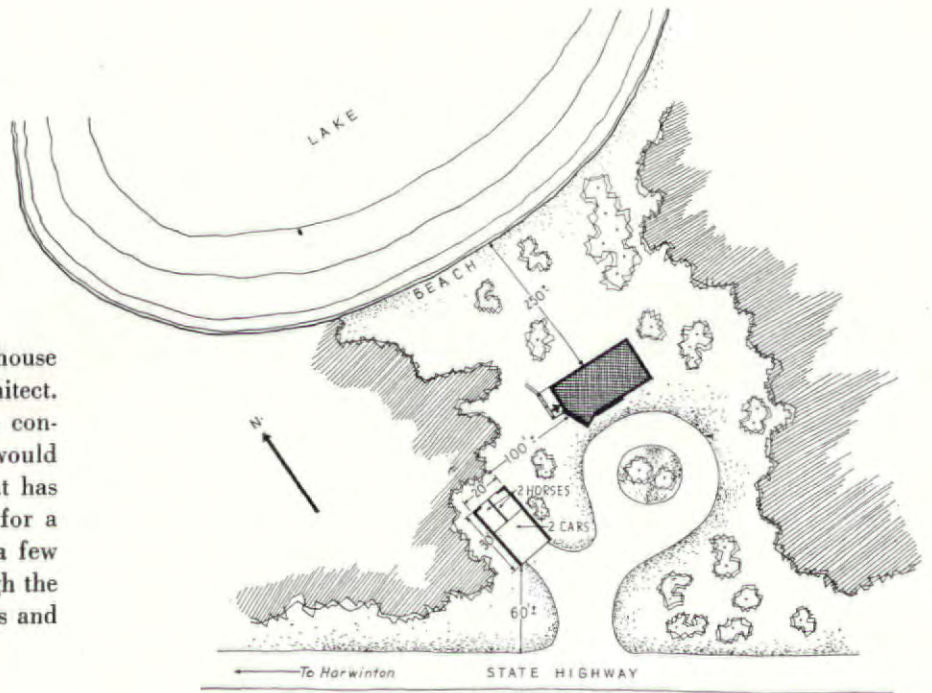
A house that grew, not like Topsy, but from enthusiasm of client

LOCATION: Harwinton, Conn.

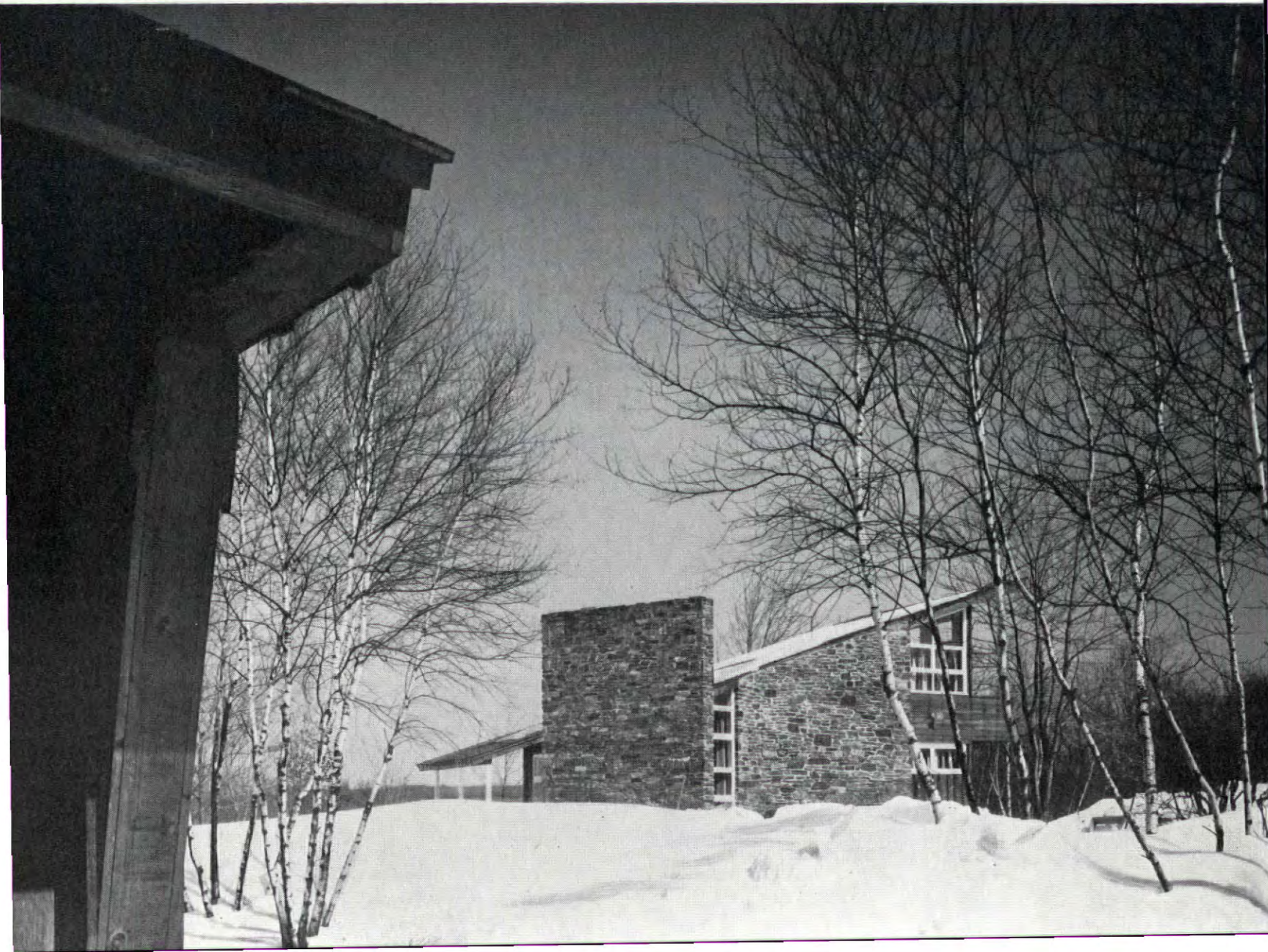
JOSEPH STEIN, Architect

DR. S. G. WEISS, Owner

In a most un-Blandings fashion, the owner of this bachelor house had laid the foundation and floors before he called in the architect. What he had in mind was a temporary summer home to be converted into a garage when, at a later date, an adjacent house would be built. What he ended up with was a studio-type house that has made him a very happy man. He sought out architect Stein for a little advice regarding the pitch of the roof but after seeing a few rough sketches he also saw other possibilities. A sample: though the house had been planned without a cellar and the walls, ceilings and floors already insulated, a cellar was excavated.

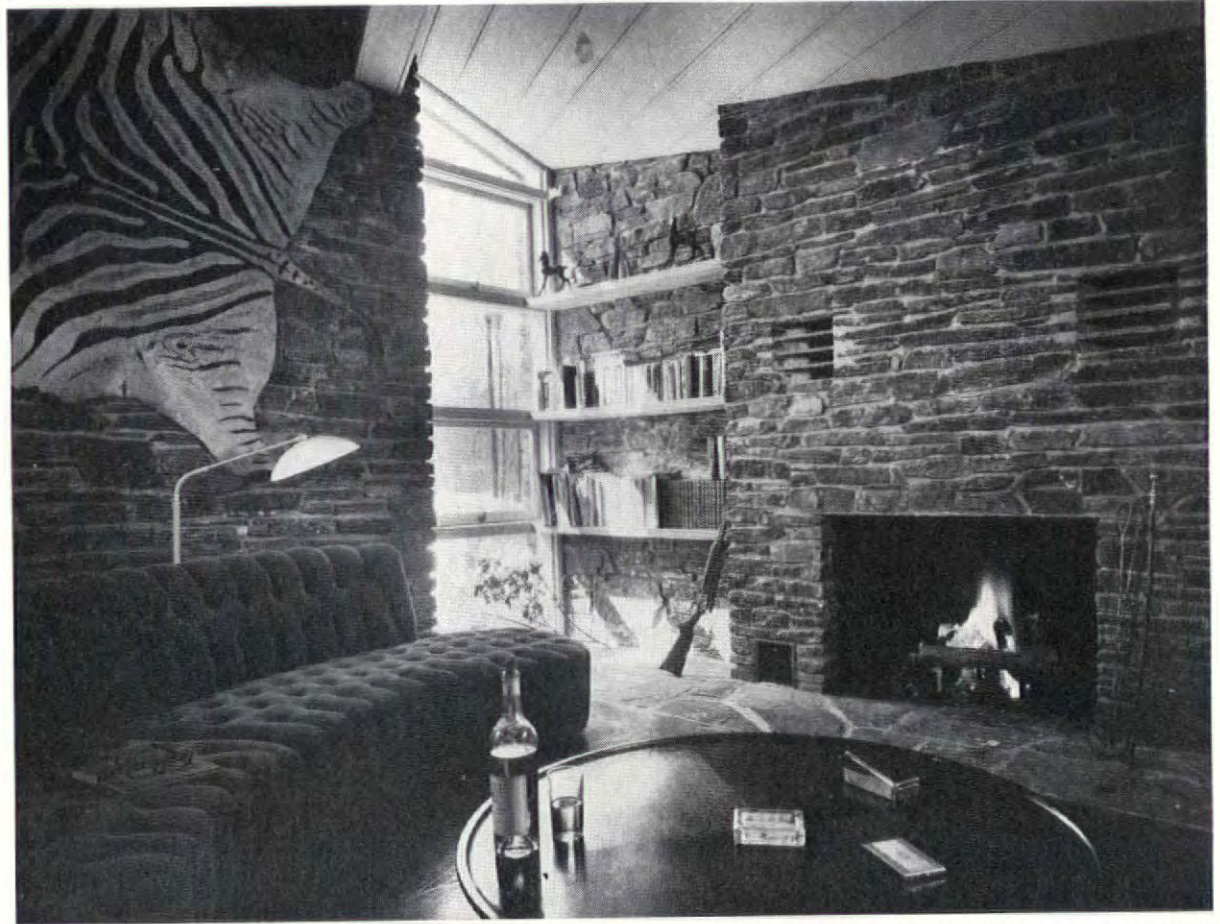


FIELDSTONE CONSTRUCTION ON THE SOUTH SIDE OF THE HOUSE IS LIGHTENED BY GENEROUS GLAZING. ROOF'S DRAMATIC SLOPE SHEDS

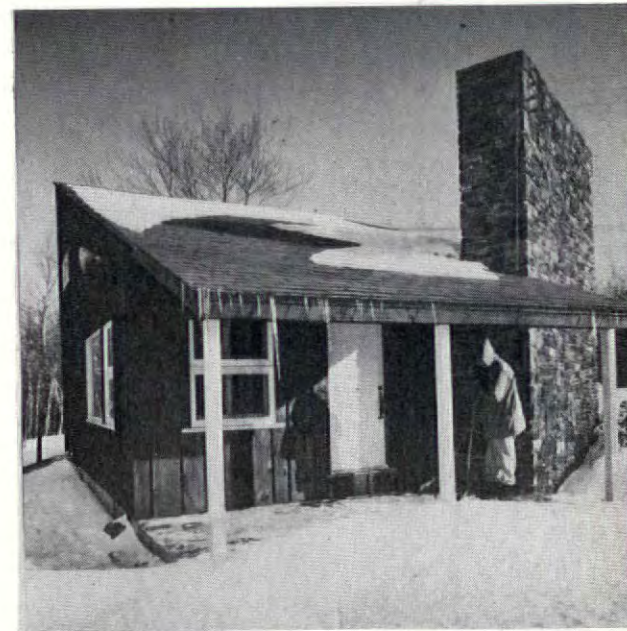
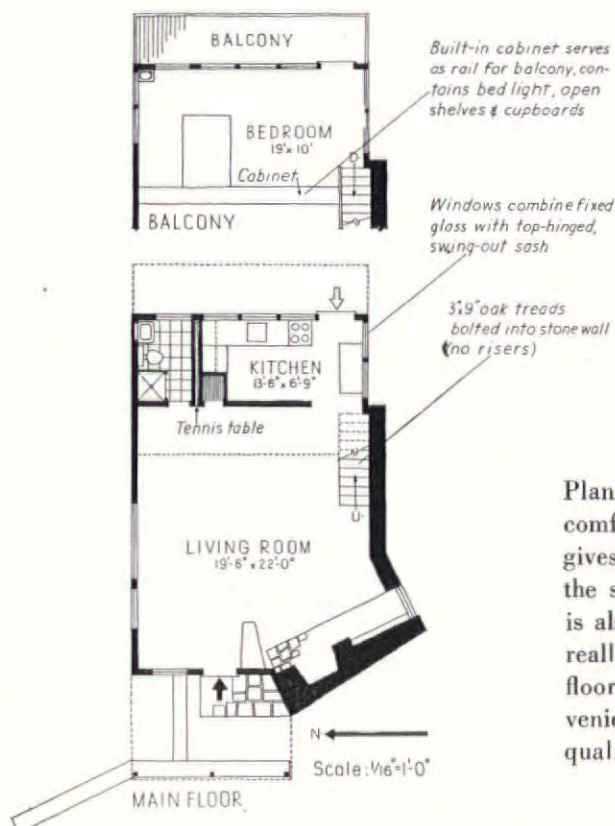


and architect

SNOW READILY

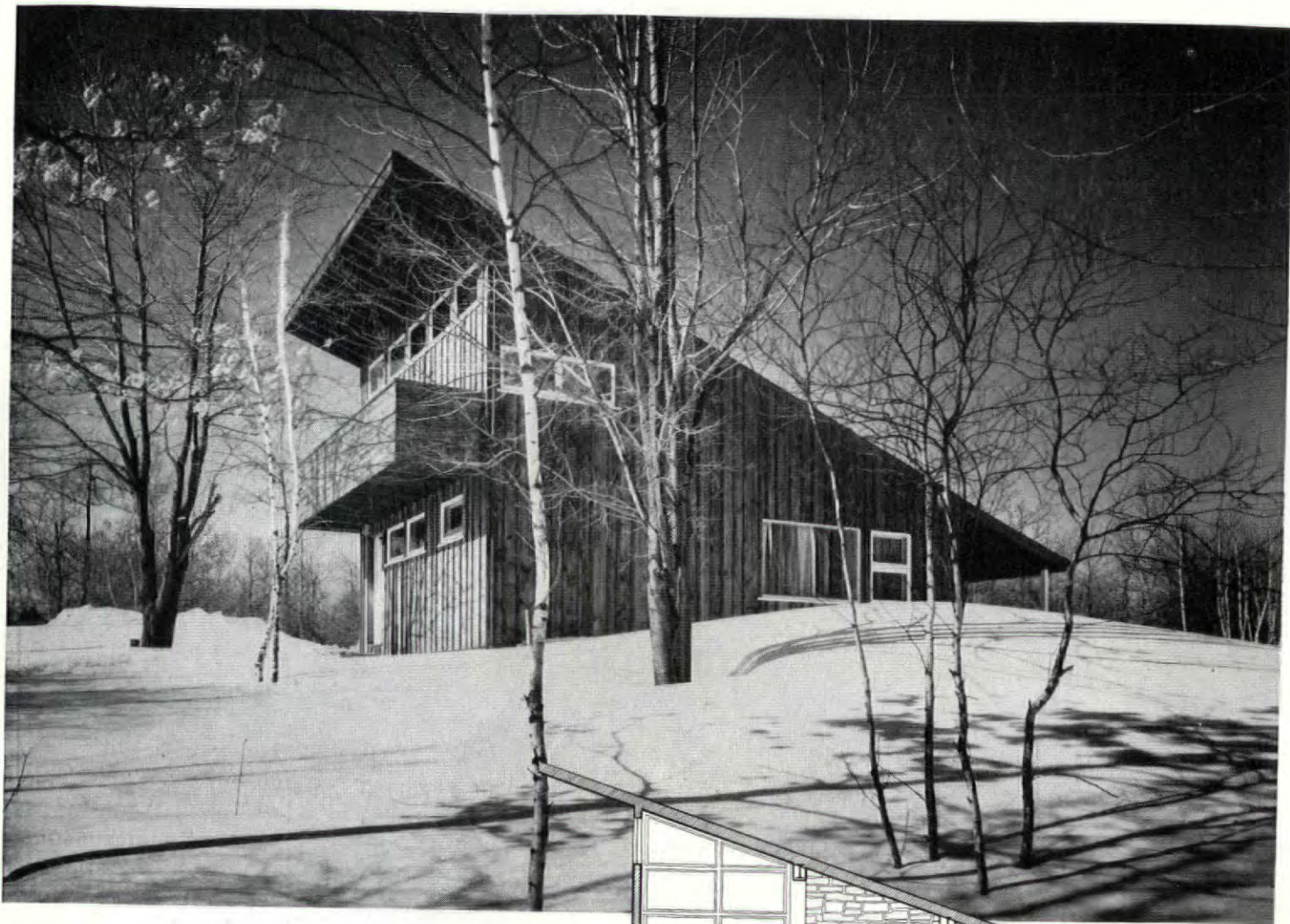


EXPOSED MASONRY ON LIVING ROOM HAS VIRILE QUALITY. TALL WINDOW ADMITS SOUTHERN SUNSHINE

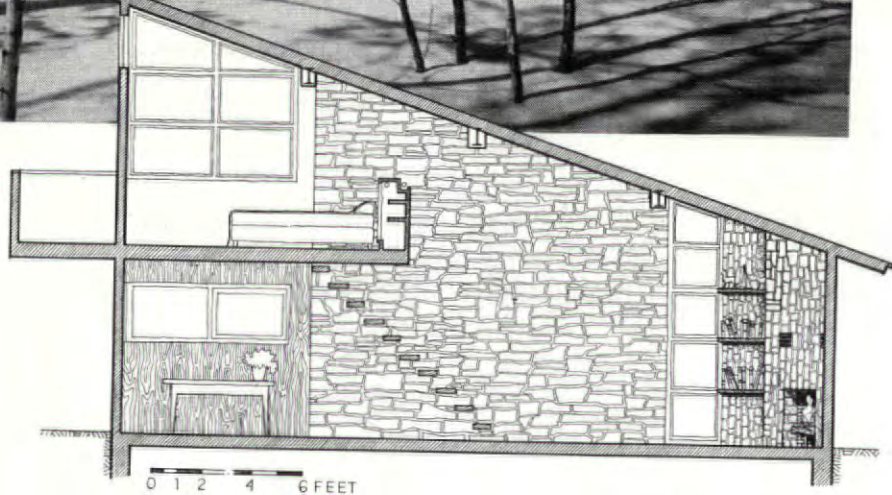


OVERHANG PROTECTS REAR ENTRY FROM SNOW

Planned for future expansion, this house even now sets a thoroughly comfortable and free living pattern. Angled as it is, the chimney gives the living area considerable character and greatly increases the sense of spaciousness, its overhigh ceiling notwithstanding. It is also rather pleasant to find in a house of this size a bedroom of really adequate dimensions. The location of the bath on the ground floor, if not the most obvious solution, is certainly the most convenient. The exterior design is well integrated but the contrasting qualities of the north and south facades nevertheless add interest.



CANTILEVERED STAIRS ARE SET INTO WALL



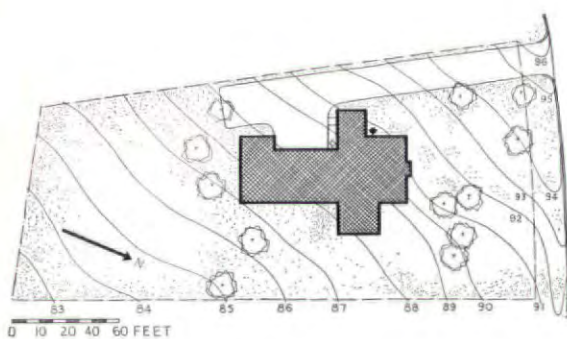
Cross section shows manner in which bedroom is tucked under steeply sloping roof. Valuable natural lighting for the center of the house is obtained from the bedroom clerestory strip.

CONSTRUCTION OUTLINE: Exterior walls—pine-board and batten, sheathing, studs and Ferro-therm metal insulation, American Flange & Mfg. Co.; inside—plaster. Floors—rubber or asphalt tile. **ROOFING**—slate. **FIREPLACE:** Damper—Heatilator, Inc. **WINDOWS:** Sash—top hinged outswinging, Whitco, Vincent Whitney Co. Glass—plate. **FINISH FLOORINGS:** Bedrooms—carpets. Living room—rubber tile, The Danbury Rubber Co. Kitchen and bathrooms—asphalt tile. **WALL COVERINGS:** Living room—plywood, U. S. Plywood Corp. Kitchen—Sheetrock, U. S. Gypsum Co. **DOORS**—flush and batten, Mengel, U. S. Plywood Corp. **HARDWARE**—Stanley Works Co. **ELECTRICAL FIXTURES**—Kurt Versen Co. **KITCHEN EQUIPMENT**—Dwyer Products Co. **BATHROOM EQUIPMENT**—American Radiator-Standard Sanitary Corp.



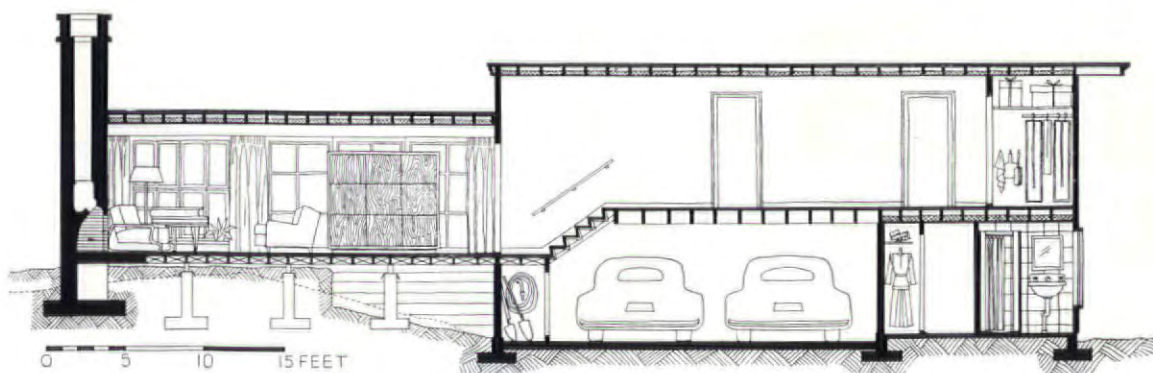
Photo Associates

A three-level house that takes the slope in its stride

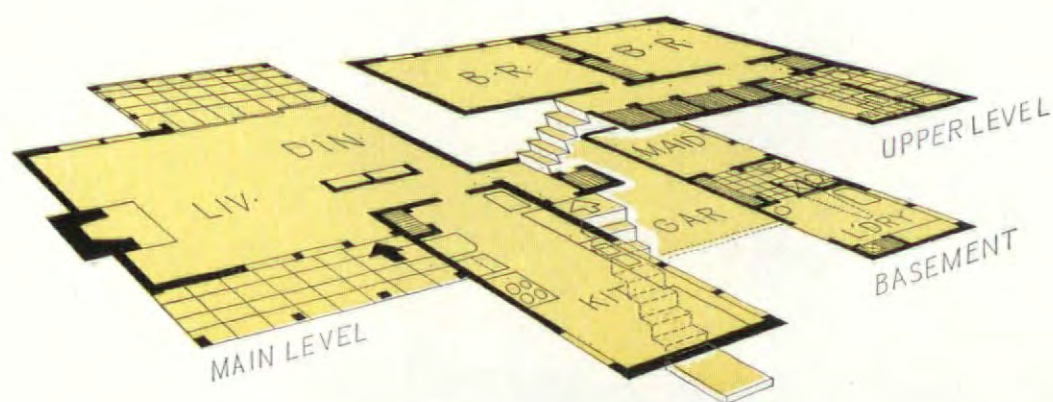


LOCATION: San Antonio, Texas
 O'NEIL FORD & G. R. ROGERS,
 Architects
 A. P. RHEINER & SON,
 General Contractors
 MR. and MRS. MARVIN
 THOMASMA, Owners

An important objective in the design of this house was to take advantage of the sloping site and, at the same time, to keep the structure compact. The three-level arrangement was deemed most efficient and economical with a minimum of excavation required. When the landscaping is finished there will be a retaining wall to hold the fill to the east of the house. Future expansion of the house is planned to the south.



Clear division of service and utility areas characterizes the planning of this house



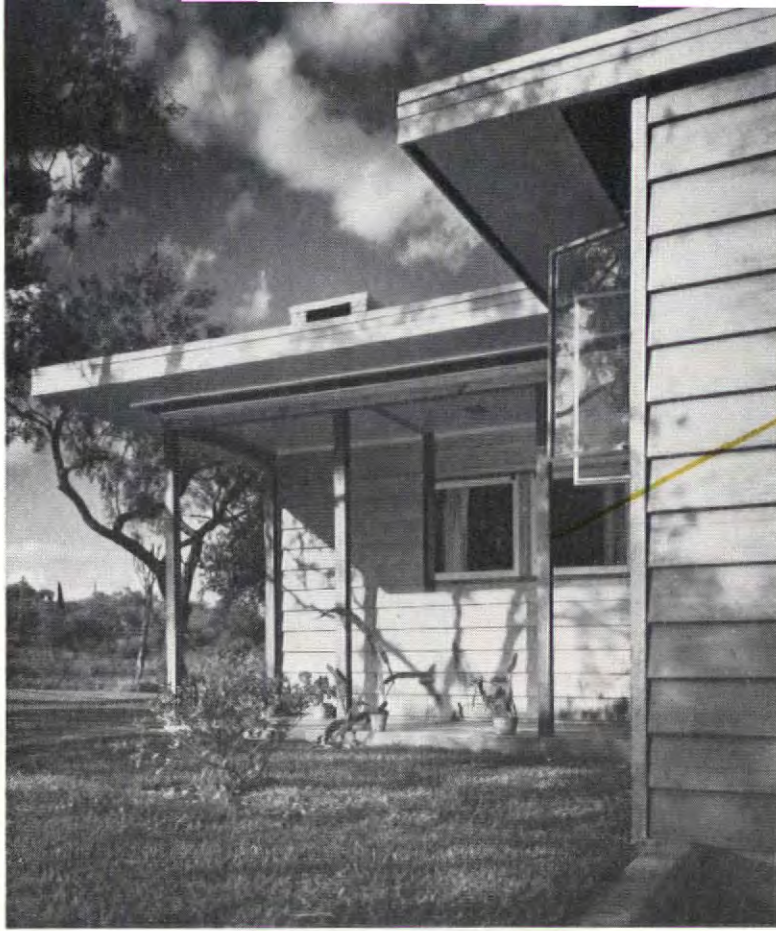
INTERIOR FINISH VERGES ON THE AUSTERE. MAIN ENTRANCE IS ADJACENT TO SMALL WINDOWS OVER COUCH

Planned for a family of four, including two daughters, it was felt that for the time being a two-bedroom house would be adequate. Copious storage space has been provided but it seems a pity that none was used along the wall separating the living room and bedroom to act as a sound barrier.

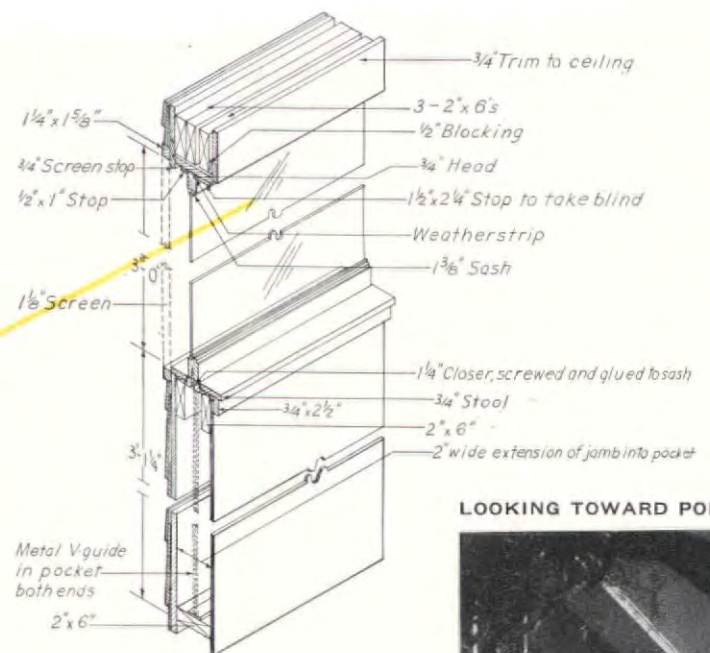
Exterior siding and trim is western cedar which the owner was lucky enough to find hiding out in a small town lumber yard. It was left natural and blends pleasantly with the greens and gray-greens of the mesquite trees around the house. It will be noted on the plan that no central heating system was included. This was at the owner's insistence. He believes, perhaps wisely, that there will be radical changes and improvements in heating systems during the next few years and prefers to get along, until that day, with just the fireplace augmented by gas stoves in the coldest weather.

SCREENED PORCH OFF LIVING-DINING AREA IS THE MOST PLEASANT VISTA

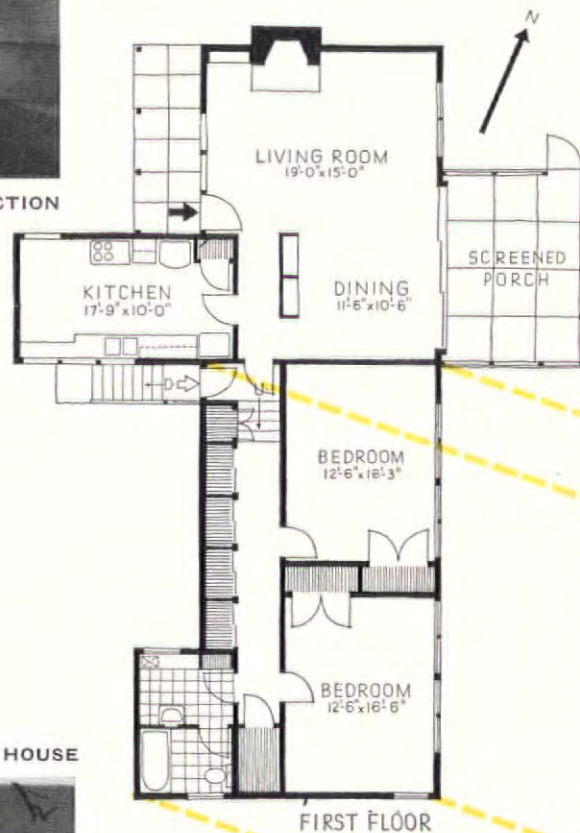




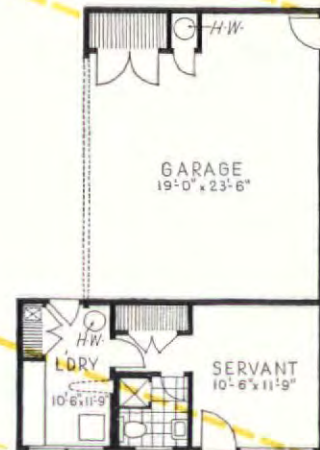
MASSIVE EXTERIOR DETAIL SUGGESTS STURDY CONSTRUCTION



LOOKING TOWARD PORCH



Scale: 1/16" = 1'-0"



ROOF OVERHANG SHELTERS ACCESS FROM GARAGE TO THE HOUSE



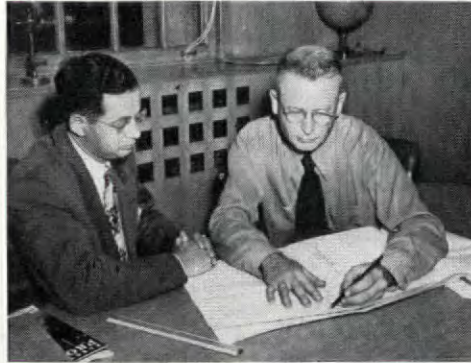
CONSTRUCTION OUTLINE: Exterior walls—western cedar siding, 15 lb. felt, pine shi lap sheathing, pine studs, gypsum board and plaster, U. S. Gypsum Corp. Floors—pine joists, sub-floor and oak finish. **ROOF**—4-ply built-up asphalt and gravel. **INSULATION:** Outside walls and roof-rockwool. **WINDOWS:** Sash—Fenestra steel, Detroit Steel Products Co. Weatherstripping, Monarch Weatherstrip Corp. Glass—double strength quality A, Pittsburgh Plate Glass Co. **FINISH FLOORING:** Bathrooms—Monarch Tile Mfg. Co. Kitchen—linoleum. **WALL COVERINGS:** Living room—one wall Philippine mahogany plywood. Kitchen—Flexbord wainscote, Johns-Manville Corp. **HARDWARE**—Schlage Lock Co. **ELECTRICAL SWITCHES**—toggle, Bryant Electric Co. **KITCHEN EQUIPMENT:** Dishwasher—Hotpoint, Inc. **LAUNDRY EQUIPMENT:** Washing machine—Lauderall, F. L. Jacobs Co. **BATHROOM EQUIPMENT:** Lavatory—Crane Co. Tub and toilet—Kohler Co. **HEATING**—gas outlets.

REVERE INSTITUTE HOUSE IN CLEVELAND

will be reproduced 800 times on a 225-acre

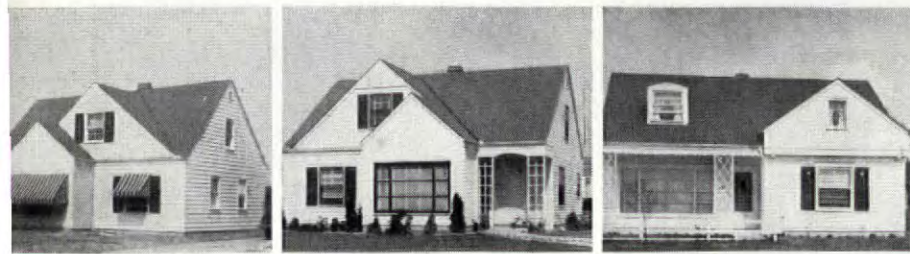
ARCHITECT: W. D. Riddle

BUILDER: Maurice Fishman, Precision Housing Corp.



RIGHT: Builder Fishman and Architect Riddle

BELOW: Fishman's pre-Revere building style



Ridgewood Park, an 800-house development soon to occupy 225 rolling suburban acres near Cleveland, Ohio is the best example to date of Revere Copper & Brass Co.'s ambitious pilot building program. Although the design of its three-bedroom prototype house is more conservative than that of the other model homes (FORUM, Sept. and Oct. '48), the Cleveland venture best fulfills Revere's purpose: that of promoting a practical partnership between architect and merchant builder to turn out a quality product in the small-home market. Revere's other building experiments have been limited to single houses. This one is an entire community development which uses one basic design throughout, varying the individual houses by facade and color changes, shifts in siting and garage placement.

One model house was built first as a proving ground for the design. Now that bugs have been eliminated 44 more houses are underway and foundations will be laid for another 100 by early spring. An orthodox site fabricating system with a large shop for pre-cutting lumber and trusses will speed up operations. Such large-scale building techniques have become a familiar cost-cutting story and, in this particular case, will hold the price of each house to \$1,050 below Revere's top limit of \$15,000.

Compared with the general market in Cleveland these days that's low cost housing. Cheaper houses are being built. But few of those in the \$14,000 price range include the quality materials and excellent plan found here. Such assets as Revere's radiant heating, oversized

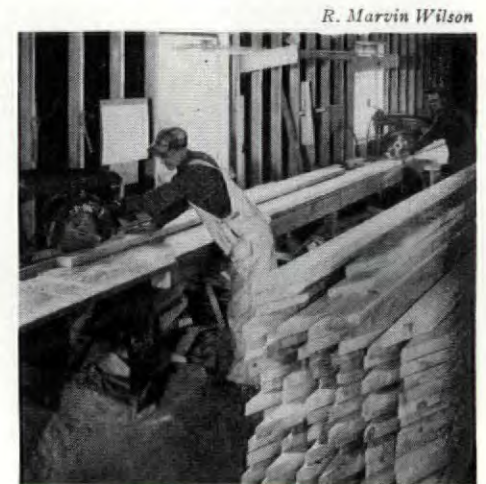
garage and packaged mortgage (which includes all kitchen and laundry equipment and storm windows) are definitely news at that price.

The successful collaboration of architect and builder is largely responsible for these plus factors. And one of the most important aspects of this collaboration was the awakening of the speculative builder to the advantages of good design.

Maurice J. Fishman, who operates an office in suburban Parma Heights, was originally described by the Revere architect as a "typical quality builder." His postwar houses (see cut above) incorporated some of the surface "features" of modern architecture. But the "picture windows" were merely appliques on the same box-like plan and fake colonial facade which he had used ten years before.

The designer chosen by Revere for their Cleveland project was Wilbur D. Riddle, staff architect for General Electric at its big research center in Nela Park, Ohio. This able and talented gentleman decided to try a flanking maneuver on Fishman. Rather than meeting him head-on with a contemporary house shockingly bare of shutters, gables and other "architectural treatments," Riddle sidestepped, opening the attack with a floor plan. To Fishman's amazement it was a good plan, better than any he had ever done. The builder began to think in terms of floor plans and before long lost all interest in the tight, bottled up interiors which he had formerly considered entirely adequate. Riddle carefully avoided showing elevations until just before tackling the FHA office.

Here Fishman's natural builder in-



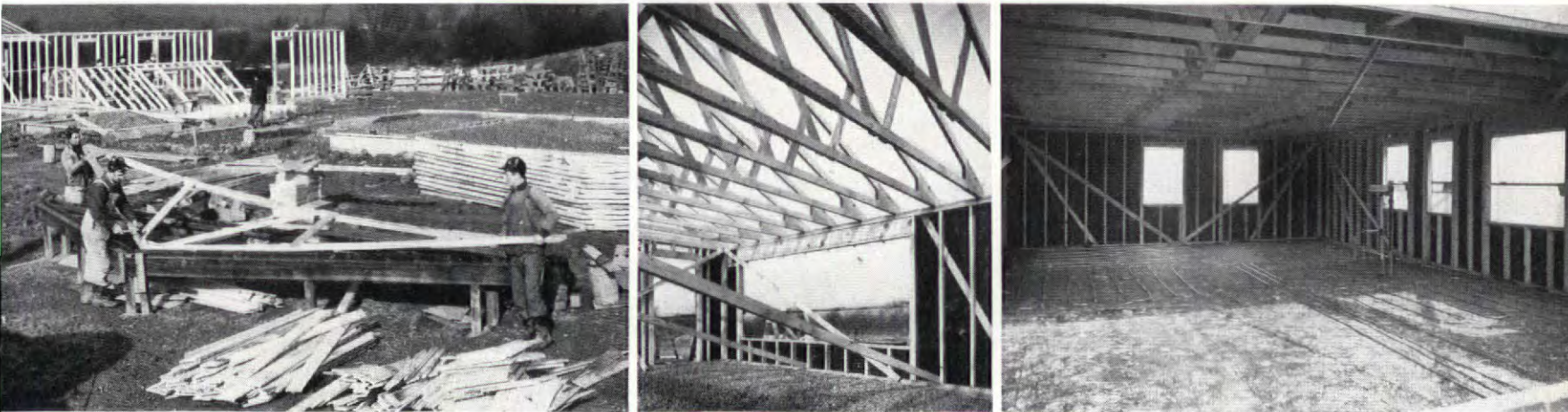
R. Marvin Wilson

LUMBER IS PRE-CUT IN SITE SHOP

stincts started to rebel. He found himself sponsoring a house minus diamond-shaped windows, gables, birdhouses, shutters. Fishman suggested that some of these things be added. Riddle kept forgetting. Now that the battle is over, both Riddle and Fishman agree that the finished design is a collaborative effort. The builder lost on some points, the architect on others. For instance, Fishman proposed an arched entrance between living room and sleeping area which Riddle was able to discourage. Riddle also managed to talk Fishman out of a door between kitchen and dining space, but bowed unhappily to the shelf arrangement with modernistic chromium tube supports which now separates the two areas. Riddle suggested that the cornice under the overhang be closed. No, said Fishman, it would cost more to do it that way. The model house thus has open cornices which turned out to be more expensive than closed ones. Without comment Fishman states that the remaining 799 houses will all have closed cornices. Another victory is also assured: there will be no shutters on any of the houses. This is one anachronism that Fishman is cured of, courtesy of Dr. Riddle. Instead, the customers will get sealed double glazing with storm and screen sash in the large modern size.

"We've set a precedent in the building industry by including storm windows as a necessary part of the completed house," Fishman proudly points out. More important to the practical builder is the fact that incorporating good storm windows enabled a reduction in the size of the heating unit. Fishman saved \$25 with the smaller heater and \$35 in piping re-

development, varied by shifts in garage placement and siting



SIMPLE FRAME CONSTRUCTION MAKES ASSEMBLY-LINE BUILDING EASY. WALLS AND ROOF GO UP BEFORE RADIANT COILS ARE COVERED

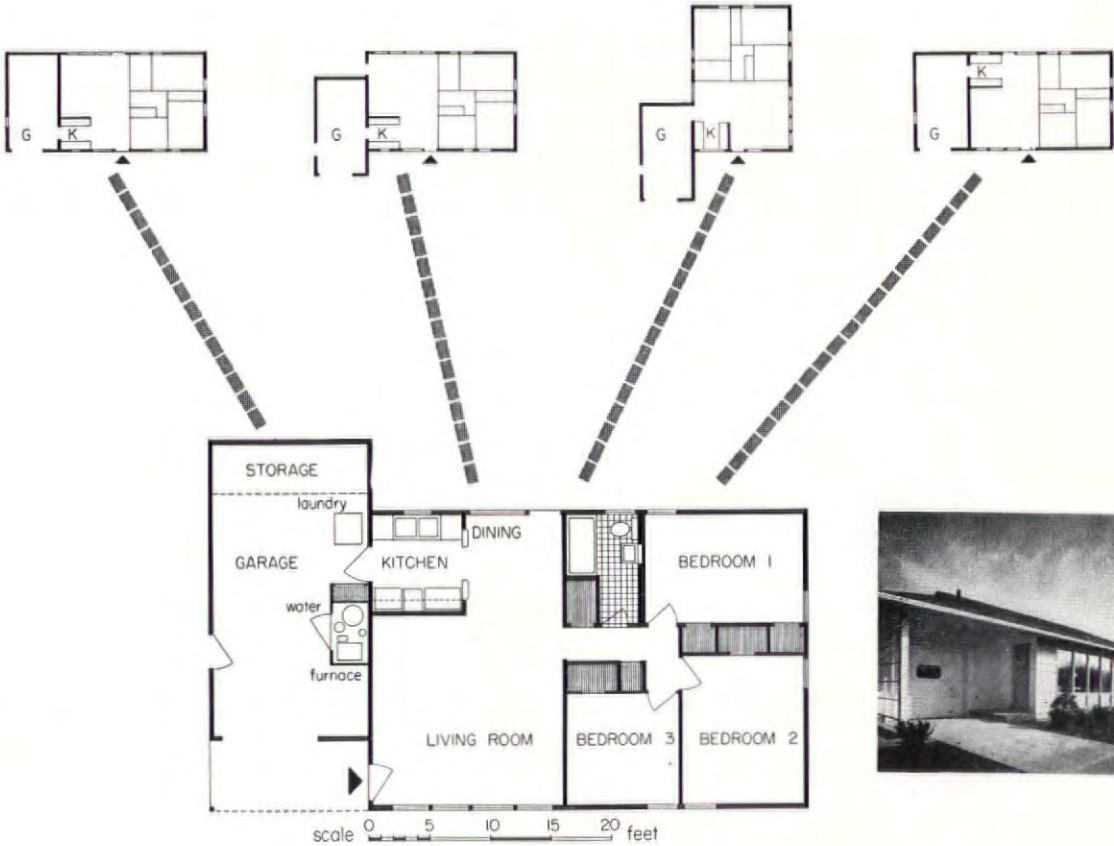
quirements, giving him \$55 to apply to the cost of the windows.

These calculations encouraged the architect to advance cost-saving arguments in favor of clipped gables, but here the builder remained adamant, dollars or no dollars.

In a burst of soul searching Riddle has admitted that one of his difficulties is an inability to sell ideas. He suggests that architects practice up on salesmen's tactics before dealing with the speculative builder. His nemesis was two carpenters who so consistently sided with their boss that Riddle christened them "Fishman's Fine Arts Commission." Particularly on facade problems they were potent adversaries. Without architectural permission they have already managed to paste a false gable on one of the Revere houses and Riddle fears that this may develop into a trend.

Fishman, on the other hand, is wholeheartedly pleased with the results of the collaboration. He waxes enthusiastic over architects, "free planning" and the advantages of "straightforward facades." He does not fail to point out, however, that to the merchant builder cost is the important factor. "But Riddle understood our problem," he adds. "He wasn't trying to add a lot of things that would build up our costs." Implicit in this statement, of course, is the builder's perennial suspicion that architects are cost-boosters. But Fishman's fears have been considerably modified by his experience. "We've learned our lesson," he explains. "The average builder tries to save money on his plans. It's the wrong place to save. A few mistakes with a stock plan and your savings are completely wiped out."

PLAN IS ROTATED, GARAGE SHIFTED AND ROOF VARIED TO PRODUCE FOUR DIFFERENT EXTERIORS



REVERE HOUSE: The public likes its low lines and big windows

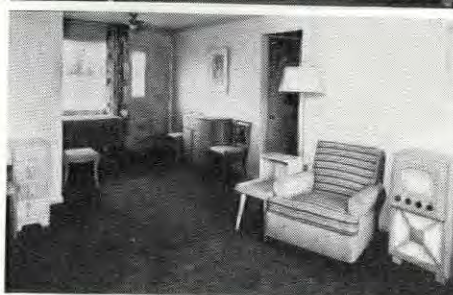


PLYWOOD MAY BE SUBSTITUTED FOR MODEL'S CEDAR SIDING TO CUT COSTS

LIVING ROOM



DINING ALCOVE



KITCHEN

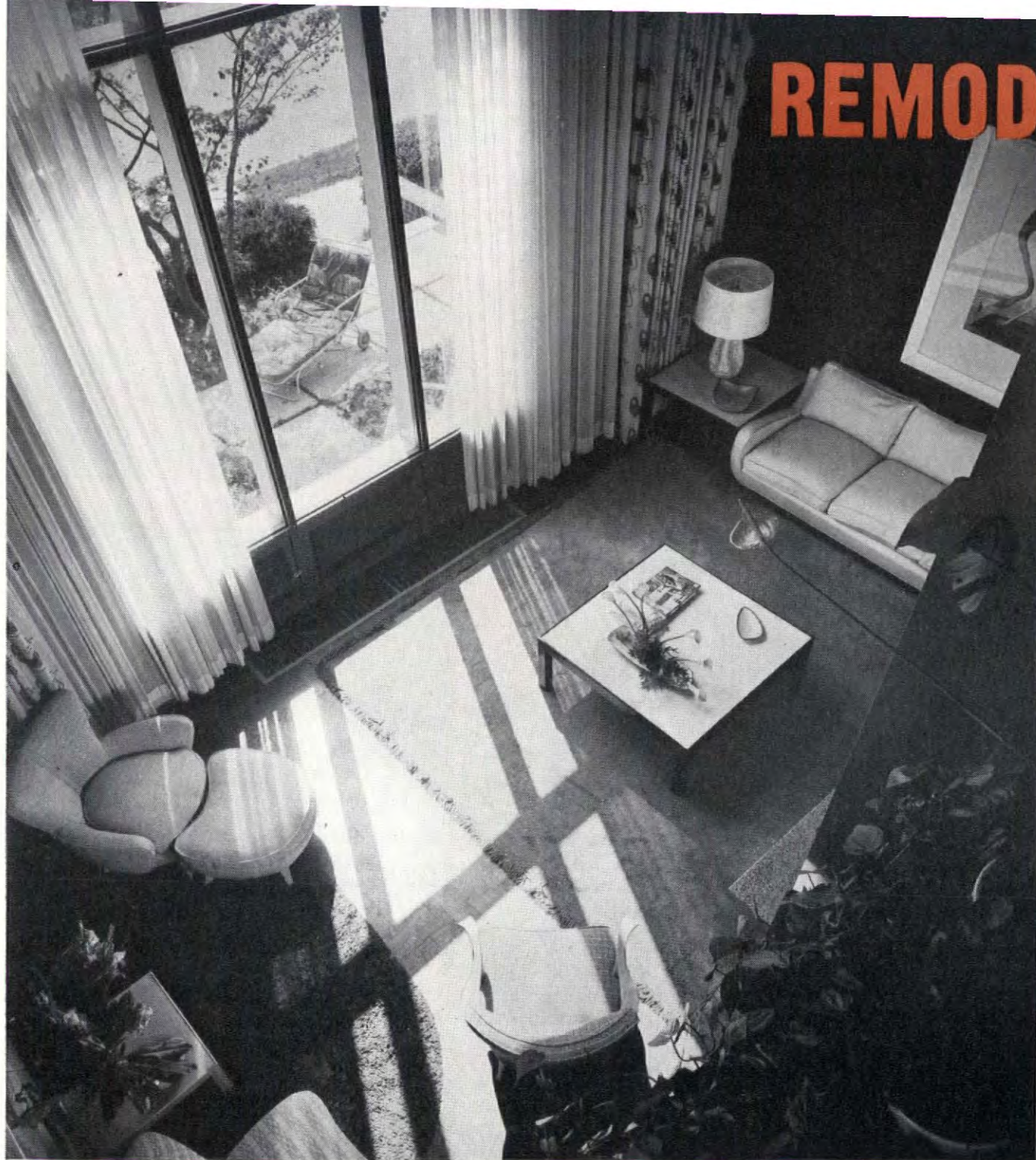


Seventy five thousand Clevelanders have already visited the model house shown on this page. What they saw pleased them: a modest design obviously of contemporary vintage but with enough familiar features to sooth the wary. Traditional clapboards and pitched roof combine happily with the large modern windows. Long, low lines and trim detailing are found to be more graceful than the decorated box shape typical of suburban architecture. Even the unorthodox pastel green paint job is accepted as a refreshing touch (other warm pastels will be used to vary houses throughout the development).

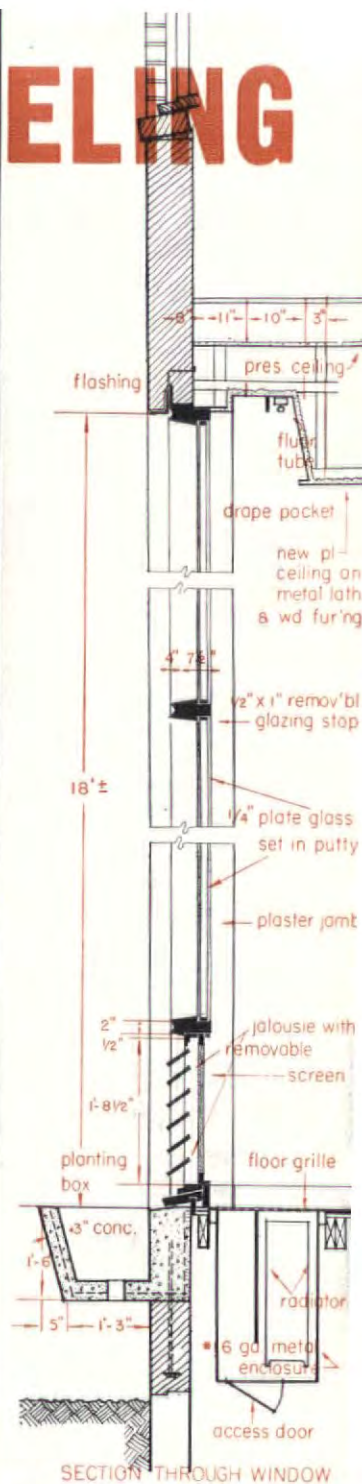
The floor plan with its recessed garage and entranceway breaks the monotony of a one-plane facade and makes the small house appear larger. Inside it is compact yet open, avoiding the inflexibility of a chopped-up stock plan. Especially good is the living room fenestration. Large windows face each other across the room, giving a really remarkable feeling of spaciousness to a small area.

Purists will call this house a compromise. And so it is. But with public taste and cost factors as deterrents to the contemporary dream house, this type of design represents a tremendous step forward from the calculated ugliness of most middle class American homes.

CONSTRUCTION OUTLINE: Foundation—10 in. poured concrete 3 ft. below grade. **STRUCTURE:** Exterior walls—fir studs, Celotex exterior sheathing, The Celotex Corp., Sisalkraft building paper, Sisalkraft Co., clear cedar siding inside, Rocklath and plaster, U. S. Gypsum Co. Ceiling finish—lath and plaster. **ROOF**— $\frac{1}{2}$ in. plywood sheathing and asphalt shingles, Certain-teed Products Corp. and Barrett Co. **INSULATION:** Attic floor—Cellulite cotton blanket, Gilman Bros. Co. **SHEET METAL WORK:** Flashing and leaders—Revere Copper & Brass Co. **WINDOWS:** Sash—white pine. Glass—Thermopane, Libbey-Owens-Ford Glass Co., and T-window, Pittsburgh Plate Glass Co. Screens—copper, Corry Jamesown Mfg. Co. **FINISH FLOORING**—Kentile, David Kennedy, Inc. **PAINTS**—Monroe, Lederer & Taussig and National Lead Co. **DOORS**—flush birch, Roddis Lumber & Veneer Co. Garage doors—Crawford Door Co. **HARDWARE**—Yale & Towne Mfg. Co. and Schlage Lock Co. **LAUNDRY EQUIPMENT:** Washing machine—Laundromat, Westinghouse Electric Corp. **BATHROOM EQUIPMENT:** Lavatory and tub—Briggs Mfg. Co. Toilet and one sink—American Radiator-Standard Sanitary Corp. **HEATING:** hot water, radiant system, copper coils in floor. Circulating pump—Bell & Gosset Co. Boiler and water heater—Bryant Heater Co. **GARBAGE DISPOSER**—Pulverator, Given Mfg. Co.



REMODELING



Bara Stoller: Pictorial Services

A complete reworking of a popular novelist's house on Long Island

LOCATION: Jackson Heights, L. I.
REISNER & URBACHN, Architects
FRANK YERBY, Owner

There are a lot of headaches for the architect in remodeling houses, but if he can do as well generally as has been done in the three jobs on the next few pages, there must be considerable satisfaction also attached. The first of the three is a house for novelist Frank Yerby, his wife and three children. Yerby spent about \$32,000 in the transformation and Architects Jedd Reisner and Max Urbahn did the job complete with selection of all furnishings (an \$8,000 item of the total cost).

Grandest room in the house is the spacious living room, whose dramatic dimensions and high window were achieved after the architects decided to carry most of it up two stories. A formerly wasted third floor was made into a children's suite, more than regaining the cubage used in raising the living room ceiling.



Slatted partitions help give interior areas continuous character

The dining area, formerly an overly large and oppressively dark room, now is behind a slatted partition off the living area, after elimination of the usual house-dividing center hallway. A new vestibule takes care of reception space. Air circulation also was improved by this slitting of some of the partitions.

On the second floor is a large master suite, bedroom, dressing room, and a study which gets hard use. Yerby commonly spends as much as 14 hours a day intent there, writing such successful novels as "The Vixens" and "The Foxes of Harrow." One of the usual highly stressed client requests in remodeling jobs, reorganization of storage space, has been answered here with several built-in cabinets.



CHAIRS AND TABLE BY GEORGE NAKASHIMA SIT WELL IN THIS DINING ROOM



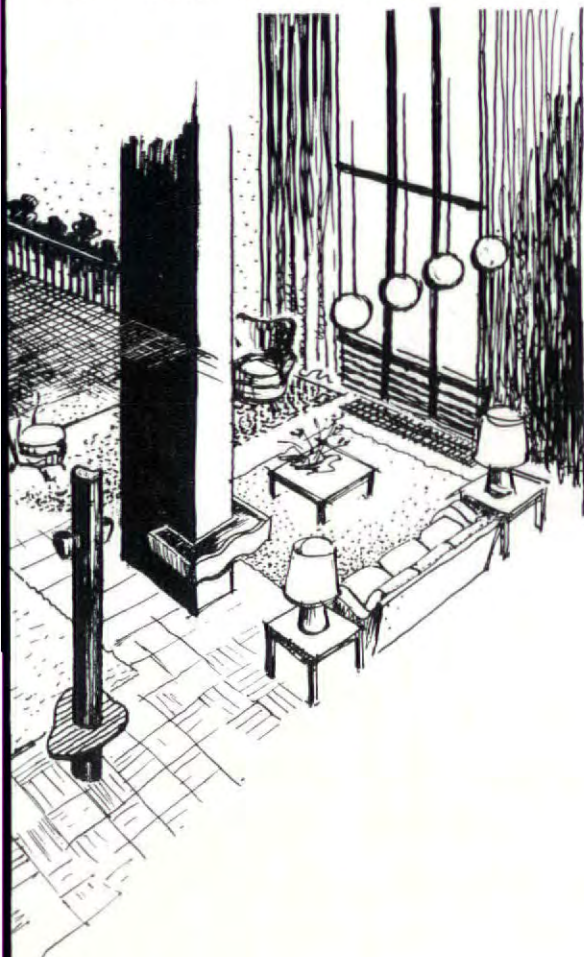
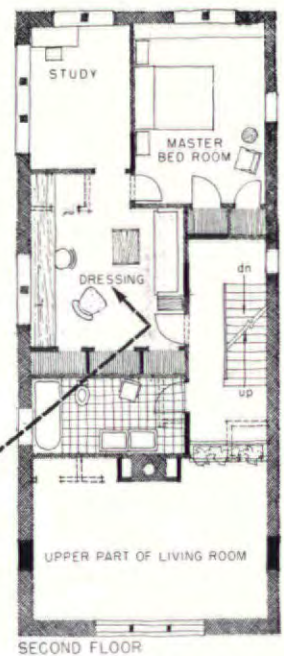
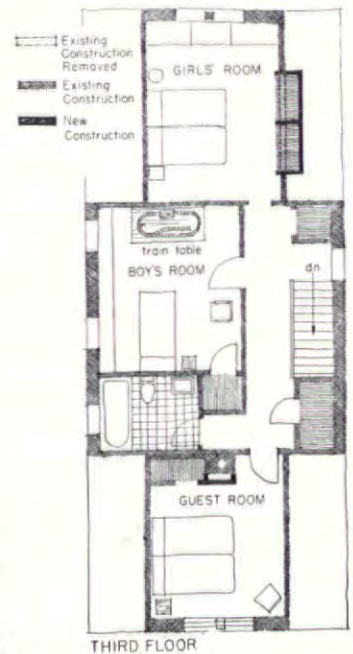
CEILING HEIGHT VARIES IN THE LIVING ROOM



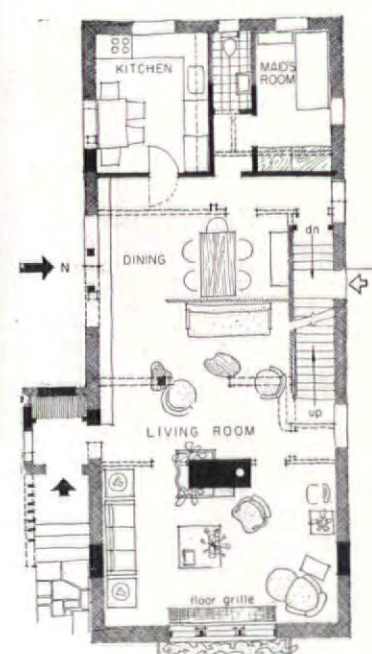


POOL HUNG ON COLUMN REPLACES FALSE FIREPLACE IN LIVING ROOM

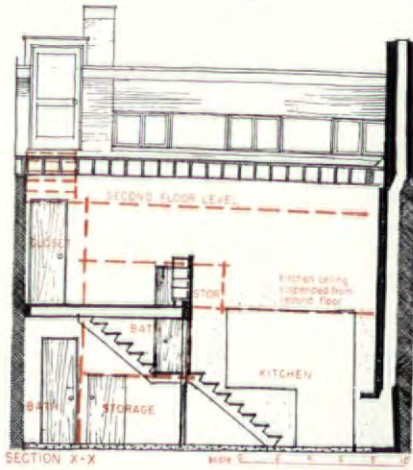
CONSTRUCTION OUTLINE: Exterior walls—8 in. brick bearing walls, 1 in. air space, wood furring strips, plaster finish. Floors—oak. Ceiling finish—plaster. **WINDOWS:** Sash—wood, double hung; picture window—fixed sash with ventilation louvers at bottom. Glass— $\frac{1}{4}$ in. plate glass, Libbey-Owens-Ford Glass Co. Carrara glass—Pittsburgh Plate Glass Co. **FLOOR COVERINGS:** Main rooms—oak. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—ceramic tile, American Franklin Olean Co. **WALL COVERINGS:** wall-paper, Katzenbach & Warren and Sigfrid K. Lonegren. Living room sculpture—ceramic, Robert Cronbac. **PAINTS:** Moleta, Monroe, Lederer & Taussig. **CABINETS:** Roof Structures, Inc. **HARDWARE:** Sargeant & Co. **KITCHEN EQUIPMENT:** General Electric Co. Ventilating fan—ILG Electric Ventilating Co. **BATHROOM EQUIPMENT:** Lavatory—Miami Cabinet Co.



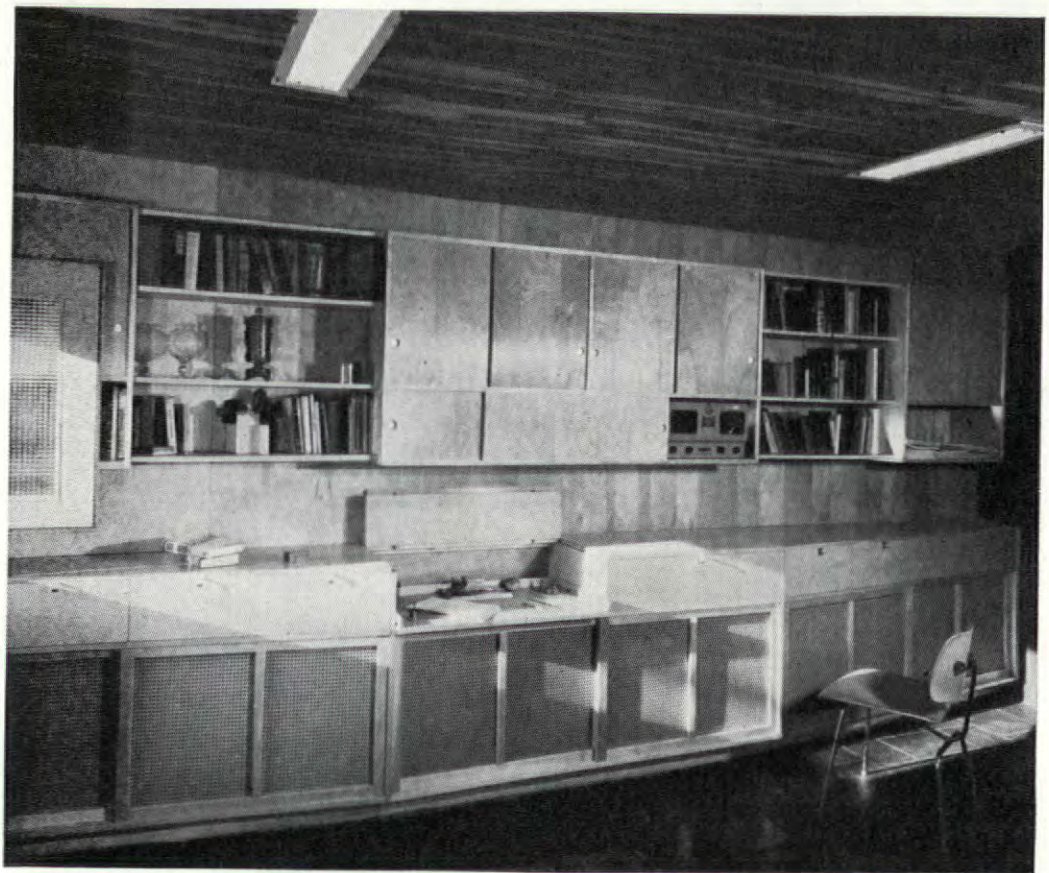
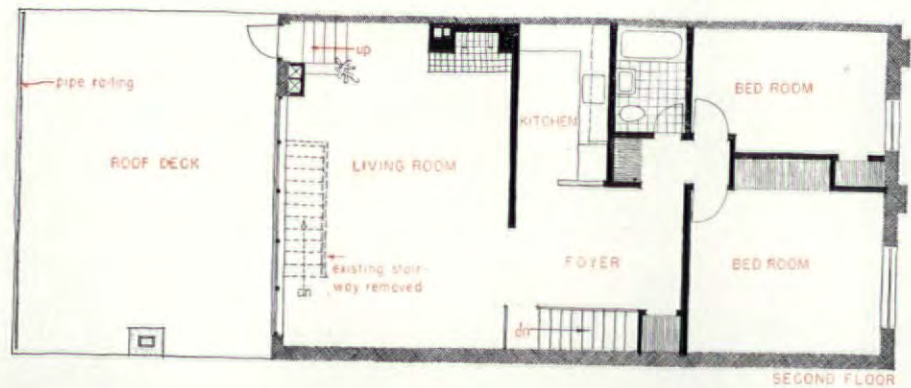
DRESSING ROOM HAS BUILT-IN CABINETS, RADIO



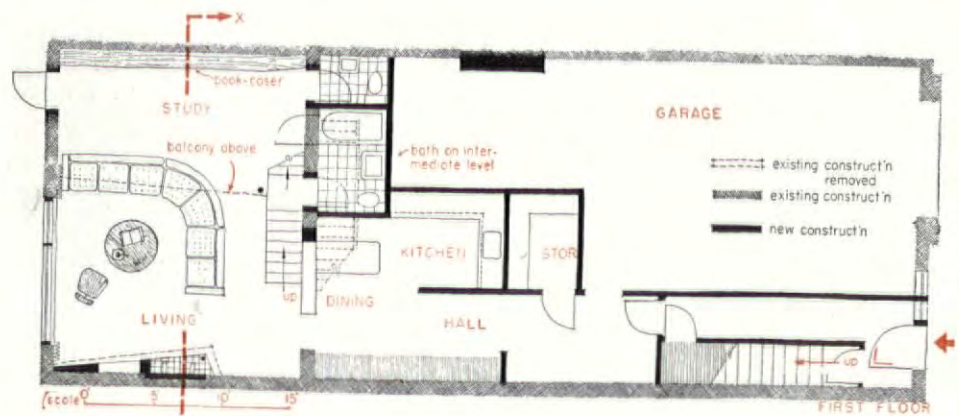
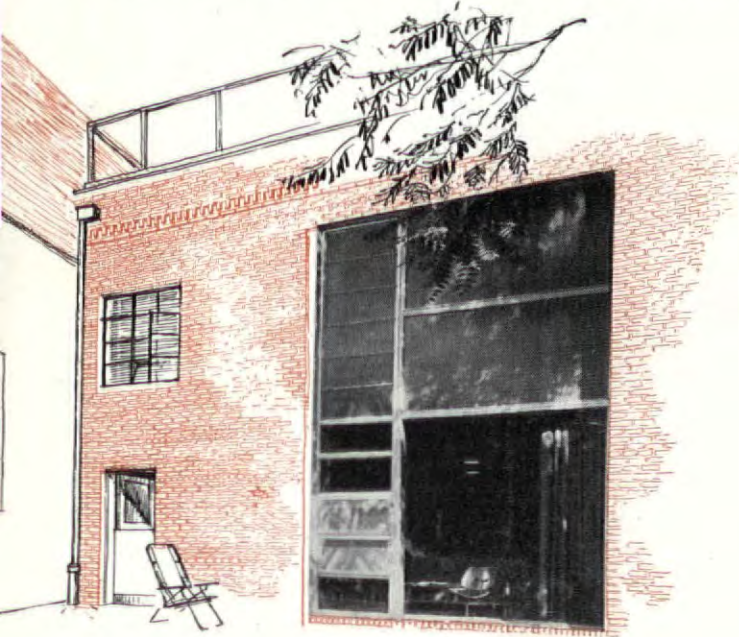
The old carriage house rides again, this time in a new direction

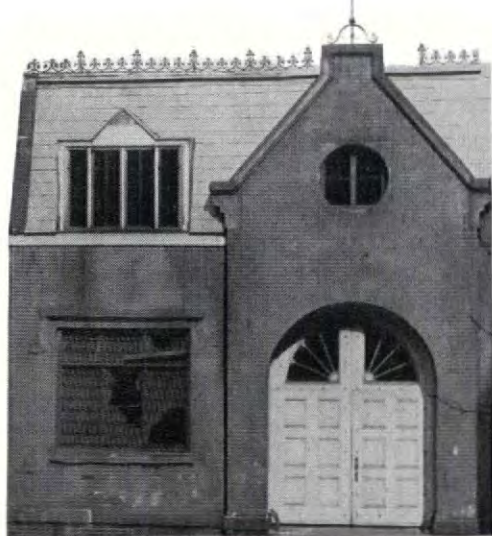


Lionel Freedman: Pictorial Services



MAIN ROOM, LOOKING OUT TO GARDEN THROUGH GLAZED PANEL. BUILT-IN WORK AND STORAGE WALL IS UNDER MEZZANINE BEDROOM





FACADE BEFORE REMODELING WAS BEGUN

LOCATION: Brooklyn, N. Y.

SAM J. GLABERSON, Architect

MEYER PARODNICK, Owner

Showing a notable restraint from knotty pine, and a really noble disuse also of horseshoes over doorways, Dutch doors, and hitching posts, this architect refurbished, rearranged, and rewinded an old horse's bedroom into two good apartments. How good they are is indicated in one way by the fact that the owner, who himself lives downstairs, has rented the upper apartment for \$250 per month, a very fair price even in this good old section of Brooklyn.

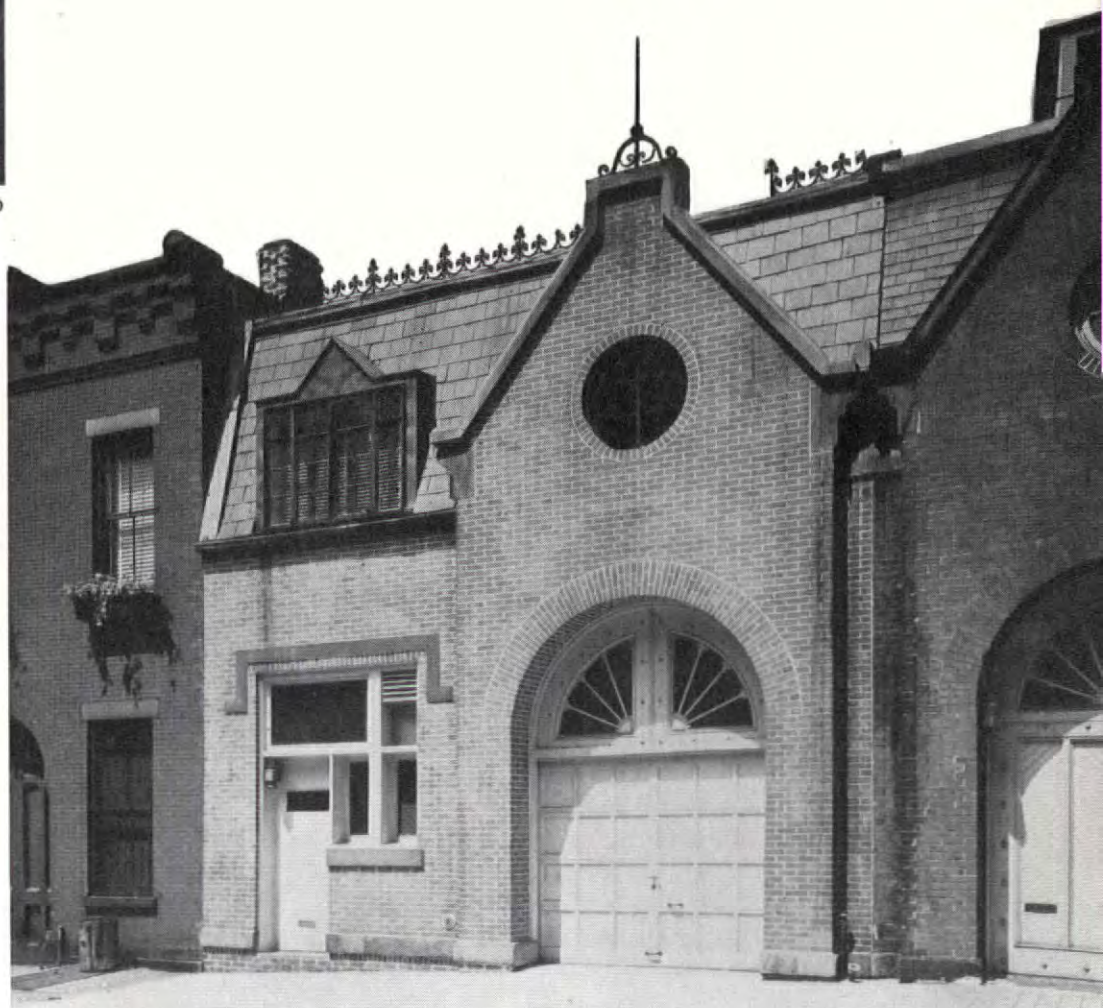
What the owner and architect started with was one of a row of old stables, with unused servants' quarters upstairs. Although a number of other stables in the same stand had already been remodeled (sculptor William Zorach has a studio next door) this particular structure had been in disuse and disrepair for a number of years. With an expenditure of about \$22,000 the building was made into the pleasant double dwelling shown here.

The rear garden end came in for considerable alteration, with a large panel of brick removed to give way to a big glazed area, mostly fixed. The high room inside comprises the big part of the ground floor apartment, with a sleeping deck half way up one side. This balcony overhangs a work space walled by cabinets and shelves. On the street side, the building presents a new entry and a new garage door, which operates in the approved overhead fashion, but is carefully held in character with the rest of the old facade.



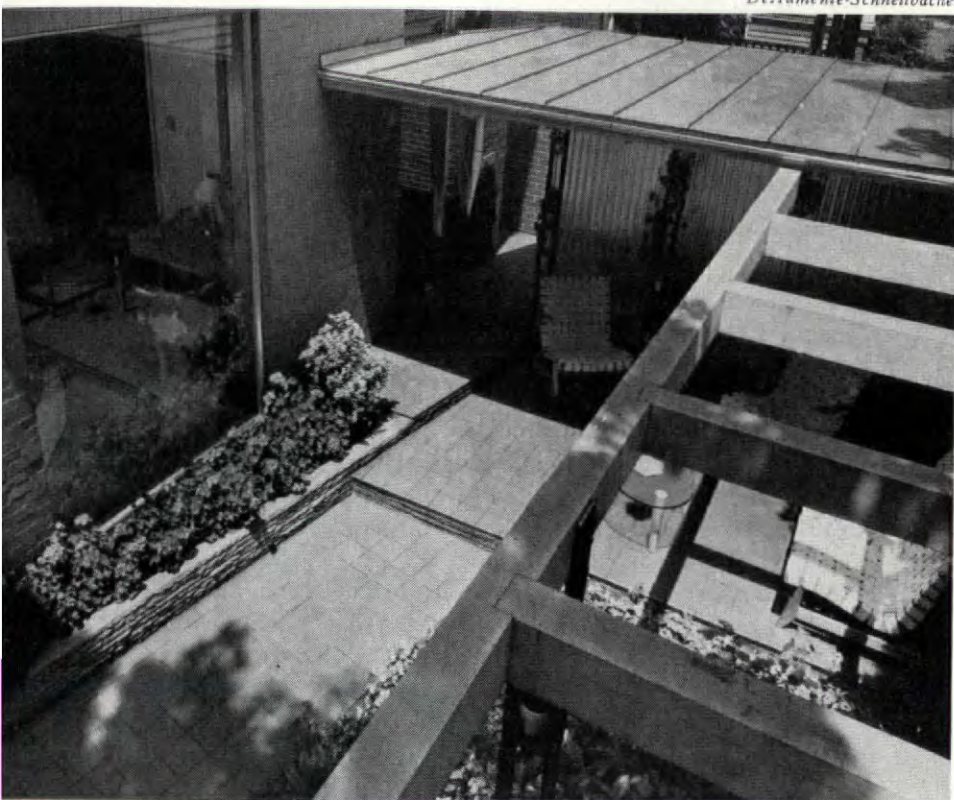
FIRST FLOOR LIVING ROOM, KITCHEN BEYOND

CONSTRUCTION OUTLINE: Structure: Exterior walls—brick. **INSULATION:** Roof—rockwool. **SHEET METAL WORK:** Flashing, gutters and leaders—copper. Ducts—24 gauge galvanized iron. **WINDOWS:** Glass— $\frac{1}{4}$ in. polished plate clear glass and Magnilite obscure, Mississippi Glass Co. **FINISH FLOORING:** Living room—slate. Sleep balcony—cork. Halls, kitchen and bathrooms—tile. **WALL COVERINGS:** Living room—plaster or exposed brick. Sleep balcony—cork. Halls and kitchen—plaster. Bathrooms—tile and plaster. **LAUNDRY EQUIPMENT:** Washing machine—Bendix Appliances, Inc. **HEATING AND AIR CONDITIONING**—hot water panel heating with complete conditioning including cooling. Valves—Sarcotherm Co. Regulator—Minneapolis-Honeywell Regulator Co.

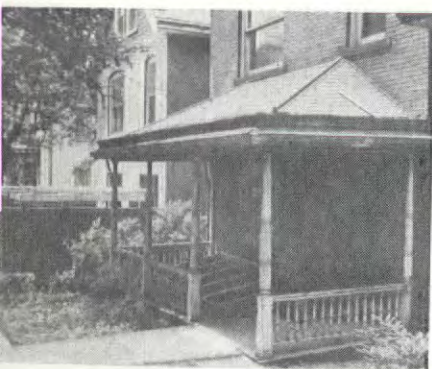


Porch is bartered for patio in remodeling of Pennsylvania house

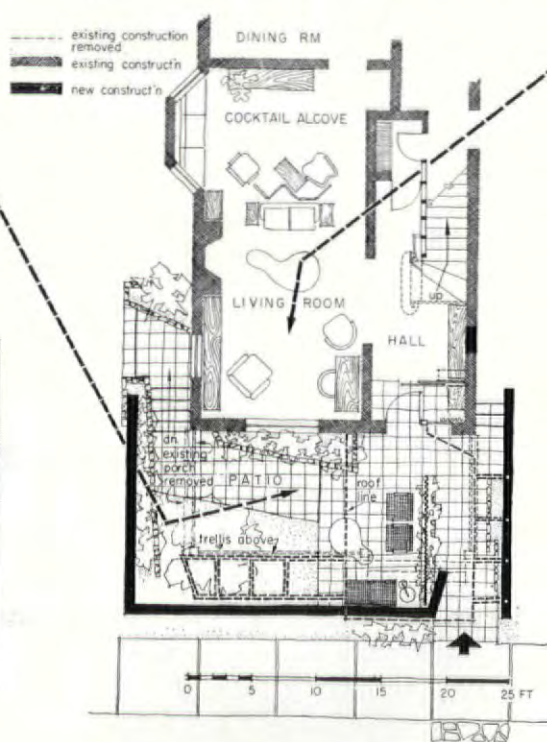
DeAumente-Schnellbacher



THIS PLEASANT PAVED COURT REPLACES A PORCH WITHOUT PRIVACY



BOUNDARY WALL NOW GUARDS PRIVACY OF FRONT YARD

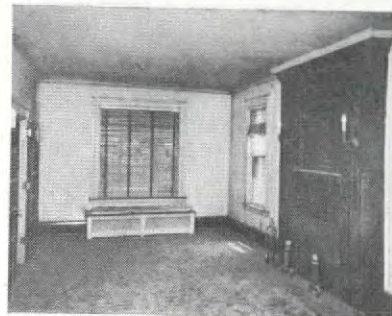


LOCATION: Jeannette, Pa.
 A. WILLIAM HAJJAR, Designer
 WEST MORELAND CONSTRUCTION CO., Contractor
 G. A. GERBER, Owner

When the architect entered this raw-for-remodeling house he found a dark, gloomy living room enclosed by strong walls of 50 year old brick. He tampered little with the shell after his first move, which was to strip off the porch—which had virtually been part of the adjoining sidewalk, and had shut off all the southeast light from the dismal interior. The building of a brick wall on the front boundary yielded not only privacy for a house very close to the street, but also allowed the planning of a pleasant, useful front patio. The front window in the living room, enlarged, takes further advantage of this court.



LARGE WINDOW LIGHTS DARK OLD LIVING ROOM



FINISHES AND EQUIPMENT: Terrace roof—stainless steel. WINDOWS: Sash—stainless steel. Glass— $\frac{1}{2}$ in. plate, Pittsburgh Plate Glass Co. PAINTS—Pittsburgh Plate Glass Co. CABINETS—oak. ELECTRICAL INSTALLATION: Wiring system—Hummel Co. Fixtures—General Lighting Co.

HOW DOES LIGHT AFFECT COLOR? Four colorists do some examining under six standard light sources, using 44 standard interior paint colors

The color of a light source makes a big difference in the color of objects being lighted. Architect, interior designer, building maintenance men and owners, all are beginning to recognize that color is an important tool because of its effect on the individual. Yet, color does not exist without light as anyone who has watched colors fade at twilight has observed. When there is light, however, its own color has a tremendous effect on the individual's reaction to pigment color. Many a male can't stand chartreuse, for example, while yellow may be his favorite color. Give that man a certain shade of yellow under 3500° white fluorescent light and he will see chartreuse because the particular source gives a green cast to yellow pigments.

Sylvania Electric Products have surveyed standard pigment colors under the six major light sources. Four trained observers, a man and three women, were involved in this study and their recommendations as to which light source does the most for each of the 44 pigment colors examined are included herewith. Miss Winona Murphy, Color Analyst of Sylvania Products and her colleagues, have assumed that any color appearing dull, grayed or faded is unsatisfactory under that particular lamp or lamps and have grouped them, accordingly, under the lamp which gives them a rich, vivid or close to pure hue appearance. In some instances, the color will be satisfactory under two lamps. One will be a warm tone, the other a cool tone. Personal taste and the character of the room or decorative project will then have to be the determining factors. A second choice is noted, and in selecting color schemes, any of the colors which appear in the first or second choice group of a particular lamp, can be used safely with that lamp. Those which appear dull or grayed should be avoided. This is most important when large areas of color will be used.

The method used in this study was to build six shadow boxes, one for each of the six light sources. A large swatch of the color to be inspected was then put in each shadow box and the colors were compared by each colorist working individually. To keep selection as objective as possible, colors were numbered rather than named and judgments were compared later on. The method has its faults, however, because the colors and light sources were isolated for testing while obviously this would not be the case in a living room, store or factory. The color quality of a lamp would be much less apparent if it were used for general lighting in a room with no contrast light

source present. Until the advent of fluorescence the color of artificial sources was controlled almost entirely by the use of filters over incandescent sources. Now, with five fluorescent sources, as well as incandescent available, the choice of the right light for particular color combinations becomes easier to decide.

COLOR TEMPERATURE OF LIGHT SOURCES

It is the color temperature of a light source that indicates which of the pigment colors it best reflects and which of the pigment colors it absorbs. A temperature scale set up in degrees Kelvin is used as a basis of measurement. Zero, on the Kelvin scale, is at minus 523.4°F.; no heat exists at this temperature. A light source is compared with the color of a theoretical *black body* (a stove lid heated to the point of incandescence gives one the idea). The so-called *black body* as it is heated is assumed to have perfect characteristics for emitting all the colors of the visible spectrum from red progressively through orange, yellow, violet and finally, white, at which point the metal will melt. Natural daylight is extremely variable in color temperature, thus, noon sunlight at normal altitudes may have a color temperature of 5,000 to 6,500° K while an overcast sky has a color temperature of 5,300 to 7,175° K. The sky only at Mt. Wilson, on the other hand, is 50,000° K; the sunlight at Mt. Wilson varies from 6,100 to 6,500° K. Atmosphere, time of day, season and geography each plays its part in the color temperature of natural daylight; in addition, Kelvin temperature of daylight can change from minute to minute. Artificial light, thus far at least, has a constant color temperature. The artificial source nearest to standard daylight as set up by the International Color Council, is the fluorescent with a color temperature 6,500° K; this is known as the Daylight lamp. Warmtone fluorescent has a color temperature of 3,000° K while 3,500° standard white and 4,500° white speak for themselves. The fifth fluorescent, Soft-white, cannot be assigned a color temperature because it contains colors from both ends of the black body spectrum. Incandescent color temperatures vary from 2,400° to 2,800° K depending upon wattage. The 60-watt, used in these studies, has a color temperature of 2,500° K.

WHAT IS COLOR?

Color temperature was only one aspect of light and color that was considered by Miss Murphy and her colleagues. Texture and reflecting characteristics of materials and the function of the eye, had to be examined before the visual

sensation that color sets up could be understood. The materials used in the study were limited, for the most part, to paint samples from several well-known paint companies. When all colors in the visible spectrum are combined in a certain proportion, white light is seen and, if the combination changes slightly, the light acquires a predominant color. Rain on a sunny day causes a rainbow to appear because the white sunlight, passing through the drops, is split up into its component parts. In the laboratory, a prism breaks white light into a band of colors in much the same way so that each light source used can be analyzed for its specific color characteristics by accurately measuring the amount of each color in its make-up. Basic colors in the rainbow or spectrum are violet, indigo, blue, green, yellow, orange and red. Many of the colors which we see and use every day are not in the rainbow or spectrum at all, but are combinations of the colors at each end of the spectrum, such as lavender and purple, or they result from the addition of black or white pigments to basic colors, such as with brown and gray. Actually color temperature does not classify a fluorescent source as well as it does natural daylight or incandescent light because its spectrum is bumpy and irregular; some wave lengths are missing entirely. Fluorescents are deficient in the red and yellow end of the spectrum which is what makes them appear to be blue. Incandescent light has elements from each wave length in the spectrum but is deficient in the violet end of the spectrum. This explains why incandescent light appears orange when compared with natural daylight.

Subjectively speaking, pure "white" is difficult to specify because it will take on a different hue for every different light source it reflects. Under direct sunlight, for example, white will take a yellow cast just as it will under 3,500° fluorescent. On an overcast day the white will appear more blue as it does under a Daylight fluorescent lamp. It will appear blege under a Warmtone fluorescent, orange under incandescence, and blue gray under a 4,500° fluorescent lamp. Colors, too, react to the light source that reflects them. Strictly speaking, only objects emitting or generating light within themselves have a color of their own. All things around us which are not light emitting have a borrowed color. They receive and reflect light from a source. Light falling on an object is partly reflected and partly absorbed. If the object is rich in red pigment, it will absorb all the rays except red, and reflect those back. We see the object

Name of Color Incandescent Warmtone 3500° Soft White 4500° Daylight

The following colors look best under Warmtone lamps, second best under Incandescent lamps

Bone white P.L.	Orange cast	Clear, bright	Yellow cast, deep	Pink cast, faded	Yellow cast, faded	Pale but clear
Peach blossom P.L.	Rich, deep, glowing	Clear, light	Yellow cast, clear	Pink cast, clear	True peach, deadened	Deadened, faded
Swedish red P.L.	Rich, deep, luminous	Clear, bright	Orange tone, bright	Bright & deep	Brown cast, darkened	Red, not bright
Brick red D.	Bright, glowing red	Bright, red	Yellow cast, dull	Emphasized red, bright	Darkened, greyed	Red, bright, dark
Dubonnet P.L.	Brown cast, cocoa	Light, brown cast	Yellow-brown, faded	Rich, clear red	Yellow cast, greyed	Violet cast, greyed

The following colors look best under Soft White lamps, second best under Warmtone lamps

Mulberry P.L.	Brownish-yellow, rich	Brown cast	Dull & faded	Bright & clear	Darkened & greyed	Violet cast, greyed
Wild orchid D.R.	Brown cast	Warm, grey	Greyed, light	Red cast, bright	Darkened & greyed	Blue cast, greyed
Opal mauve D.R.	Orange cast, bright	Bright, rich	Pale cast, greyed	Red cast, greyed	Yellow cast, faded	Light, faded
Platinum grey P.L.	Warm, deep	Beige cast	Yellow-beige, bright	Pink-beige, bright	Soft, neutral beige	Cool, slightly faded
Normandy grey P.L.	Brown cast, dark	Warm, clear	Yellow cast, bright	Pink cast, light	Neutral beige	Clear, light, grey-beige
Cocoa brown P.L.	Rich, dark	Dull, yellow cast	Yellow cast, light	Red cast, deep, clear	True tan, darkened	Greyed
Rust P.L.	Rich, dark orange	Yellow cast	Dull brown cast	Red cast, bright, rich	True color bright	Greyed, cool
India D.	Red cast, bright	Yellow cast	Yellow cast, dull	Red cast, rich, deep	Yellow cast, greyed	Greyed, faded

The following colors look best under Warmtone lamps, second best under (Incandescent lamps 3500°)

Petal rose S.W.	Warm, rich yellow cast	Warm	Bright & clear	Pink cast, deep	Darkened & greyed	Greyed & dull
Cafe au lait D.R.	Brown cast, dark	Yellow cast, beige	Clear, warm	Red, deep	Darkened, greyed	Cool, light, greyed
Bedford buff P.L.	Warm, dark	Yellow cast, bright	Yellow cast, light	Pink cast, clear, light	True color	Cool, light, faded
Sunglow yellow S.W.	Orange cast, slightly dark	Warm, bright	Clear Yellow	Tan cast, slightly dark	Greyed & dark	Greyed, dark
Hollywood cream S.W.	Warm, deep	Bright yellow cast	Tan cast, clear	Pink cast, dark	Slightly greyed, dark	Greyed, dark
Cottage ivory S.W.	Slightly dark, warm	Warm, bright	Clear, slightly greyed	Pink cast, dark	Greyed, dark	Clear, faded
Deep chartreuse D.R.	Brown cast	Bright, yellow cast	Green cast	Brown cast, dull	Greyed	Clear, faded
Light olive green D.	Brown cast	Bright clear	Dull, clear	Brown cast	Slightly greyed	Clear, cool green
Warm grey D.	Green-brown cast	Yellow-green cast	Clear green-grey	Beige	Grey-green	Cooler grey-green

The colors on the facing and backing pages are standard paint pigment colors as manufactured by Sherwin-Williams (SW), Pratt & Lambert (PL), Devco & Reynolds (DR) and O'Neil Duro (D). They have been studied by a group of four trained color specialists under six standard artificial illuminants, 60-watt incandescent and the following fluorescents: Warmtone, 3500°, Softwhite, 4500° and Daylight. The colors are grouped according to the light source under which they will appear to best

advantage and note is made of the source under which they will appear to second best advantage. Texture of materials and intensities of light will influence color perception, of course, and individuals may see color differently so there will undoubtedly be disagreement with some of the light sources chosen by the colorists. Most choices, however, will probably meet with wide agreement because in borderline cases of color selection, findings were rechecked before final light source choices were made.

red only because there is red in the light that falls upon it.

Color constancy is a phenomenon of the human eye which allows it to see color as normal under widely different conditions of illumination. The eye perceives that a piece of paper is white whether it is directly under an illuminant or in shadow. Because of color constancy, white walls in shadow do not appear gray, nor do gray walls in bright light appear white. Yet, when two illuminants are used in the same room—fluorescent, say, for general lighting and incandescent for downlighting—the difference in the color of the luminaire is immediately evident. A piece of white paper held under the incandescent downlight will have a definitely yellow cast but when the paper is moved away from the incandescent spot and viewed under the fluorescent source, it will have a bluish cast. Despite this, however, it is perfectly evident to the eye that the paper really is white no matter what the color temperature of the illuminant.

Most illuminants are made up of more than one color, yet most are richer in one color than another. This explains why various illuminants have various effects on a white surface. Similarly, few objects are of a single color; some of the other colors are nearly always present. This explains why people look so unnatural under the brilliant yellow of sodium vapor highway lighting. It is essentially monochromatic and since the human skin has very few pigment particles that respond to this wave length, most of the rays are absorbed. Thus, sodium vapor light is most unflattering. Candlelight, on the other hand, is considered flattering by most women because it brings out the red in the complexion. Unlike sodium vapor, candlelight emits some light in all wave lengths but it is deficient in blue and violet while it emits much orange and yellow light.

Complementary colors are those which, when mixed, produce gray. The same holds true in lighting, and care must be taken to avoid using lamps and colors in which a major component part of the color is close to the complement of the light source. Green under a Softwhite fluorescent lamp or blue under an incandescent lamp will result in a graying of the color. A fabric which has a pattern of small pink flowers and green leaves, seen under a Softwhite lamp will show intensified pink while the green will be grayed. Under a

Daylight fluorescent, the reverse will be true. Under a Warmtone fluorescent lamp, the pink and the green will appear equally lively, because they respond through the yellow in the near red and the yellow in the near green. Since most colors are made up of a large percentage of one color, a somewhat smaller part of other colors, the color which is present in the largest quantity will determine the basic reaction to the light source. The color which is present in the lesser amount will determine which light source will be acceptable as a second choice. *The predominating component of a color determines the most favorable light source for it to be seen under, and it will be found to be the source which is richest in that part of the spectrum well represented in the component part. The second major component will, on the same basis, determine the light source under which the color will still clearly appear to good advantage, but not emphasizing quite as much its distinctive quality.*

It should be remembered also that it is not always desirable to show a color in its most vivid and lively capacity. Sometimes in decorative and design work with colors, a softer, more subtle effect is required so that the source to choose is the one which does the most satisfactory job on all of the color combinations to be used, rather than one which emphasizes only one or two.

In planning the lighting and color, it is not necessary to confine oneself to a single lamp color for the entire room. Accents and interesting patterns of light can be achieved by varying the lamp color which also allows greater freedom in the color selection. In a room having platinum gray walls and illuminated with Softwhite fluorescent lamps, for example, lime or honey yellow may be used in chair fabrics if incandescent floor lamps are nearby. Without the incandescence, however, the desired effect of these fabrics would be destroyed. When the various colors were examined in the test cubicles with the six different lamps, there was a decided difference in their appearance. It must be remembered, however, that when used alone in a room for general lighting and there is no contrasting source, the color quality of the lamp is less apparent and its effect not so noticeable.

This analysis required many days of observation and discussion. Care was taken to avoid the influence of visual fatigue and illusion. The color samples were selected by an im-

partial well-known color consultant as most representative of those in demand for commercial and home decoration.

COLOR SYSTEMS AND THE EYE

For those unfamiliar with the various color systems in use, the following may be helpful. Many attempts have been made to set up a color system so that colors will be readily identifiable. Before any such systems were devised it was difficult, if not impossible, to convey the idea of a color unless a sample were available. A look at the standard manufactured paint pigment colors on pages 116 and 118 will indicate how confusing mere names are. For example, Platinum Gray is very close to Cottage Ivory yet the names give no notion of this. A color system, such as Munsell, Ostwald or ICI, takes such subtle variations into consideration. Color has four major characteristics, hue, value, intensity and finish. Hue refers to the color itself, whether it is red, green, blue, etc. A very light pink and a dark red may have the same hue. Value refers to the tonal quality of the color. If it is light in value it is a tint, and if it is dark, it is considered a shade. Intensity and chroma are terms used to designate the brilliance or strength of a color. Yellow is weak in saturation and pale in intensity or chroma. Blue is high in intensity and saturation of color. Finish applies to the surface reflecting the color. It may be either a rough or mat finish, or have a glaze or specular surface.

The exact relationship between color and the eye is still in its theoretical phase. It is known that the eye receives radiation through a lens and focuses it on the retina at the back of the eye. Imbedded in the retina are sensitive nerve endings known as rods and cones which absorb the energy and, by photo-electrical and chemical processes, pass this light stimulus along the optic nerve to the brain. The exact nature of this transmission of light into a sensation in the brain is not known, but a differentiation has been made between the rods and cones in the eye. Rod vision actually takes effect only under low levels of illumination and all objects appear as white-blacks and shades of gray. There is no fine discrimination of detail in rod vision. Cone vision enables us to see sharp detail and functions under higher levels of illumination. Cone vision also enables us to see color.

Name of Color Incandescent Warmtone 3500° Soft White 4500° Daylight

The following colors look best under Daylight lamps, second best under (3500° White lamps Warmtone)

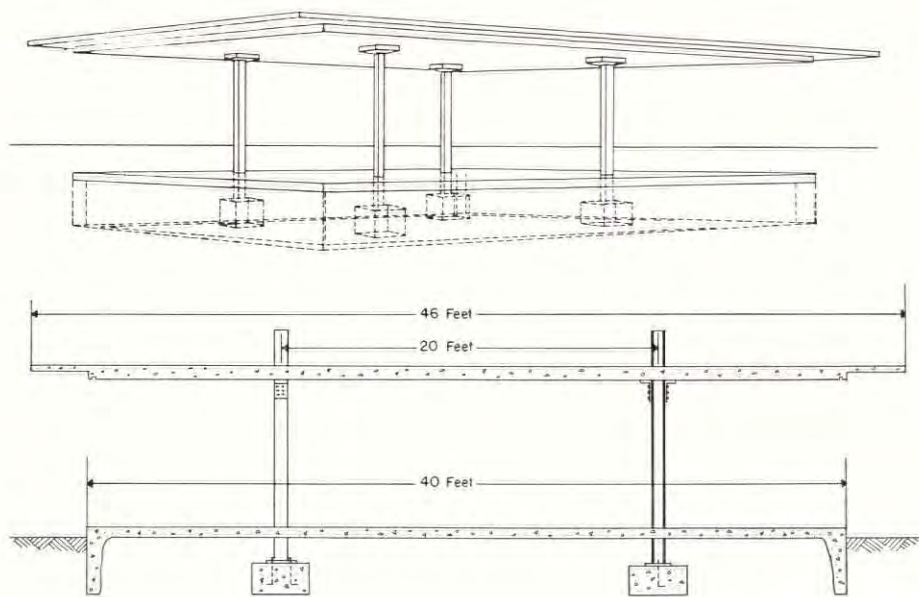
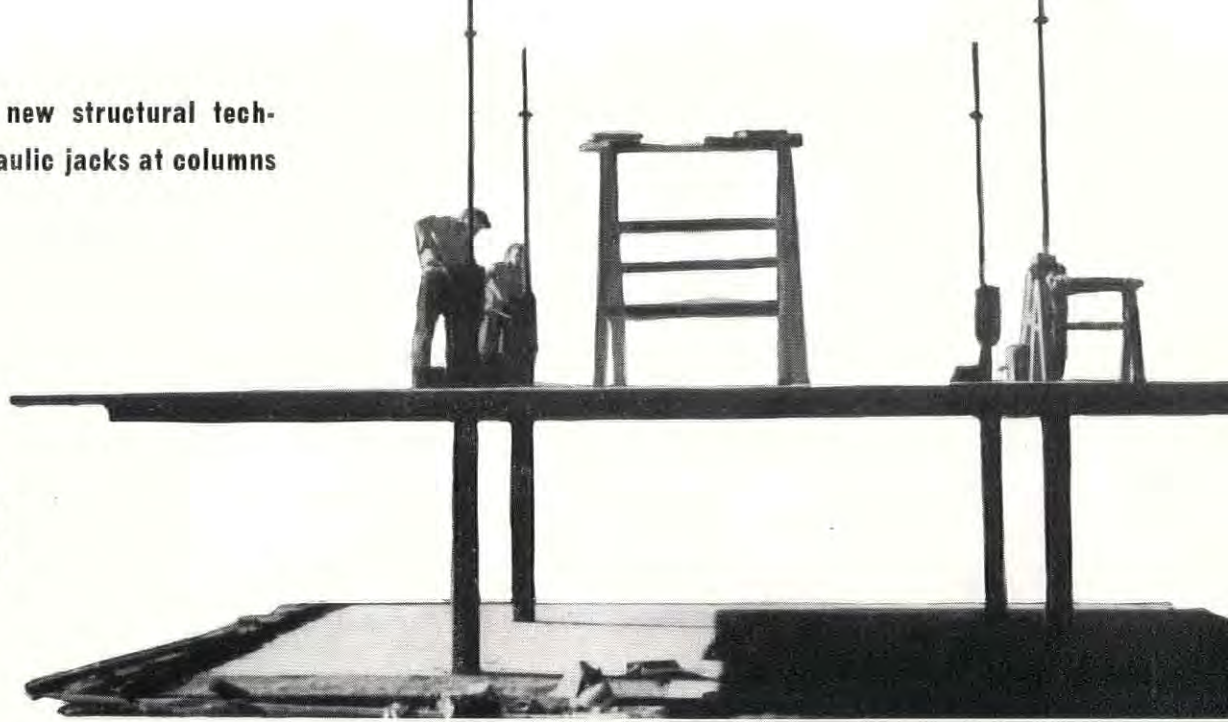
Olivine D.R.	Brown cast, dull	Yellow cast, bright clear	Green cast, bright	Yellow cast, faded	Greyed	Green Cast, bright
Empire green P.L.	Yellow cast, deep	Rich, deep	Yellow cast, darker	Very greyed	Darkened, greyed	Clear blue cast
Dusty green P.L.	Brown cast	Yellow cast, bright, clear	Clear, light	Very greyed	Slightly green	Clear, green cast
Spring green S.W.	Yellow cast, dark	Yellow cast, bright	Bright & clear	Very greyed	Greyed, slightly dark	Clear, bright green
Melon green P.L.	Yellow cast, deep	Yellow cast, bright, clear	Light, clear	Grey & faded	Darkened, greyed	Clear, blue cast
Pistachio D.R.	Brown cast, dark	Yellow cast, clear	Yellow cast, clear, cool, bright	Blue cast, faded	True green	Clear, blue cast
Medium green D.	Yellow cast, dark	Yellow cast, dark	Clear, darker, bright	Slightly greyed	Grey-yellow cast	True green, bright
Light green D.	Yellow cast, deep	Slightly yellow, rich	Slightly yellow cast	Slightly blue cast	Slightly greyed	Clear, cool, bright
Fathom green D.R.	Yellow-brown cast	Yellow cast, warm	Cool, slightly yellow cast	Blue cast, greyed	Green, greyed	Bright, blue cast
Turquoise green D.R.	Yellow-green cast	Green Cast, bright	Green cast	Blue cast, greyed	Dull green	Blue cast, bright
Seafoam green S.W.	Yellow cast, deep	Yellow cast, warm	Bright & clear	Blue cast, greyed	Slightly greyed & darkened	Clear, bright

The following colors look best under Daylight lamps, second best under (Soft White lamps Warmtone)

Lagoon D.R.	Very green, light	Yellow cast	Definitely green	Grey-blue, faded	Grey-green cast	Clear, light
Victorian blue D.R.	Yellow cast, dark	Green cast, clear	Blue cast, light	Green cast, faded	Greyed green	Cool, bright
Caribbean blue P.L.	Green cast, dark	Clear, rich	Grey-green cast	Very grey, blue cast	Slightly greyed	Bright, clear
Gordon blue P.L.	Green cast, dull	Cool, clear, light	Green cast, faded	Violet cast	Slightly greyed	Clear, bright
Royal blue D.	Green cast, dull	Warm, rich, clear	Greyed	Violet cast, bright	Greyed, dark	Bright, clear
Medium blue D.	Greyed and faded	Clear, rich	Grey-violet cast	Violet cast, bright	Slightly dark	Bright, true color
Ceylon blue D.R.	Brown cast, dull	Grey cast, clear	Light clear	Greyed, dull	Green cast, greyed	Bright, clear blue
Dawn blue S.W.	Yellow cast, slightly greyed	Bright & warm	Light & clear	Violet cast, slightly darkened	Clear, slightly greyed & darkened	Bright & clear
Priscilla blue D.R.	Grey-green, dull	Bright, clear, slightly warm	Greyed blue-green	Violet cast, bright	Slightly greyed	Bright, true color
Wedgewood blue P.L.	Green cast, dull	Cool, clear	Green cast, faded	Violet cast	Greyed, darkened	Clear, deep
Shadow blue S.W.	Greyed & slightly darkened	Bright, warm	Clear & warm	Pink cast, bright	Clear, slightly greyed	Bright & clear

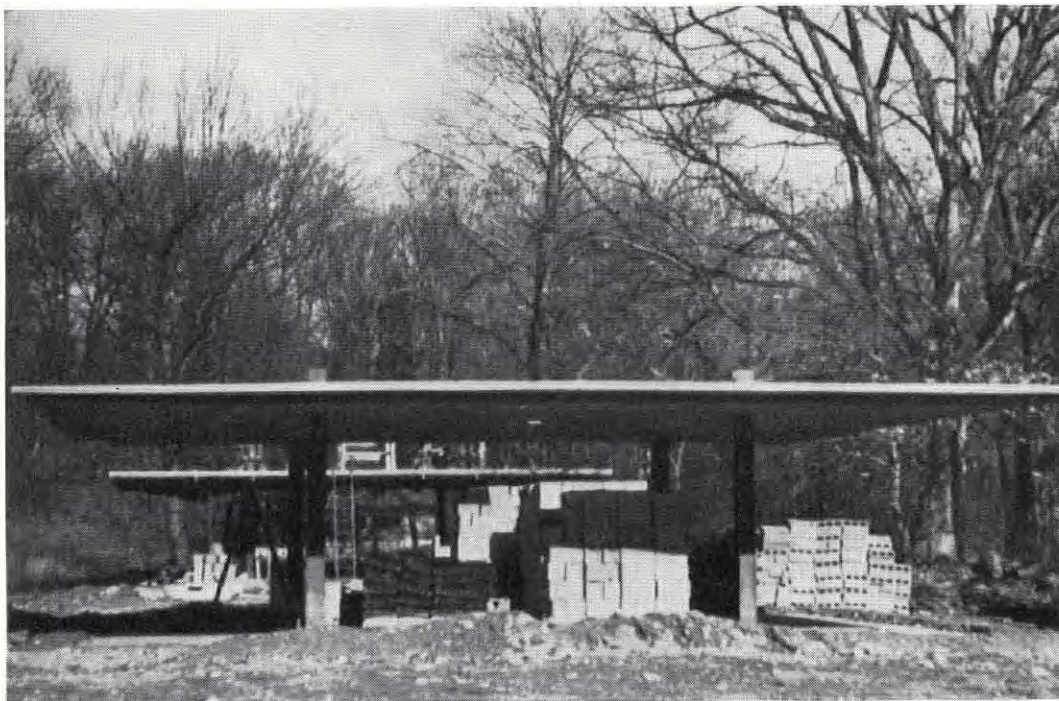
ROOF SLAB POURED ON FLOOR in new structural technique, then lifted into place with hydraulic jacks at columns

Column jacks are normally operated by four workmen standing on slab as it rises. The roof slab shown to right was jacked into place in four hours. Cantilever over edge of floor slab allows great design freedom in treatment of walls.



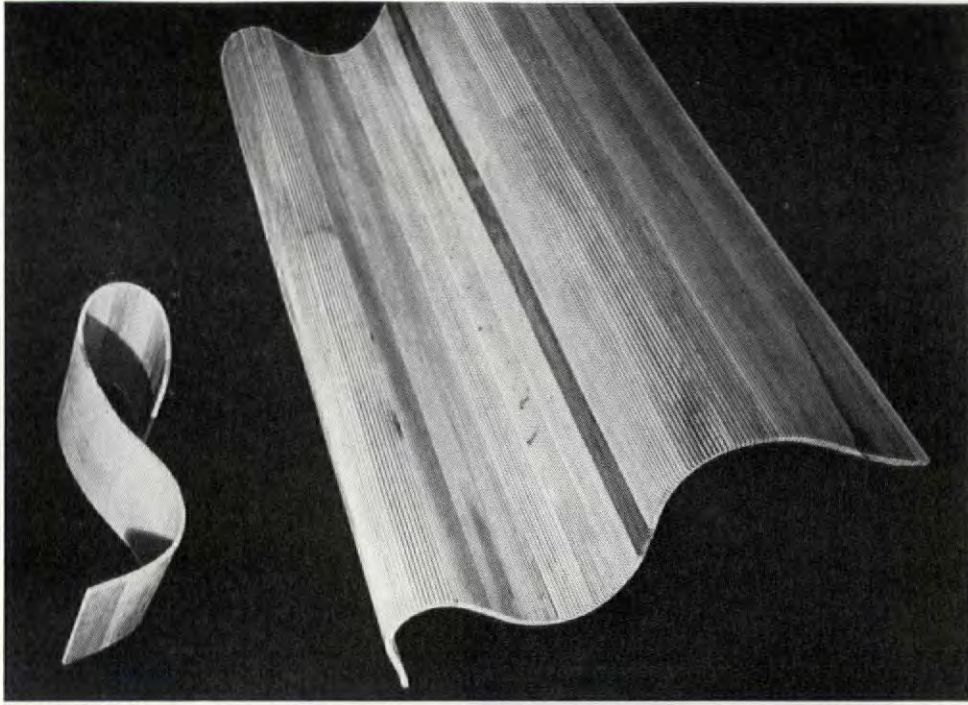
A slab roof which is cast and erected without use of forms is the feature of this low cost house frame, whose construction is as simple in principle as it is novel in practice. The reinforced roof slab, weighing 50 tons, is poured on the floor slab after the floor is completed. Then, after setting, the roof is raised slowly on steel columns by means of a hydraulic jack system which employs a device called the "Youtz skyhook" (after the inventor, architect Philip N. Youtz). Since lifting pressure occurs at the columns, the stresses on the slab during its four hour journey up to its ultimate roof height are much the same as the normal roof pressures will be when the frame is fixed, so reinforcing in the slab is not greatly complicated by the fact that it is erected rather than poured in place. Columns are interior, with a considerable cantilever out and no structural exterior wall, leaving opportunity for great flexibility in treatment of the weather wall.

No forms at all were used on the first set of these houses, which were built for the Henry Street Settlement Camp at Yorktown Heights, New York. Column footings and foundation were poured direct into their excavations, and the floor was poured on the ground, framed with planks. A layer of tar paper over this slab received the roof slab, its overhang shaped by mounds of earth covered by tar paper. The jacks attached to the columns which make each an elevator are operated by men standing on top the slab. This "skyhook" consists of a lifting yoke bolted to the roof or upper floor slab, a tension screw placed between the flanges of the column, a safety device that prevents slipping, and the hydraulic jack. Price of such a house, with minimum finishing runs \$6,000, architect Youtz says.



Early building of roof creates shelter for workmen finishing exterior walls, partitions, and other details, as well as serving as its own storage shack. Steel columns are trimmed down after the roof slab has been lifted into place.

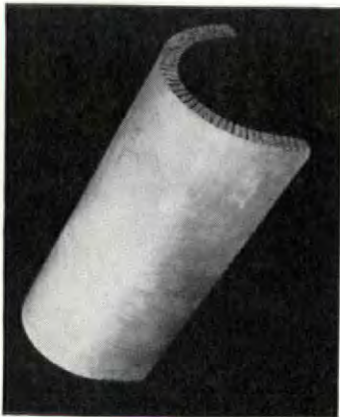
FLEXIBLE PLYWOOD PANELS simplify building of curved walls, are applied with smooth or slatted surface exposed



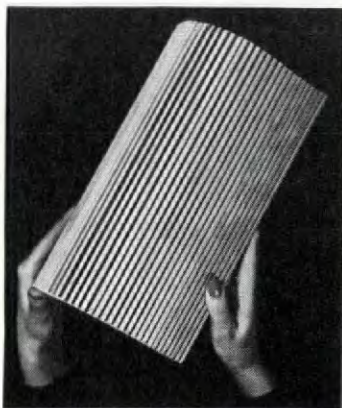
Broun & Bertheim

Plywood panels, fabricated in large sizes, are moistened and bent to the shape needed, then are erected on framing.

Smooth side, one of several available veneer finishes, can be used in convex or concave curve.



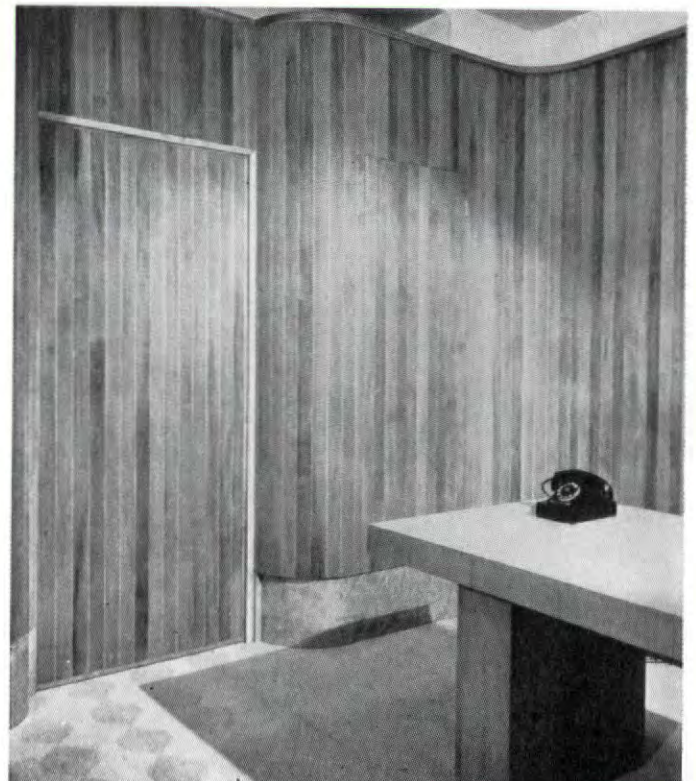
Slotted side also bends either way, and is often used as finish. Laths come in several sizes. To right, finished wall,



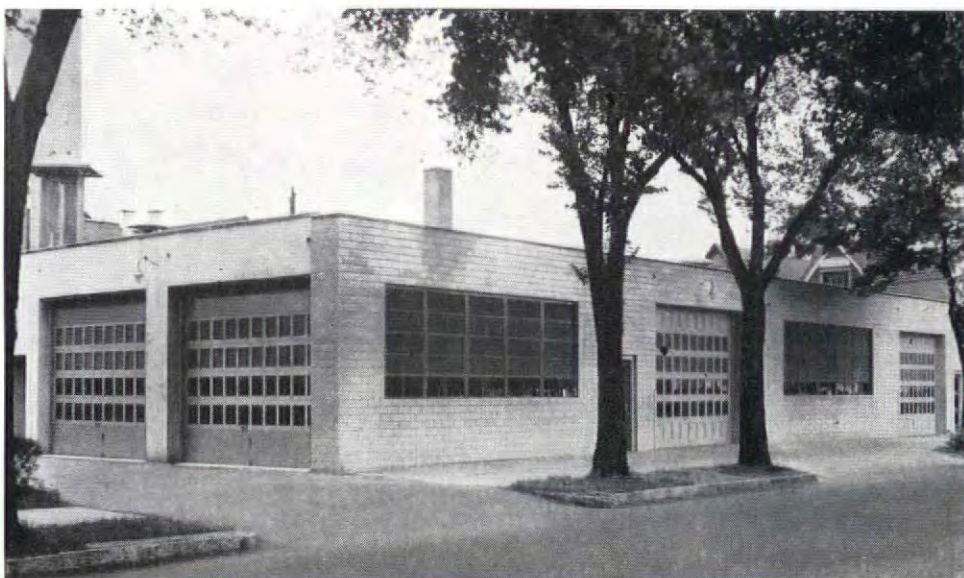
A new Dutch import, "Superflex" Plywood, presents two useful surfaces to the interior designer. The material consists of a layer of thin veneer, to one side of which narrow laths are glued transversely at very small, regular spacings (see photographs). Original object in designing the material was to fabricate a flexible panel to use in finishing large curved surfaces. The goal was achieved by the application of the lath as backing, with much the same effect as scoring a strong material so that it bends; this done, the sheets of plywood could be moistened, bent, and applied with smooth veneer side out, usually saving money over curves which had to be plastered or finished with other materials. Superflex was used considerably in this manner in Europe.

But then designers began to look at the back of the material, and decided that the regularity of the small vertical shadows also might be useful. Present was a new instrument for achieving what is apparently one of the contemporary designer's favorite textures, vertical lining. The material is used slatted side out not only on curves, but also in flat sheets, frequently as background in display work. Other uses of Superflex, smooth or lath side exposed, include paneling, column covering, curved ceilings, furniture, and concrete form-work.

The flexible plywood is available in 4 x 8 ft. sheets from Wall Trading Corp. in New York, the importers. Several different sizes of veneer and lath are used, with overall thicknesses from 7/16 in. to 25/32 in. Small sections sell slightly under a dollar per sq. ft. Birch (1/32 in.) and beech (1/16 in.) are the principal veneers, with oak and mahogany available at extra cost.



Alexander Georges



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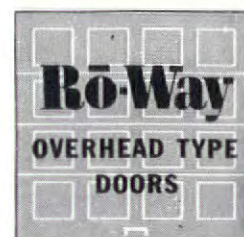
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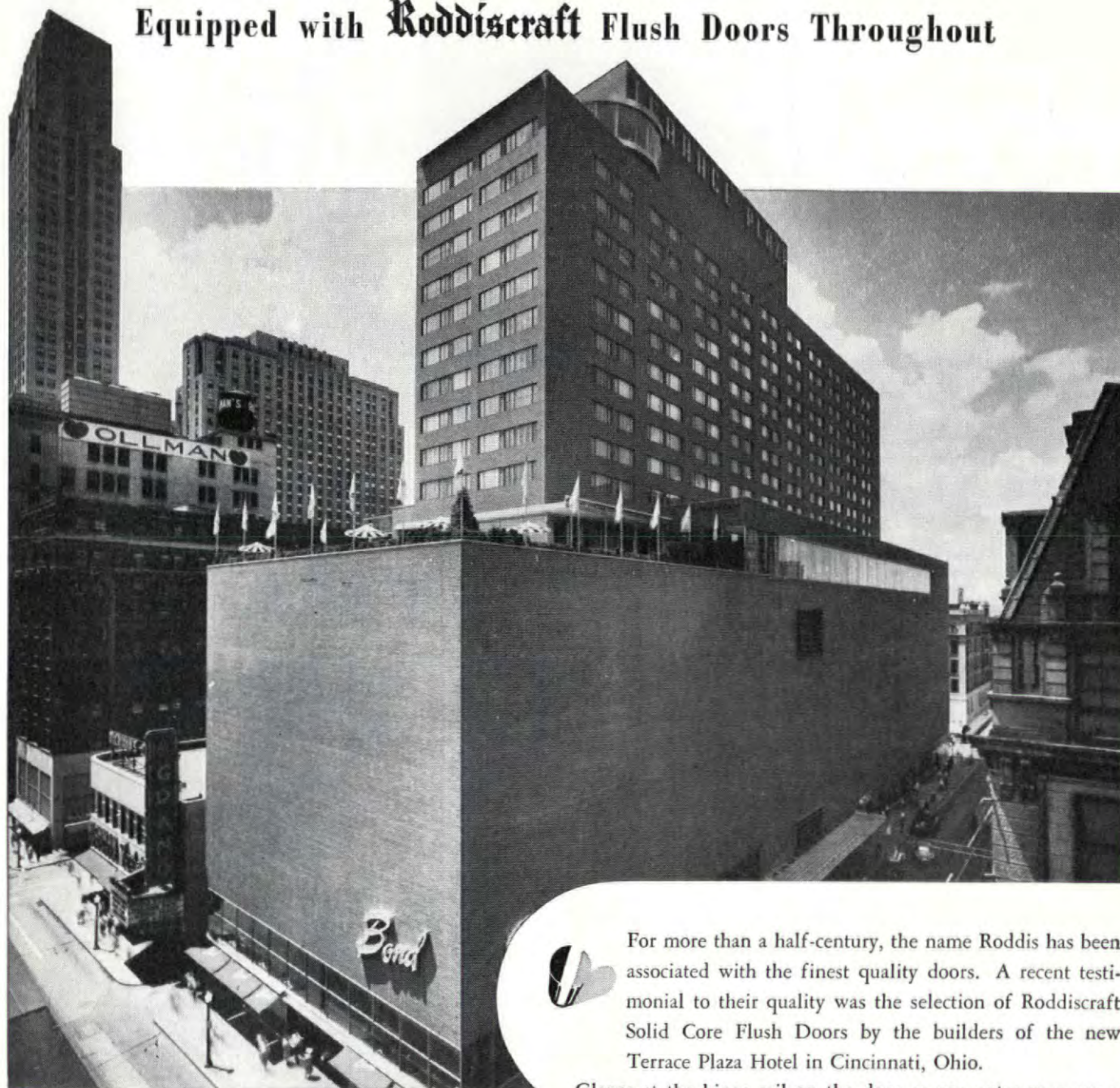
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REVIEWS



SMALL ARCHITECTURAL EXHIBIT stimulates interest in good design

Public-wise or publicity-wise, this hinterland exhibit of the work of Schweiker & Elting is no small triumph. It is currently on view at the Fox Valley Art Association, Elgin Academy Art Gallery, Elgin, Ill. In the not too distant future it will be shown at the Renaissance Society, University of Chicago.

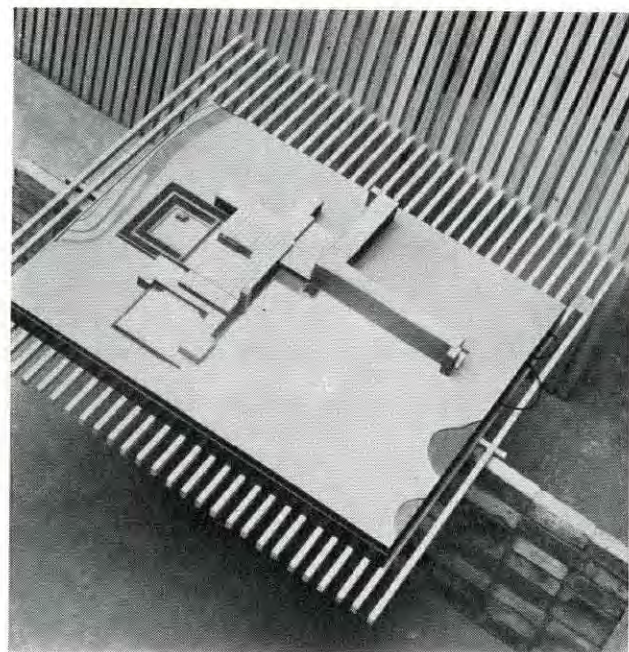
The actual staging was carried out by the staff of the Schweiker & Elting office. Rough sawn Douglas Fir, 1 x 2 in., was used for the lath. The masonry wall is of Illinois common brick laid on edge, a construction most masons claim to be impossible.

It is encouraging as well as interesting to see what smaller middlewestern towns are doing to promote a better knowledge and appreciation of architecture. It is also noteworthy that a comparable amount of thought and consideration was given to the installation as to the actual designs on display. Communities, towns and cities, please take note. M.S.

The Country Studio

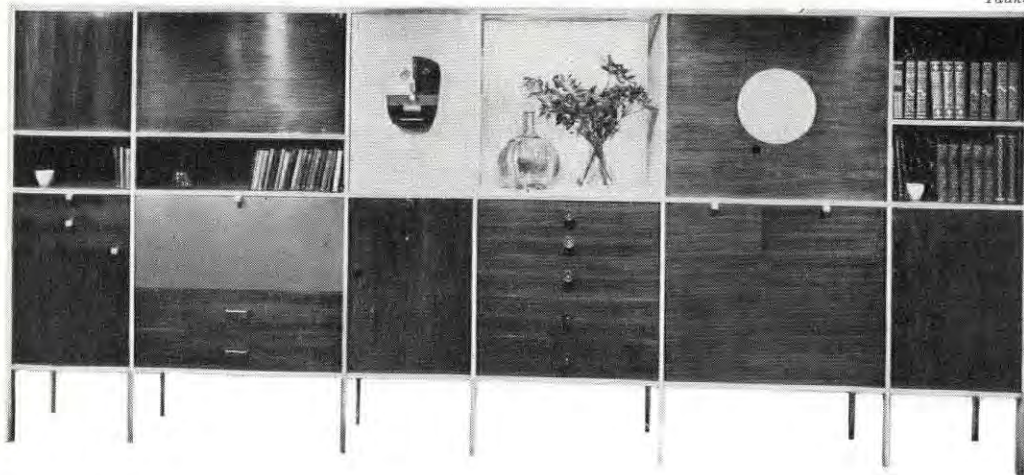


Models for a yacht club, a private house are shown above. At right is a model for the new Keeley Institute, Dwight, Ill.

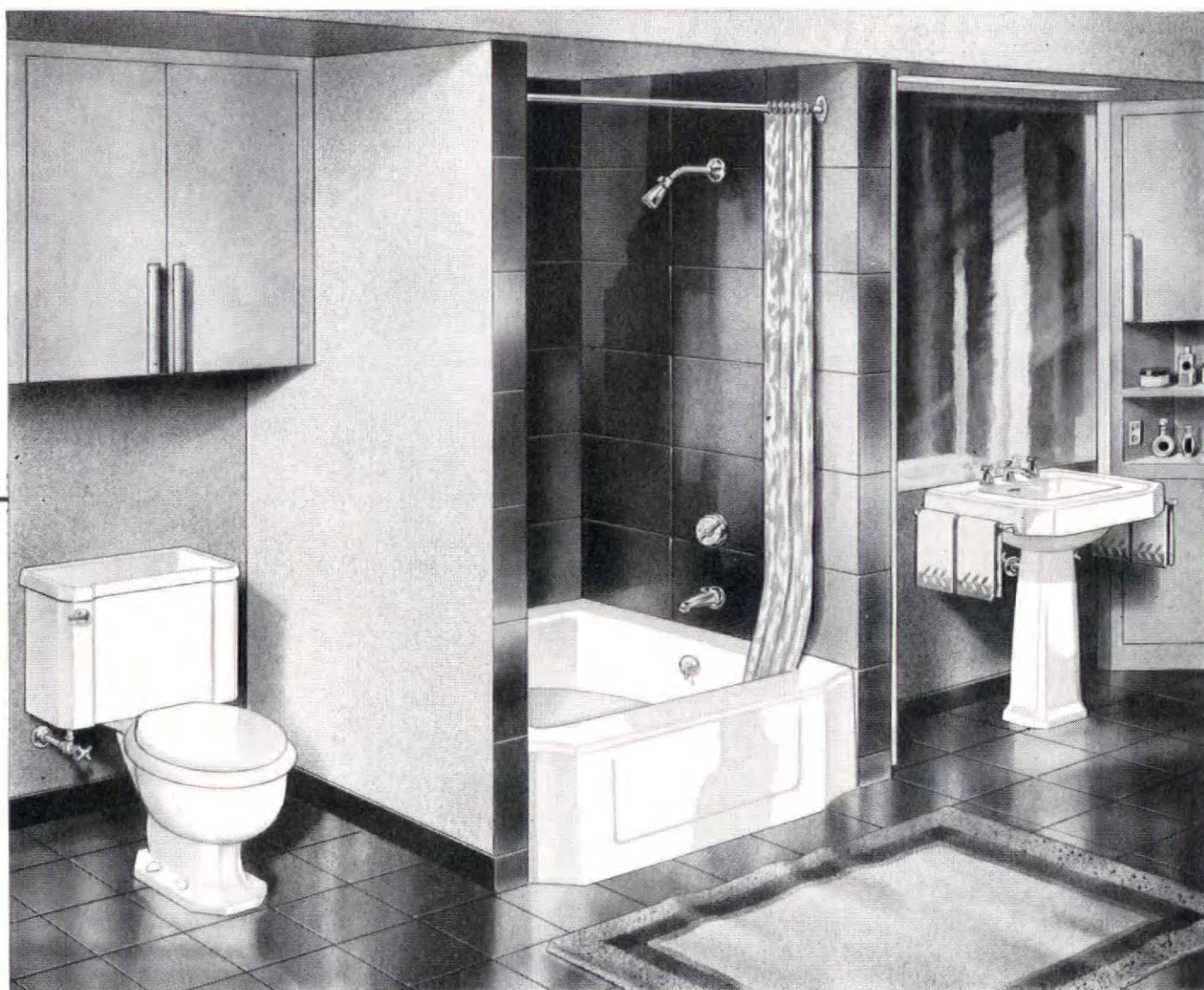


MODIFIED STORAGEWALL cuts expense of special cabinet features

Idaka



BSC (built-in storage components) is the name of this simplified and modified StorageWall designed by George Nelson and marketed by the Herman Miller Furniture Co. Components consist of a dozen sizes of drawers, seven sizes of doors, four sizes of shelves, three desks, a desk pigeonhole and a radio speaker panel. The depth of all units is uniform. Provided he can drum up a good carpenter to erect a sturdy framework, BSC makes it possible for architects to incorporate few or many of the items listed as part of the general scheme without the expense of special designing and cabinet work. A catalogue illustrating all components with complete instructions on their installation is in preparation. M.S.



KOHLER PLUMBING FIXTURES

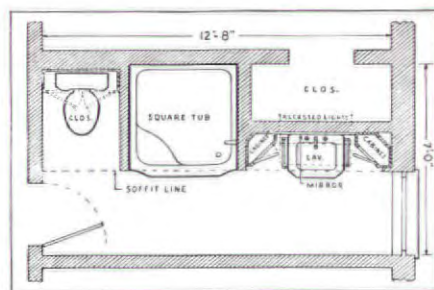
a source of permanent pride and satisfaction

No explanations are needed when plumbing fixtures carry the Kohler name. Home owners know the Kohler name and quality reputation, built through 76 years of doing things well. They know "Kohler" means beauty and dependability in the highest degree.

The Times Square Bath is roomy and convenient to use, yet its compact 4' x 4' dimensions often allow extra closet room. This bath has a handy corner seat. Fixtures come in pure white or delicate pastel shades.

Kohler's extra value at no extra cost

is represented in the lustrous, glass-hard, easy-to-clean Kohler surfaces—in the non-flexing iron base of the bath, cast for rugged strength and permanent rigidity—in the precision-made, chromium-plated brass fittings. The efficient Triton shower fitting is shown with the Niedecken mixer. Graceful, convenient Jamestown pedestal lavatory is made of highest quality vitreous china. Well-worth close-coupled closet works smoothly and quietly. Kohler Co., Dept. 23G, Kohler, Wisconsin.



This arrangement illustrates the extra closet room which use of the Kohler Times Square Bath frequently allows. The fixtures are well placed for convenient access, and though the bathroom is compact there is plenty of storage space.

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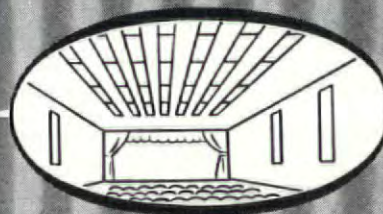
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Waiting Rooms



Auditoriums



When you plan the lighting of conference rooms, waiting rooms, auditoriums, etc., where fixtures may be in the field of vision for extended periods, lighting panels should be low in brightness to prevent eye fatigue.

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BP doors are of multiple-piece-stile construction; and are so designated because they are ideal for paint or enamel finish.

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STILES, RAILS, AND MULLIONS—This stock shall be of vertical grain faces with some coarse grain permitted. It shall be sound in all respects, and may contain sap, light stains, streaks, burls, and neatly repaired pitch seams. Glued-up members are permissible. A moisture-resistant glue shall be used. Mixing of woods is permissible provided both stiles are of a single specie.

PANELS—FLAT VENEERED—The standard thickness of 3-ply flat veneered panels shall be $\frac{1}{4}$ inch after sanding. Each face shall be of one or more pieces of firm smoothly cut veneer. When of more than one piece, it shall be well joined and reasonably matched for grain and color at the joints. It shall be free from knots, splits, checks, pitch pockets, and other open defects. Streaks, discolorations, sapwood, shims, and neatly made patches shall be admitted.

PANELS—RAISED—The standard thickness of raised panels shall be not more than $\frac{9}{16}$ inch before sanding and not less than $\frac{7}{16}$ inch after sanding. They may be either slash or mixed grain, or mixed woods and shall conform to the grade of the stiles and rails. Glued-up, solid panels are permissible.

BOOKS

AMERICAN FOLK ART IN WOOD, METAL AND STONE.

By Jean Lipman. Pantheon Books, Inc., 41 Washington Sq., New York 12, N. Y. 186 pp. Illus. 11 1/2 x 8 1/2. \$7.50.

This book happily leads the reader to believe that perhaps, after all, Americana is not limited to spool beds, cobblers benches and hurricane lamps. Miss Lipman, an authority on American primitive painting (she has published a book on the subject) leads a short reconnaissance party through the relatively unexploited field of folk art, the vast majority of which was created by anonymous artists: plain shipwrights, farmers, carpenters or just whittlers. Their art, unique and indigenous to the U.S., has a directness and charm all its own—com-

paring favorably with the work of some of our most popular contemporary artists.

Interior decorators, dictators of popular taste for better or for worse, have quite obviously opened the trade entrance to American folk art—having run the gamut of practically every other style and apparently finding it a little too early to stage a large scale re-revival. Emphasis is now on the quaint and picturesque as is seen in almost any consumer home magazine. Miss Lipman has, therefore, hit the best possible moment for her book to appear. (It is safe to assume that a number of others in the genre are currently in the hands of the publishers.) She has divided the text into eight sections each dealing with a particular aspect of folk art. They are: 1) ship figureheads and ornaments, 2) weathervanes, 3) cigar store figures and other trade signs, 4) circus and carousel carvings, 5) toys, 6) decoys, 7) sculpture for house and garden, and, 8) portraits. The last has the most appeal for this reviewer principally because it seems least familiar and hackneyed. Most of these, gravestone cuttings, date from the middle of the nineteenth century. Most captivating is one of Henry Ward Beecher which was carved, however, by an Indiana farmer named Corbin during one of Beecher's visits to that state. Accompanying the illustrations is Miss Lipman's highly readable commentary, in this section peppered with some incomparable and authentic epitaphs, three of which appear below:

*Here lies John Auricular
Who in the way of the Lord walked perpendicular*

*Under the sod and under the trees
Here lies the body of Solomon Pease
The pease are not here there's only the pod
The Pease shelled out and went to God.*

*To all my friends I bid adieu,
A more sudden death you never knew.
As I was leading the old mare to drink,
She kicked and killed me quicker'n a wink. M.S.*

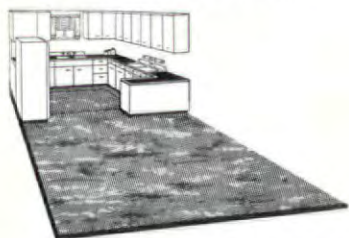
THE HEART OF THE HOME. Issued as a Public Service by the Committee on Cardiovascular Diseases in Industry of the New York Heart Association, 2 East 103rd St., New York. 11 pp. 9 x 6. Mailing charge 8 cents for over 50 copies.

"It is," this little pamphlet says, "the way you do things rather than what you do that is important." Wasted energy, a favorite talking point of architects and planners, is here discussed and condemned by one of our leading medical institutions in the most down-to-earth and concise manner imaginable. It does not, however, represent the medical opinion alone. Architect John Callender acted as consultant. Into the research went the construction of a scientifically planned kitchen which is still intact at Columbia Teachers' College, many space-motion studies incorporating those of the Pierce Foundation as well as the collective knowledge of the medical profession.

To revert to "the way you do things"—the vernacular of our times is built on the acceptance of "tension" and "wear and tear" as part of the daily routine. Actually, in the physical planning of a house, these "symptoms" of our civilization can be to a great measure reduced. This is the chief point that the pamphlet makes though it is aimed at people who have been given definite cause for alarm—not invalids.

The New York Heart Association is to be congratulated
(Continued on page 132)

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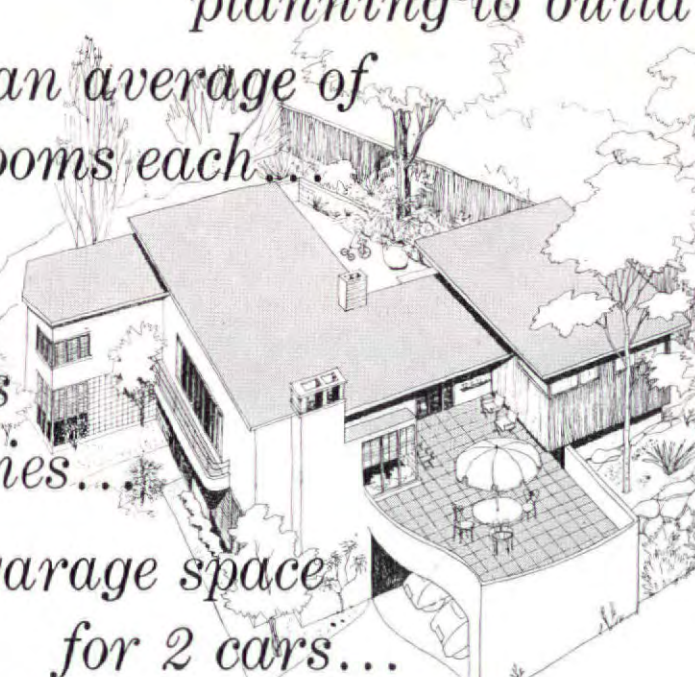
because the occupants have the power of final decision. They are owner-builders

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will have an average of
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plus
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and lavatories...
and garage space
for 2 cars...*



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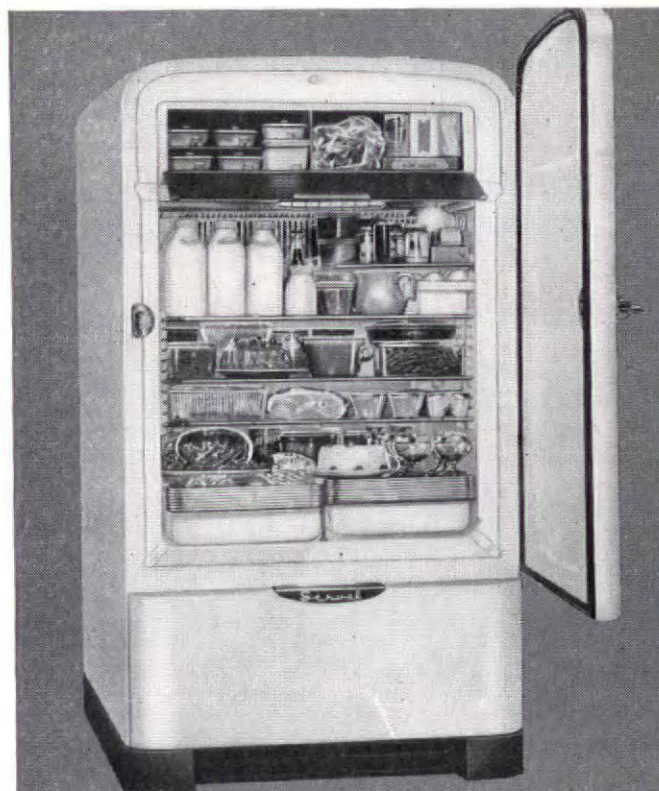
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on its forward thinking as well as on its accomplishment to date. To augment its own resources in relation to the homemaker with heart disease, it has set up a Sub-Committee on Work Simplification that enlists the experience of other interested groups. These include industrial and management engineering, home economics, family relations, psychiatry, physical education, physical therapy and architecture. People representing these branches have been selected for special understanding of homemaking problems. With these facilities it is not surprising that *The Heart of the Home* has turned out to be the successful job that it is. Call it propaganda, call it education, this pamphlet amounts to a united viewpoint, backed by several fields of science, focused on the home and the well being of its occupants. The inclusion of the architecture is certainly a progressive and encouraging step, but not

only from the architect's viewpoint. For what good is the best designed house if its occupants are not healthy and happy.

Aside from its obvious value to the lay public, *The Heart of the Home* represents the same sort of rapprochement between architecture and engineering. It is to be hoped that it is a forerunner of greater developments in the field of group clinical facilities. M.S.

CONTEMPORARY PAINTERS. By James Thrall Soby. The Museum of Modern Art, 11 West 53rd St., New York. 151 pp. Illus. 10 1/4 x 7 1/2. \$3.75.

Admirable as are almost all publications of the Museum of Modern Art, so many interlock and overlap that after the first ten years the mass output assumes a somewhat confusing aspect. However, Mr. Soby, for a change, openly admits that there is too much duplication of subject in books on modern art. In striving to avoid it in this book, he set out "re-exploring neglected movements like vorticism and that *scuola metafisica*, sometimes by proposing . . . juxtapositions and categories . . . by writing about young and less known artists—the newer American and English painters, for example." The result is of the quality one has grown to expect from Mr. Soby. Aside from his characteristically readable and lucid prose, and his well directed approach, the book is indistinguishable from many other Museum publications. Furthermore, it was not blessed with a single color plate. M.S.

A HISTORY OF CAST IRON IN ARCHITECTURE. By John Gloag and Derek Bridgwater. George Allen & Unwin, Ltd., 40 Museum St., London WC1, England. 377 pp. Illus. 10 x 8 1/2. 63s.

If one is to judge matters by the prolificness of an architectural writer, England's Gloag is second only to France's Corbu. This, his most recent contribution, will be chiefly of historic interest to the American architect. One reaches the all time high of the Crystal Palace about half way through and it is given the best treatment on record—in itself makes the book worthwhile. Everyone knows that England in the first half of the Nineteenth Century produced some of the most interesting of all cast iron structures, particularly in her railway stations. These too, are well covered as is some bridge construction of that and subsequent eras. Much of the book, however, is taken up with details of grilles, lampposts and other memorabilia that is of little value to today's practising architect. In overall evaluation, *A History of Cast Iron in Architecture* should have had *English* included in the title since the material it deals with is limited solely to that island. However, in view of current preoccupation with the structural forms that resulted from the industrial revolution, it is quite conceivable that more than one American architect will want this volume included in his library. M.S.

HOME PLANNING GUIDE. The Women's Architectural League, San Francisco Bay Area, California. 31 pp. 9 x 6. \$.25.

This small pamphlet on the intricacies of selecting an architect and seeing him through his stuff is chiefly angled at the female client though it contains plenty of material from which the master of the house might profit. As a small concise briefing, it is as good as they come and should successfully compete with some much more ostentatious books that have appeared on the market. Its chief attribute is the matter-of-

(Continued on page 136)



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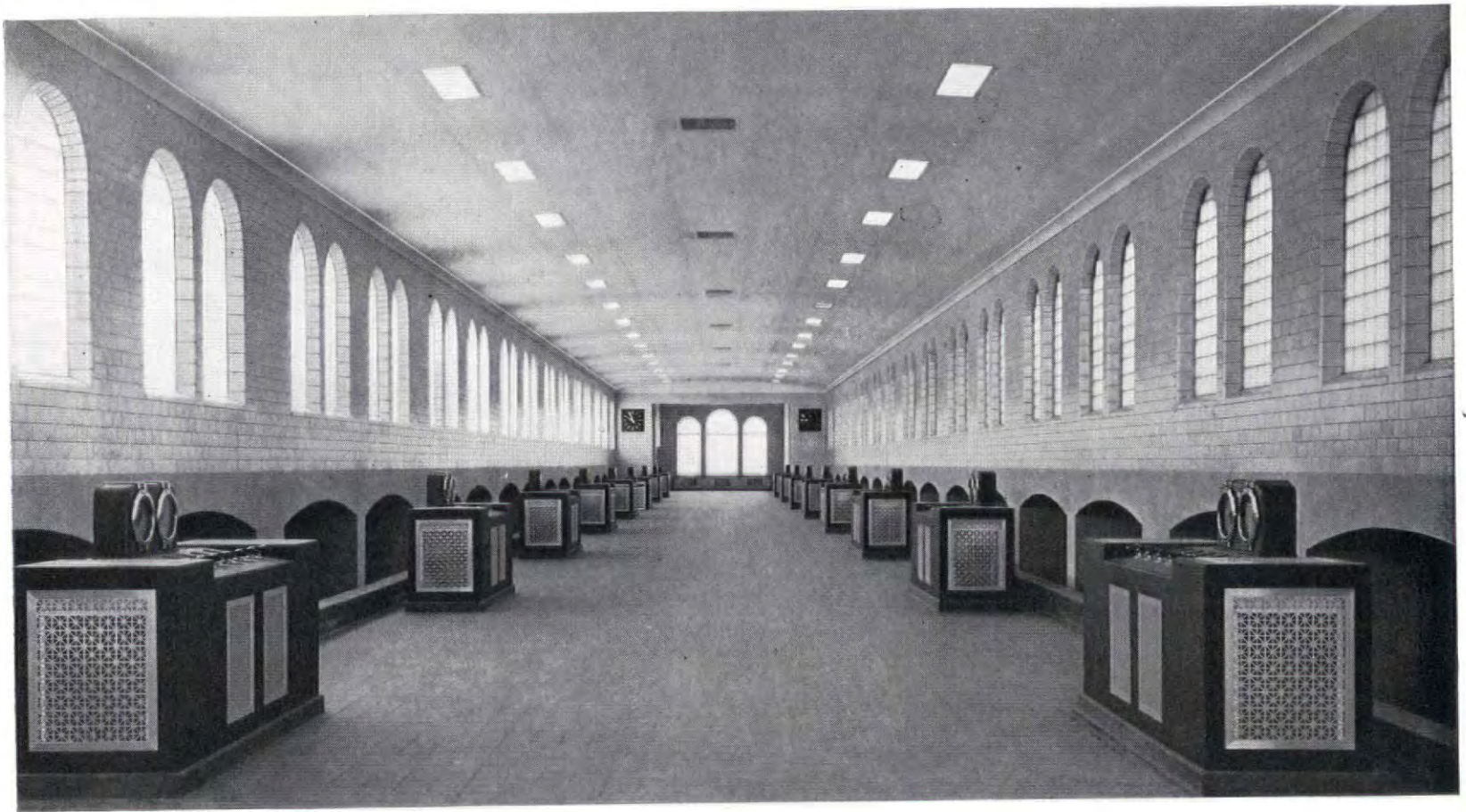
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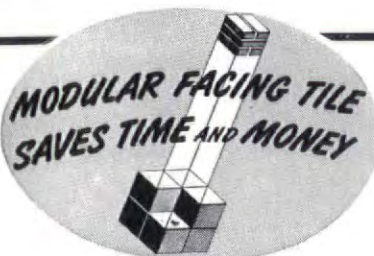
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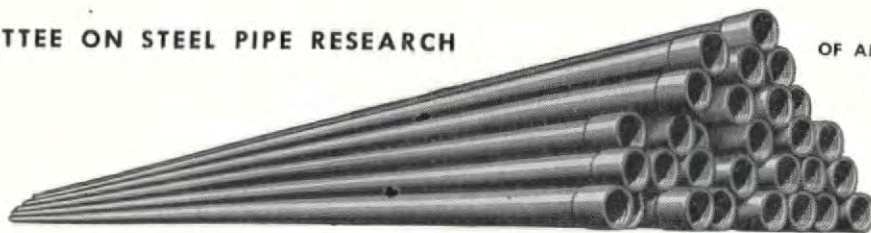
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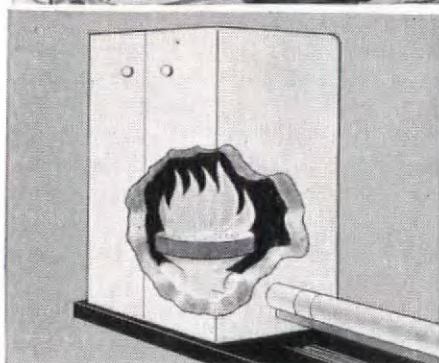
The interesting story of "Pipe in American Life" sent upon request.

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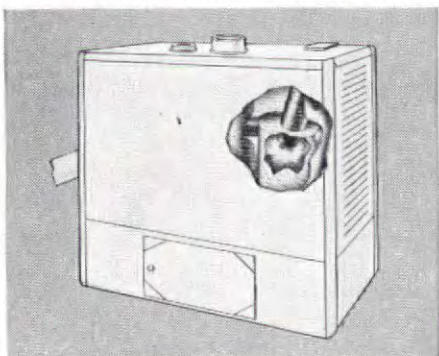


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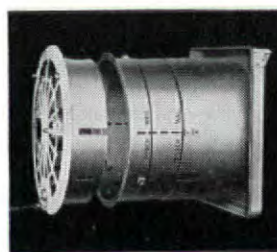
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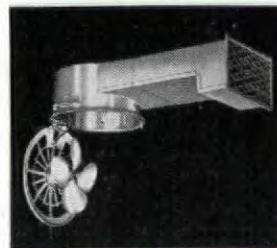
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fact and convincing manner in which it sells the value of qualified architects, landscape architects and decorators, working in unison from the first stages of the design.

The pamphlet originally appeared in a small printing, only about a sixth of which is left. However, should the reception given it justify further printings, it seems likely that they will be made and sold at cost—probably not over 25 cents. In the meantime, some copies can be obtained by writing to Mrs. Bolton White, President, The Women's Architectural League, 291 Leland Ave., Palo Alto, Cal. M.S.

THE LONDONER'S ENGLAND. By Alan Bott. The MacMillan Co., 191 pp. Illus. 11 x 8½. \$6.

First, let's get it straight that The Londoner's England bears absolutely no resemblance to The *New Yorker's* map of the U. S. The former is a very deadpan description of notable buildings in London and the Home Counties, devoid of all wit and lightness though anecdotes run on and on. It is, however, eminently architectural in its approach and should probably furnish valuable references for someone or other. Offsetting the drab text is an excellent production job and 89 full page illustrations a great many of which are in color. These alone are worth a tourist ticket on the Queen Mary. M.S.

PROBLEMS OF CONTEMPORARY ART. By G. Vantongerloo. Wittenborn & Co., 38 East 57th St., New York 22. 49 pp. Illus. 10 x 7½. \$3.

As if there weren't enough general problems in contemporary art, Wittenborn & Co., has undertaken the publication of a series of individual adjustments. This is the fifth.

Vantongerloo, painter and sculptor now inhabiting Paris is of course a well known abstract painter and sculptor. His problems (to the best of our knowledge shared with no one) are best set forth by himself. A brief sample: "Fruits are sweet. Sugar has been extracted from sugar cane and beets. Sugar has been concentrated. It is not a new product but a new form, or the presentation of sugar in new form. But sugar has also been extracted from coal, i.e. saccharine, another new form, an imitation sugar. I am not speaking of nutritive value. . . . If sugar and saccharine are not creations, the atom and radium are sources of energy. . . ." If this wasn't dictated from the analyst's couch, we'll stick to oversimplification. M.S.

GOVERNMENT PAMPHLETS

The Government Printing Office has recently issued reprints of additional sections of the National Park Service 1938 publication *Park and Recreation Structures*. The following sections are now available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.:

Barriers, Walls and Fences	\$.05
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Boathouses and Dependencies	.10
Cabins	.20
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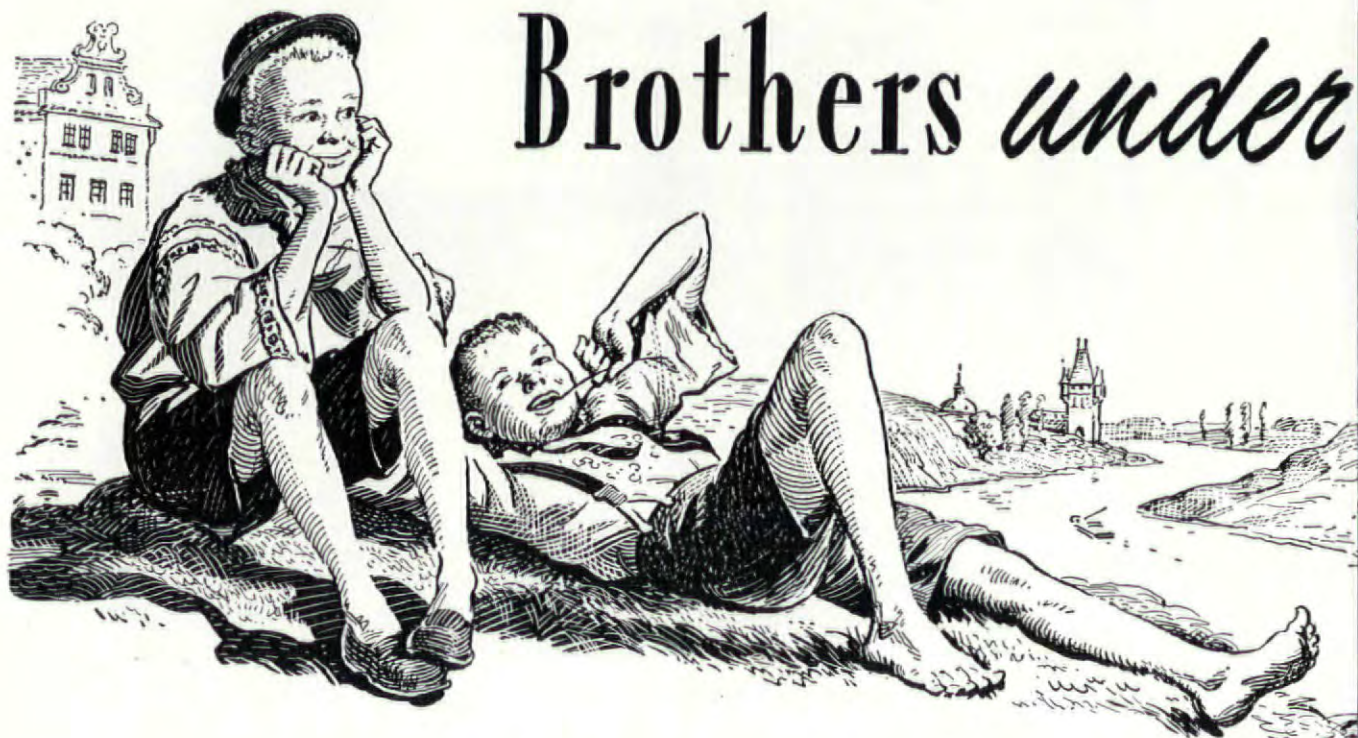
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Brothers *under*

This is the story of two brothers.

It has its beginning in a Northern province of Czechoslovakia. Two small boys were sprawled on the banks of the broad Elbe River. This afternoon was not unlike many others. For often they sat by the river and talked, sometimes until sundown.

"I'm going to be rich when I grow up," Karol would vow. "I'll own much land . . . and everyone will point to me and say, 'There is Karol Mahacek. He is the richest man in all Czechoslovakia.'"

Then Jan would watch for that familiar look of determination he had seen so many times on his brother's face. He would see his dark eyes growing larger and brighter, shining already with the happiness the future promised. And he would nod at his brother. Yes, Jan thought, Karol is smart. Yes, Karol will be rich some day.

But Jan, too, had dreams . . . dreams he dare not even tell. For Karol would surely think them strange. So he said nothing. He just sat there and looked out into the horizon. Somewhere beyond the Elbe there was an ocean . . . and beyond that? Well, some day he would know.

Old Eduard Mahacek considered his sons—what the future held for them. He even prophesied it many times.

"Jan is a dreamer. He is the one with imagination, but he is not as ambitious as Karol."

Yes, even at an early age, Karol was marked for success.

As for Jan, well, maybe it was an accident that he happened to be on the village dock when a river boat stopped for cargo. Maybe it was fate when on an impulse he took a job on the boat and found his way to the sea, to a different way of life—for Jan came to America.

It wasn't easy for him, at first, this new world. He used to write home about the strange American ways. Yet, there was always something wonderful to tell. He was making progress. He had a good job—good pay.

But Karol's letters were different—filled with uncertainty. He couldn't save to buy the land he promised himself he'd one day own.

What does the story of these two brothers mean—and why are their lives so different today? For Jan Mahacek faces the future with confidence—owns his own home—a car—his family is well fed, well clothed.

While Karol is a man without hope—his family ill clothed, ill fed—no home of their own.

The answer is simple, for both are *symbols* of America and Europe. Actually, there is no difference in the people here and there. ***We are all brothers under the skin.*** Like Jan and Karol, we are Czechs, or we're English, French, German, Spanish, Finnish, Norwegian, Polish, Italian . . . just as people are there. We are the same people, with the same blood, the same native ability. But there is *one* essential difference . . .

the Skin

Here in America, we have the opportunity—the privilege to use to the fullest our native ability.

Much has been said about the production genius of America. And who will deny it? But that power to produce far beyond the record of any nation on earth would never have blossomed into its present greatness if the individual in America had not had the chance to expand his individual talents to produce. Yes, here in America, all have been free to express themselves, to use and to develop talent and ability. This freedom to grow and build for the future isn't something to be considered lightly. It is something that all of us must guard, even with life itself.

Yet, in the abundance that surrounds us, we sometimes forget. We forget that with all this comes an obligation—an obligation to WORK. For, if we do not work to preserve it, we do not deserve it. This great productive power of America grew because of work, became the great thing it is because men bent to the task to accomplish an end.

Today, there are forces at work to hold back the high productive ability of America. A false creed is abroad. Some put it this way—"Hold back effort—do only an average job—regulate things." It all has a familiar ring—it is a creed of trading individual opportunity for false promises of future security.

Here at CECO, we do not accept this creed of leveling of effort, for we believe in full opportunity for the individual. We know what all-out unharnessed production can accomplish. In this past year, for example, we have seen the building industry, unhampered by fewer controls, roll up one of the most impressive records in the history of the industry. CECO salutes construction men

for the job they are doing. Their accomplishments represent the American way of doing things, and we believe in the American way to solve our problems, to provide a more abundant life, to curtail shortages, to drive down prices.

Yes, the way to do this is to work. ALL must work MORE—not be content to be average. Management must work at managing. Labor must work to produce—give a full day's work for a full day's pay. We must constantly produce, create more things instead of less, reduce overall costs per unit—justify high wages. The will to work can drive down costs and prices, drive up production which labor and management both need to stay prosperous.

We believe in the right of each man to work for greater opportunity. We believe in the individual's pride in his work and we believe in the importance of the individual's contribution to the task as a whole. We believe in a "two-way traffic" in ideas on how to do the job better. In four years, CECO has had over 3200 suggestions from shop and office on how to improve product and service.

In all aspects of CECO's work, we strive for meticulous attention to the little things, because we believe no product is better than the perfection of the smallest detail.

We like to sum it all up in an ideal which best describes the way CECO and all of its people work in seeking production excellence . . .

"NO TASK IS TOO SMALL,
NONE TOO LARGE,
TO RECEIVE EXACTING CARE.
IN ALL,
ENGINEERING EXCELLENCE
IS THE CECO CREED."



PARTIAL LIST OF CECO PRODUCTS • STEEL WINDOWS AND DOORS • METAL SCREENS • ALUMINUM STORM WINDOWS • ALUMINUM COMBINATION STORM AND SCREEN UNITS • METAL LATH • STEELFORMS • REINFORCING STEEL • STEEL JOISTS AND ROOF DECK • ATTIC AND ROOF VENTILATORS

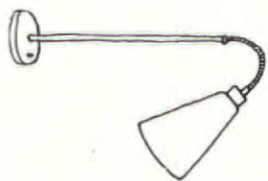
CECO STEEL PRODUCTS CORPORATION

GENERAL OFFICES: 5601 West 26th Street, Chicago 50, Illinois

Offices, warehouses and fabricating plants in principal cities



BUILDING REPORTER



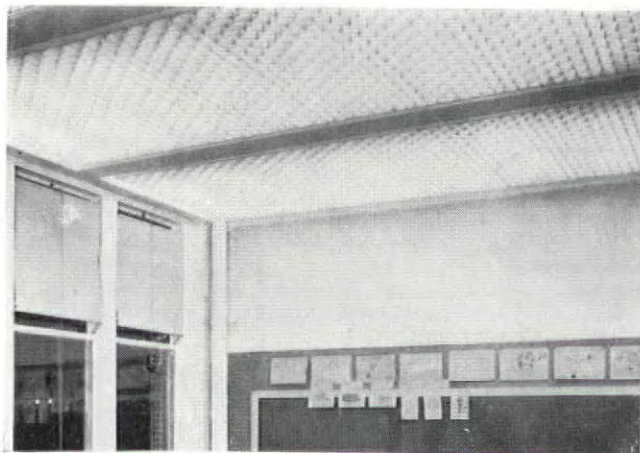
MODERN LIGHTING FIXTURE for accent and overall lighting has numerous applications.

Gotham's new Formlite fixture, for accent and overall lighting of modern interiors, features an exceptionally clean-cut, graceful design and numerous mounting arrangements. There are four variations of the basic Formlite, cone-shaped unit and over 16 different kinds of applications for their use. In addition to flexible and rigid stems, adjustable joints and clamp mountings there is a pin-up and desk-type supplied with cord and plug. The fixtures use R 30, R 40 and Par Reflector lamps and have a satin aluminum finish over which is applied a baked heatproof lacquer. They can be installed on standard outlet boxes and are especially suitable for use in stores, offices, showrooms, residences, or for accenting displays and exhibits. The principle style can be supplied with clip on louver, color filter holder and various colored filters, has a list price of \$13. Other units in Series "600," or the Formlite line, are priced from \$11.50 to \$25.

Manufacturer: Gotham Lighting Corp., 548 West 22nd St., New York, N. Y.

LOUVERED CEILING PANELS assure glare-free light, provide low cost ceiling treatment.

Forming a continuous louvered ceiling below the lighting fixtures, Cell-Ceil prefabricated, honeycombed panels provide diffused, glareless light and a low cost ceiling treatment. They help eliminate glare and deliver an even illumination when used with either incandescent or fluorescent lighting. The continuous louvered ceiling helps conceal pipes, sprinkler systems, etc., and in new buildings is said to reduce construction costs by eliminating both lath and plaster. The panels themselves are made up of a series of thin, cold rolled strip steel ribbons, 3 in. wide, which are set on edge, corrugated into a series of even waves and fastened together. They come in 24 and 30 in. widths and in lengths varying by 6 in. from 96 in. down to 12 in. Cell-Ceil panels weigh only 12 oz. per sq. ft., and according to the manufacturer, can be hung without expen-

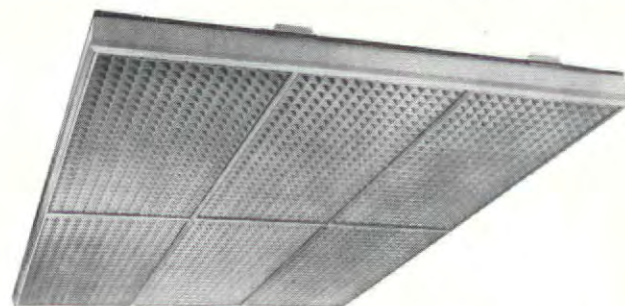


sive equipment. They are suspended from hanging rails and accessories which are attached to the ceiling by wires.

Manufacturer: Federal Enterprises, Inc., 8700 S. State St., Chicago, Ill.

LOUVERED FLUORESCENT LIGHTING FIXTURE can be used individually or for complete egg-crate ceiling.

Panelux fluorescent luminaires, available in 12 in. x 8 ft., 16 in. x 8 ft., 2 x 8 ft. and 4 x 8 ft. units, can be used individually or in combination to provide complete louvered ceilings. Each Panelux unit is a complete fixture, containing wiring channel, ballast housing and sockets in a chassis that also supports the louver sections. The louvers are made of fire-resistant fiber-board in white and pastel shades of green, blue, pink and yellow and are replaceable at nominal cost.



Metal louvers are also available if desired, finished in low brightness baked "Klasium" white enamel. The units carry 2, 4, 6 or 8, 96 in. Slimline lamps at 120 ma, 200 ma or 300 ma. Light cut-off is 38°, both parallel and transverse to the unit. Panelux fixtures can be joined end-to-end or side-by-side, surface or pendant mounted, or inset level with ceiling or false ceiling. When mounted on the ceiling or from standard fixture hangers, the side panels are softly illuminated to a brightness of less than 1/4 candle power per sq. in. Panelux luminaires are U/L approved, are especially suitable for use in shops, restaurants, schools and offices.

Manufacturer: Lighting Products Inc., Highland Park, Ill.

LIGHTING FIXTURE provides maximum efficiency, requires minimum of maintenance.

Especially suitable for classroom use, Appleman Art Glass Works' new Spill-Lite S 1000 supplies glareless, shadowless illumination for clear, easy and comfortable seeing. It has an overall efficiency performance of 89 per cent, or reputedly 10 per cent more than conventional units, and is the newest development in what this manufacturer calls Silvrex lighting. Used with a 300 or 500 W silvered bowl lamp to which the efficiency of Silvrex lighting is credited, the luminaire measures 30 in. long and has a lighting bowl diameter of 21 in. The new fixture is furnished with a Temprex shockproof, heat resistant lighting bowl and patented spillway. This mirror-smooth spillway expels dirt, bugs, and miscellaneous debris and cuts cleaning maintenance. Spill-Lite has a satin chrome finish and a swivel type of rod suspension for easy relamping.

Manufacturer: Appleman Art Glass Works, Bergenfield, N. J.

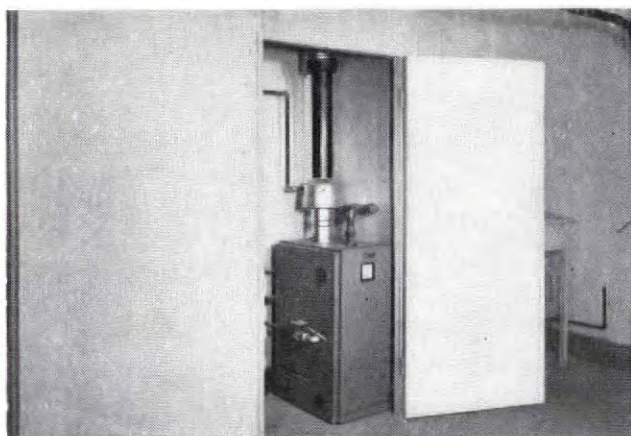
(Continued on page 144)





Revere Quality House for the Cleveland area. *Architect:* W. D. Riddle, Willoughby, Ohio. *Builder:* Maurice J. Fishman, Precision Housing Corp., Parma Heights, Ohio

...in a house that has the BEST of everything



PICTURE OF COMPACTNESS is this Bryant 5-W-26 Gas-Fired Boiler (input 112,500 Btu/hr) that serves a Cleveland Revere Quality House. It is tucked away in the corner of a small utility closet in the garage. (Installed by City Plumbing & Heating Company, Cleveland, Ohio.)

"Give us moderate-cost housing that has quality down to the last stick of wood," directed the Revere Quality House Institute. And the gentlemen commissioned by the Institute to create the Quality House for Cleveland complied. That is why we point with pride to the selection of Bryant Model 26 Boilers for use with the forced hot water radiant heating systems in this *quality* housing.

Architect Riddle put every inch of space to work in a design that is functional and wonderfully livable. He provided spacious rooms, a modern step-saving kitchen... made even the garage play a part in this plan for modern living.

Builder Fishman, through his on-the-spot prefabrication methods, ac-

counted for savings that made possible such features as automatic laundry equipment, automatic garbage disposal, copper plumbing and *Thermopane* windows. Before long he will have mass-produced *more than 800* of these homes that speak *quality* in every detail.

This meeting of Bryant Quality with quality in other building equipment and appliances is a custom that dates back more than forty years, when Bryant created the *first* completely automatic gas-fired boiler for home heating. The top-grade features of design, workmanship and performance incorporated in Bryant heating equipment are a case of quality we invite you to hear about first hand from the Bryant Distributor in your locality.



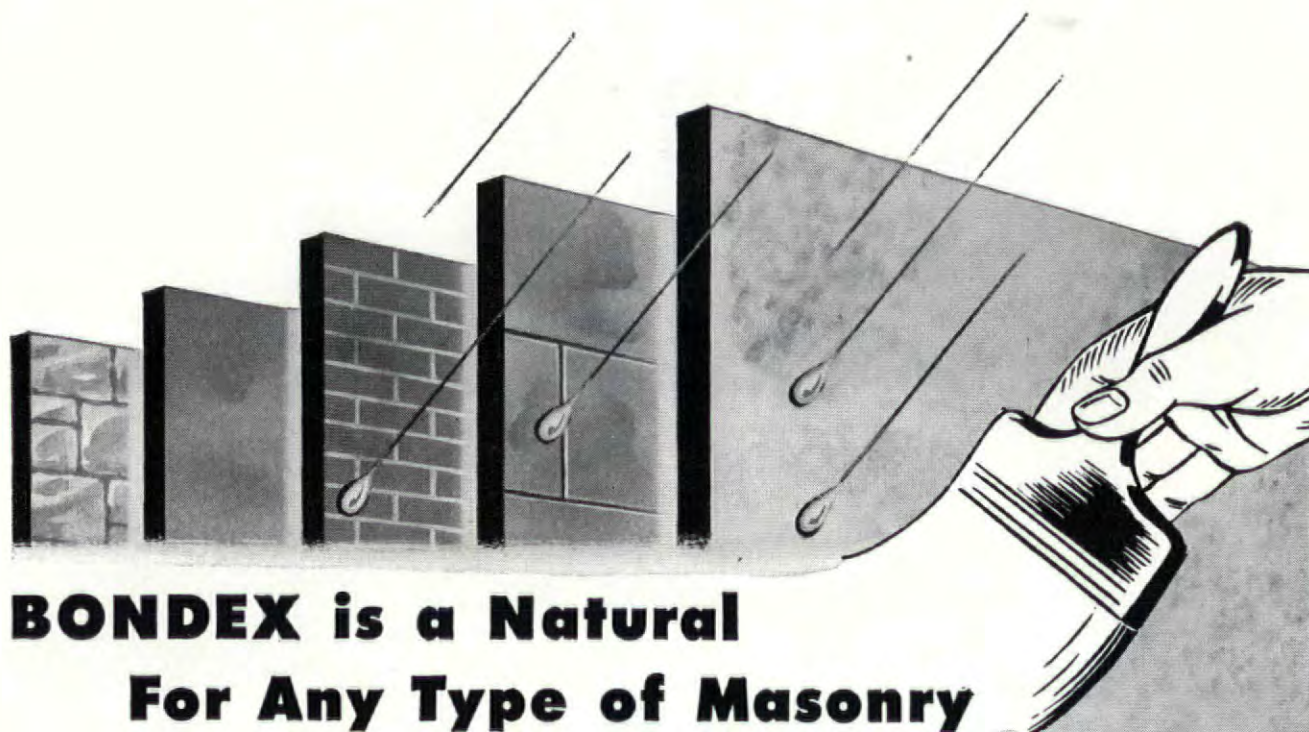
BRYANT HEATER COMPANY
CLEVELAND, OHIO • TYLER, TEXAS

"Bryant Automatic Heating Equipment is Part of Our Quality Theme"

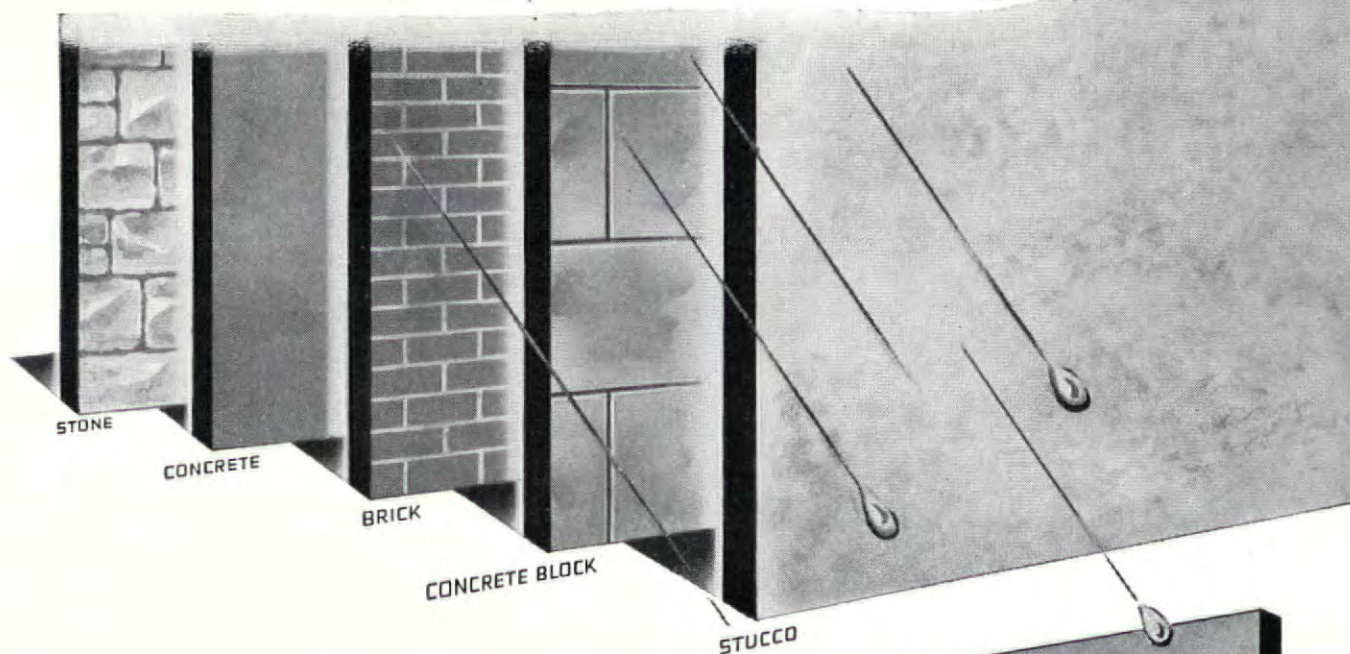
says **MAURICE J. FISHMAN**, builder of the Cleveland Revere Quality Houses

"Certainly the provision for cold-weather comfort is an important aspect of home construction. We specified Bryant Boilers for this project because we were sure they would handle the job efficiently and economically. In my experience they have proved it many times".





BONDEX is a Natural For Any Type of Masonry



Because the basic ingredients of Bondex and masonry are completely compatible, use Bondex to:

1. Shield masonry against dampness
2. Add color interest to masonry
3. Protect masonry against surface disintegration

The world-wide reputation of Bondex builds confidence and assures satisfaction.

For color chart write...



THE REARDON COMPANY • St. Louis 6,
Chicago 9 • Los Angeles 21 • Bayonne, N. J. • Montreal 1

**BONDEX outsells all other
cement paints combined**

Charm *multiplied!*

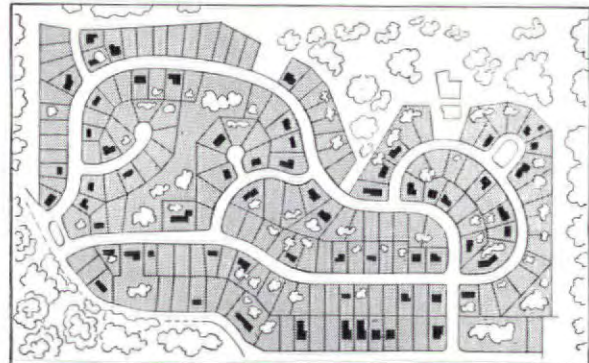


Distinction, harmony... variety... achieved with
ASPHALT SHINGLES and Limestone

In their Bedford Heights development, Indiana Limestone Company, Inc., under the guidance of W. W. Cordes, Architect, and F. W. Pressler, Associate, of Cincinnati, have combined the dignity and permanence of Limestone with the warmth, versatility and long life of Asphalt Shingles to achieve a community of individualized homes of unusual distinction. Through design and color the charm captured in the typical home above has been multiplied by all of Bedford Heights.

Throughout the United States, Asphalt Shingles are contributing their many unique advantages to the success of scores of outstanding modern community and industrial housing developments.

CONSTRUCTION'S BIGGEST DOLLAR'S WORTH



Its trees, hills, park and houses are for employees

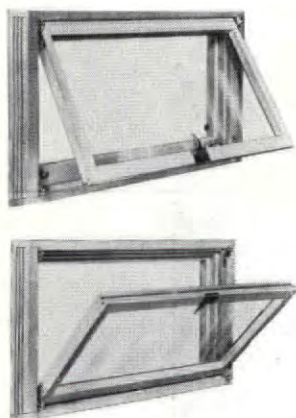
Bedford Heights is proving itself both a practical product demonstration project—and a conspicuously successful employee housing development for the Indiana Limestone Company. In the capable hands of J. Harry Dickman, veteran operative builder of Cincinnati, and with the creative imaginations of W. W. Cordes, Architect, and F. W. Pressler, Associate, fitting design to material and setting, an industrial housing community of unusual distinction is nearing completion. With contemporary design calling for long horizontal lines, Indiana limestone strips are being cut in random lengths up to 4 feet. Asphalt Shingles have been used throughout in black, brown and gray color groupings.



SHINGLES

ASPHALT ROOFING INDUSTRY BUREAU
2 West 45th Street New York 19, New York

SPONSORED BY 28 LEADING MANUFACTURERS OF ASPHALT SHINGLES...SIDINGS...ROLL AND BUILT-UP ROOFINGS



PREFABRICATED BASEMENT-UTILITY WINDOW is designed for sash reversibility.

Andersen's new Basement-Utility Window is a completely prefabricated, easily installed wood unit consisting of frame, glazed sash, weatherstripping, hardware and screen. Made in modular sizes to fit with 8 in. x 8 in. x 16 in. concrete block construction, the window measures two blocks wide and either 2, 2½ or 3 blocks high. All three sizes have one light and all their wood parts are chemically treated to prevent termite and decay damage. A feature of the new unit is sash reversibility. Dual purpose reversible hinges permit swinging the sash from either the top or bottom of the window, and no tools are required for reversing its swinging position. The unit can be used for standard basement installation or in tourist homes,

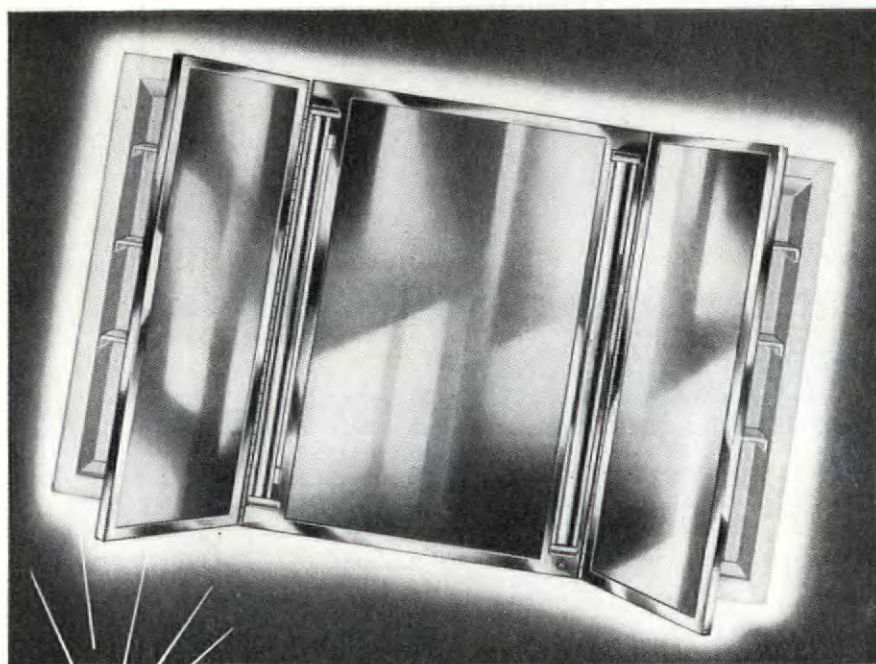
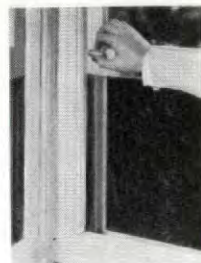
farm buildings, vacation cottages and temporary houses. Where desired, sash can be combined in ribbon or stack fashion for additional fenestration. Storm sash are available to fit the new unit.

Manufacturer: Andersen Corp., Bayport, Minn.

WINDOW GLIDE provides both sash control and weather seal at reasonable cost.

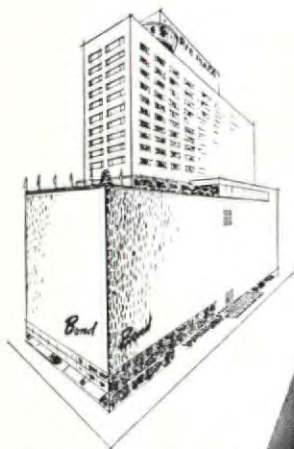
A new addition to the sash balance family, the Ball Bearing Window Glide functions as both a sash control and weather seal. The device consists of a non-ferrous metal strip with ½ in. holes punched every 1¼ in. and a ball bearing which is inserted in the side of the sash. As the bearings roll up and down the channel-mounted strips they seat themselves in the holes at the desired level to secure the sash. According to the manufacturer, the Glide eliminates the sticking of windows and allows mullions to be reduced to ½ in. between sash. Furnished with or without weather seal, Glides retail with weather seal on four sides of the sash for \$3.95, or without weather seal for \$1.95. When weather seal units are used, however, the manufacturer reports that cost of installation is about the same as weather seal alone.

Manufacturer: East Side Tool & Die Works, 901 South East Madison St., Portland 14, Ore.



Your own ideas polished up!

IT WILL SURPRISE YOU how well your own ideas have been polished up—and how completely they have been incorporated in the designs of the whole Parker Line of bathroom cabinets and accessories. Years of experience have developed Parker's ability to see eye-to-eye with architects in style and utility... just as working with builders has influenced Parker's strict standards of materials and workmanship to meet extreme usage requirements. See the complete line in Sweet's, or send for the new Parker Catalog. The Charles Parker Company, Meriden, Connecticut.



Parker Bathroom Cabinets and Accessories were used throughout Cincinnati's new Terrace Plaza Hotel.

PARKER

BATHROOM CABINETS AND ACCESSORIES

INSULATING SIDING is designed to give appearance of shingles.

Mastic Asphalt Corp., the manufacturer of Inselbric insulating brick siding, is marketing a new insulating produce, Inselwood, a panel-type, shingle-design siding. This newest insulating siding development consists of 14 in. panels that overlap and, according to reports, give the appearance of real shingles. It features a snug, self-sealing metal corner with a baked-on enamel finish and is made in three popular shingle colors: Morocco Brown, Plymouth White and Linden Green. The company is also manufacturing a new metal window molding for use with Inselbric and Inselstone as well as Inselwood, which is designed to eliminate seepage under windows.

Distributor: Jones & Brown, Inc., 439 Sixth Ave., Pittsburgh 19, Pa.

CALCULATOR quickly reveals accurate lengths and cuts of roof rafters.

A flat Vinylite plastic instrument measuring 6¼ x 8¼ in., the Rafter Dial can be used to calculate rapidly all the lengths and cuts of roof rafters. Pictured on the instrument is a diagram of a roof. By setting two dials it is possible to read the lengths and angles of the various kinds of rafters opposite arrows at the proper places on the diagram. With the two settings Rafter Dial gives the length of common rafters, length of hip and valley rafters, length of shortest jack rafter (16 or 24 in. apart), top and bottom cuts of common rafters, top and bottom cuts of hips and valleys, side cut of hip against ridge board and side cut of jack against hip. The new dial also makes it possible to design a roof with any pitch from 14° to 57°, in addition to the standard pitches, and enables one to convert angles in degrees to "square readings" for marking with the carpenter's square. Rafter Dial costs \$1.95 and is supplied with a booklet entitled "Quick Tricks in Roof Design" and a job sheet.

Manufacturer: Edward Weyer, 40 W. 77th St., New York, N. Y.

(Continued on page 148)



Architect: Arthur Baer; Contractor: Schirmer Peterson.

A comfortable study room at Gilmour Academy, Gates Mills, Ohio. Notice the smooth all-over daylighting provided by the Fenecraft Projected Windows. Controlled ventilation, too. In-tilting sill vents are designed to deflect air upward, guarding students against drafts. Open-out vents allow ventilation even in rainy weather, for they act as canopies over openings.

How can we give you High-Quality Windows . . . at such Low Cost?

It's a matter of design, size and standardization. Fenestra* is the largest manufacturer of steel windows in America—only volume production makes it possible to standardize a *large variety* of windows and keep quality at a maximum . . . cost at a minimum.

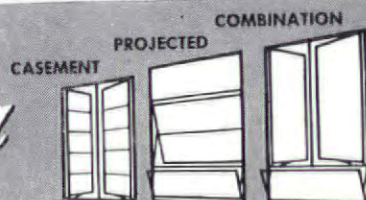
Fenestra Fenecraft Intermediate Windows are made of high-quality casement sections of advanced design—fabricated into 51 different Projected Windows, 14 Casement Windows and 36

Combination Windows. Each is good looking, finely made . . . and *economical*.

All 3 types offer permanently-easy operation in any weather . . . weather-tightness . . . firesafety . . . low maintenance . . . cleaning and screening from inside.

For full information on types and sizes, write Detroit Steel Products Company, Department AF-1, 2251 East Grand Boulevard, Detroit 11, Michigan. Or, see Sweet's, section 16a/13.

Fenestra



FENCRAFT INTERMEDIATE STEEL WINDOWS

Detroit Steel Products Company,
Dept. AF-1,
2251 East Grand Blvd.,
Detroit 11, Michigan

Please send me data on types and sizes of the
new Fenecraft family of Fenestra Windows.

Name

Company

Address

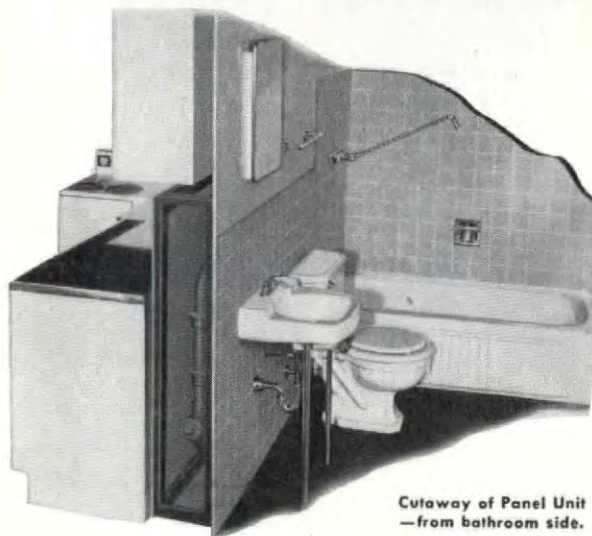
NO. 2 OF A SERIES

The PROFESSIONAL BUILDERS' BULLETIN

An "Idea Department" from the Engineers of Ingersoll



INGERSOLL ADDS NEW MODEL UTILITY UNIT



Cutaway of Panel Unit
—from bathroom side.

Simplified Panel Unit Includes All Basic Plumbing in Minimum Space—

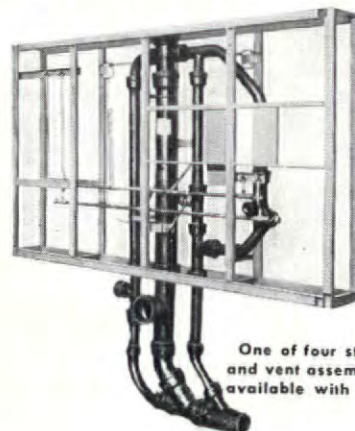
HEATING UNIT MAY BE PURCHASED SEPARATELY!

A new, simplified Utility Unit has been added to the Ingersoll line. It includes all basic plumbing plus a complete kitchen and bath. Unlike the standard Unit, the heating plant is not an integral part of the new model. The new Ingersoll "88" or other furnaces may be purchased separately if desired.

This unit is built around a compact, 10-inch-wide panel core. To meet your codes there is a choice of four vent and stack assemblies. Further flexibility is provided in a choice of lead, cast iron and steel materials in vents, stacks, wastes and undergrounds.

Assembled by skilled A. F. of L. Building Trade Mechanics, the

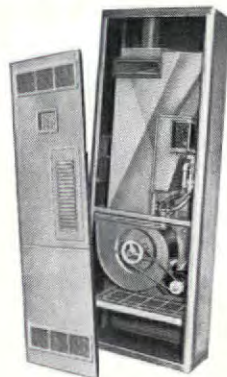
new Panel Unit combines the economies of pre-engineered assembly with the flexibility of buying small-home utilities in individual components. It is equally adaptable to homes with or without basements, to multi-storied apartments and to tourist courts.



One of four stack
and vent assemblies
available with Unit.

"JUST WHAT WE'VE NEEDED"

**TRADE SAYS ABOUT NEW
INGERSOLL "88" FURNACE**



Enthusiastic acceptance everywhere has greeted the recently introduced Ingersoll "88" Furnace. Gas-fired, it has an output of 50,000 B.T.U.s, yet occupies less than 3 square feet of floor space. It has been approved by A.G.A. for installation within walls—an interliner jacket keeps the exterior cool. It is equally efficient either as a space heater or for duct-type heat distribution.

**New Wholesalers Report on
Sales of Ingersoll Utility Unit**



Reports from the more than 100 wholesalers added by Ingersoll in recent months, indicate excellent sales activity for the Ingersoll Unit. "The Unit fills a real need," is the most frequent explanation.

**WRITE FOR INGERSOLL
BOOKLET TODAY**

It's yours for the asking, at no cost to you—a complete booklet about the new Ingersoll Panel Utility Unit and "88" Furnace. Gives all information complete with illustrations, diagrams and suggested floor plans.



Write for yours today!

INGERSOLL UTILITY UNIT DIVISION

Borg-Warner Corporation
Dept. F1, 321 Plymouth Court
Chicago 4, Illinois

Get your free copy of the rules of the

Chicago Tribune's Third Annual BETTER ROOMS COMPETITION

\$25,000.00 in 145 Cash Prizes

*ranging from \$100.00 to \$1000.00 each
for the best ideas for furnishing and decorating typical rooms of homes*

ALL ENTRIES MUST BE RECEIVED BY 5 P. M. OF APRIL 4, 1949

DO YOU have ideas for furnishing and decorating a living room or a dining room, or a bedroom, or a living-dining room, or a kitchen-dining room, or an "extra" room, or a one-room home?

In order to present to readers again this year the fullest range of suggestions for furnishing and decorating various rooms of homes, the Chicago Tribune is conducting its Third Annual Better Rooms Competition, offering \$25,000.00 in 145 cash awards for the best entries presenting ideas on this subject.

Just as the Chicago Tribune's similar competitions in 1947 and 1948 brought forth a wealth of original ideas which set the pace in this field of popular interest, so the 1949 project has been designed to set new high standards of excellence in home interior fashions.

This year's competition presents for solution seven different furnishing and decorating problems based on the needs of specific family groups and circumstances, giving the entrant stimulating challenges to his ability and ingenuity.

Here is your opportunity to plan one or more interiors just the way you would have them. And here is your chance to win substantial monetary award and national recognition for your efforts.

After the prize-winners have been chosen, the Tribune plans to give them widest publicity. Week after week, the newspaper intends to reproduce the winning ideas, or adaptations of them, in full color in the Sunday Tribune with its more than 1,625,000 circulation.

Everyone is eligible to compete, except employees of the Chicago

Tribune and its subsidiaries, members of their families, and of the Jury of Awards, which will be composed of persons competent and skilled in this field.

For complete information about how to submit an entry, write today for your free copy of the rules which will be sent postpaid. As is made plain by the anonymity provision in the rules, all entries will enjoy equally fair consideration in the judging.

Fill in the coupon below, paste it on a postcard and mail today. All entries must be received not later than 5 p.m. of Monday, April 4, 1949

MAIL THIS RULES REQUEST FORM TODAY

"BETTER ROOMS" COMPETITION

Chicago Tribune,
Tribune Tower, 435 N. Michigan Ave.
Chicago 11, Illinois

Without cost or obligation to me, please send by postpaid mail complete details and rules of the \$25,000.00 Chicago Tribune Third Annual Better Rooms Competition to me at the address below.

My Name.....

Street and Number.....

City..... State..... Zone Number (if any).....
(Please PRINT plainly)

LOW COST ROOF VENTILATOR is easily installed.

A rigid, low-priced, easily installed aluminum louvered roof ventilator, the new Leigh No. 402 is offered especially for use in low cost homes. It is designed for 9 on 12 pitch roofs, although its wide flange makes it equally suitable for use with 8 on 12 or 10 on 12 pitches. The ruggedly constructed, curved, rustproof unit provides 40 sq. in. of free area for ventilating the attic. Its double louvers allow free flow of air, yet deflect water and snow. A removable insect screen eliminates the possibility of birds' nests. Dealer's price for No. 402 is \$1.68 f.o.b. Coopersville. Ventilators come packed ten to a carton.

Manufacturer: Air Control Products Inc., Coopersville, Mich.

WOOD SEALER preserves color and beauty of wood.

Gordon's "101" sealer is said to permit the use of any finish—

lacquer, varnish, shellac or wax—on any wood, with the true beauty of the wood preserved and protected. According to the manufacturer, it even allows such porous woods as red gum, hemlock and white fir to be sealed and finished in their true natural colors. The sealer prevents bleeding of sap, pitch or gum even in new woods. It strengthens and integrates the grain, and reportedly eliminates the need of sanding after sealing. Tests on "101" indicate that in addition to being a firm and effective sealer for wood, one coat will easily seal such other materials as plaster, wallboard, acoustical board, etc. The manufacturer credits "101" with saving one or two finish coats and giving perfect results in transparent or color finishes.

Manufacturer: Gordon Chemical Products Inc., 114 North Western Ave., Los Angeles 4, Calif.

Meet All Restaurant Sanitation Laws

For a constant supply of

180° STERILIZING WATER

—or even hotter—depend on a

SMITHway-BURKAY

VOLUME-FLOW WATER HEATER

180° is the minimum hot-water temperature demanded by many city laws for sterilizing tableware. You can solve dependably your client's sterilizing problem with a SMITHway-BURKAY unit.

Installed as a two-temperature system, a single unit supplies ample quantities of sterilizing water at 180°... or even hotter. At the same time, this unit supplies your client's needs for 140° general-purpose hot water. Or you can use one or more SMITHway-BURKAY units in a straight booster installation.

Takes Little Floor Space. Compact SMITHway-BURKAY units free more usable floor space in congested areas—a single unit measures only 63 x 20 inches. Installation is fast and simple.

Restaurants, hotels, office buildings, apartments—all volume users of hot water—can be served dependably by this super-efficient gas water heater. Get all the facts before you specify any other make.

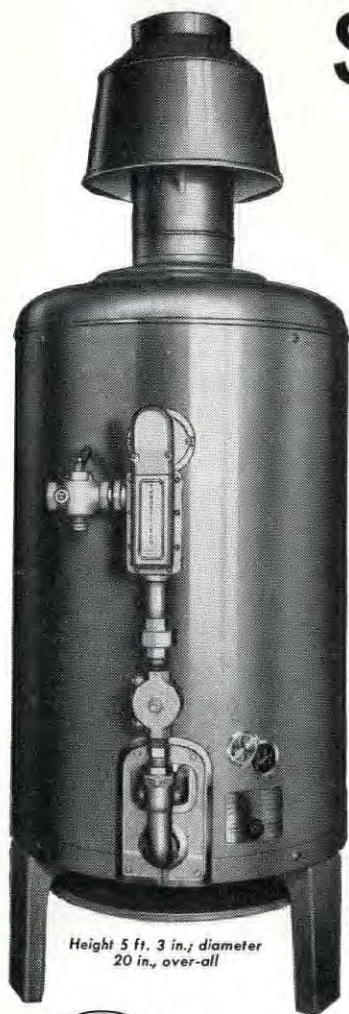
Mail the coupon, now, for complete specifications

A. O. SMITH Corporation

New York 17 • Atlanta 3 • Chicago 4 • Houston 2
Seattle 1 • Los Angeles 14 • International Division: Milwaukee 1

A. O. SMITH CORP., Dept. AF-149, Toledo 7, Ohio
Send us all the facts on the SMITHway-BURKAY
Volume-Flow Water Heater. No obligation.

Name _____
Firm _____
Street _____
City _____ State _____

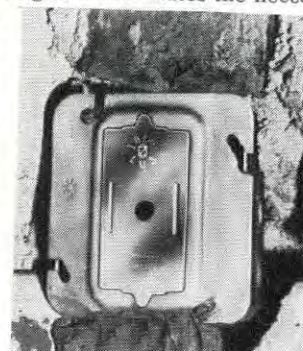


Height 5 ft. 3 in., diameter 20 in., over-all



PLASTERGUARD prevents clogging of electrical outlet boxes, reduces electrical installation costs.

Set in the coverplate frame of a square electrical outlet box before plastering, the O. Z. Plasterguard eliminates the necessity of cleaning plaster from the box before completing the final installation. Thus it is said to reduce installation time from 15 to 30 minutes, achieving a monetary savings for the contractor of 60 cents to a dollar per outlet. The device is held within the outlet box frame by four spring ears and may be straightened and reused several times. Plasterguard's price to contractors is 4 cents in quantities of 100 or less.



Manufacturer: The O. Z. Electrical Manufacturing Co., 262 Bond St., Brooklyn, N. Y.

PLASTIC FURNITURE AND WALL COVERING in pleasing colors adheres to plaster, wood or other surfaces.

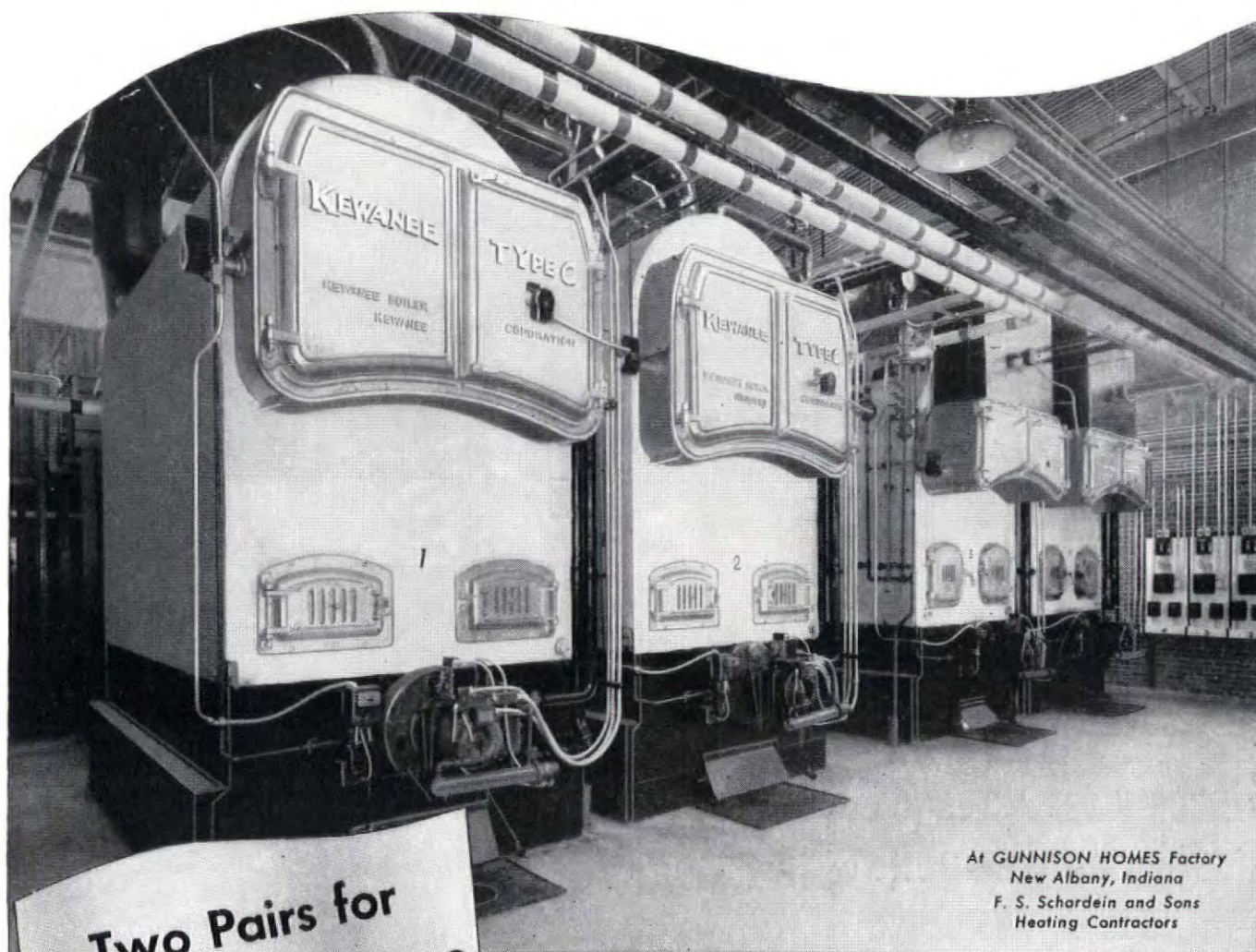
Kalistron is a colorful, soft, pliable plastic covering material which has been used successfully for walls, furniture upholstery, lamps, desk and store counter tops. Draping and shaping well, it combines decorative appearance with durability, is waterproof and practically mar-proof. In the manufacture of the new material the color is applied to the back surface of a transparent Vinylite sheet. The color is then protected with a suede-like backing which also enables simple and rapid adhesion of the material to plaster, wood and other surfaces. Kalistron is applied to plaster walls or other porous surfaces by normal paper-hanging techniques, using water soluble adhesives. It is supplied in 48 in. wide rolls of approximately 480 sq. ft. and is available in 29 standard colors. The covering can also be had in practically any desired color at slight additional cost.



Distributor: United States Plywood Corp., 55 West 44th St., New York City, N. Y.

LIQUID MASKING TAPE keeps paint off adjacent surfaces, eliminates scraping off excess paint.

Easily brushed on glass, metal, wood and similar surfaces, Liquid Masking Tape protects (Continued on page 152)



Two Pairs for
Hi and Lo Pressure
Steam

At GUNNISON HOMES Factory
New Albany, Indiana
F. S. Schardein and Sons
Heating Contractors

KEWANEE[☆]

STEEL BOILERS

In the beautiful boiler room of this outstanding plant where Pre-Fabricated homes are manufactured by Gunnison, subsidiary of U. S. Steel Corporation, full dependence is placed on Kewanee for both high and low pressure steam.

There are two Kewanee Type "C" 15 lb boilers 48,580 sq ft capacity and two Kewanee "500" Series Firebox for 125 lb steam working pressure furnishing 10,200,000 Btu, both pairs oil fired for heat and industrial process service.

☆ Reg. U. S. Pat. Off.

KEWANEE BOILER CORPORATION

BOILERMAKERS 80 YEARS KEWANEE, ILLINOIS
Branches in 60 Cities—Eastern District Office: 40 West 40th Street, New York City 18
Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

Serving home and industry

AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TONAWANDA IRON

COMPLEMENT

South Park Manor, Cleveland, Ohio. Using Truscon 138 Double-Hung Steel Windows, Clerespan Joists and Ferrobord Steeldeck. Weinberg, Laurie & Teare, Architects. Charles Bernstein, Builder



Kemper Road Apartments, Cleveland, Ohio. Truscon 138 Double-Hung Steel Windows used throughout. Weinberg, Laurie & Teare, Architects. Charles Bernstein, Builder



COMPLEMENT YOUR RESIDENTIAL MASTER-PIECES WITH TRUSCON SERIES 138 DOUBLE-HUNG STEEL WINDOWS

The adept use of Truscon Series 138 Double-Hung Steel Windows in two apartment groups at Cleveland, Ohio, lends an air of dignified beauty and efficiency to the structures . . . and assures the occupants easy-to-operate, easy-to-screen and apply storm sash, easy-to-drape windows that will give them numberless years of trouble-free service.

This outstanding window was an original development by Truscon in 1938, as an answer to the insistent demand for an economically priced steel window in the popular double-hung design. The

NEW LITERATURE. Write for new Truscon Catalog, complete with installation details and specifications of Truscon Double-Hung Windows and Casements.



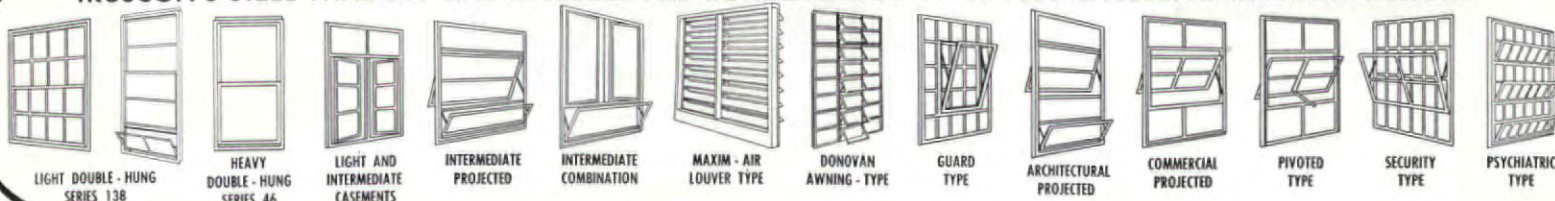
efficiency and economy of these steel windows have been proven thru ten years of use in thousands of installations.

Of major importance in the Series 138 Truscon Double-Hung Steel Windows is the fact that the sash members are of welded tubular construction. This assures strength, durability and finished appearance. Weights and cords are not used. Operation is controlled by motor type spring balances equipped with tapes of Enduro stainless steel. Each window is completely factory weather-stripped in stainless steel. Screens and storm sash of the simplest and most economical type are available. Shade, drapery, curtain or venetian blind fixtures, of standard types are easily attached to the interior side, in holes provided in all units.

Truscon Steel Company • Youngstown 1, Ohio

SUBSIDIARY OF REPUBLIC STEEL CORPORATION

TRUSCON'S STEEL WINDOW LINE INCLUDES ALL CONVENTIONAL TYPES PLUS EXCLUSIVE TRUSCON DESIGNS





THERE'S A NEW
Magic Chef
 GAS RANGE
 TO FIT YOUR PLANS



62" Wide—Series 1000



36" Wide—Series 700



39" Wide—Series 2400 & 1300



36" Wide—Series 1200



30" Wide—Series 600



20" Wide—Series 500



43" Wide—Series 400 & 460

OTHER Products: combination, coal and wood ranges, oil stoves and heaters, oil furnaces.

© 1948, American Stove Company

• *Finest Homes!*

Here is a range especially built to meet the cooking requirements of large homes. Beautifully styled in satin finish stainless steel, this new Magic Chef cooks for two or two hundred. It has six top burners, two large ovens, high level broiler and a 23" x 24" griddle. These and many other features are compactly built into an overall length of only 62".

• *To Smallest Apartments!*

HERE'S WHY MAGIC CHEF HELPS SELL YOUR PLANS

- 1 Most widely advertised gas range in America.
- 2 More women cook on Magic Chef than on any other range.
- 3 More women plan to buy Magic Chef than any other range.
- 4 Magic Chef's proven quality offers you the greatest return on your investment.

FOR CITY, "PYROFAX" AND OTHER LP GASES

• *Hotels and Restaurants Too!*

America's finest hotels and restaurants have equipped their kitchens from Magic Chef's line of Heavy Duty Gas Cooking Equipment.

FOR COMPLETE DETAILS SEND FOR OUR ARCHITECTS AND BUILDERS FILE

AMERICAN STOVE COMPANY • 1641 SO. KINGSHIGHWAY BLVD., ST. LOUIS 10, MISSOURI



adjacent surfaces during painting, thus eliminating the tedious, time consuming task of scraping off excess paint. The liquid solution has a Vinylite resin base. When brushed on surfaces to be protected it dries in about 10 seconds to permit immediate painting. After the paint is dry, the plastic shield is peeled off like tape. Various size jars are available, retailing at 49 cents up.

Manufacturer: Ramsell Products Inc., 712 South Fifth Ave., Maywood, Ill.

ELECTRONIC COMBUSTION CONTROL effects fuel savings.

Robot-Eye, a simple, inexpensive combustion control device, operates, as its name implies, by photo-electric cell. Designed particularly for rotary cup burners, it also has been applied advantageously to both mechanical and steam atomiz-

ing burners. In addition to average fuel savings of from 15 to 20 per cent, the unit helps eliminate smoke. Robot-Eye controls the amount of air that is allowed to enter with the fuel oil to keep the burner operating at peak efficiency; it has nothing to do directly with the fuel oil flow. The electronic controller is designed to maintain an economical fuel-air relationship regardless of the characteristics of the oil, variations in temperature, pressure and draft, the condition of equipment or the number of boilers in operation. According to General Power Plant Corp., the manufacturer, a burner operates most efficiently in the "index haze" area. This is the point where combustion gases change in appearance from clear to smoky. The photo-electric cell, mounted on one side of the boiler breeching, receives light from an electric lamp mounted on the other side of the breeching. It translates the "index haze" into proper fuel-air ratios. The control cabinet and panel of the unit are 10 in. x 12 in. x 6 in. and house all control elements except the photo-electric cell, its energizing lamp and the line switch.



Manufacturer: General Power Plant Corp., 381 Fourth Ave., New York 16, N. Y.

Adaptable TO ANY INTERIOR DESIGN



VERSATILE

Plain, Horizontal, and Tile Patterns in a variety of sparkling colors, and in high gloss or velvet smooth finish. Wood and Marble Patterns in a variety of beautiful, authentic reproductions.

EASY TO SPECIFY

Width, 4 feet. Lengths, 4 to 12 feet. Thickness, 5/32 in. Complete line of aluminum alloy, presdwood, and plastic mouldings for all requirements.

NEW CONSTRUCTION OR MODERNIZATION

In any room, in any building, where colorful, practical interiors are needed - Marlite provides economical, permanent beautiful walls and ceilings.

Marlite PLASTIC-FINISHED Wall and Ceiling Panels

Traditional or modern, conservative or boldly individual - regardless of the interior design - Marlite plastic-finished panels meet all the requirements for beautiful, economical walls and ceilings. Quickly and easily installed over old walls or new, Marlite is adaptable to any architectural treatment. Here is a deluxe material which keeps costs well within the most restricted budget. Complete details are available in Sweet's File, Architectural.

MARSH WALL PRODUCTS, INC.
101 MAIN STREET, DOVER, OHIO

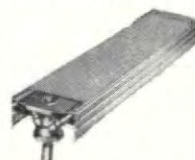
*for Creating
Beautiful Interiors*

Marsh Adhesives • Marsh Caulking • Marlite Polish
Marlite • Marsh Mouldings • Marsh Bathroom Accessories



CONVECTORS for one-pipe steam heating systems feature full-capacity performance.

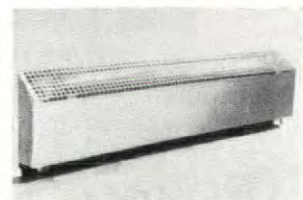
Modine's new Quiet-Seal Convectors are designed to give smooth, quiet, full-capacity performance on one-pipe steam heating systems. The convectors feature a patented, specially developed, one-pipe steam heating unit, which is said to eliminate water hammer and gurgling noises, air binding, spitting of water from air vents, or the troubles usually associated with steam and hot water convectors when installed on one-pipe systems. The Modine Quiet-Seal Principle of operation reportedly completely avoids counterflow of steam and condensate in the same passage. Steam, condensate and air (when present) all flow in one and the same direction. Condensate is returned to a built-in trap or water seal from which it overflows and drains into the supply branch. This seal is said also to permit free and easy venting which eliminates resultant air binding and water logging. Another feature of the new convector is that heat output from each unit can be individually modulated by a built-in damper. Modine Quiet-Seals are available in 10 lengths from 20 to 64 in., in four heights from 18 to 32 in., and four depths, 4, 6, 8 and 10 in.



Manufacturer: Modine Manufacturing Co., Racine, Wis.

WALL PANEL TYPE CONVECTOR for heating large areas requires minimum of space.

Rempe Co. has announced a new Wall Panel Type Convector for steam or hot water heating of large areas. Requiring a minimum of space, the compact unit can be placed above or in the baseboard of offices, factories, hotels, schools, hospitals or homes and is reported to be



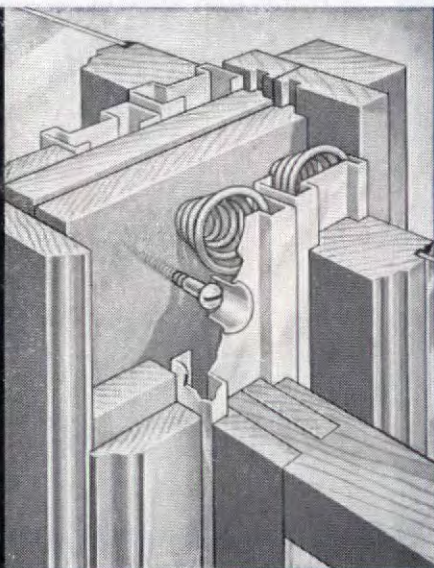
(Continued on page 156)

Why



Are a Favorite with Builders and Architects

WINDOWS WOMEN WANT. Four million in use. Nationally advertised R.O.W. Windows have all these features: *Removable* for washing, painting, ventilation; no cords, no weights, no pulleys; more light from narrow mullions.



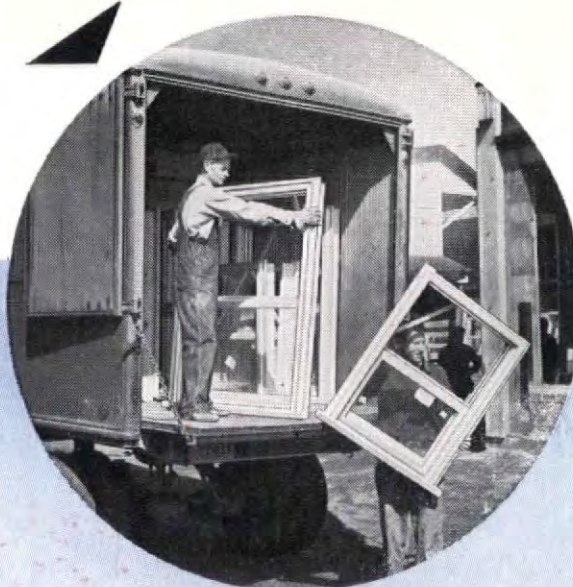
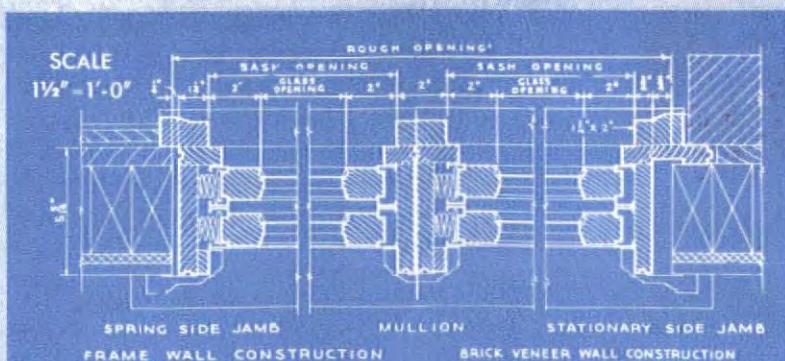
NEVER STICK; NEVER RATTLE

In opening or closing, wood slides against metal. Spring pressure acts as a cushion, compensates for swelling or shrinking due to weather conditions.

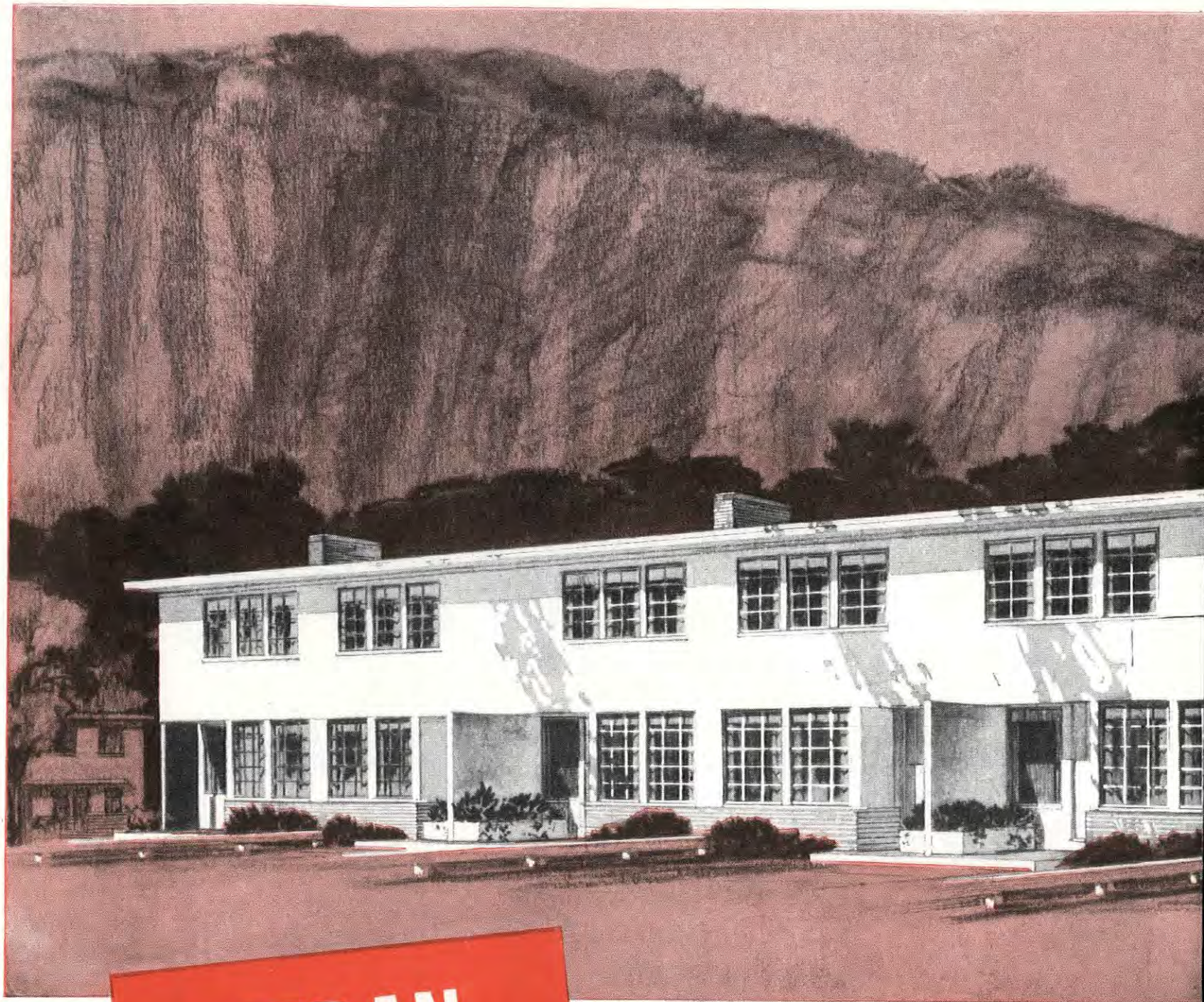
DELIVERED COMPLETE to your construction job as pre-fit, weatherstripped units. Keeps on-the-job labor costs at a minimum. One of 43 R.O.W. manufacturers is near you to insure prompt delivery, efficient service, and low freight expense.

See your local building materials dealer or write R.O.W. Sales Company, Royal Oak, Michigan.

TYPICAL CONSTRUCTION DETAILS



See R.O.W. Windows at the 1949 National Home Builders Show, Stevens Hotel, Chicago, February 20-24, Booth 123. Look for the R.O.W. Catalog in Sweet's Architectural and Builders Files.

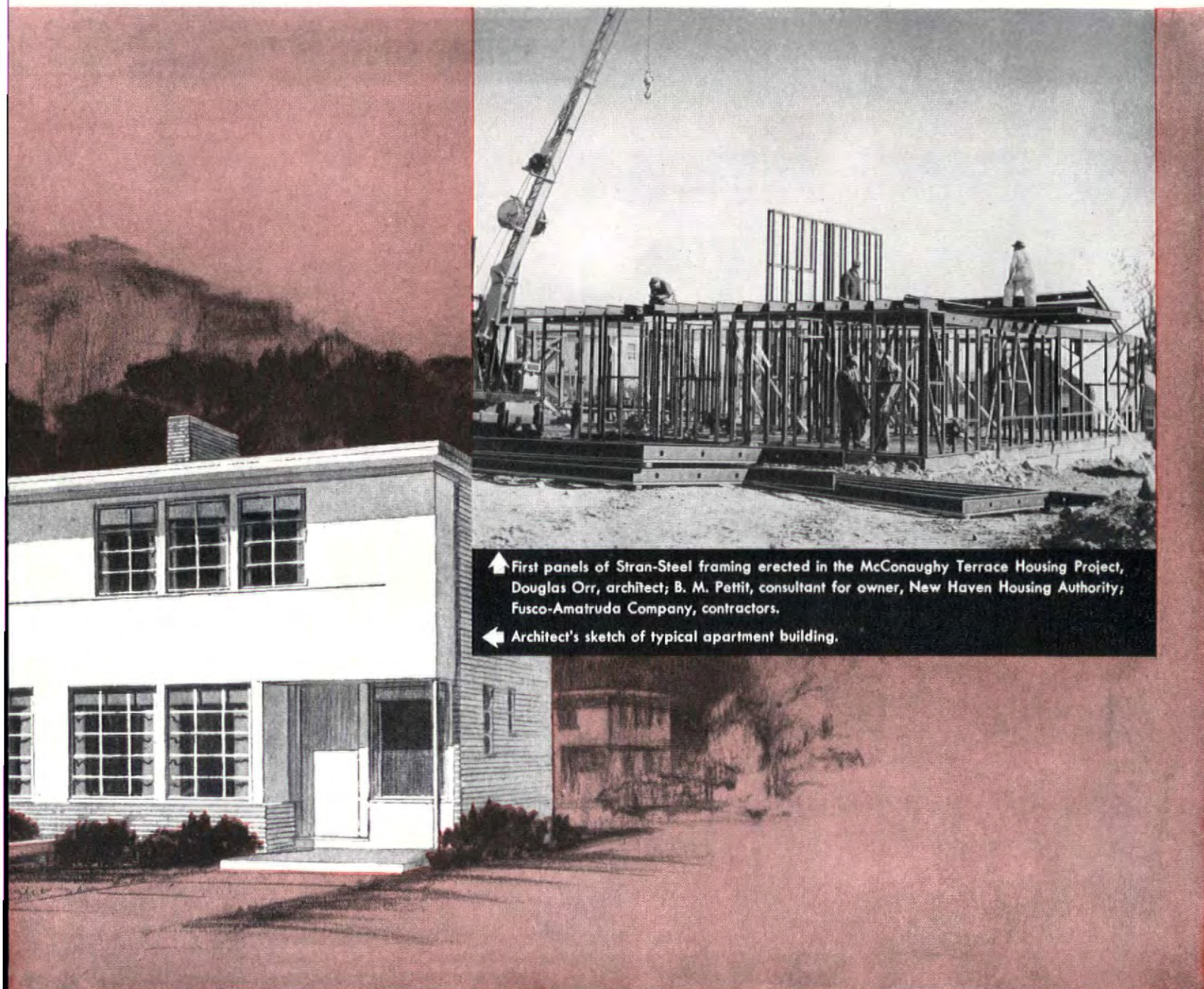


STRAN STEEL FRAMING

selected for

Use of Stran-Steel framing throughout the fifty-nine buildings of the \$2,752,000, 300-family McConaughy Terrace garden-type apartments, now under construction in New Haven, Connecticut, is providing fire-resistant, long-life buildings with real economy.

Since this project is being amortized over a 50-year period, these factors are of vital importance. When plans for the project were formulated, Douglas Orr, architect, and the New Haven Housing Authority, owners, believed that the precision, simplified Stran-Steel framing system could provide premium quality and fast construction.



▲ First panels of Stran-Steel framing erected in the McConaughy Terrace Housing Project, Douglas Orr, architect; B. M. Pettit, consultant for owner, New Haven Housing Authority; Fusco-Amatruda Company, contractors.

◀ Architect's sketch of typical apartment building.

McConaughy Terrace Project

Cost of McConaughy Terrace's fire-resistant construction is on a par with ordinary frame construction, because of the savings in time and the simplified procedures possible with Stran-Steel framing. Moreover, a permanently rigid, rot and termite-proof Stran-Steel framework insures lower maintenance costs and long life.

Fabrication and partial pre-assembly of Stran-Steel framing panels off the site during foundation work simplify and speed erection on the site. Delays in close-in time are further reduced by the nailability of Stran-Steel framing, which permits carpenters and almost all other trades to work simultaneously on both interior

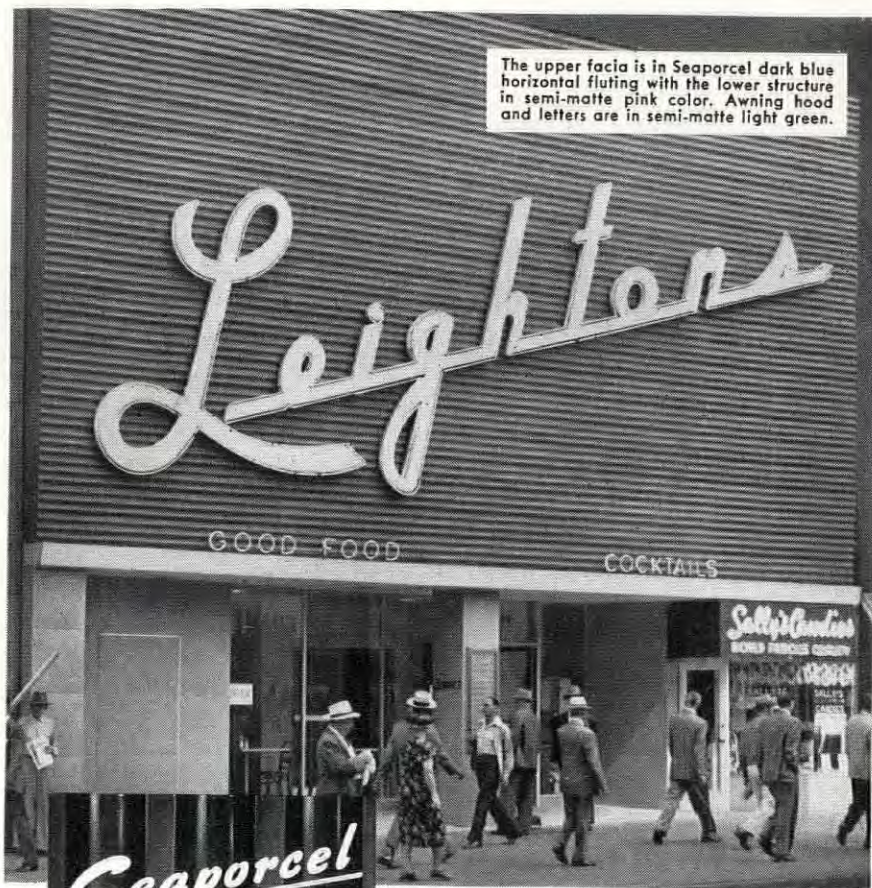
and exterior construction.

Stran-Steel framing is making McConaughy Terrace apartments *better buildings* without increasing costs. If you are planning new construction—commercial, industrial or residential—you can get the same advantages from this modern framing system.



GREAT LAKES STEEL CORPORATION

Stran-Steel Division • Dept. 35 • Penobscot Building • Detroit 26, Michigan
UNIT OF NATIONAL STEEL CORPORATION



Seaporcel
PORCELAIN
ENAMEL

One of many stock dies

Architectural **SHAPED** Parts are

PRACTICAL

LIGHTWEIGHT • DURABLE • ECONOMICAL
FIRE PROOF • EASILY CLEANED

The entire facade of Leighton's new building in Los Angeles, California shows how one of a variety of Seaporcel* "shaped" parts has been applied for esthetic as well as practical value.

BEARING IN MIND the ease of installation, the negligible maintenance cost, its strength, long life and beauty of fadeless color (which is almost limitless) and you have the reasons for architects' preference for Seaporcel architectural material in designing store fronts, entire building facades and even interiors.

EXTRUDED OR REVERSE, Seaporcel "shaped" or custom fabricated parts are obtainable in such versatile surface textures as "terracotta," "limestone," "granite," in semi-matte, matte or gloss finishes.

Write today for catalog showing applications and current jobs.

SEAPORCEL METALS, INC.

Formerly Porcelain Metals, Inc.

28-24, Borden Ave., Long Island City 1, N. Y.

Complete A. F. of L.-Metal Fabricating & Enameling Shop

Also manufactured on the West Coast

SEAPORCEL CORPORATION OF CALIFORNIA

Represented by Douglas McFarland & Co., 1491 Canal St., Long Beach, Cal.



*Reg. U.S. Pat. Off.

Seaporcel

Member Porcelain Enamel Institute, Inc.

practicable for new installations or the replacement of cast iron radiators. The new units consist of 3 x 6 in. steel or aluminum fins, with two steel tube circuits passing through the section to give maximum heat transfer to the full fin area. A slanted cover fits close over the unit and has square openings to allow radiation. Convectors are made in sizes from 18 in. to 116 in. in length, 8 in. height, 3 in. depth.

Manufacturer: Rempe Co., 340 N. Sacramento Blvd., Chicago 12, Ill.

AUTOMATIC CEILING SPRINKLER guards enclosed structures against fire.

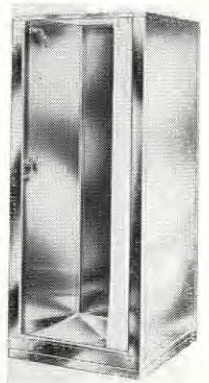
Aut-O-Jet is a new completely automatic ceiling-installed fire control unit which goes into action as soon as a fire starts or at 160° F., and creates a dense fire-suffocating cloud to extinguish the fire below. Approximately 12 in. long and 6 in. wide, it ejects a penetrating spray that quickly turns into a thick, fire-smothering cloud. According to the manufacturer, this spray spreads over an average size room. The spray is ejected under pressure and covers a radius of 10 to 15 ft. The hermetically-sealed, leakproof glass reservoir containing a quart of carbon tetrachloride is enclosed in an aluminum housing and all the unit's vital parts are protected from moisture and dust. Aut-O-Jet is recommended for use in homes, factories, barns, ships and other enclosed structures and is reported to be as lasting as the house or structure it safeguards.



Manufacturer: Aut-O-Jet Co., Multnomah, Ore.

STAINLESS STEEL PREFABRICATED SHOWER CABINET requires minimum of maintenance, is easily erected.

This latest Bathe-Rite all stainless-steel prefabricated shower cabinet is designed for application where maintenance is a factor, such as in hotels, hospitals, institutions and industrial plants. Its brilliantly polished, attractive appearance is easy to keep clean and sanitary while its rigid construction is corrosion resistant from the porcelain enameled reinforced receptor, to walls, fastenings, shower head, valves and curtain rings. According to the manufacturer, the new unit is entirely leakproof and non-warping. It can be easily installed from inside, or if space is limited, it may be erected and moved into position for connection to water and drain. The new cabinet is available in 36 in. size.



Manufacturer: Milwaukee Stamping Co., 865 South 72nd St., Milwaukee 14, Wis.

PLASTIC WASH BASINS in soft pastel colors are durable, lightweight and easily cleaned.

Two new colorful Lucite wash basins, one for space saving corner installation, are being manufactured for use in small housing projects, summer cottages, trailers and boats. Heat resistant, stainless and chipless

(Continued on page 160)

new survey shows

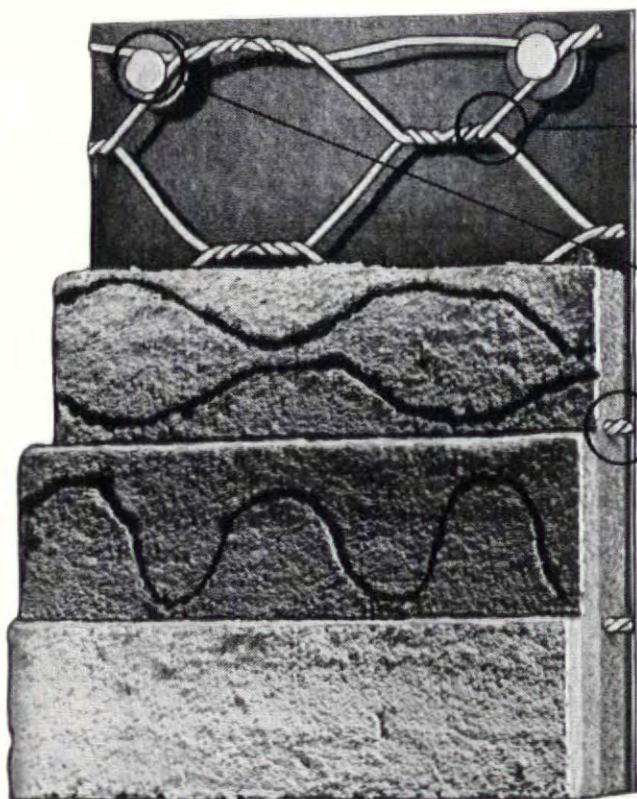
Architects and Builders like Steel-Reinforced Stucco

for these **GOOD CONSTRUCTION** Reasons

IN a recent coast-to-coast survey, the Architects interviewed showed an overwhelming approval of modern methods of stucco construction—using improved Portland Cements and steel reinforcing. They recognize that steel reinforcing gives stucco the necessary strength for lasting durability and permanent crack-resistance, that homes built with reinforced stucco retain their beauty through the years.

The same survey also showed a strong and increasing trend toward the use of more stucco—a large majority of Architects feel that stucco will be used on more homes in the future because it is appropriate for today's popular home design styles, such as Modern, Ranch-Type, Cape Cod, Colonial and Georgian. They consider steel-reinforced stucco as being *good construction*—low in initial cost and easy to maintain.

Why Keymesh Reinforcing Insures Stronger More Durable Stucco



Provides stronger reinforcement—Keymesh is made of strong, copper-bearing steel wire. It's specially woven with a reverse twist—Keymesh lays flat when unrolled. No bumps or bulges to cause uneven thickness of the "scratch" coat. Keymesh is heavily galvanized for protection against corrosion.

Keeps distance from wall—Keymesh is easily furred out with special Keymesh furring nails to keep it at a uniform and proper distance from the wall—to insure full thickness of the scratch coat.

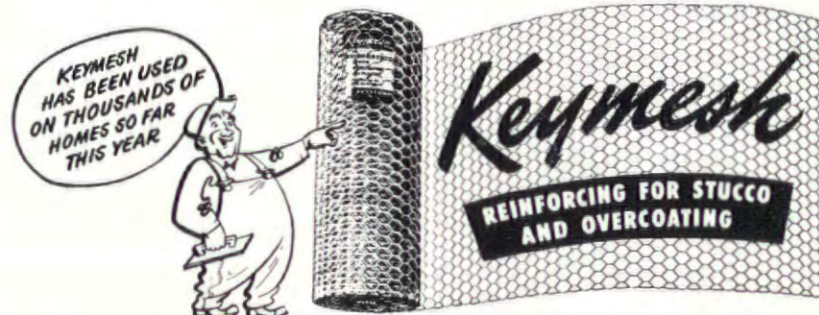
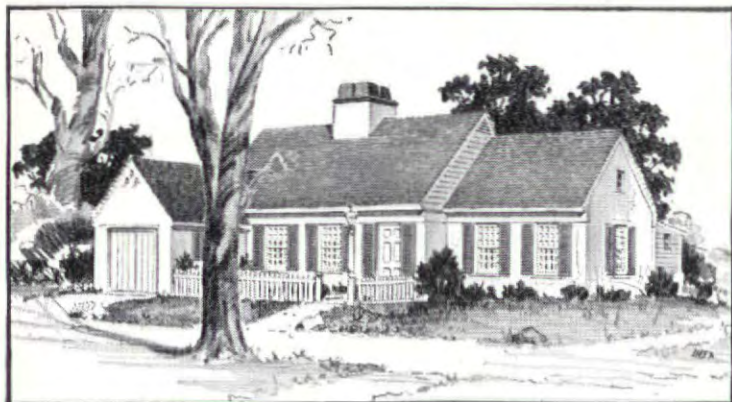
Embeds thoroughly—The special open mesh design of Keymesh allows each steel strand to be completely embedded by the "mud," insuring lasting strength of the wall. Keymesh is the right size for easy troweling, and the right size for holding the scratch coat firmly while setting. Joins easily with compact, smooth laps. No bumps or high spots in the first or following coats.

When you specify Keymesh—for new homes or in remodeling—you are assured of strong, durable stucco—*good construction* that will be of lasting satisfaction to your clients. Write for your copy of the new booklet containing Keymesh specifications.

Keymesh is shipped in rolls 150' long by 3' wide. For stucco and overcoating, specify Keymesh 1½" hexagon mesh, 17-gauge galvanized wire, or 1" hexagon mesh, 18 gauge.

THE POPULAR CAPE COD "COTTAGE"

During the course of the survey, many Architects gave "first mention" to Cape Cod design as being most appropriate for stucco.



KEYSTONE STEEL & WIRE COMPANY

PEORIA 7, ILLINOIS

TWENTIETH CENTURY "49'ERS"

take Brick and Tile to new frontiers



THE "49'ers" in our industry do their pioneering without the aid of shotgun, covered wagon or gold pan. They deal in such commodities as test tubes and temperatures, tension and tolerances.

Their job is research.

Their progress is measured in terms of discoveries that will help you build better—that will add *and keep adding* to the great strength, beauty and utility you'll get in the brick and tile for tomorrow's building.

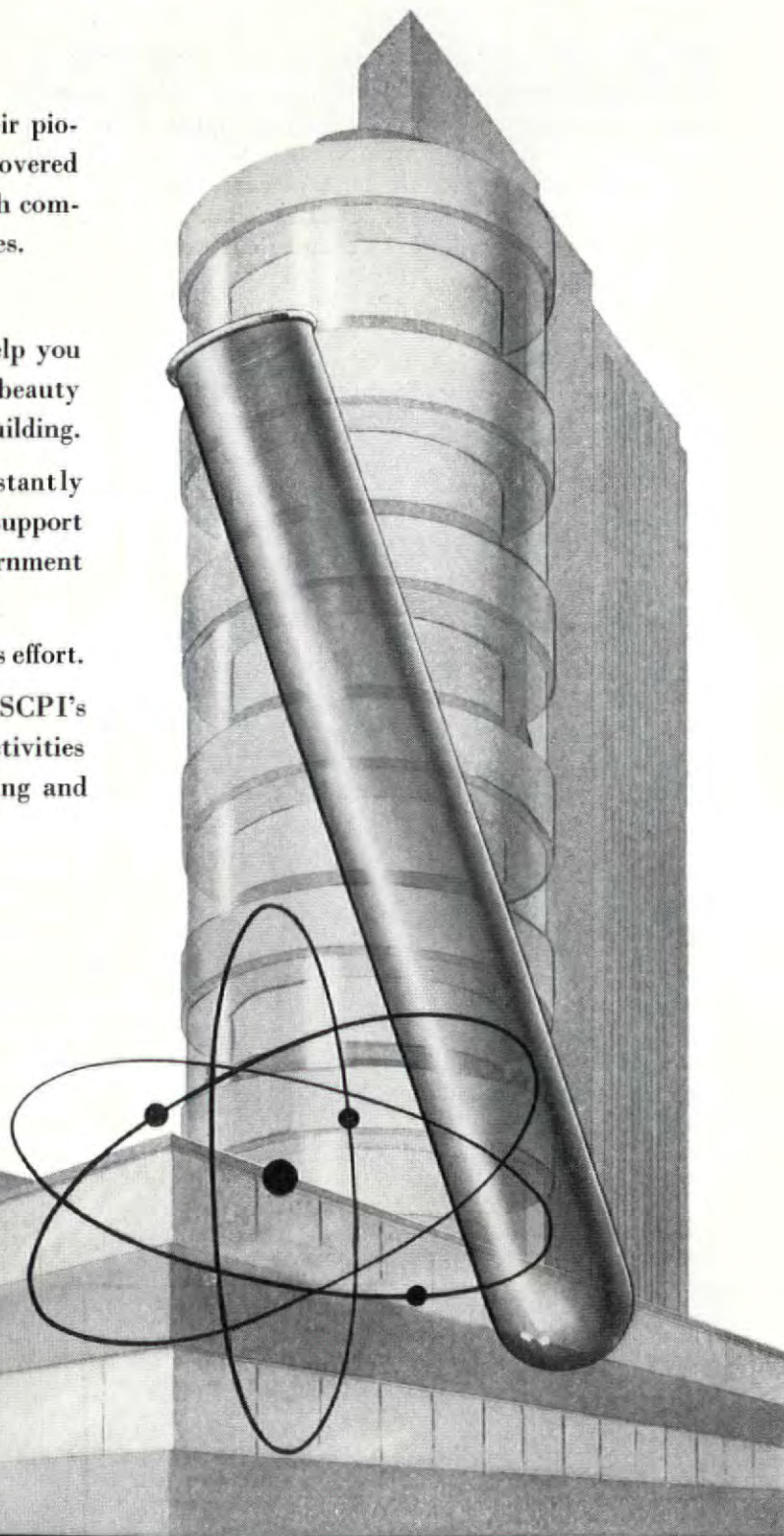
Their achievements are many. But these "49'ers" are constantly blazing new trails. Under the co-sponsorship and enthusiastic support of SCPI, this research goes forward in university and government laboratories throughout the country.

In the immediate future SCPI plans to double and redouble this effort.

Research is just one—though a most important one—of SCPI's continuing contributions to the building industry. Other activities include promotion of modular coordination, apprentice training and brick engineered housing.

TWO BOOKS TO HELP YOU

To help you with your building problems two basic handbooks, "Brick Engineering" and "Tile Engineering", are available at \$2.50 each postpaid. Write Desk AF-1, Structural Clay Products Institute, 1756 K Street, N. W., Washington 6, D. C.



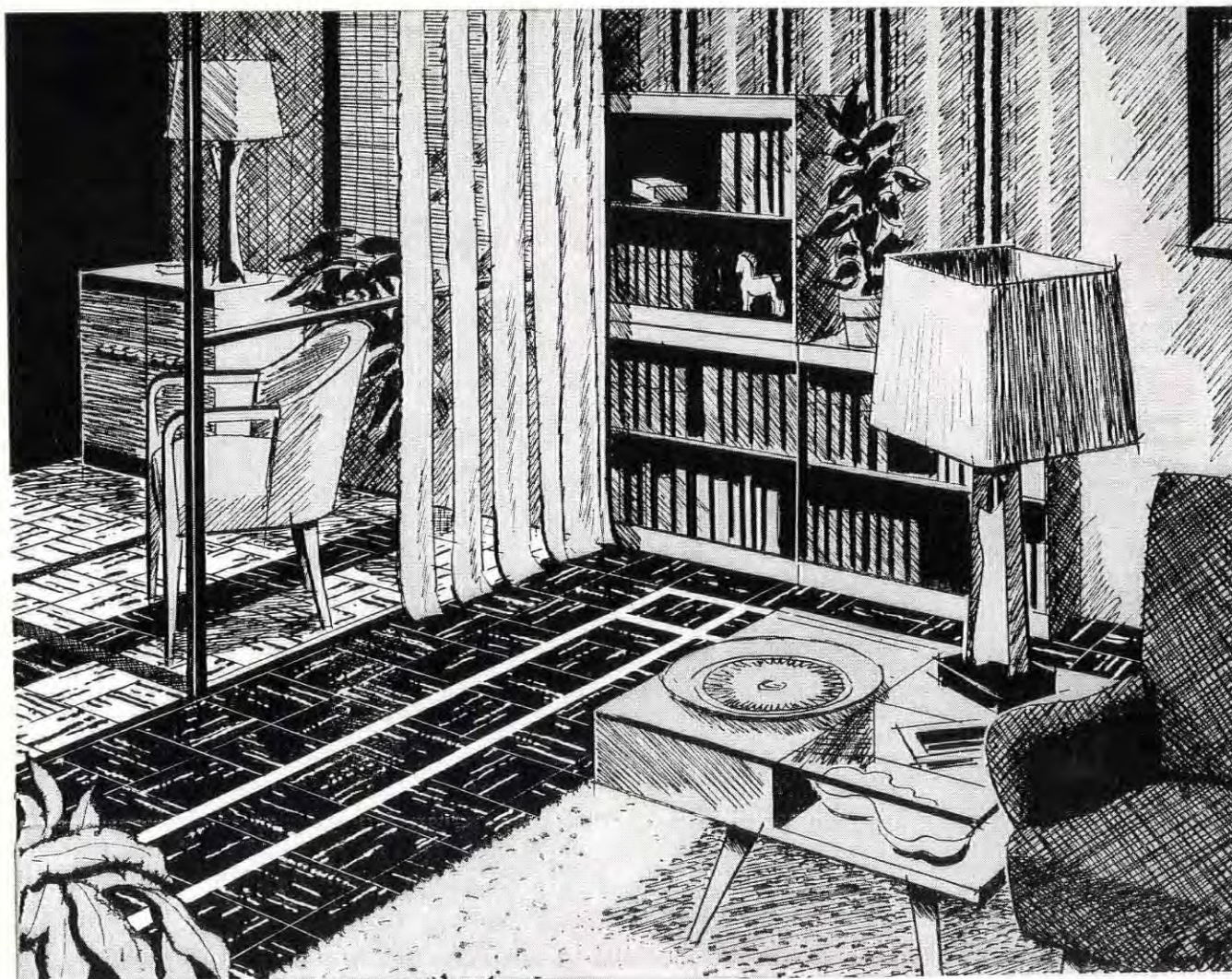
Structural Clay Products Institute • 1756 K Street, N. W., Washington 6, D. C.



new direction in housing



- **FLOOR DESIGNING** has become a more important factor—because of Kentile. Kentile's 23 colors and 5 feature strip colors are combined so easily and economically, in any way desired, that architects are planning floors both original and effective—in perfect harmony with all other elements.
- **CLEANABILITY** achieves a new meaning with the improved formulation of Kentile—especially in kitchens and foyers.
- **SMOOTH SURFACED** Kentile floors are preferred by more and more women today, even in bedrooms and living rooms, because Kentile floors make house cleaning so much easier and more satisfactory.
- **POURED CONCRETE** foundations, with or without imbedded radiant heating, are helping to solve America's need for low cost housing—and with Kentile on this concrete the house becomes a Home.
- **REMODELLING** is also more effective today because Kentile can now be applied on sound double wood floors with T & G top boards not over 3" wide.
- **ECONOMY** is synonymous with Kentile because it is so low priced and installation is so fast and simple.



DAVID E. KENNEDY, INC.

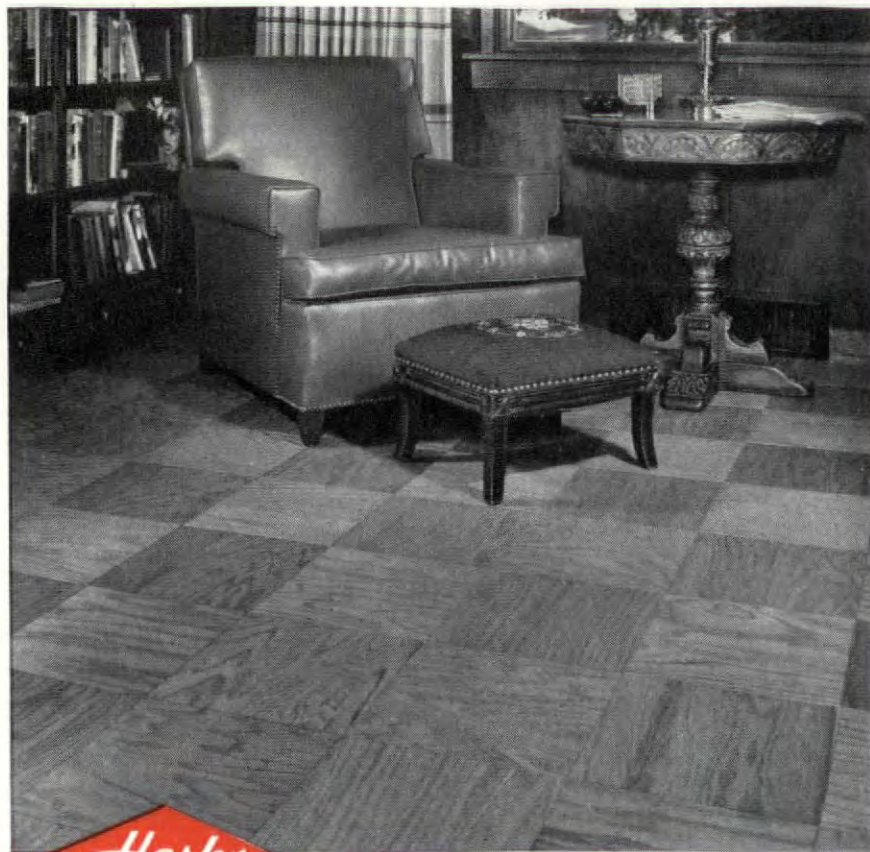
Brooklyn 15, N. Y.
New York 1, N. Y.

Boston 16, Mass.
Washington 6, D. C.

Kansas City 8, Mo.
Chicago 32, Ill.

Atlanta 3, Ga.
Cleveland 14, Ohio

Denver 4, Colo.
Los Angeles 21, Cal.



THE HARDWOOD BLOCK FLOOR

that has *Everything* builders want

BEAUTY—The rich brilliance and natural beauty of fine northern oak provides, in Hasko block floors, a fitting setting for modern or period furnishings. 12-inch square Hasko Blocks create a floor with fewer joints. Each block has a smooth, unbroken surface — no unsanitary dirt-catching crevices. The blocks, laid with their grains running in alternate directions create an unusually attractive patterned effect. Hasko Floors are available in golden oak or the new dark oak . . . the two finishes may be combined to make a unique checkerboard pattern.

PERMANENCE—Each Hasko block is laminated of three plies of veneer permanently bonded with phenolic resins . . . they are guaranteed not to delaminate. There are no butt joints in a Hasko floor. Instead, Hasko's exclusive tongue-and-groove feature interlocks each block with adjacent blocks. This assures floor flatness, prevents buckling, and forms a tight seam that eliminates the danger of mastic extrusion. Hasko blocks are factory finished with an exclusive process which impregnates the wood fiber with varnish, forming a scratch and mar resistant surface. They are thoroughly waxed and polished before shipment.

LOW - COST INSTALLATION—Factory-finished Hasko blocks are designed for laying with a minimum of labor, waste and cost. They may be set in Mastic over concrete without the use of costly screeds or wood subfloors. Over old wood floors or new subfloors they may be blind nailed in the conventional manner. They are ready for use as soon as laid since all sanding, sealing, varnishing and waxing is done at the factory.

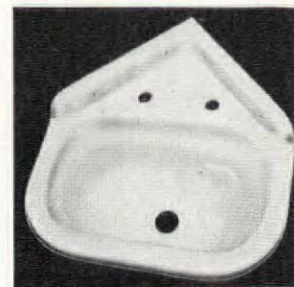
For full information regarding Hasko block flooring write for complete bulletin or see Sweet's Architectural File.

ADVERTISED IN LEADING NATIONAL MAGAZINES



HASKELITE MANUFACTURING CORP., DEPT. AF, GRAND RAPIDS 2, MICH.
New York Chicago Detroit St. Louis Philadelphia Los Angeles

the plastic units are immune to the effect of food acids and most chemicals, and are easy to clean. The basins measure



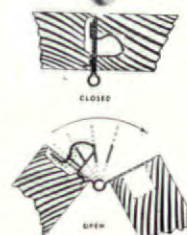
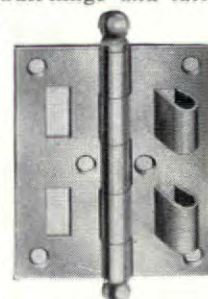
14 1/4 in. long by 15 in. wide, weigh only 2 lbs., and come in four colors—white, pink, blue and green. Supplied with faucets and drains when desired, basin with overflow drain is priced at \$15.90, without overflow at \$13.60. A companion line of sinks will be available shortly.

Manufacturer: Durable Formed Products Inc., 6 Greene St., New York City, N. Y.

SELF LATCHING DOOR HINGE combines functions of butt-hinge and latch spring.

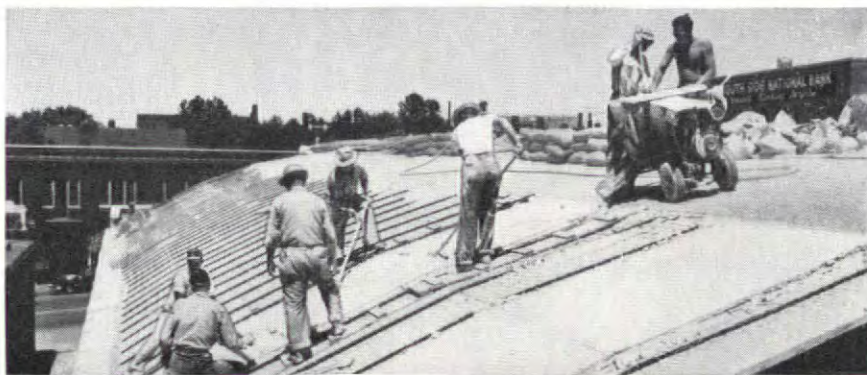
Latching is a self-latching, self-aligning device which combines the functions of a conventional butt-hinge and latch spring. One leaf of the new hardware is slotted to permit the insertion of a simple U-shaped, tempered spring made from flat spring stock. This one leaf is anchored in the door jamb; the other end, with the curved spring, compresses into the hinge slot. The spring operates, releases and latches, with the manual closing of the door. Latching comes with either one, two or three springs, depending upon the hinge size, and is installed like any other butt-hinge except for a mortise the depth of the spring insert. It can be used for hanging cupboard, cabinet, closet or showcase doors and costs, according to the manufacturer, considerably less than the combined cost of a conventional hinge and latch.

Manufacturer: Latching Corp., 9100 Roselawn Ave., Detroit, Mich.



FACTORY-FINISHED KITCHEN CABINETS are carton-packed to reduce shipping and storage space.

Packed and shipped in flat cartons, Boro-magic Kitchen Cabinets are uniquely designed, precision-built, factory-finished units that can be easily assembled in a few minutes. The carton packaging reduces shipping and storage space by as much as 50 to 75 per cent, and thus reportedly achieves considerable freight and storage space savings. The new line comprises base, wall, combination wall, sink, utility and linen cabinets in sizes to fit all needs. Cabinet faces and ends are each made from one piece of plywood for maximum strength and rigidity. Backs are Presdwood. Doors have a hardwood lumber core with tempered Presdwood faces and are equipped with chromium plated hardware. Sink and counter tops are constructed of 3/4 in. plywood and are surfaced with either Battleship linoleum or Formica. (Continued on page 164)



Ideal for problem-jobs, too **SHEETROCK-PYROFILL**

T. M. Reg. U. S. Pat. Off.

POURED-IN-PLACE GYPSUM ROOF DECKS

This roof structure presented a roof deck problem. Panels were diamond-shaped; members were not uniformly spaced; connection plates were raised.

But monolithic SHEETROCK-PYROFILL followed the required curvature perfectly. With its sub-purlins welded to the roof trusses, this roof deck stiffened the structure and impressively tied the entire roof together.

SHEETROCK-PYROFILL saves in material and labor cost and maintenance expense. It saves in weight compared with other poured roof decks. And it offers the added protection of fire-proof gypsum.

For name of your local SHEETROCK-PYROFILL contractor, write Industrial Sales Division, United States Gypsum Company, Chicago 6, Illinois.

(Shown) SHEETROCK-PYROFILL roof deck of Andy Burger Motor Co., St. Louis, Mo. W. F. Hellmich, St. Louis, Architect and General Contractor. Roof Structures, Inc., Webster Grove, Mo., roof structure design and engineering. Atkinson-Lindberg Co., St. Louis, roof deck contractors.



United States Gypsum

For Building • For Industry

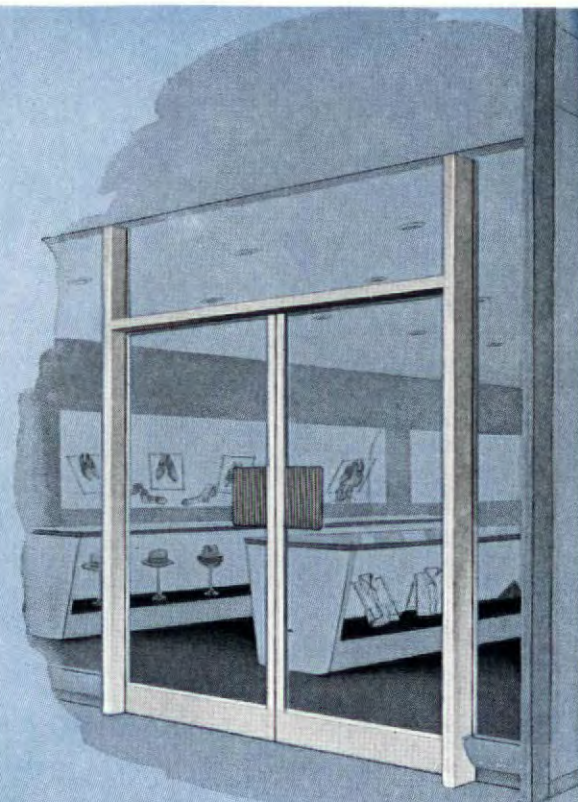
Gypsum • Lime • Steel • Insulation • Roofing • Paint

Outstanding New Products

that meet modern
architectural needs

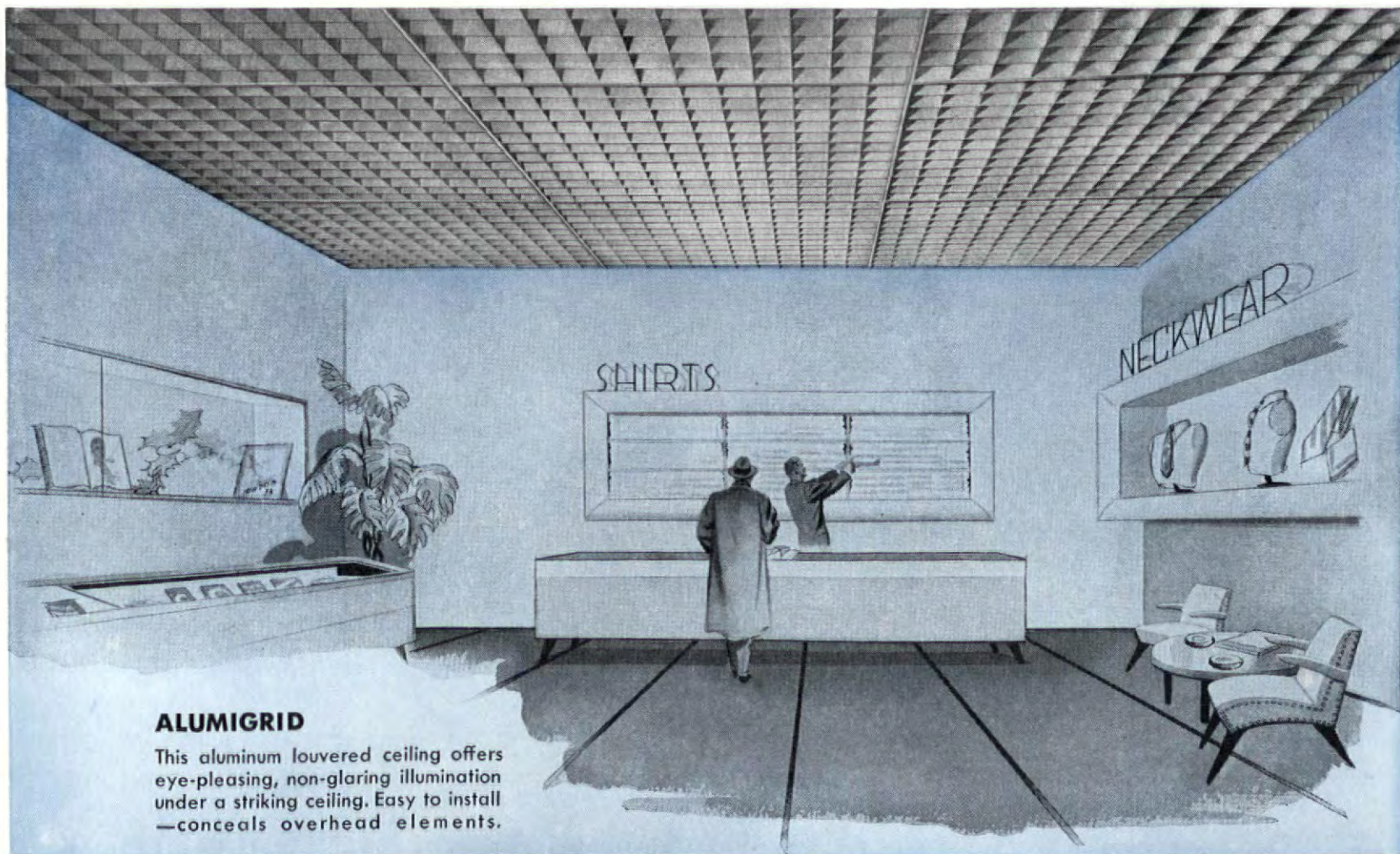
Kawneer precision-made assemblies are designed and engineered to fulfill the highest standards of modern building.

Shown here are four striking new product developments. United with the famous Kawneer Line of Store Front Materials, they offer you the widest variety of architectural metals available today.



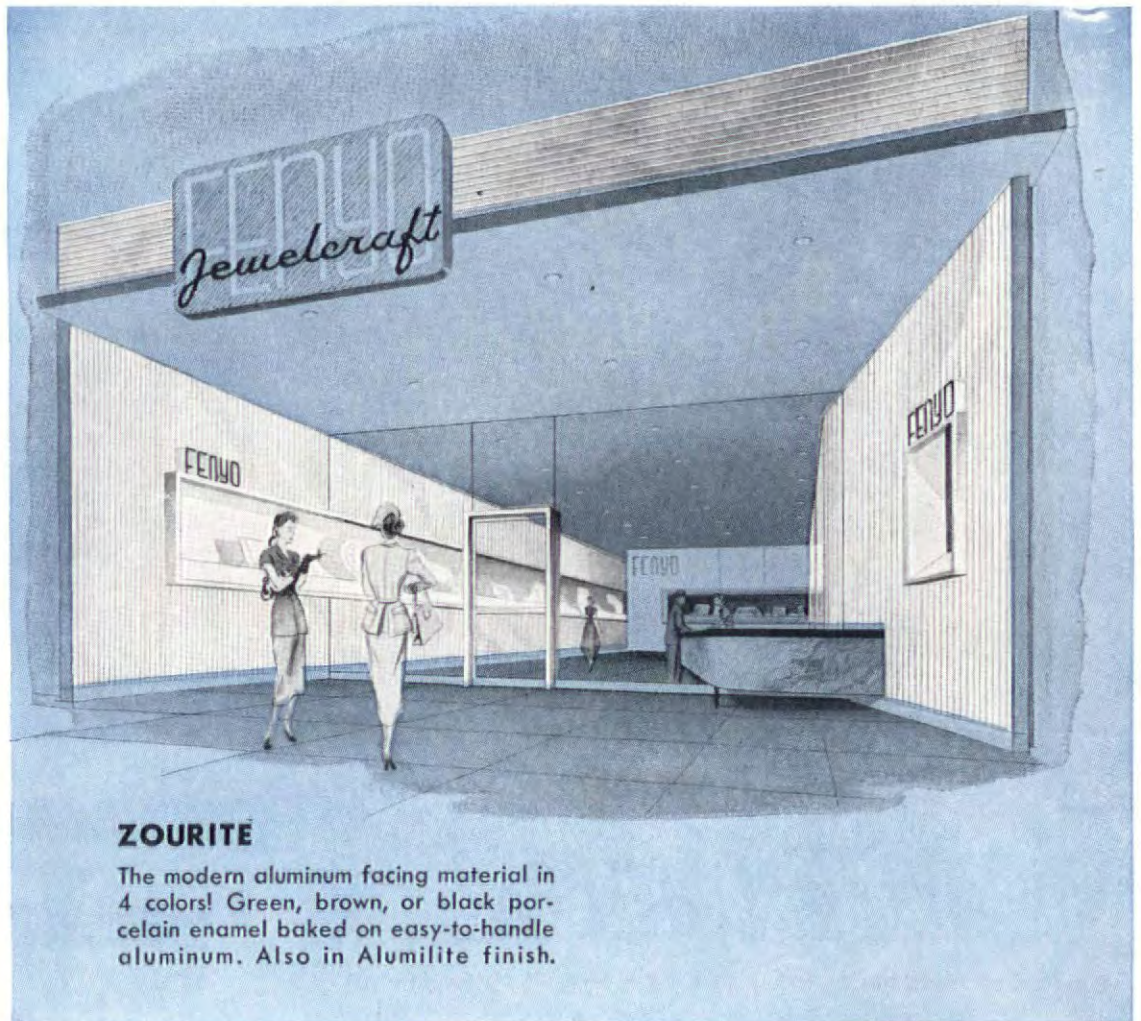
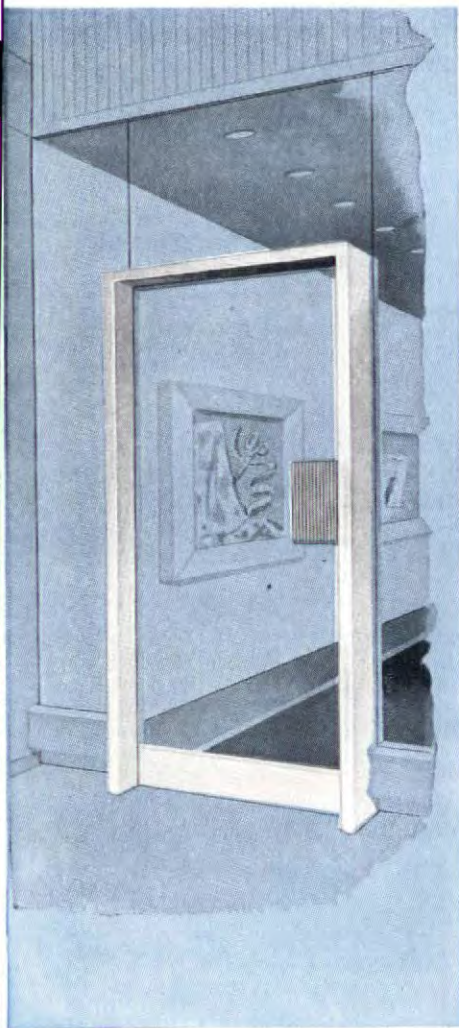
STOCK ENTRANCES

Now you can obtain immediate shipment on stock units. Kawneer offers the most complete line of aluminum entrances in the industry.



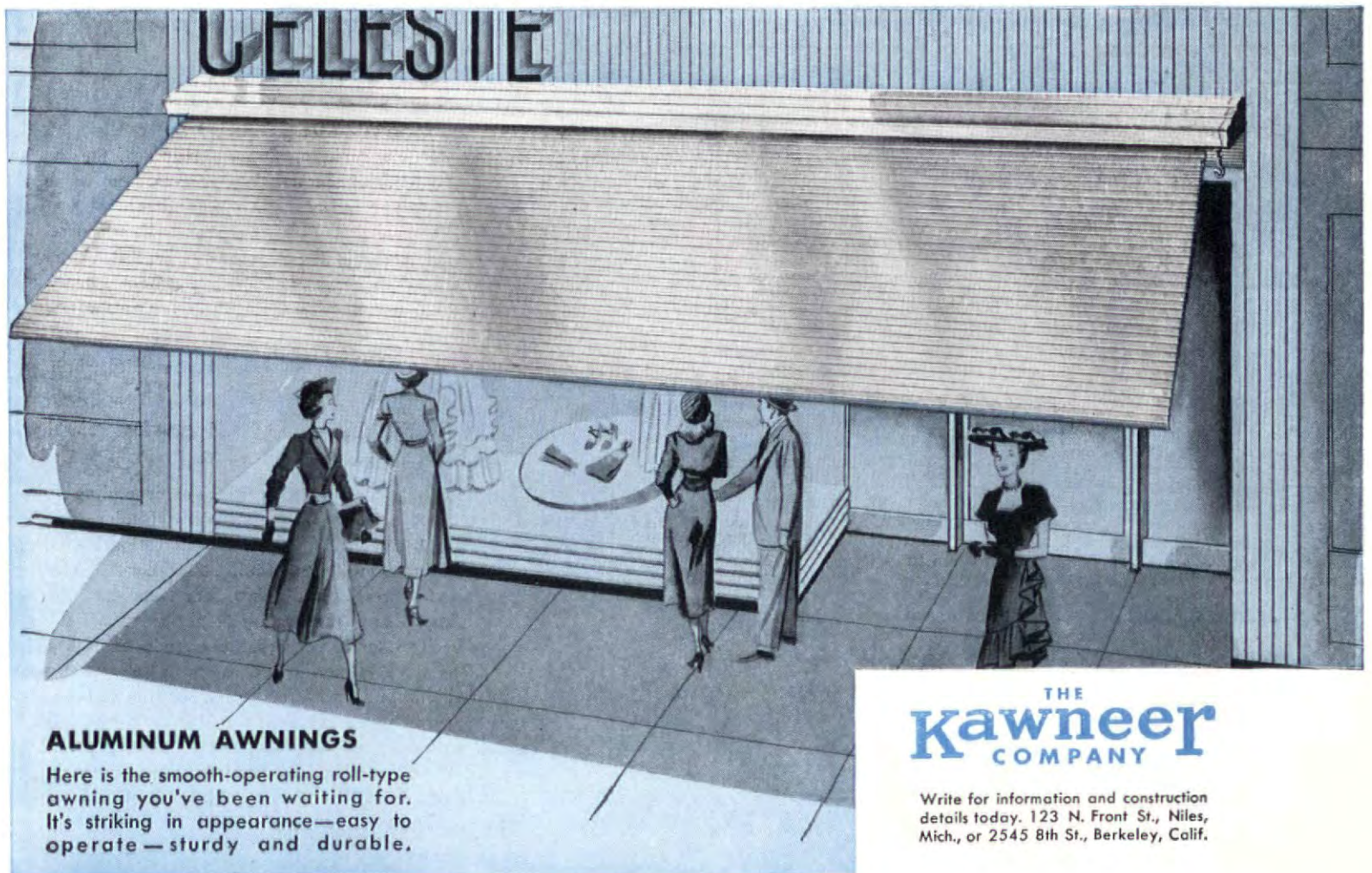
ALUMIGRID

This aluminum louvered ceiling offers eye-pleasing, non-glaring illumination under a striking ceiling. Easy to install —conceals overhead elements.



ZOURITE

The modern aluminum facing material in 4 colors! Green, brown, or black porcelain enamel baked on easy-to-handle aluminum. Also in Alumilite finish.

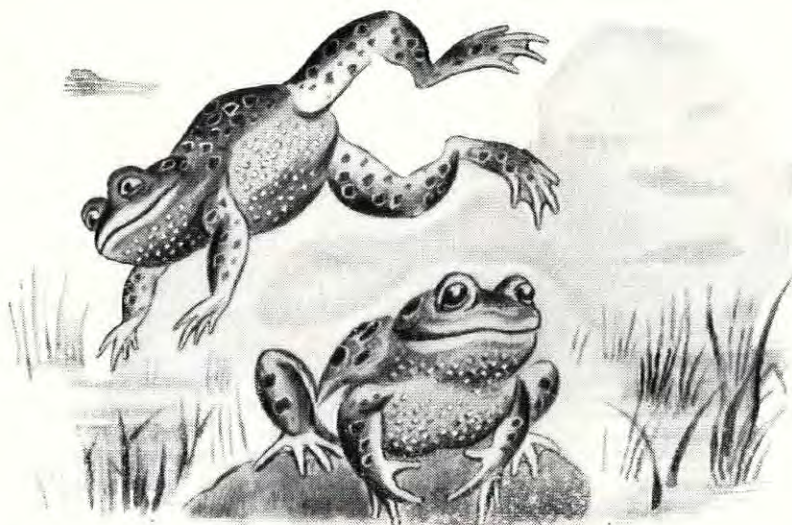


ALUMINUM AWNINGS

Here is the smooth-operating roll-type awning you've been waiting for. It's striking in appearance—easy to operate—sturdy and durable.

THE
Kawneer
COMPANY

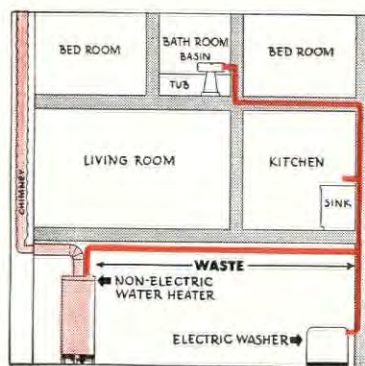
Write for information and construction details today. 123 N. Front St., Niles, Mich., or 2545 8th St., Berkeley, Calif.



Don't play **Leapfrog** — *with figures!*

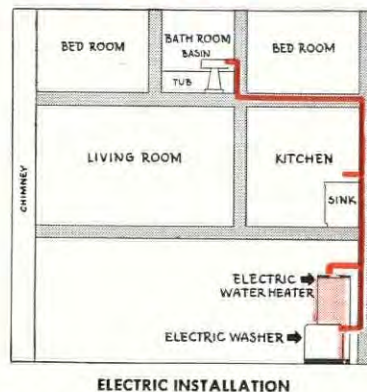
Sales and survey figures both show that more people want Electric Water Heaters than ever before. The only way to satisfy them is to install in the homes you build the kind of water heaters that will satisfy your customers both now and years from now—
Electric Water Heaters!

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



Electric Water Heaters can save you money on construction costs. There's no flue or vent. Installation can be made anywhere—in the kitchen, in the bathroom, or the utility room—even in a closet. This keeps hot water lines short, cuts piping cost.

Customers like Electric Water Heaters because they are: (1) AUTO-



MATIC (continuous hot water, no attention); (2) CLEAN (smokeless, sootless); (3) DEPENDABLE AND TROUBLE-FREE (as electric light); (4) ECONOMICAL (fully insulated storage, short hot water lines); (5) SAFE (all electric, dependable temperature control); (6) FLEXIBLE (can be installed anywhere, even in living quarters; no flue or vent).

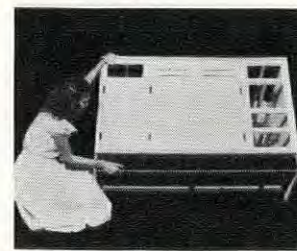
ELECTRIC WATER HEATER SECTION, National Electrical Manufacturers Association
155 East 44th Street, New York 17, N. Y.

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JOHN WOOD • KELVINATOR • MERTLAND • MONARCH • NORGE • PEMCO • REX
RHEEM • SELECTRIC • SEPCO • SMITHWAY • SUNBEAU • THERMOGRAY
TOASTMASTER • UNIVERSAL • WESIX • WESTINGHOUSE

**IT'S EASY TO
INSTALL an electric WATER
HEATER!**

... in a house wired for an Electric Range!

All cabinets in the Boro-Magic line are finished in a long-lasting, sprayed and baked-on gleaming white enamel. Cabinet assembly, according to the manufacturer, is simple enough

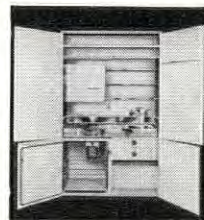


so that even a housewife can handle the job. The cabinet sink unit illustrated, with linoleum top, faucets, and a 24 x 18 in. pressed steel bowl, retails for \$73.25. With a Formica top, retail price is \$88.25.

Manufacturer: Boro Wood Products Co., Inc., Bennettsville, S. C.

PARSONS' 1949 PACKAGED KITCHEN incorporates new features and refinements.

After a half million dollar retooling program, "All-New" 1949 Puraire Kitchens are rolling off the Parsons' assembly line at the rate of hundreds a day. The new package, built of fire-proof metal and complete with refrigerator, range, oven, sink, shelves and drawers, features restyling and other refinements. Four front doors replace the former six while styling of the stove, refrigerator, drawers, working surfaces, shelves and storage facilities has also been changed. The thermostatically controlled oven is on eye level for convenient use and the refrigerator has a net capacity of 5½ cu. ft. A built-in ventilating system permits odorless cooking. Other features of the new model include "no-splash faster sudsing" faucets, steel grip assembly detail, AGA approved easy-cleaning full control gas burners, hermetically sealed freezing system and UL approved flat surface electric range units. Only 4 ft. wide, 2 ft. deep and 7 ft. high, the kitchen is supplied in two gas and one all-electric models, and can be easily adapted to numerous structures and floor plans.



Manufacturer: The Parsons Co., Traverse City, Mich.

COORDINATED COLOR SYSTEM provides aid to color selection.

The Color-Aid Swatch Book and corresponding Color-Aid Papers are valuable tools for all users of color. The swatch book, designed primarily to aid specification of color, contains 3 x 5 in. swatches of all 200 Color-Aid coordinated colors. It features 24 basic hues, four tints and three shades of each hue, plus a value scale of eight grays. On the reverse side of each swatch is a designation as to its hue, tint or shade. The 200 Color-Aid coordinated colors in the swatch book are also available in 18 x 24 in. sheets. Usable as backgrounds, these papers have an excellent working surface which is stain-proof, wrinkleproof, washable, and non-bleeding. They also withstand erasing, take pencil, ink, showcard and tempera color. Price of the Color-Aid Swatch Book is \$3.75, papers sell for 25 cents each.

Manufacturer: Color-Aid Co., 329 East 29th St., New York 16, N. Y.
(Technical Literature, page 168)



HOW TO GET THE **JUMP** ON COMPETITION



One of the best ways to keep ahead of competition with the homes you build is this: Give your customers what they *really* want—modern Electric Ranges!

That's the way to build houses that are modern today, and will stay modern for years to come. That's the way to keep abreast of the trend to Electric Cooking. Another million American families bought Electric Ranges last year. Conservative estimates indicate that the same thing will happen again this year.

So during construction, include wiring for an Electric Range, leading to a range outlet in the kitchen. An Electric Range, like electricity itself, is now a "must" in every modern home!

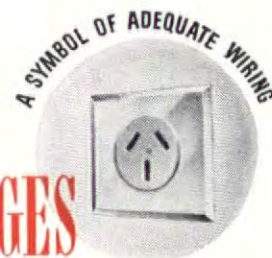
ELECTRIC RANGE SECTION, National Electrical Manufacturers Association, 155 East 44th Street, New York 17, N. Y.

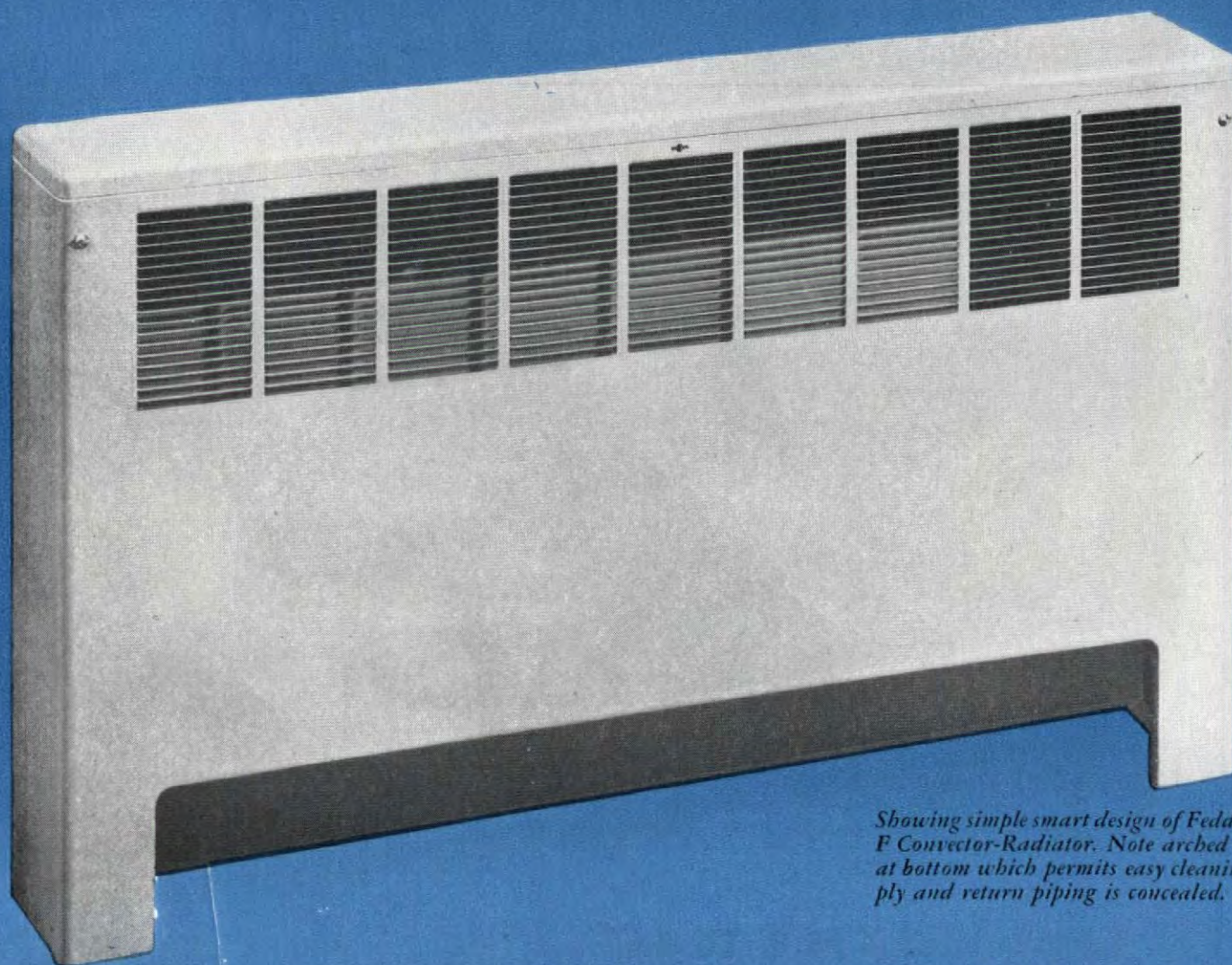
ADMIRAL • CROSLEY • ESTATE HEATROLA • FRIGIDAIRE • GENERAL ELECTRIC • GIBSON • HOTPOINT
KELVINATOR • LEDO • MONARCH • NORGE • QUALITY • UNIVERSAL • WESTINGHOUSE

*Follow
the trend...*

WIRE YOUR HOUSES
FOR ELECTRIC RANGES

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

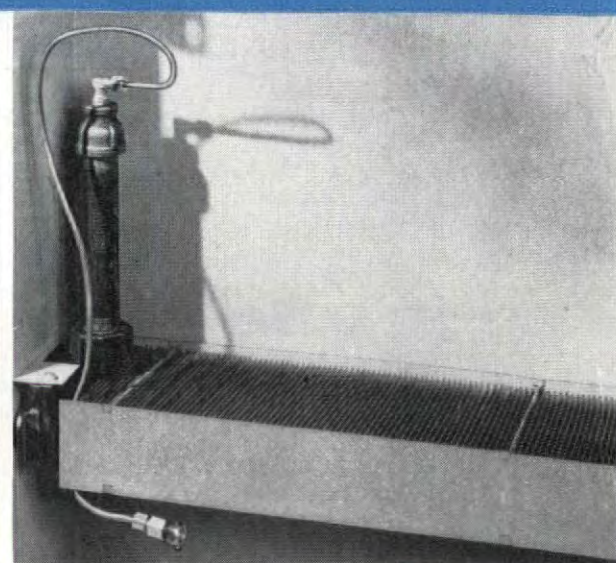
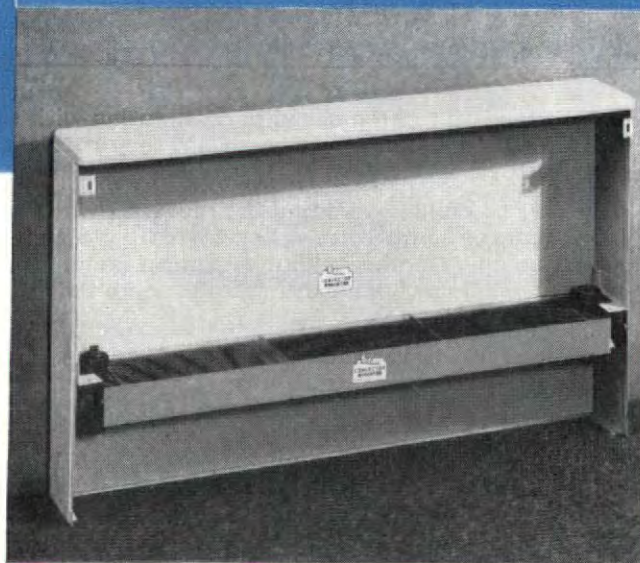




Showing simple smart design of Fedders Type F Convactor-Radiator. Note arched opening at bottom which permits easy cleaning. Supply and return piping is concealed.

Fedders Type F Convactor-Radiator with front panel removed shows location of finned heating element.

Close-up of Fedders Type F heating element showing provision for convenient piping, adjustment to secure proper pitch, and air vent.



FEDDERS-QUIGAN CORPORATION

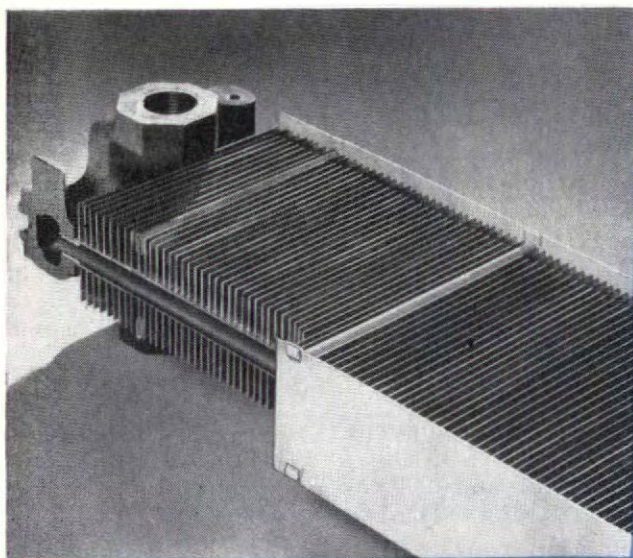
Presenting

a new line of

Fedders Type F

Convactor-Radiators

Cutaway view of heating element showing arrangement of fins, tubes and headers.



Men who design, specify, sell, install and service household and commercial heating systems will welcome Fedders Type F Convactor-Radiators. They are built in a complete range of standardized sizes and capacities for free-standing and semi-recessed installations. Heating element design is a result of over 50 years of Fedders heat transfer experience and skill. They combine thermal and aerodynamic efficiency with consequent comfort and fuel economy. Write for catalog and price list. Representatives in principal cities, see your classified telephone directory.

BUFFALO 7, NEW YORK

HEATING TEXTBOOK. Warm Air Heating and Winter Air Conditioning. By John W. Norris. Sales Department, The Lennox Furnace Co., Marshalltown, Iowa. 320 pp. 8½ x 11. \$5.

The author set out, he says, to write a simple, comprehensive textbook on warm air heating; he accomplished his purpose. *Warm Air Heating and Winter Air Conditioning*, hereinafter referred to as WAH & WAC, was prepared assuming no previous knowledge in heating on the part of the reader.

The heating student will find the first two chapters to be a primer on warm air heating. Unfortunately, it is at this point that the book is weakest; (Lennox is a dry heat outfit) a rather violent partisanship against "wet" heat (and particularly panel heat, wet or dry) is shown. This bias would almost certainly lead the neophyte to think that the only really successful heating system is forced warm air or gravity warm

air. In this respect Revere (a wet heat outfit) Brass & Copper's "Radiant Panel Heating a Non-technical Discussion" (FORUM, Nov. '47) is a much more balanced presentation. This fault in WAH & WAC, however, can be overlooked because in most respects the book is so excellently done, and it should be assumed any serious student would not depend on one text for all his information.

From here on out WAH & WAC settles down to the business of explaining in simple terms, with many illustrations and examples, how to design warm air heating systems for houses. The last half of the book is devoted to humidification control and installation of coal, gas and oil furnaces. The book stresses house installations but does go into the subject of commercial and industrial installations in a lengthy chapter which includes discussions of various types of buildings and design examples for each one.

WAH & WAC can be recommended to anyone who wants to design, install and service warm air heating systems. The new student of heating, however, most certainly should investigate other more objective sources before he can claim to know the advantages and disadvantages of either "wet" or "dry" heat.

RADIANT HEATING. Pan-L Grid Design Manual. Pan-L Heat Corp., 2838 N.E. Columbia Blvd., Portland 11, Ore. 39 pp. 8½ x 11¼ in. One copy upon request, additional copies \$1.00.

This design manual contains necessary information for designing, estimating and installing Pan-L Grid heating systems, which are radiant heating installations using prefabricated, coil panels. The factual data included enables one to determine proper sizing and placement of Pan-L Grids, to compute boiler size and requirements, pump size, pipe sizes and to estimate approximate cost of labor for the installation of panel grids and piping system.

HEATING. Merely A Matter Of Air, Unitrane Finest Air Conditioning. The Trane Co., La Crosse, Wis. 53 pp. 8½ x 11 in.

A well organized publication, *Merely A Matter Of Air* should accomplish its purpose: to give executives contemplating a new multi-room building an understanding of air conditioning. Outlining the basic facts about air conditioning—that there are only two systems, central and unit and that modern systems are based on one or the other or both—it summarizes and compares the available arrangements. Chapters describe the advantages of central, modified central, modified unit and Unitrane systems. A summary section then compares the conclusions reached about Unitrane with the central, modified central and modified unit systems.

LIGHT-WEIGHT AGGREGATES. Properties of Assorted Light-weight Aggregate Materials by Corwin D. Willson. Hobart Publishing Co., Inc. Box 4127, Chevy Chase Branch, Washington, D. C. 173 pp. 8 x 10½ in. Price \$7.50.

Corwin D. Willson's *Properties of Light-weight Aggregate Materials* is a technical study of cement-bonded construction and aggregate materials. The study had two objectives, the first: to learn the physical characteristics of a large number of different kinds of compositions containing cement-bonded light-weight aggregates. The second and more important: to investigate the possibility of using by-products of various manufacturing processes and various waste organic fibers as concrete aggregates by including (Continued on page 172)

SAVED!

Thousands of Dollars
Tons of Structural Weight . .
Hundreds of Man Hours . . .

by *alumitile*

the feather-weight aluminum wall tile
that offers all the enduring
beauty, all the eagerly sought
advantages of gleaming, easy-to-clean
tile. Mail the coupon for
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HASTINGS *alumitile*

Metal Tile Products, Inc., Hastings, Mich.

Metal Tile Products, Inc.
Hastings, Mich.

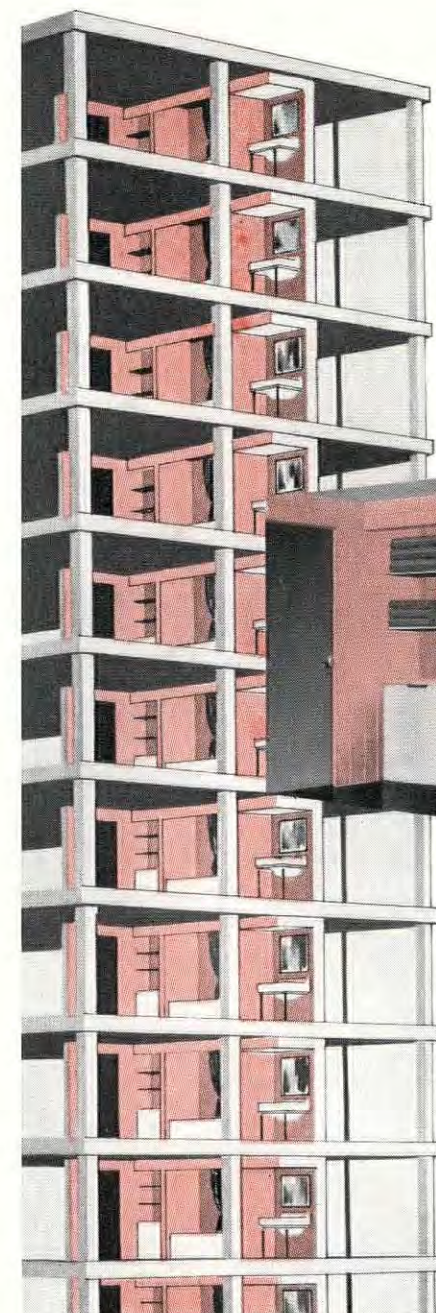
Please send me sample tile
and architect's kit FREE.

Name

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KEEP OWNERS SOLD ON YOUR HOUSES

by specifying

American KITCHENS

Complete with this
Amazing New
DISPOSER



Now—a disposer that won't jam! Patented knee-action pulverizer arms pivot in center . . . making jamming impossible!

Close-up of pulverizer arms, showing simplicity of design. Sawtooth hammers grind fast and thoroughly!



Heavy ribbed construction, motor overload protector and permanently sealed bearings assure lifetime, trouble-free operation.

New American Kitchens ventilator. Mounts directly above range, regardless of range location.



New American Kitchens Serv-Cart. Fits under counter when not in use. Removable tray top.

Deluxe What-Not shelves give smart finish to ends of runs of base and wall cabinets.



AT LAST! A PERFECTED GARBAGE DISPOSER TO GIVE YOUR HOUSES THAT FINAL "DE LUXE" TOUCH THAT "WINS THEM OVER!"

Give the owners of your houses an extra their neighbors don't have—a new American Kitchens Disposer—and they'll praise you all over town as the most progressive man in your line!

Yes, women who own American Kitchens Disposers *talk* about them—rave about how wonderful they are! Because this amazing *new* type of disposer quickly liquefies even hardest bones . . . and positively can't jam nor

clog—even if metal is dropped in—thanks to the center pivot of the patented knee-action pulverizer arms!

The new American Kitchens Disposer is safe, odorless, sanitary—competitively priced, easy to install, easy to service. See it at your nearest American Kitchens dealer or distributor.

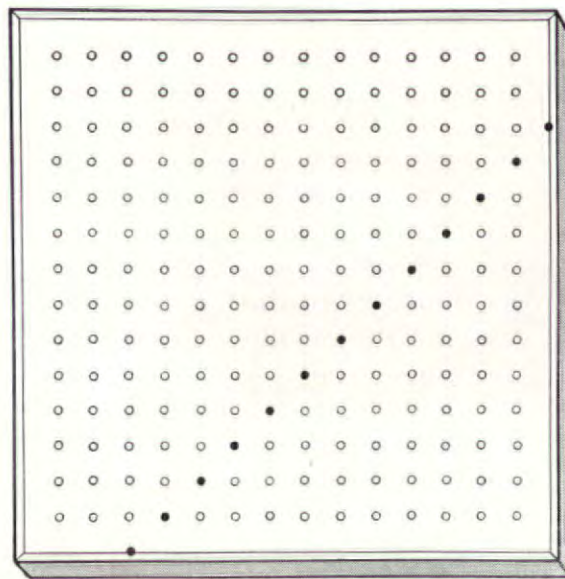
FREE! Architects-Builders File . . . gives blueprints of outstanding kitchen treatments, equipment specifications, etc. Ask your nearest American Kitchens supplier. If you don't know his name, write us today.

ASSISTANCE TO ARCHITECTS

American Kitchens are demonstrably better. They're the most advanced in styling, priced in line, easy to specify and ideal to install. Units are available in varying widths, to form perfect installation in rooms of any size and shape. American Kitchens are represented in your locality by distributors and dealers factory trained in planning and installation. Call on these experts freely.

AMERICAN CENTRAL

Division—AVCO Manufacturing Corporation
Connersville, Ind.



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FIBERGLAS* PERFORATED ACOUSTICAL TILE

Important Characteristics

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- ✓ DIMENSIONALLY STABLE
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TESTED FOR MAXIMUM EFFICIENCY
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- ✓ IDEAL FOR FIRESAFE MECHANICALLY-SUSPENDED CEILINGS
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- ✓ APPROVED APPLICATORS IN PRINCIPAL CITIES

**AVAILABLE
APRIL 1st**
Tile Sizes: 12"x12"
12"x24"
3/4" Thickness

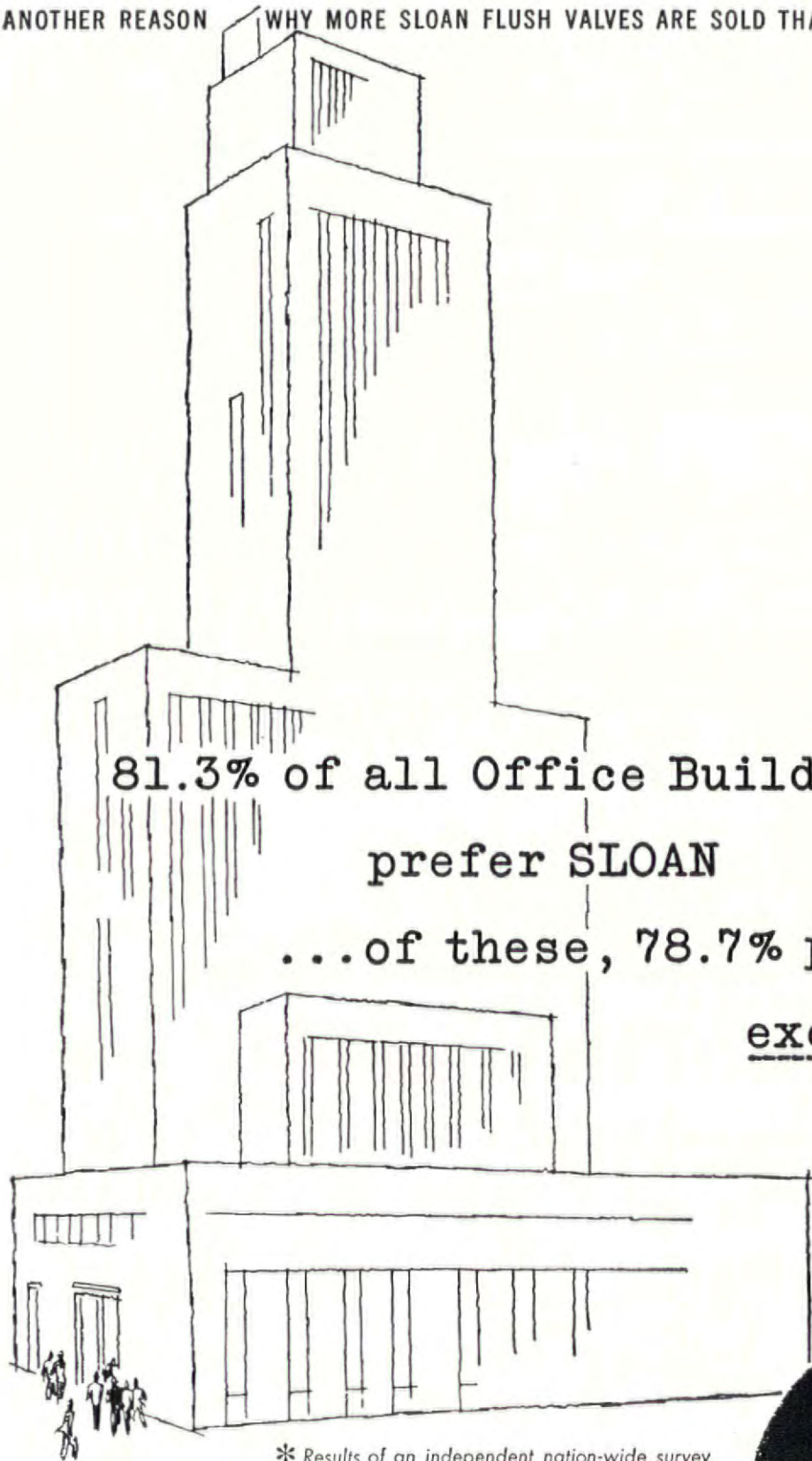
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**BUILDING
MATERIALS**

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

ANOTHER REASON WHY MORE SLOAN FLUSH VALVES ARE SOLD THAN ALL OTHER MAKES COMBINED



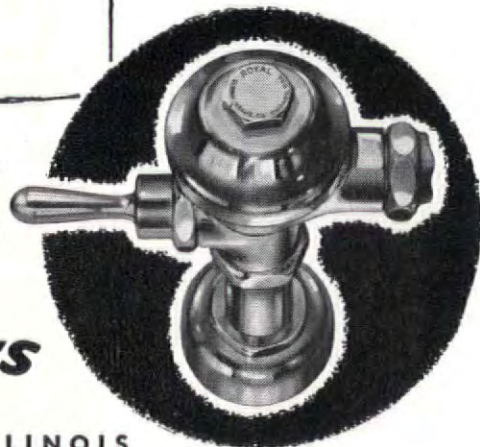
81.3% of all Office Building Managers*
prefer SLOAN

...of these, 78.7% prefer SLOAN
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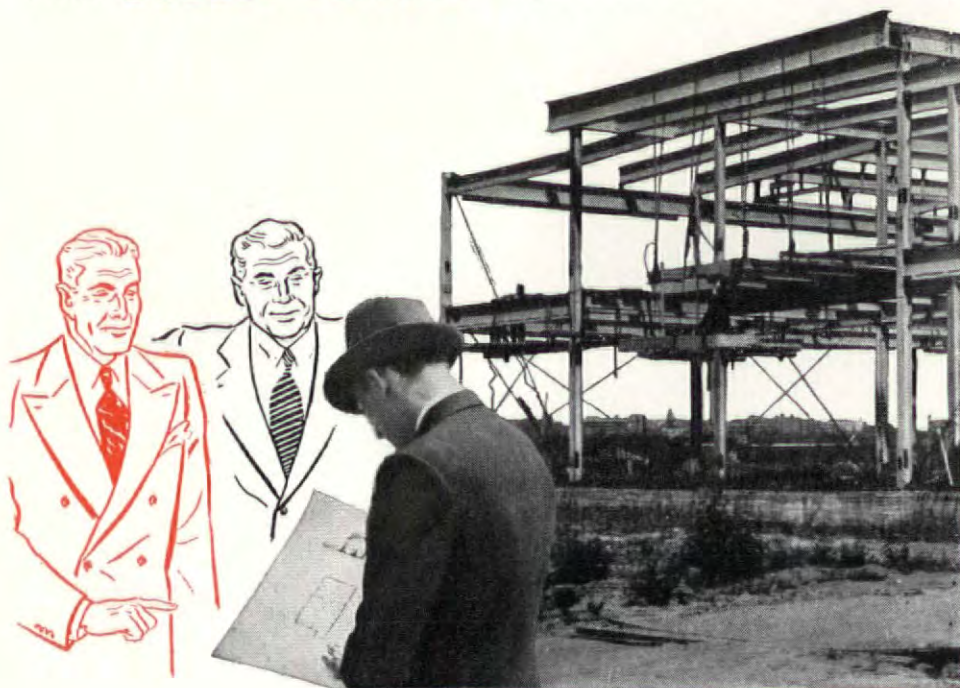
* Results of an independent nation-wide survey
(July, 1948) among 1168 Managers of Office Buildings
of ten or more stories, 21% of whom responded

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Your **DOUBLE DEFENSE** against electrical delay



How to steer clear of "wonder-when" deliveries

When you draw up electrical specifications, how many items fall into the "wonder-when" class—of which slow delivery may delay the entire project? There's no 100-per-cent remedy, of course, but you can go a long way by getting frank and well-informed advice on availability *before* the plans are set.

Through your electrical contractor—or directly with Graybar if you wish—your specified materials for wiring, lighting, ventilating, communicating, or any other electrical system can be *pre-checked for prompt availability*. Where delay is likely, Graybar's wealth of application experience may provide alternate ways to do the job. Catalog information on 100,000 leading electrical products is available from our near-by office. And you can be sure of *scheduled* delivery, rather than "wonder-when" delivery, once a Graybar promise is made.

Directly or indirectly, you benefit from electrical buying "via Graybar." Both *as* you plan and *after*, you'll find it's good to have Graybar in the picture. 4889

Your Electrical Contractor and ...

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Graybar Electric Company
Executive offices:
Graybar Building, New York 17

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a chemical admix along with the Portland cement. Tests on more than 8,000 specimens from 225 different materials demonstrated the merit of a large number of such compositions. Many of these were found to be crack and fire resistant to an unusual degree and suited to use in machine fabrication of an insulative weather and fire resistant building board, as well as to the making of light-weight, easily-handled wall, roof and floor panels. Others of the compositions were found to be particularly suitable for shingles, large sheet siding, floor tile, water pipe and other commercial products requiring an exceptionally strong, cheap, rigidly setting plastic. In the book the most promising materials and most successful tests are detailed. Test data are correlated, special problems are discussed and recommendations for further work are made. All chemical phases of the work are fully covered technically, along with mixing techniques, formulas of mixes, etc. A total of 675 mixes are detailed.

LIGHTING. Artistic Ecclesiastical Lighting. Catalogue No. 45. The Edwin F. Guth Co., 2615 Washington Blvd., St. Louis, Mo. 7 pp. 8½ x 11 in.

Presenting the Guth line of church lighting equipment, Catalogue No. 45 illustrates and describes various types of neo-Gothic church fixtures.

REQUESTS FOR LITERATURE

JOSEPH N. CARNER, associate technical director, The Art Institute of Chicago, Chicago 3, Ill.

ROBERT G. GUSTAFSON, architect, 15½ East Front St., Monroe, Mich.

CHARLES R. HARTMAN JR., draftsman, Box 253 C, R R 10, Cincinnati 27, Ohio.

HIDELL & DECKER, architects, 2715 Oak Lawn, Dallas 4, Tex.

HAROLD L. HOOPER, architectural student, 33 York St., Hartford 6, Conn.

EUGENE KODANI, architectural student, 2600 Ridge Rd., Berkeley 9, Calif.

NATHAN S. LEVENSON, architect, 830 Jancey St., Pittsburgh 6, Pa.

W. C. MAGILL, designer, "The Gardens," Berlin, N. J.

RICHARD I. MITCHAM, architectural student, 3445 South Hillcrest Drive, Los Angeles 16, Calif.

FRANK F. NORRIS, architectural student, 1724 F St., Lincoln, Neb.

JAMES L. PAYNE, architect, 182 South Church St., Salem, Ore.

CLARENCE W. PHILLIPS, architect, 910 Jefferson Ave., Pekin, Ill.

RON S. PURSEY, c/o J. P. Donoghue, Estates Chambers, Creek St., Brisbane, Queensland, Australia.

N. E. SAKSENA, architect, 277 Walnut St., Englewood, N. J.

MELVIN SCHULTZ, 1722 Brame St., Toledo 12, Ohio

STATE OF CALIFORNIA, Dept. of Public Works, Att: Los Angeles Branch Office, Black Building, 4th & Hill, Los Angeles, Calif.

JOHN STOCKEMER, designer-draftsman, 14508 Van Nuys Pl., Pa-coima, Calif.

WASHINGTON UNIVERSITY, Att: Architecture Library, St. Louis 5, Mo.

CARLTON S. YOUNG, 1723 Kline Rd., Ithaca, N. Y.

ADVANTAGES OF RAYMOND CONCRETE PILES NO. 5

Saving in construction cost

OTHER ADVANTAGES: Uniform Bearing Capacity
Greater Carrying Capacity • Permanency • Engineered
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Eleven Raymond rigs in operation on one job—an example of Raymond's ability to speed the work.

Genuine economy depends on many basic factors and is not always evidenced by the lowest bid.

Whether your job is large or small, you will find Raymond economy is the result of:

1. Sound engineering and planning.
2. Experienced supervision.
3. Equipment readily available anywhere in the country.
4. Experience in purchasing materials at lowest costs from sources nearest the job.

... All demonstrated by world-wide experience . . . your assurance of genuine economy.



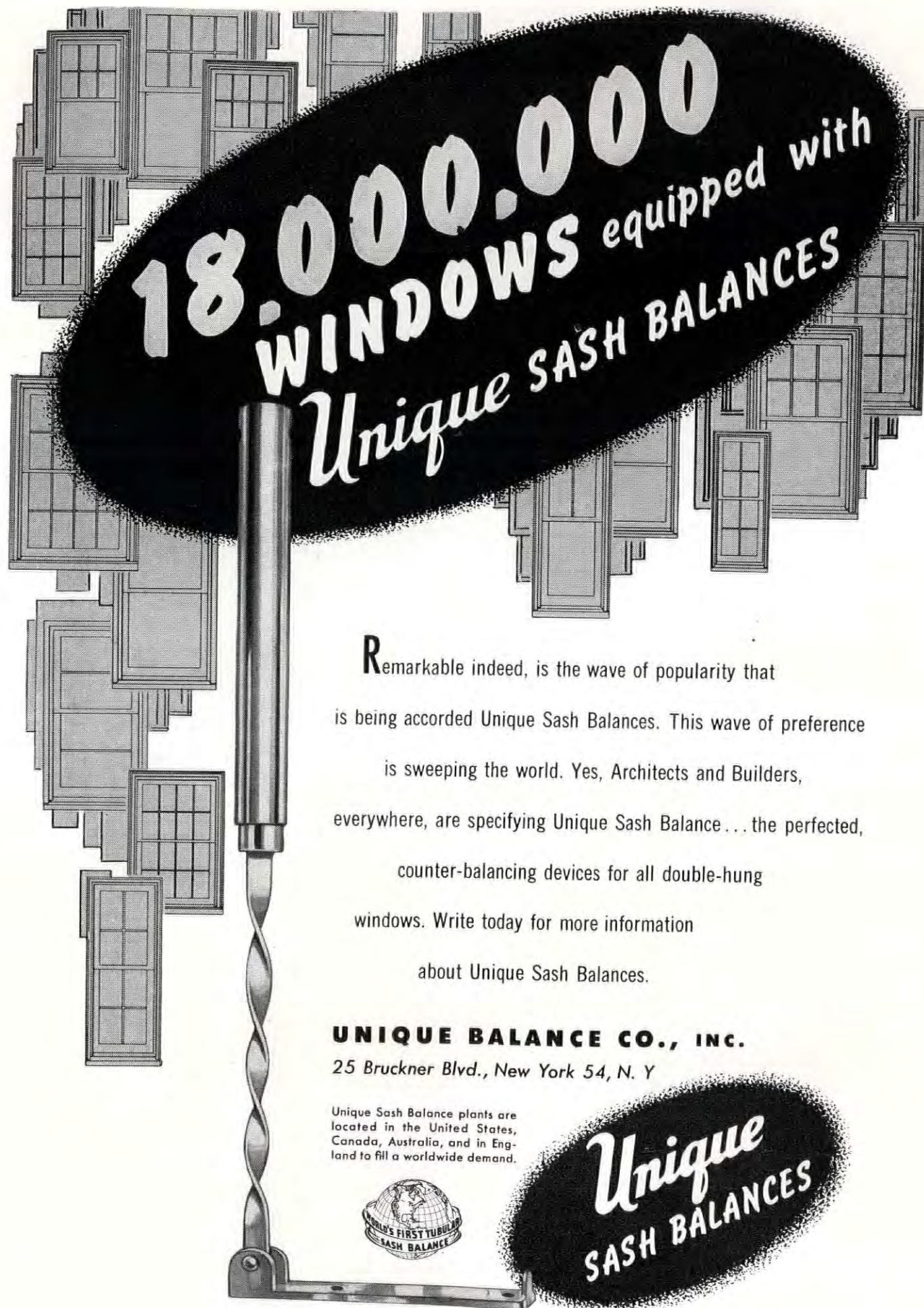
THE SCOPE OF RAYMOND'S ACTIVITIES includes every recognized type of foundation construction—concrete, composite, precast, steel, pipe and wood piles. Also caissons, underpinning, construction involving shore protection, shipbuilding facilities, harbor and river improvements and borings for soil investigation.

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Branch Offices in Principal Cities
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WINDOWS equipped with
Unique SASH BALANCES

Remarkable indeed, is the wave of popularity that is being accorded Unique Sash Balances. This wave of preference is sweeping the world. Yes, Architects and Builders, everywhere, are specifying Unique Sash Balance... the perfected, counter-balancing devices for all double-hung windows. Write today for more information about Unique Sash Balances.

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Unique
SASH BALANCES

Bigelow presents...

The revolutionary new Cushionlok

A Commercial Carpet That's Rich Wool with Built-in Rubber Base!

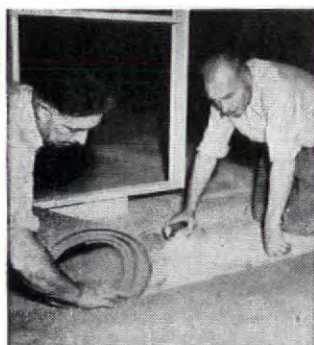


YEARS of experimentation have at last produced a real miracle carpet for every commercial use—Bigelow's amazing new *Cushionlok*.

Cushionlok combines thick wool carpeting (in the famous-for-wear Gropoint weave) with a built-in sponge rubber back. It's softer to walk on, longer-lived, quieter. It's easier to install, more economical!

See if *Cushionlok* isn't the answer to your needs. The Bigelow Carpet Counsel office near you will help in planning your *Cushionlok* installation.

A completed *Cushionlok* installation as seen in the Bigelow showroom at 140 Madison Ave., New York City. Not only does *Cushionlok* look rich and distinctive—it's a real economy. The slight additional cost is less than you'd pay for a separate rubber cushion. Ideal for offices, stores, hotels, theaters.



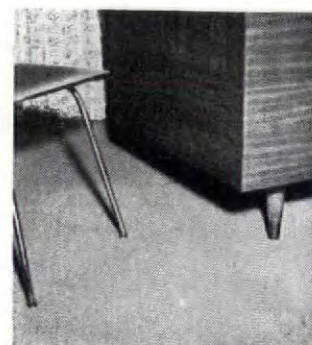
1. Cushionlok goes down on bare concrete. Can be laid, with no time-taking workroom tasks, on concrete, wood or plywood. Requires no cushion—the cushion is part of *Cushionlok*.



2. Almost invisible seaming! *Cushionlok* has a special Trim-easy edge which strips off, leaving neat edges that meet almost invisibly. *Cushionlok* is then cemented to the floor.



3. Less inconvenience! The new *Cushionlok* is made in 27" width, requires little moving of furniture. Cement grips carpet; carpet can be walked on immediately. Can be cleaned on floor.



4. Longer service! *Cushionlok's* long-wearing looped pile gives all the wear-advantages of Gropoint—with added wear from the shock-insulating rubber back. Expect many years of service.

BIGELOW Rugs and Carpets

Beauty you can see . . . quality you can trust . . . since 1825

Mueller Climatrol

fuel-thrifty Furnaces

With this complete line, there's no question about the *right* answer to any heating problem

Mueller Climatrol comfort wins quick and lasting approval from your clients

Here's a formula that guarantees client approval — saves time and trouble on every job: *Mueller Climatrol heating equals modern comfort and economy multiplied by years of client satisfaction.*

And here's why you can count on quick and lasting approval:

- 92 years of specialized experience and years of national advertising in leading magazines have established the Mueller Climatrol name.
- Up-to-the minute engineering gives your client the most advanced new heating developments. (See "Modular Design" below.)
- The complete Mueller Climatrol line gives you a unit you *know* is right for any job, with any fuel.
- Every Mueller Climatrol Furnace is built to deliver years of satisfying, fuel-thrifty comfort.

When you make it a practice to recommend Mueller Climatrol equipment, you make sure of successful jobs. Write for complete information . . . L. J. Mueller Furnace Co., 2001 W. Oklahoma Ave., Milwaukee 7, Wis.

M

Modular Design...

All units starred "M" are Modular Furnaces — Mueller's great new heating development. Each is composed of combinations from a basic group of standardized, interchangeable units.

Thus, you can install any modular equipment (up to the complete year-round air conditioner) all at once or a step at a time to fit your clients' needs and budget. You can change from one fuel to another by switching modular units. You can expand the initial installation by adding modular units. At each stage, your client enjoys the efficiency of a completely engineered heating system! Write for complete details on this great new step in home-planning.

M U E L L E R

Climatrol

REG. U.S. PAT. OFF.

**FOR
GAS**



Type 101 Gravity Furnace—Steel. For small and medium-size homes.



Type 108 Winter Air Conditioner—Cast iron. The blower-filter cabinet can be installed on either side of the heat-exchanger cabinet.



Type 109 Winter Air Conditioner—Steel. Vertical cabinet for space-saving installation. Blower assembly mounted in exclusive Roll-a-Drawer.

**FOR
OIL**



Type 50 Winter Air Conditioner—Steel. For residential and commercial installations. Pressure-atomizing burner.

**FOR
COAL**



Type "F" Gravity Furnace—Cast iron. Five sizes from 20" to 30" firepots. Also furnished with square casings.



Type 701 Gravity Furnace—Steel. Three sizes: 20", 22", 24". Also available in square, green lacquer cabinet.



Type 702 Winter Air Conditioner—Steel. Type 701 and blower-filter unit combined in one cabinet.



Type "WG" Gravity Furnace—Cast iron. For small, compact home. 42,000 Btu at register.



Type 102 Winter Air Conditioner — Steel. "Heat-Speeder" sectional heat-exchanger design.



Type 103 Forced Air Furnace — Steel. "Heat-Speeder" sectional heat-exchanger. For large residences, apartment houses, and commercial installations.



Type 105 Winter Air Conditioner — Steel. Type 101 plus forced-air circulating and filtering unit. Shown with Mueller Levelizer Control System.



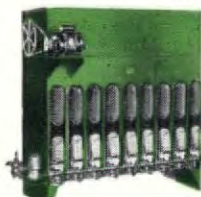
Type 106 Gravity Furnace — Cast iron. Vertical design for space-saving installation in small and medium-size homes.



Type 107 Winter Air Conditioner — Cast iron. Type 106 plus forced-air circulating and filtering unit.



Type 110 Winter Air Conditioner — Steel. Vertical design similar to Type 109 less Roll-a-Drawer. For small homes and apartments.



Type "UH" Unit Heater — Space heating unit for factories, warehouses, hangars, shops.



Type 150 Unit Heater — Suspended type. For flexible, space-saving, "overhead" installation.



Type 10 Boiler — For steam, hot water, or vapor heat, and hot-water supply in residences and small commercial or industrial installations.



Type 11 Boiler — Same as Type 10 except that controls are not enclosed in outer cabinet.



Type 20 Boiler — For steam, hot water, or vapor heat in large residences, and commercial and industrial jobs. Sectional construction for battery installations.



Type 500 Conversion Burner — Designed for quick, easy installation to convert coal- and oil-fired units.



Type 201 Gravity Furnace — Steel. For small and medium-size homes. With pressure-atomizing or vaporizing burner.



Type 202 Winter Air Conditioner — Steel. Type 201 plus forced-air circulating and filtering unit.



Type 209 Winter Air Conditioner — Steel. Vertical cabinet for space-saving installation. Blower assembly mounted in exclusive Roll-a-Drawer.



Type OH-57 Unit Heater — For industrial applications. Pressure-atomizing burner.



Type 404 Conversion Burner — Highly efficient vaporizing oil burner with exclusive "flame-bowl" design. Capacities of $\frac{3}{4}$ and 1 gal. per hour.



Type 450 Conversion Burner — Pressure-atomizing type. Nozzle capacities from 1 to 5 gal. per hour.



Type 460 Conversion Burner — Highly efficient pressure-atomizing type. Nozzle capacities from 1 to 2 gal. per hour.



Type "FB" Winter Air Conditioner — Cast iron. Type F and blower-filter unit combined in one cabinet.



Type "WR-72" Forced Air Furnace — Cast iron. Type "WG" plus forced-air circulating unit. 61,200 Btu at register.

Year 'Round Air Conditioning

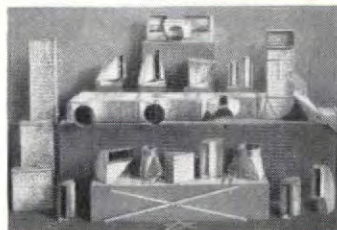


Type 900 Condensing Unit and Coil — For installation in standard forced-air heating systems. Sizes: 3 and 5 tons.

Type 901 Summer Air Conditioner — For installation with Type 105 Gas-fired, and Type 202 Oil-fired Winter Air Conditioners. By-pass damper. Sizes: 3 and 5 tons.



Other Mueller Climatrol Equipment



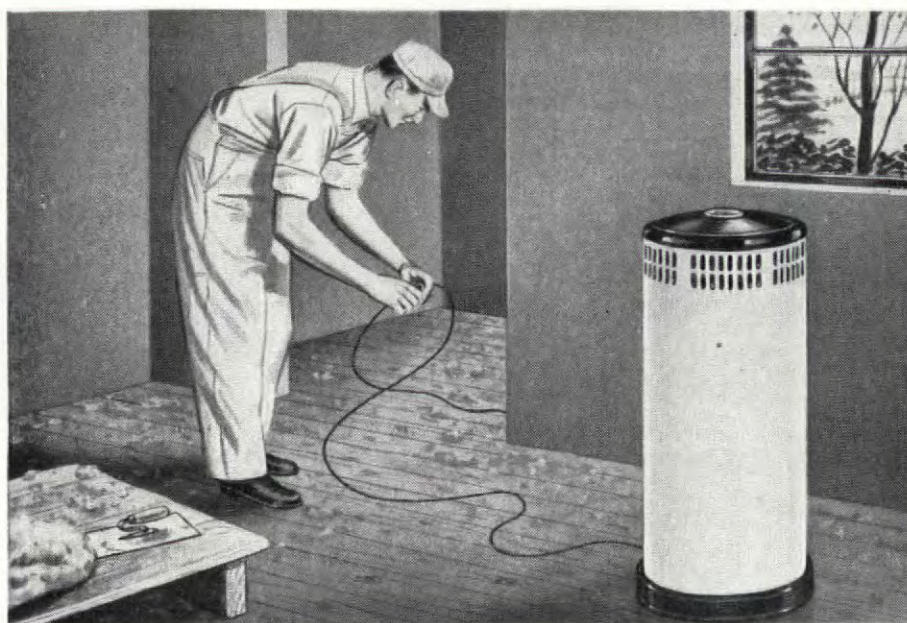
Furnace Pipe, Duct, and Fittings — Complete line for both gravity and forced-air installations.



Blower-Filter Unit — In wide range of sizes for heating, ventilating, air-conditioning, and processing applications.



Automatic Humidifier — For installation in hood of any size or make of warm-air furnace.



Dry fresh paint and plaster in almost $\frac{1}{2}$ the time . . . with

the new FRIGIDAIRE Electric Dehumidifier

Now you can put new rooms or offices into use days ahead of time! Install Frigidaire Electric Dehumidifiers that dry out fresh paint and plaster in almost $\frac{1}{2}$ the time . . . one unit will take as much as four quarts of water out of a newly plastered room overnight!

Prevent moisture damage in these places, too!

The Frigidaire Electric Dehumidifier is an appliance of "one-hundred-and-one" uses. Among the many places it can be used to excellent advantage are rooms where merchants store:

- Shoes
- Luggage
- Furniture
- Hardware
- Paper products
- Sporting goods
- Photographic supplies
- Linens
- Drugs

Its all-steel construction, light weight (85 lbs.) makes it easily portable . . . plugs into any 115v. 50/60 cycle outlet. Operation is completely automatic. Powered by the famous Frigidaire Meter-Miser mechanism, cuts current cost and has a 5-year warranty.

Reduce dampness; stop rust, mold and mildew in —

- Club locker rooms
- Pressing rooms
- Candy kitchens
- Bank vaults
- Bakeries
- Photographic dark rooms
- Libraries
- Organ lofts
- Home basements
- Home workshops
- Industrial kitchens
- Scientific laboratories

This revolutionary new Frigidaire appliance pays for itself in the protection it affords and the time it saves.

FRIGIDAIRE Makes a Good
Building Better



Facts about these Frigidaire Products yours for the asking

Check this list of Frigidaire products you want to know about—sign your name and address and mail to Frigidaire Division, Dayton (1), Ohio. (In Canada, Leaside 12, Ontario), or see your Frigidaire Dealer—find his name in Classified Telephone Directory.

Household Refrigerators

- ☐ 9 models from apartment house 6 cu. ft. to "Tandem" 14.5 cu. ft.



Electric Ranges

- ☐ 7 models from apartment house RK-3 to RK-70 which has two Twin-Unit Even-Heat ovens.



Electric Water Heaters

- ☐ 30 to 80 gals. Magnesium Rod checks corrosion and "red water."



Automatic Washer

- ☐ Live-Water action; all porcelain; one-piece, sealed, Unimatic mechanism; warranted.



Electric Ironer

- ☐ Full, 30-inch, open-end roll, Prestoe-Matic foot operation.



Automatic Electric Dryer

- ☐ Dries washer-load of clothes in 15 to 25 minutes automatically.



Home Freezers

- ☐ 8 cu. ft., Meter-Miser mechanism. Others up to 26.5 cu. ft. size.



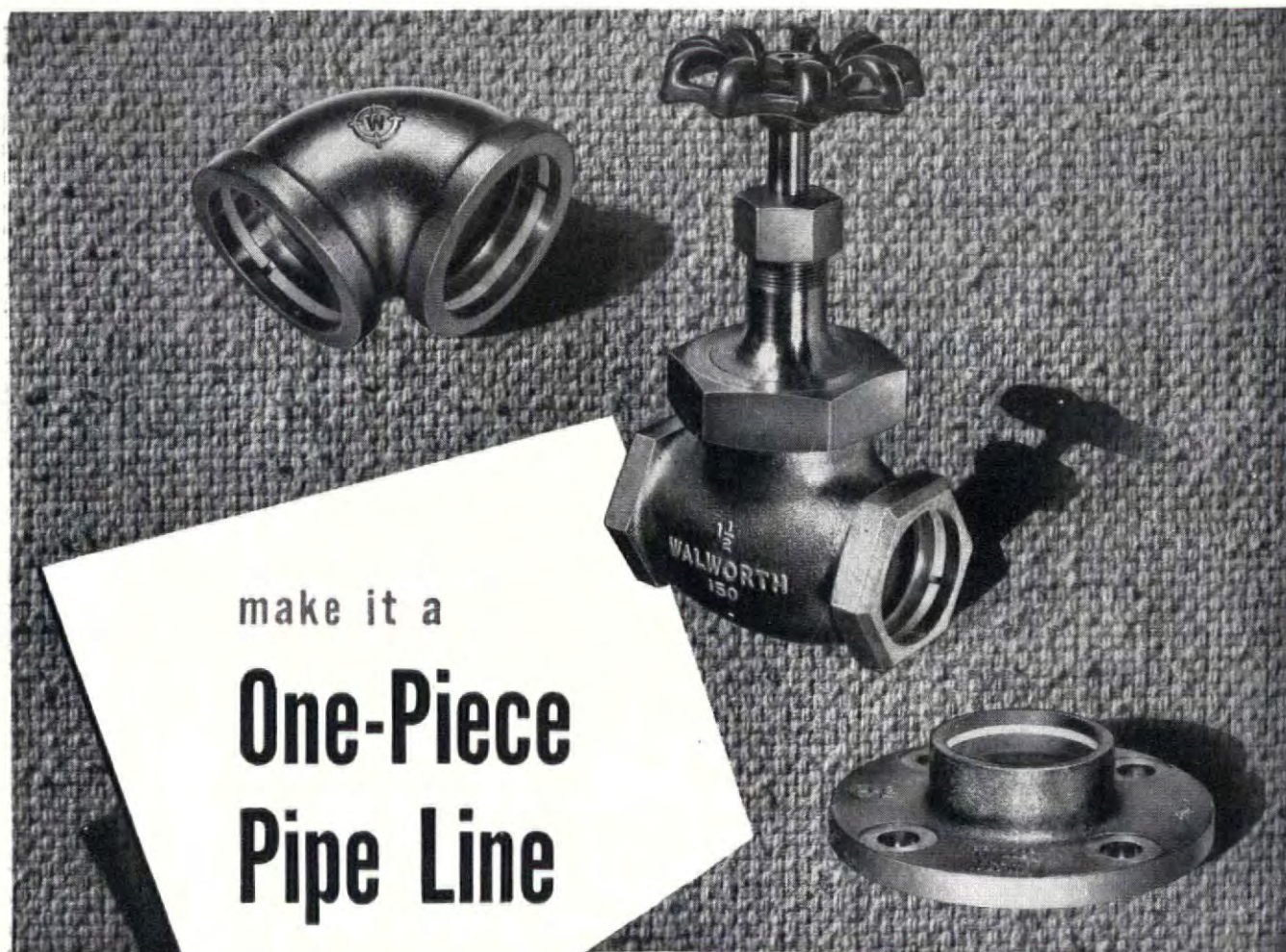
- ☐ Electric Dehumidifier
☐ Air Conditioners
☐ Water Coolers
☐ Commercial Refrigeration

Name

Firm Name

Street & No.

City State



make it a
**One-Piece
Pipe Line**

with **SILBRAZ*** joints

Silbraz joints, made with Walseal* valves, fittings and flanges, actually make a "one-piece pipe line" of brass, copper, or copper-nickel I.P.S. pipe or tubing . . . leaky joints are completely eliminated, and maintenance costs are reduced to the minimum.

A Silbraz joint is *silver-brazed* — not soldered. This modern pipe joint will not creep or pull apart under any condition which the pipe itself can

withstand . . . vibration or corrosion will not affect it. A Silbraz joint is designed to have a tensile strength equal to about three times standard weight brass pipe, and the pipe will fail before the joint will pull apart.

For full information about Silbraz joints made with Walseal valves, fittings and flanges, see your nearby Walworth distributor, or write for Circular 84.

*Patented — Reg. U. S. Patent Office



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



WALWORTH

valves and fittings

60 EAST 42nd STREET

NEW YORK 17, N. Y.

SPECIFICATION AND BUYING INDEX

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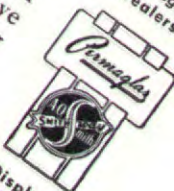
A. O. Smith is **FIRST** to give architects and builders a glass-lined water heater that cannot rust or corrode under any water condition.

Permaglas
TRADE MARK REG. U.S. PAT. OFF.

A SMITHWAY WATER HEATER*

NO SPECIAL ATTACHMENTS or accessories are necessary in the glass-fused-to-steel tank of a *Permaglas* Water Heater. Glass, which **CANNOT** rust or corrode, needs no rust protection. Conclusive tests . . . and hundreds of thousands of installed *Permaglas* Water Heaters . . . prove that this glass will not crack or break under operating conditions. Another outstanding "*Permaglas*" first: a high temperature limit control is standard equipment on all "*Permaglas*" electric models. Other equally desirable features in models for all types of gas.

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Dept. AF-149
Water Heater Division
Kankakee, Ill.

Send complete specifications on SMITHWAY Water Heaters:

☐ Gas ☐ Electricity ☐ Both

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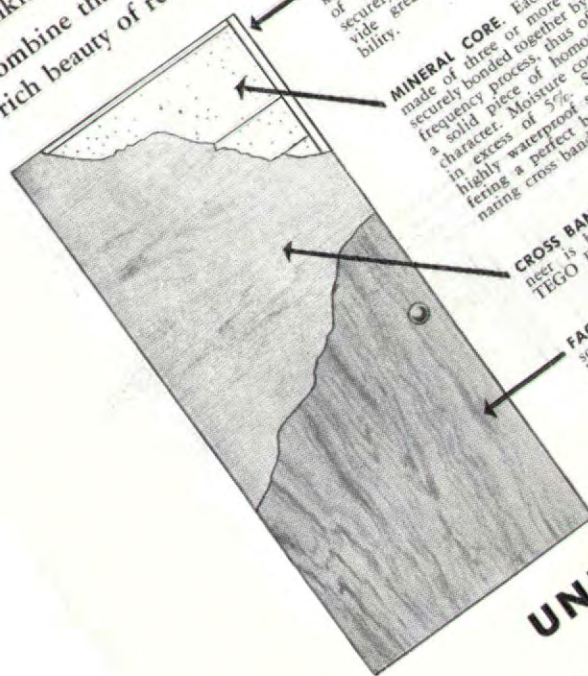
*Manufacturers also of better zinc-lined **Duraclad** and **Milwaukee** Water Heaters



When considering Doors remember this:

Weldwood Doors Are Guaranteed
against warpage or binding
in opening due to any dimen-
sional changes in the door.

IT'S a fact! These beautiful new Weldwood flush veneer doors are *guaranteed* against swelling and sticking in the summer . . . or shrinking and rattling in the winter. Combine that feature with light weight and the rich beauty of real wood . . . and you have a truly



EDGE BANDS are thoroughly kiln dried hardwood, built up of two pieces of $\frac{1}{4}$ " stock, securely glued together to provide greater dimensional stability.

MINERAL CORE. Each core is made of three or more pieces, securely bonded together by high frequency process, thus offering a solid piece of homogeneous character. Moisture content not in excess of 7%. Sized with highly waterproof solution, offering a perfect base for laminating cross bands and faces.

CROSS BANDING of 1/16" veneer is bonded to core with TEGO Film Waterproof Glue.

FACE VENEER. At present, hand-some Birch veneer forms the hardwood faces. Wide variety of other decorative woods available on special order.

SIZES AND THICKNESS. Made in all stock sizes, 1 3/4" thick.

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

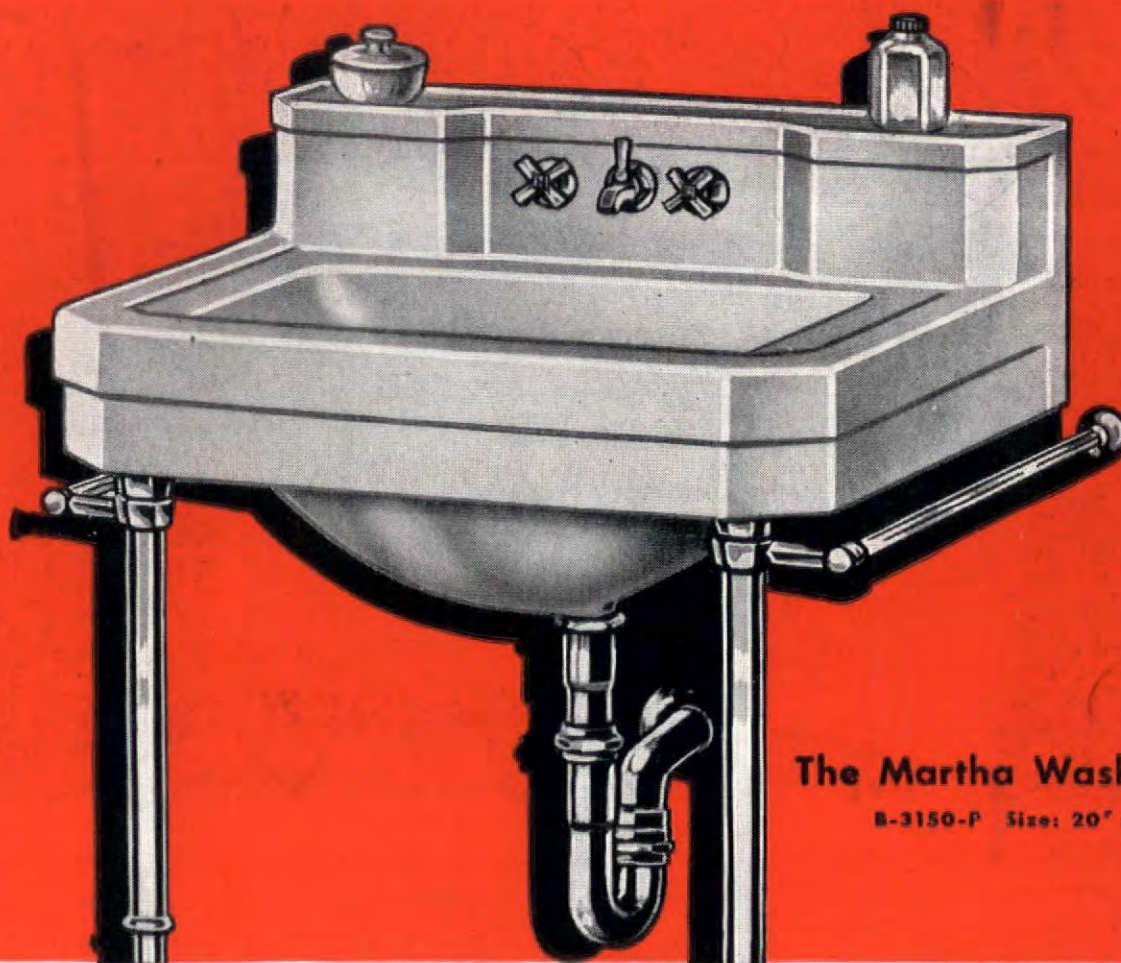
Distributing units in Baltimore, Boston, Brooklyn, Buffalo, Chicago, Cincinnati, Cleveland, Detroit, Fresno, High Point, Los Angeles, Milwaukee, Newark, New York, Oakland, Philadelphia, Pittsburgh, Portland, Ore., Richmond, Rochester, San Francisco, Seattle. Also

U. S. Mengel Plywoods, Inc., distributing units in Atlanta, Birmingham, Dallas, Houston, Jacksonville, Louisville, New Orleans, San Antonio, St. Louis, Tampa. In Canada: United States Plywood of Canada, Limited, Toronto. Send inquiries to nearest point.

superior door that you'll want for your next job. Write or contact our nearest branch for full information on this new Weldwood Flush Veneer Door. Also ask about the amazing new *Weldwood Five Door* which carries the Underwriters' label for Class B openings.

ONLY WELDWOOD DOORS GIVE YOU THESE 5 UNIQUE ADVANTAGES

1. PERMANENT HOT PLATE BONDING of veneers to core and banding with TEGO Film Waterproof Glue.
2. VERMIN AND DECAY PROOF mineral core resists fungus, decay and termites for life of structure.
3. INSULATING PROPERTIES are superior to double glazing, such as opening protected by storm door . . . when door is installed in an exterior opening with weather stripping.
4. EXCELLENT VAPOR BARRIER assured by TEGO Film Phenolic Glue bond between core and veneer.
5. INCOMBUSTIBLE MINERAL CORE has a fibrous reinforcing with a nominal density of 20 lbs. per cubic foot. This material has a sturdiness which assures proper performance under most severe conditions.



The Martha Washington

B-3150-P Size: 20" x 18"

Extra Quality . . . Makes Extra Sales

The high quality and modern styling of Eljer Lavatories give homeowners the *extra values* they recognize and appreciate. Eljer's Martha Washington Lavatory, for example, is made of *real vitreous china*. The hard, glass-like finish is fired at 2200° F. to become *part* of the rugged clay base . . . it resists stains and is impervious to all ordinary acids.

The overflow outlet in Eljer Vitreous China Lavatories is hidden under the front, anti-splash rim of the basin . . . permitting a

smooth, unbroken back surface. The generous shelf space is a great convenience. *Renewable* fittings, featuring the exclusive Eljer Swivel Disc, offer extra sales value.

Eljer manufactures a complete line of plumbing fixtures, in Vitreous China and Enameled Cast Iron. Available in white or harmoniously matching pastel colors. For additional information, see your Eljer Distributor or write Eljer Co., General Offices, Ford City, Pennsylvania.

It pays you, it pays us— because we specialize in Plumbing Fixtures and Brass

ELJER



FORD CITY, PA.



LOS ANGELES, CALIF.

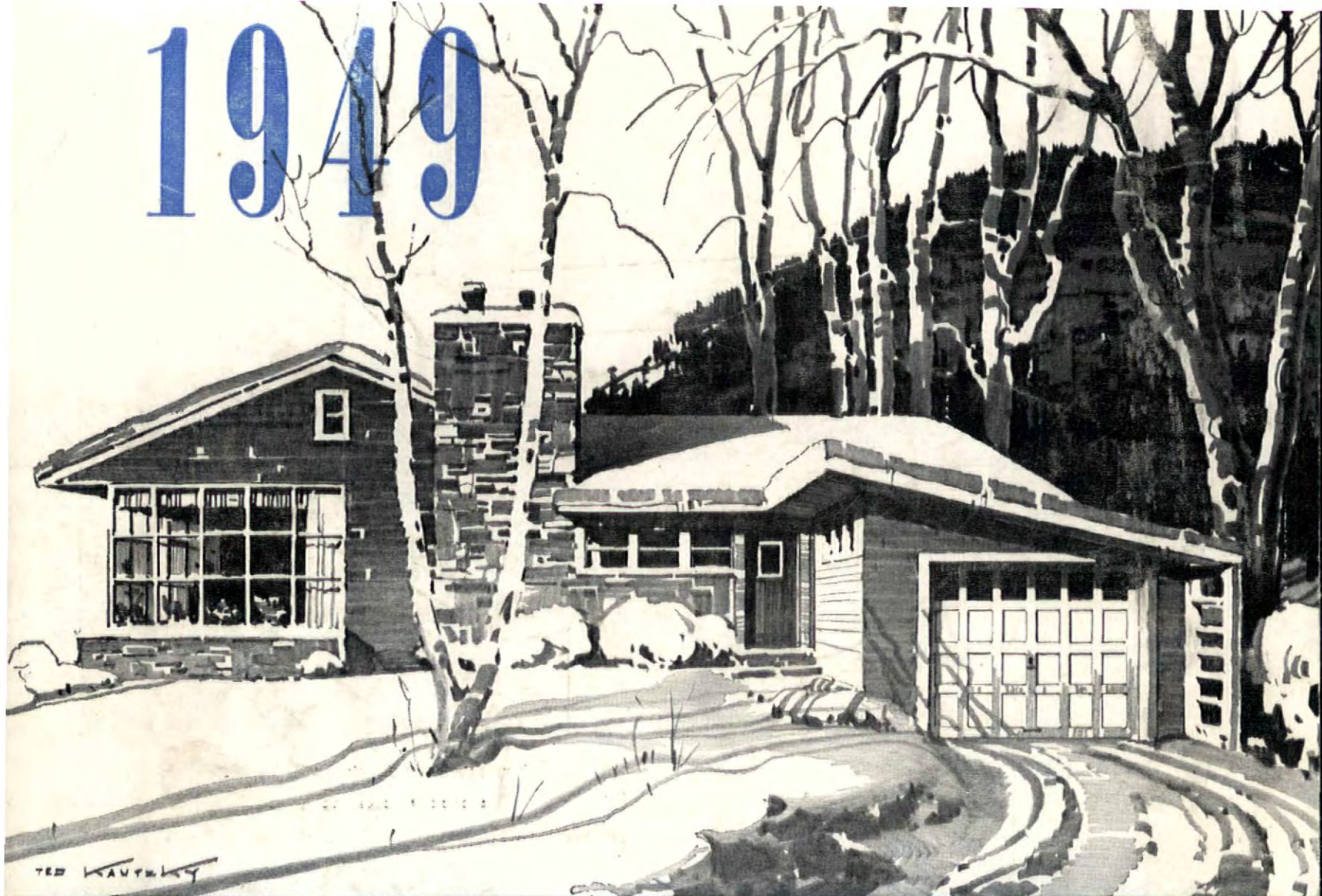


SALINA, OHIO



MARYSVILLE, OHIO

1949



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To our many friends the Overhead Door Corporation and all its distributors extend sincerest good wishes for a Happy and Prosperous New Year.

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OVERHEAD DOOR
TRADE MARK
WITH THE
MIRACLE WEDGE

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