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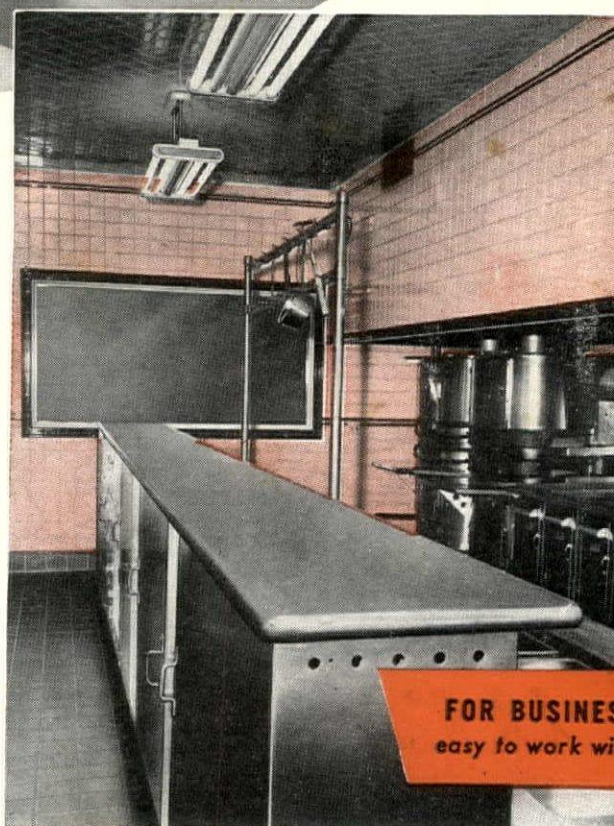
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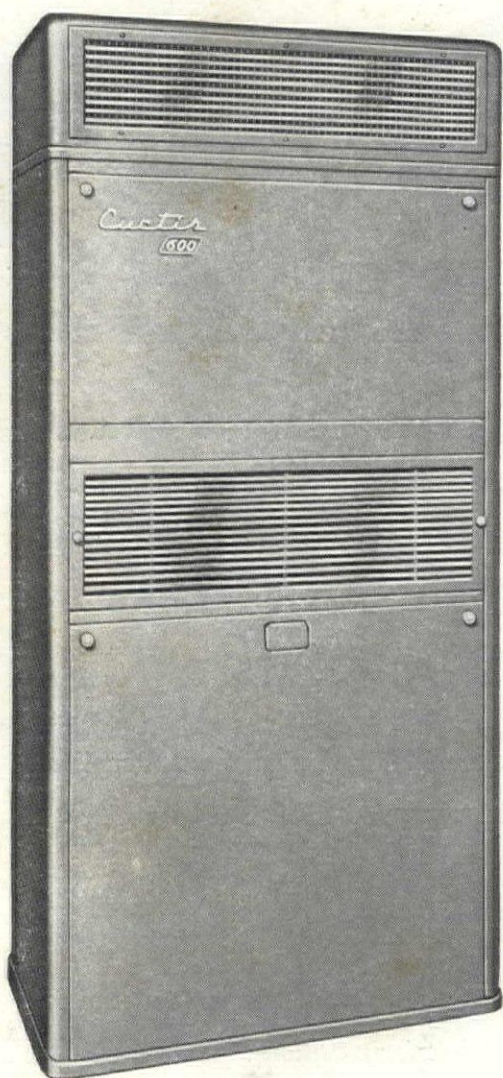
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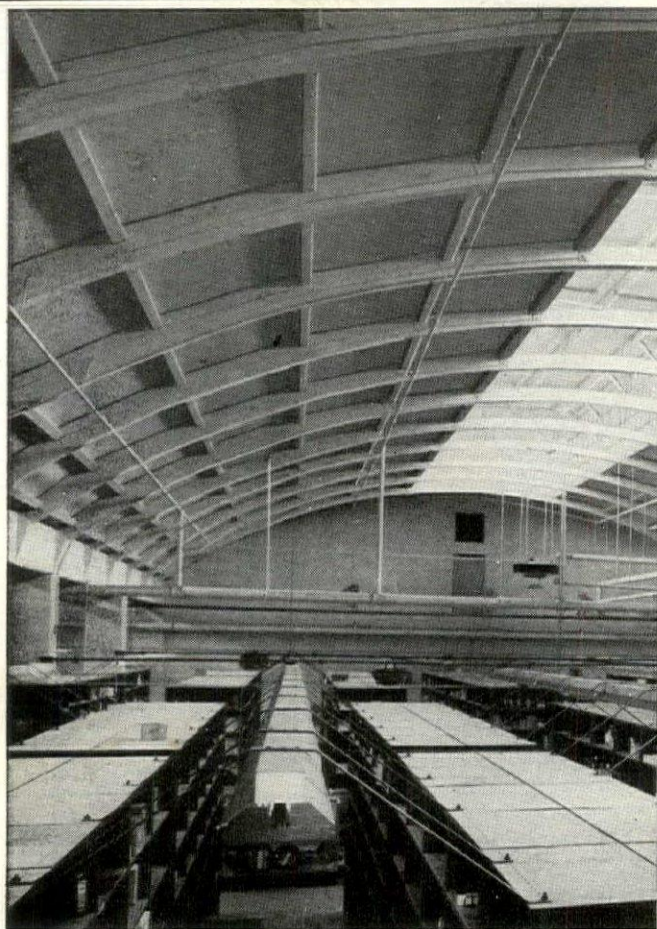
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ARCHITECTURAL **forum**

MAGAZINE OF BUILDING

MARCH 1949

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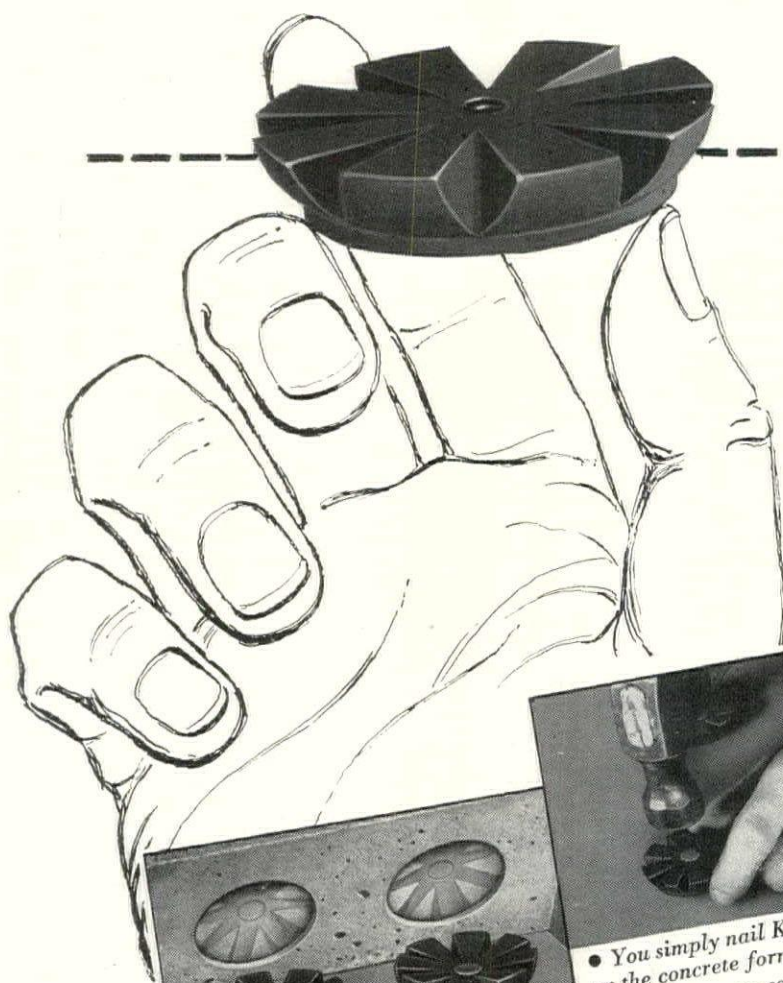
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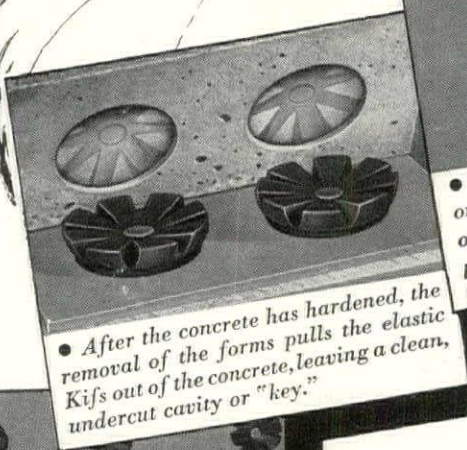
How KiFS..

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new elastic key forms....

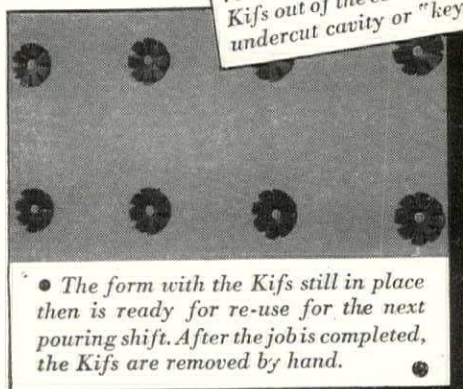
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PERMANENTLY
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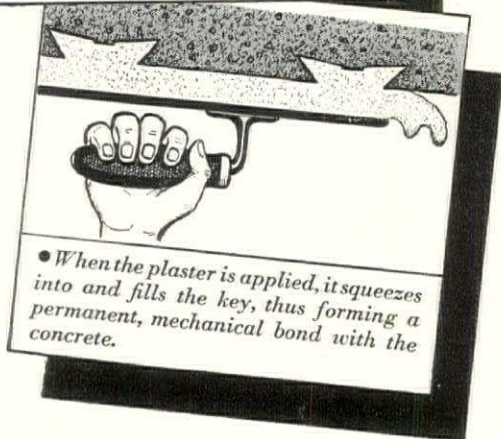
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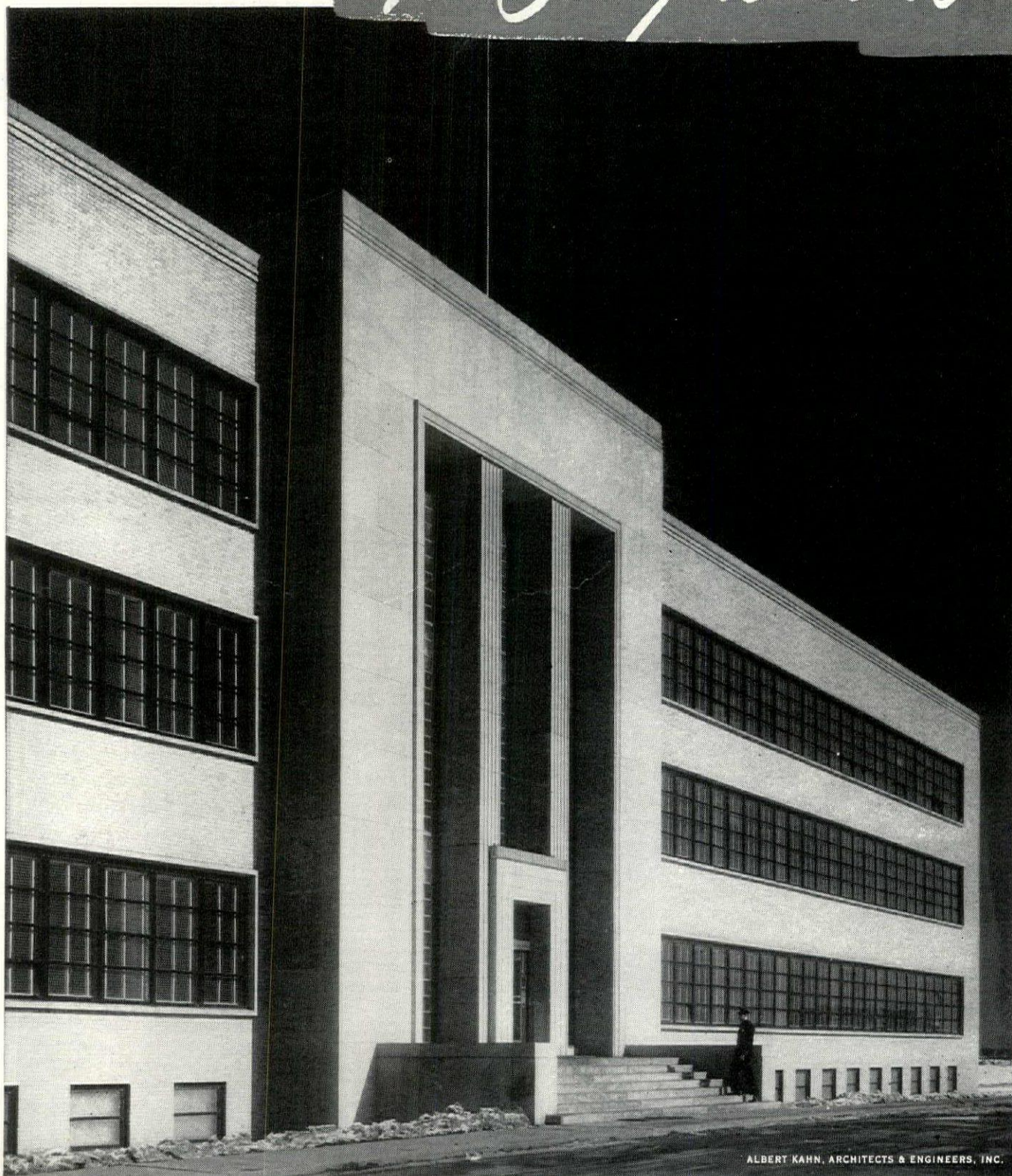
Patterned MFMA Maple floor in new ultra-modern bread plant of Fuchs Baking Co., Miami, Fla.—Consulting Engineers: W. E. Long & Co., Chicago.

MFMA Northern Hard Maple floor—Auditorium, Banker's Life Home Office Building, Des Moines, Iowa—Tinsley, Higgins & Lighter, Architects.

Hard Maple Floor in Rayon Mill—Photograph courtesy Westinghouse Electric Corporation.

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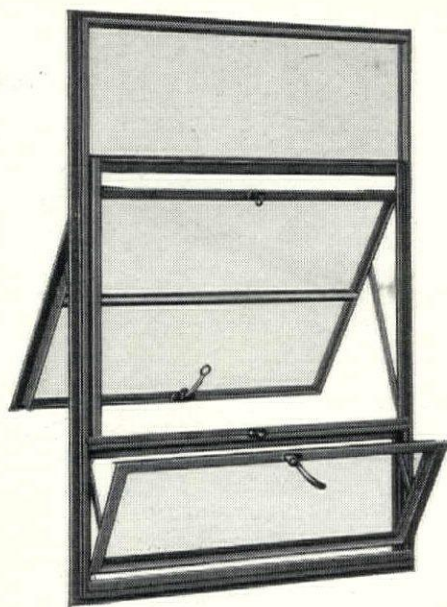
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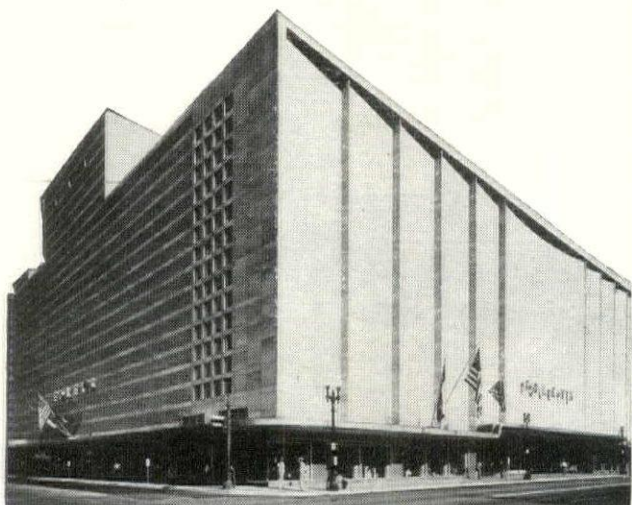
makes the big difference



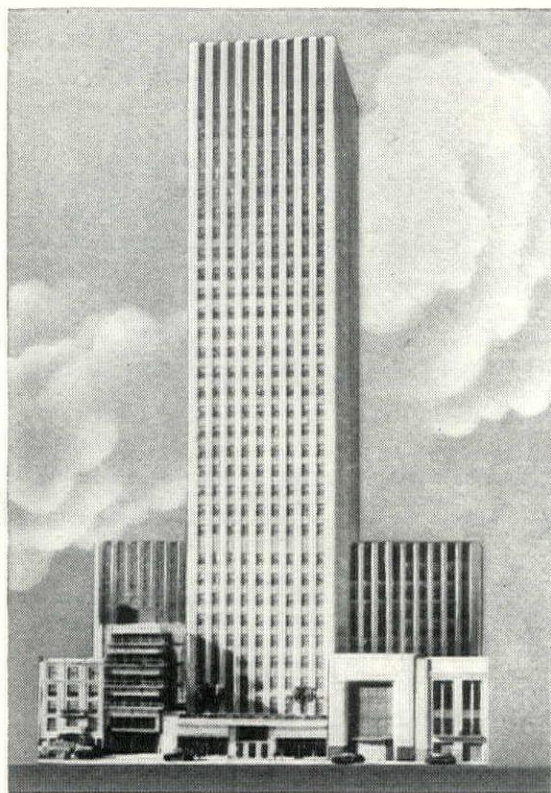
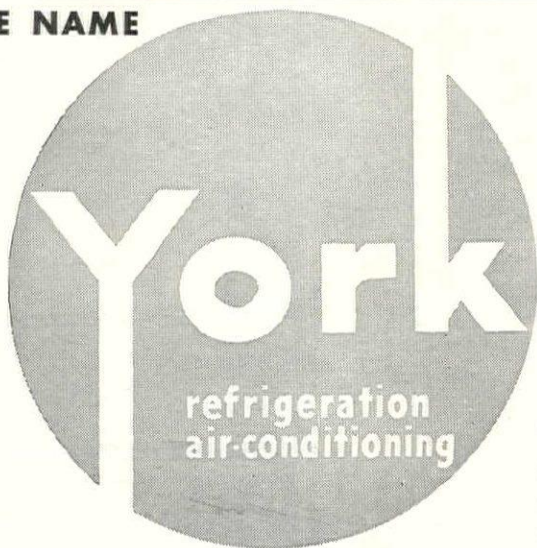
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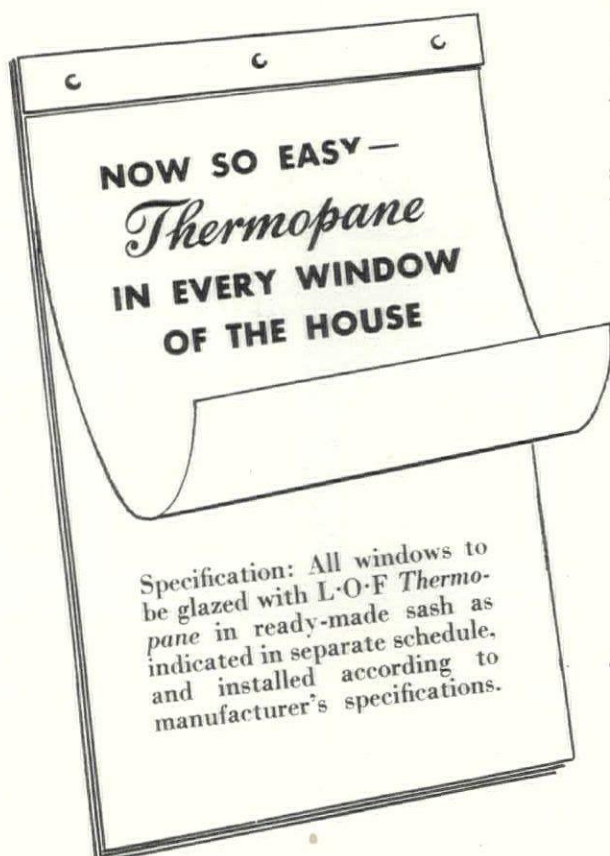
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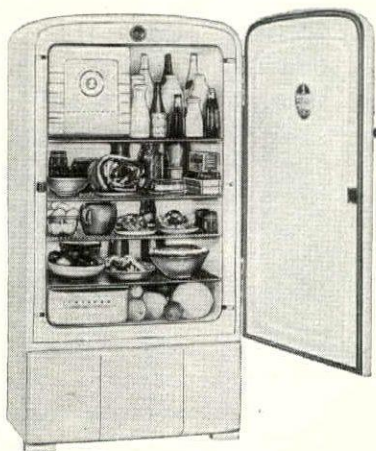
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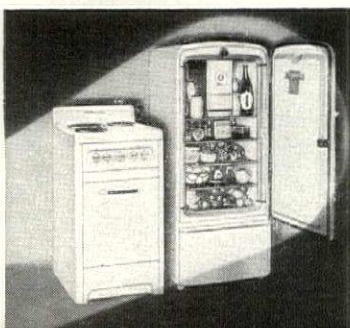
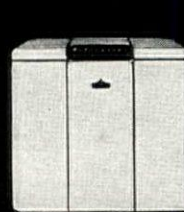
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NEWS

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Los Angeles tops all other
U. S. cities in 1948 house
starts p. 24

HOME BUILDERS MEET

Special report on NAHB's
words, deeds and people at
annual Chicago assembly

BUILDING MONTH. In California's prime farmland, orange groves and vineyards were going for prices just half of what they fetched a year ago. In Massachusetts, where layoffs in the textile and shoe industries mounted, the Real Estate Association counted 1,265 unsold new houses on the market—many of them had been waiting for buyers for as long as six months. As the New York Central laid off 8,000, as Pennsylvania laid off 2,500 mentioning "a more than seasonal decline in traffic," as commodity prices dropped sharply, the whole nation wondered: Was it the beginning of Recession—or just the healthy "burp" of deflation needed to forestall a real economic bellyache?

Whatever it was, Washington was still running up the bewildering series of stop-and-go signals which threatened to keep business from moving in any direction. There was, for example, a big go-sign for housing, and bills calling for everything from 150,000 government-built houses a year to direct government loans to home buyers were before Congress. But a stop-sign was going up for private building money: the Administration had asked for a further increase in bank reserve requirements, a curb that might ultimately cut into housebuilding and curtail credit for every kind of industrial and commercial expansion. A patient banker expressed the feelings of the American Banking Association in a notable understatement: "We admit to some perplexity about the intentions of the government with respect to credit."

Building men, perhaps because their industry had been more at the mercy of contradictory government policies than any other, were less restrained. They gave the Senate Banking Committee, holding hearings on the public housing bill, the full benefit of their opinion. The realtors, in opposing public housing, also managed to get in some telling statistics on the rental control issue. Rent control, they said, had already removed 2,000,000 houses from the rental market and had virtually paralyzed building of new rental units. (Example: In Chicago last year only 910 rental units were built—3 per cent of 1927 volume.)

Out of Washington, as the force of a free market was once more felt in the U. S., many of the ills of yesterday were curing themselves. Lumber, which had led the price climb of building materials, was now dropping sensationally. In Oregon and Washington, where the price break had shut down 900 mills, dimension lumber was selling for half what it brought last year. In the Southeast, price cuts as high as 30 per cent were reported on unfinished lumber. Mill plywood prices were down by 20 to 40 per cent. Millwork, still not abundant, held a firmer price line.

Here and there 4 per cent housebuilding money was coming back again, and lenders only recently cool to home mortgages were once more offering small premiums. The price of land had dropped by at least 20 per cent. Housebuilders, assembled in Chicago for their annual meeting, were still not talking about spring starts in precise figures. Some of them said that every factor in the cost of building, except labor, would give this year's customer a better price bargain. On whether that bargain would prove good enough hung the real answer to the month's question: how much will the U. S. economy absorb about deflation?

WASHINGTON

KLEIG LIGHT

Preliminary public housing skirmishes take place in Senate Committee room

The housing spotlight last month was a congressional kleig light. It bore down steadily on the old, high-ceilinged, crystal-chandeliered room in the Senate Office Building where the Banking Committee's seven-member subcommittee on housing heard exhaustive testimony on the seven bills introduced during the first two congressional weeks. The most dog-eared document on the polished table before the congressmen was S-138, the Administration's request for 1,050,000 public housing units.

During the first week of the hearings, all the groups the Administration knew it could count on tramped through to voice their endorsements—veteran, religious and municipal groups, women's organizations, organized labor. (UAW-CIO President Walter Reuther advanced a proposal to use idle warplane factories to turn out 20 million prefabricated homes in ten years.)

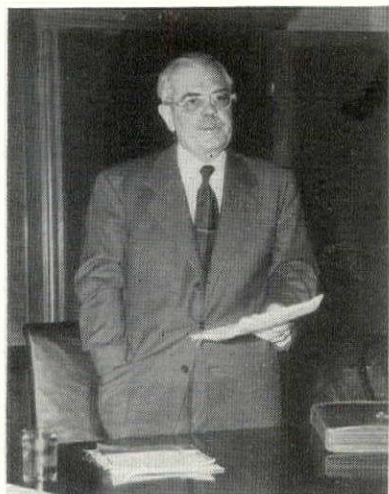
Industry opposition

When the "friendly" witnesses were through, the housebuilding industry sent its linemen in: the materials producers, the realtors, the mortgage bankers. One by one they flatly opposed the Administration's public housing request. They advanced no sensationally new arguments, but no one expected them to. They came with a long and well-known record of opposition to public housing. There was one exception: the American Institute of Architects, which offered its endorsement of the bill with a minor reservation that urban redevelopment should not be considered solely in terms of slum clearance.

Then the Committee began to thumb through another document: S-712, the Administration's bill to aid private enterprise. Industry spokesmen gave it the same treatment. They favored one part of it: Title VI extension for rental housing; and some liked the provision for more liberal secondary marketing facilities in RFC. But they shuddered at the idea of direct federal loans, the price of which they consider to be eventual and complete government domination of the industry. And they were no fonder of the proposal of

INDUSTRY SPOKESMEN testify at hearings

Photos by Reni



JOHN F. EVERITT, lumber dealer from Enid, Okla., appeared for the Retail Lumber Dealers. He told the committee: "Government in one capacity has endeavored to prevent private industry from accomplishing what has been demanded of it by Government in another capacity."



NATIONAL ASSOCIATION OF HOME BUILDERS was represented by (left to right) Thomas Coogan, chairman of the mortgage finance committee; Herbert S. Colton, general counsel, and Rodney M. Lockwood, the new president. Lockwood warned that public housing "has no economies to offer and in fact its costs are far higher than private enterprise."



JAMES ROUSE, a Baltimore mortgage banker appearing for the Mortgage Bankers Association, opposed the unlimited sale of mortgages to RFC. He expressed a fear that lending institutions, if they could sell all their mortgages, might be less careful making loans.



CALVIN SNYDER, Secretary of the Realtors' Washington Committee, (left), asked: "Can citizens long remain free, dependent on government?" Robert P. Gerholz, committee chairman, said the bill contained no requirement to "provide housing for the most needy first."



ABNER H. FERGUSON (left) and Horace Russell, representing the U. S. Savings & Loan League, approved slum clearance, but not public housing. Said Russell: "There are several ways to get more and better homes for American families." The bill is "merely the worst of them."



WILLIAM A. RECKMAN, president of the Western Bank & Trust Co., Cincinnati, representing the American Bankers Association, opposed legislation permitting government to enter lending "in competition with private institutions."

a moratorium in respect to FHA-insured loans (which would permit the Administrator to give the borrowers a holiday for three years if business conditions worsened and the going got tough).

Unnecessary "aids"

They pressed their contention that further government "aids" would not be so necessary if the government would let the industry do its job with the aids that exist. To demonstrate what builders can do without government subsidies, new President Rodney Lockwood, of the National Association of Home Builders, presented a series of pictures of low cost houses built around the country by Association members. All of them were single-family, detached units, ranging from \$8,300 for a two-bedroom house in Minneapolis to \$4,850 for one in Fort Worth, Texas. Committee members were impressed. Said Vermont's Republican Senator Ralph Flanders: "This is the finest collection of low cost houses I have ever seen."

Down the line, the testifiers hammered on one theme: the incredible inconsistency between the Administration's call for more and more housing, with its accompanying contention that private industry cannot do the job, and the conflicting record of the attempts by the Administration's regulatory agencies to hold housebuilding down through a tightening restriction of credit. Calvin Snyder, Secretary of the Washington Realtors Committee of the National Association of Real Estate Boards, summed it up: "The government says to the builders on one hand, 'Go ahead and build at top speed,' and on the other, 'Don't you dare!'" John F. Everitt, an Oklahoma lumber dealer, was even more specific. "Changes in the policies" of the federal fund regulating agencies, he told the congressmen, "would very easily accomplish many of the objectives of the pending legislation."

Final result

When all the testimony was ended, the Committee closeted itself in executive session and wrote a compromise bill for 810,000 public housing units, which it sped on its way to a Senate vote. The committee included in the bill a provision which would provide a minimum of 50,000 units a year, as well as the Administration-requested maximum of 250,000 units a year.

The Administration had an ambitious timetable worked out: Senate approval by March 1, House action by April 1.

* * * * *

The Senate would probably also:

- ▶ Extend rent control beyond its March 31 expiration date.
- ▶ Approve the inclusion of a housing census in the 1950 census.

DEAD HORSE

OHE asks for another \$385,000 to investigate veteran house complaints

In spite of their constantly growing immunity to surprise whenever a government housing agency asks for more funds, builders nevertheless blinked at one surprising appropriation petition last month: The Office of the Housing Expediter's request for an additional \$385,000. OHE needed the money, it said, to complete its investigation of jerry-built houses constructed under the old Veterans Program.

Building men thought OHE was whipping a dead horse. The priority program ended in 1946; most of its houses were built that year (although order fulfillment carried into the first half of 1947).

Technical deficiencies

There was another reason for resentment: many of the "shoddy construction" cases which OHE had turned up were deficient only on technicalities—technicalities at which the government itself had winked. Builders well remembered that in the feverish days of 1946, FHA (which had been burdened with the program in the field in addition to its other tasks) had been more concerned with getting houses built than in sticking to the absolute—and sometimes unworkable—basic requirements of the program. As a practical expedient it had nodded at minor deviations. Moreover, confusion resulting from FHA's dual-natured job (approval of its own mortgages as well as the Priority Program) had produced many a minor—but honest—mistake. Example: one Western builder putting up 20 identical houses had been forced to raise his cost \$100 beyond the FHA mortgage insurance commitment. FHA approved the cost hike. But he sold five of the houses before he realized that the FHA approval did not automatically cover his Priority Program agreement. A separate filing was necessary to put him in the clear. Now OHE is attempting to collect the excess amount on the initial five houses.

Climate Change

The National Association of Home Builders, among other industry groups, called OHE's attention to these matters. At one time, OHE indicated that it was aware of them. As late as last fall, it had acknowledged that less than 5 per cent of the defective construction was done by established builders (FORUM, Sept., '48), and indicated that it was primarily interested in flagrant violations (which the industry has helped to correct). Now it says little about that side, remains silent to the charge that many reputable builders are harassed by technical trivialities. There were indications that overzealous OHE field staffers were actually soliciting veteran complaints. And OHE stubbornly insisted that it had 37,357 veterans' complaints on hand for investigation.



LORD & TAYLOR'S new suburban department store, which opened in Millburn, N. J. last month, is a white and honey-colored brick structure with two levels, a 240 ft. frontage, approximately 80,000 sq. ft. of floor space and surrounding parking space for 700 cars. It is the department store's third branch—all in the New York area. Architects are Starrett & Van Vleck. Raymond Loewy Associates were the designers. The store will employ 300 persons.

Many builders thought that OHE's revived sense of importance was more than just another reflection of the change in political climate: they wondered if OHE was determined not to miss any opportunity to perpetuate itself.

BUILDING MONEY

MARKET SOFTENING

Some lenders see signs of more mortgage money

There were signs last month that a steadier flow of money was coming back to the home mortgage market. It had been lured away in substantial quantities last year—mostly by attractively low-priced bonds, which had declined under the influence of federal fiscal policy to the point where they were more attractive investments than mortgages. But, driven by the normal flow of the economic tide, bond prices have risen sharply since November, and last month some lenders were coming home to the mortgage market. There was another reason, too, for the market easing: a gradual tapering off of house sales as buying slowed up.

Return of 4 per cent?

No one could tell for sure how quickly an eased market would bring a return of 4 per cent money. But some lenders last month thought that they saw indications of it already. Even outside of states like Texas (where lenders have fewer qualms about risking their money because of easy foreclosure laws) and New York (which is a low rate area), they found evidence that loans were being sold again for 4 per cent—and by sources which two months ago were holding out for 4½, and even talking about 5 per cent.

Not all lenders, of course, would agree that the 4 per cent loan was returning. Said one in the East: "Banks' overhead costs have gone up and they have to pay depositors 2 per cent; as a result they won't make mortgages, even FHA, at 4

per cent. There is going to be more mortgage money around, but builders are not going to get the kind of money they want . . . Mortgage money will continue to be careful and cautious." Another predicted that bankers will still try to compensate for the 4 per cent loans they have to make on veterans' houses by trying to get the veterans to pay higher down payments or shorten the terms of the loan.

Beating the Bushes

But many thought that if the volume of construction does not increase much beyond the 850,000 units generally predicted, and if VA sticks to its determination not to go beyond 4 per cent, even the now-lagging lenders would fall back in line.

Said one member of the Federal Reserve Board: "By summer, lenders might be beating the bushes looking for loans to make."

HOUSES

HOUSE SUPPLY

Producers' Council says it is bigger than the country thinks

Nobody really has known how much housebuilding the U. S. has done in the last decade—the decade that saw the house-building industry's final recovery from depression, its conversion to war housing and its first experiments with mass production technique, its great production leap after the war's end.

Now the Producers' Council has tied together all the sources of information available and discovered that the industry has actually created more housing space during that period than most observers had supposed.

Encouraging Conclusion

The last housing census was taken in 1940. The Bureau of Labor Statistics, which bases its information on the num-

ber of housing permits issued, says that since that time, there have been 4,896,500 new houses built in the country. But BLS has never taken into account the number of units provided by cutting one house into two or more apartments, converting an unused factory building into efficiency dwelling units, or by repairing houses which in 1940 were classed as sub-standard.

Builders have contended for some time that, because of these factors, the U. S. actually has more and better houses than it thinks. The Producers' Council survey, "Our Housing Improvements Since 1940," provides the facts and figures which support an encouraging conclusion: "The American people are better housed today than in 1940, and probably than at any time in their history."

Seven Chicago's

This study, prepared by Economic Consultant Miles Colean, finds that more than 6,700,000 nonfarm dwelling units were added to the housing supply from 1940 through 1948, "sufficient in number to provide complete housing accommodations for almost seven cities the size of Chicago." (Loss through demolition, conversions to nonresidential use, etc., lowered the number of units provided during this period to 6,639,000.) At least two million of these habitable units, the study reveals, were provided by the "making of major repairs and the addition of private sanitary facilities."

Among the other findings:

► In 1948 alone, new construction and conversion operations established an all-time annual record in providing an estimated 1,125,000 additional nonfarm units.

► More than 5.5 million new rooms were added to existing nonfarm structures between April, 1940, and April, 1947.

► There was an increase of nearly 5,700,000 units between 1940 and 1947 in the number of nonfarm dwelling units having electric lighting facilities, making nearly 96 per cent of the total nonfarm supply that now has this amenity.

► The proportionate number of married couples living "doubled up" is 7 per cent lower than in 1940. They total 1,820,000.*

ECONOMY HOUSE

Attempt to find good \$6,000 house stumbles on national and local levels

First auditions of the government-industry-labor trio's attempt to describe the way to produce a \$6,000 house were pretty bad. The third member would not sing.

Housing Administrator Raymond Foley, who had been talking hopefully about a \$6,000 house for some time, had rounded the three groups together in Washington

A great many of them do not want separate houses; in 1930, when income and vacancies were high, 1,500,000 couples were doubled-up. —Ed.

to discuss the Economy House (FORUM, Feb., '48). On the assumption that all were agreed that the U. S. needed a cheaper house, he had thought it would be a good idea to put that agreement in writing. Such an agreement would be an encouraging spark for similar Economy House meetings held in cities over the country, where the men connected with housebuilding would make a concerted effort to produce a good cheap house.

Proposed agreement

Foley passed around a proposed "joint statement of objectives" which would commit the groups to agreement that the Economy House would be no economy at all if it were built by lowering construction standards or further reducing an already minimal living space; the agreement would define the economies sought as "maximum efficiency . . . adoption of new and more economical methods of production wherever they are proved practical and sound." It saw plenty of opportunities for such economy—"all along the line from preliminary planning to completion of the house on the site."

The industry, which had been vigorously pushing economy houses all over the country on its own, approved Foley's statement in principle. They were rounding up the details of a draft acceptable to everyone when building labor knocked the whole idea into a cocked hat. AFL's executive committee, from its Miami convention, sent word to its delegates not to approve. Its stated reason: the plan might lead to too much jerry-building. Some suspected that there were other reasons; that AFL, for example, didn't want to sign anything that would put it in direct opposition to featherbedding.

Housing Boss Foley sadly put his joint statement away. In its place he issued one with FHA Commissioner Franklin D. Richards and HLRB Chairman William K. Divers to be read at all the local meetings. The statement, reduced now to little more than a government pep talk, contained most of the ambitious objectives which Foley had thought would bear the "tri-partisan" stamp.

* * * * *

The Economy House Drive was having its troubles on the local level, too. In Milwaukee, one of the 65 key cities scheduled for a meeting last month, more than 90 builders, realtors, finance and labor representatives and materials men from southeastern Wisconsin turned up for the session at the Milwaukee Gas-Light Co. auditorium. A third of them failed to return after the luncheon recess. Only a handful were present for the windup at the day's end.

Basic conflict of the meeting was established early, when Milwaukee's Socialist mayor, 35-year-old Frank Zeidler, called for a \$6,000 "shooting mark." But he

didn't want a shoddy house for that price. "It must look like any other house," he warned. "It must have provisions for future expansion. It must have a substantial core. It can't fall apart in five years."

One builder shook his head and murmured: "And he wants that for \$6,000."

Bale of Hay

His pessimism was shared by all building men present. It expressed the hub of the failure of Milwaukee's Economy House meeting: nobody knew how a good \$6,000 house could possibly be achieved.

Most of them thought Milwaukee could do no better than the average-\$9,000 house it now offers. Said John Sehrt, president of the local chapter of the Mortgage Bankers Association and a large-scale home builder: "Experiments have shown us you can't give a house for less than \$10,000 unless you are talking about just shelter—and we aren't interested in that. Some of these houses are so small you can't even find storage space for a pail."

When a VA spokesman suggested that builders "cut profits," quick-tempered R. J. Teske, president of the Milwaukee Builders' Association, jumped to his feet

Mayor Zeidler (right) wanted a \$6,000 "shooting mark." AFL Leader Schoemann (below, L.) and Builder Teske disputed worth of "core houses."



Henry F. Larson

and cried: "Some people think that builders are making a bale of hay per house. Builders actually average 3 per cent net profit. . . . We aren't cutting any more of our profits, or we'll wind up on relief."

"Silly" requirements

Builder Arthur Hellerman thought builders could get down to an \$8,000 house, but to do it would take "further substantial concessions on the part of all." The concessions Hellerman had in mind: "elimination of excessive profits by subcontractors," increased labor productivity, increased flow of materials, and "some sense" on the part of municipalities. "What's the sense of Milwaukee requiring a full concrete pavement at a cost of \$300 per lot to run in front of what is sup-

posed to be a low cost house?" he demanded. He hit at "silly" building requirements, as well. "Why, now they require that we bring the water meter up 3 ft. off the basement floor so the reader will have an easier time. That's costing me \$12.50 per house. Add to it all the other silly rules and it becomes quite an item."

None of the builders wanted anything to do with "minimum" or "stripped" housing. Descriptions of FHA's construction requirements for minimum housing were greeted with scorn. One man asked if those houses would "withstand a slight wind." Another described them as "two sides of a chicken coop, plus a 'Chic Sale,' which are put together on a garage floor."

They had no encouragement from building money representatives. Warned Urban Pilon, secretary of the Milwaukee Mutual Building & Loan Association: "There will be no concessions in financing of low cost homes. Money is a commodity and our costs have gone up. . . . My members aren't interested in encouraging shell type housing or those of substandard nature."

Even building labor shared in the general pessimism. "I don't know why I'm here," grumbled Peter T. Schoemann, president of the Milwaukee AFL Building & Construction Trades Council, "unless you want us to work for nothing. And I don't know how you are going to do economy building unless you eliminate everything and wind up with a glorified garage. That's not housing. I'm a basement house guy myself, and so are the people of Milwaukee."

RENT CONTROL

French economist describes how it ruined his nation's housing

With the exception of public housing, no area of housing activity has excited such dramatic response, enthusiastic oratory and studied warnings as the Administration's request for more rent control. The Federal Rent Control Office set about investigating the possibilities of legal action against upset landlords who joined the "Tulsa plan" to evict tenants on a mass scale in protest. Housing Expediter Tighe Woods told the House Banking Committee that rents would rise 50 per cent if controls were not extended beyond their March 31 expiration date. A New York real estate broker, S. Earl Honig, proposed rent control legislation which would include a floor under rents to protect owners when an accommodation surplus develops.

But the most sober and arresting note of all was a foreign one. A French economist, Bertrand de Jouvenel, describing the tragedy of France's housing, warned that rent control's greatest dangers are that it "is self perpetuating and culminates in both the physical ruin of housing and the legal dispossession of the owners." Americans, largely unfamiliar with this point of view, will do well to examine de Jouvenel's

(Continued on page 20)

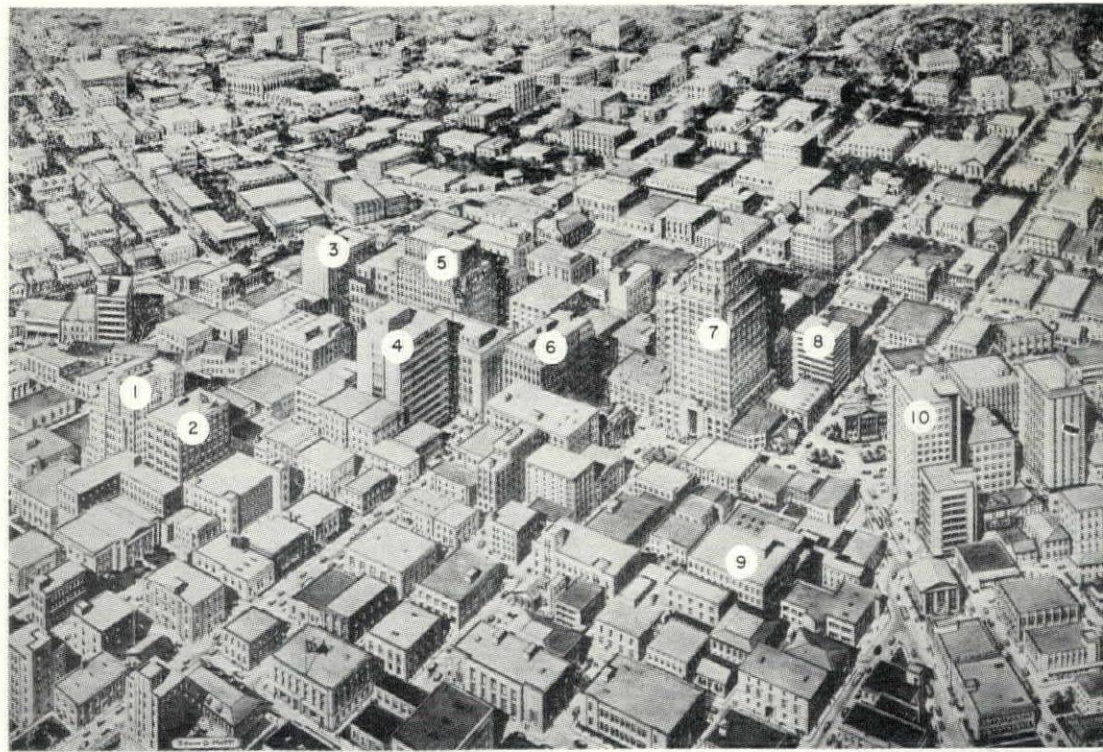


Louis H. Dreyer

COMBINATION OFFICE-GARAGE planned for old Hippodrome site

On the site of the famous old Hippodrome theater in New York City, The Sixth Avenue Garage Corp. will erect a combination garage and office building. Architects are the equally famous old firm of McKim, Mead & White,

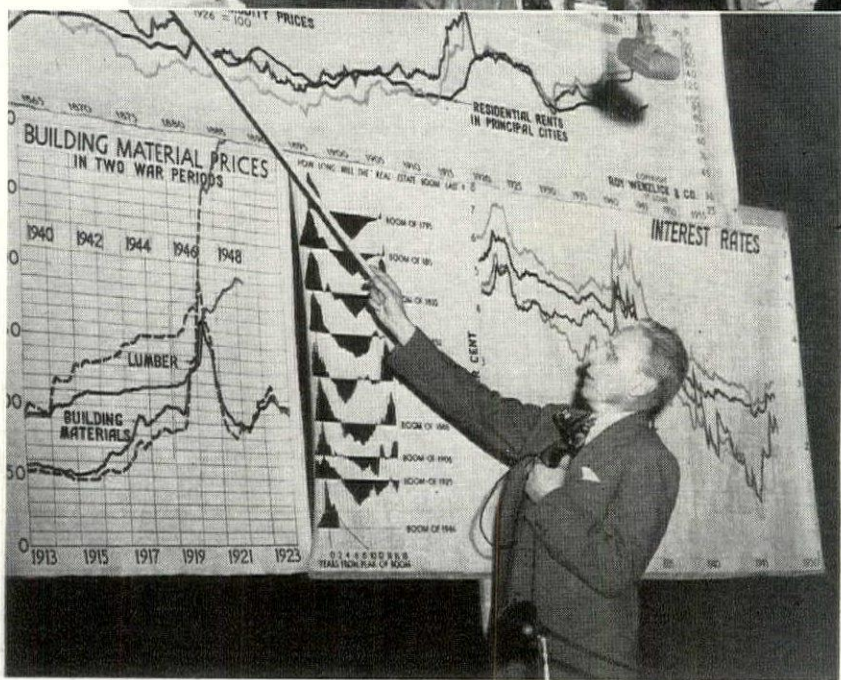
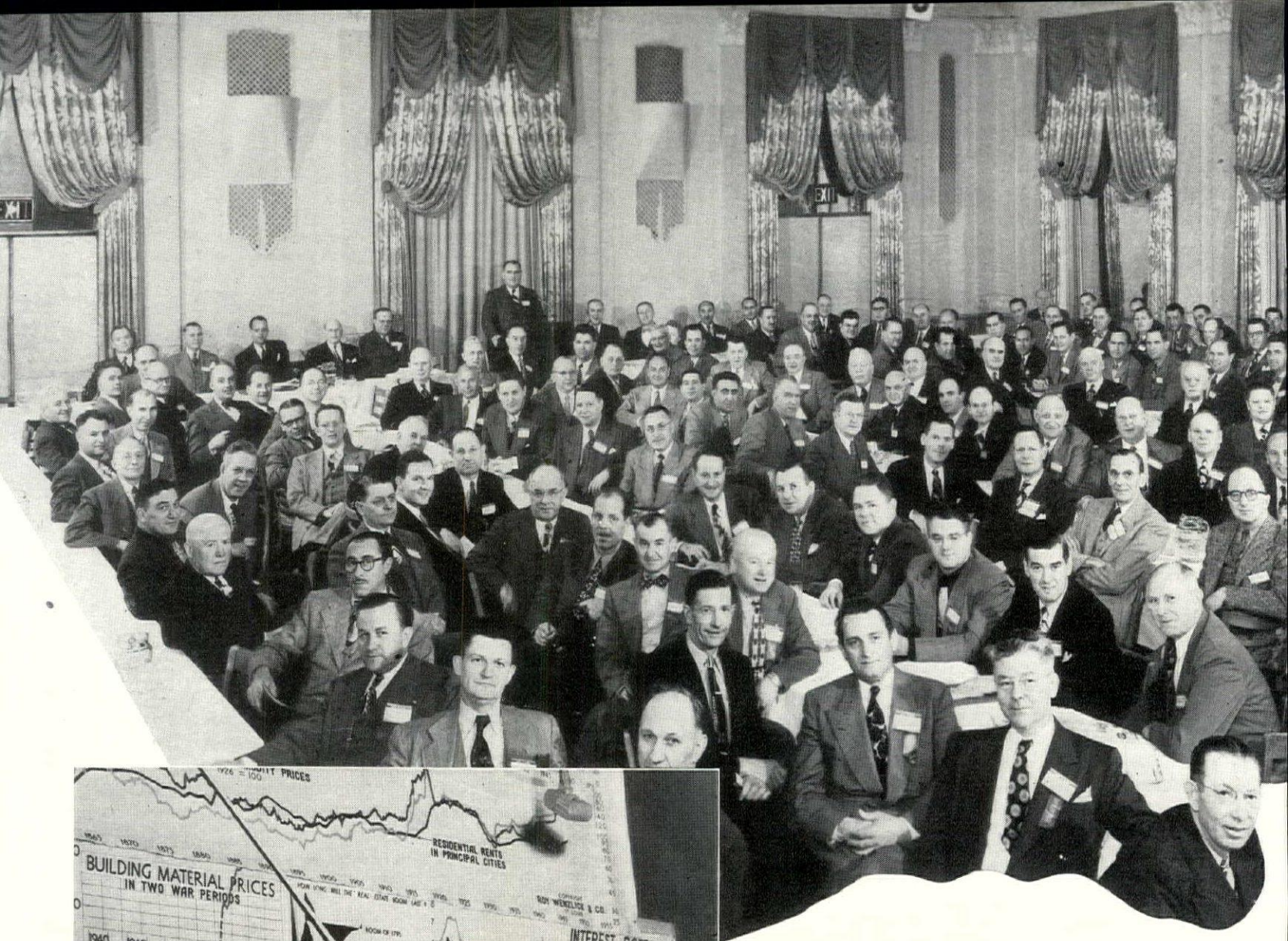
who designed many of the city's genteel residences on Fifth Ave. The garage, with five floors, will hold 1,000 to 1,200 cars. Twenty-five floors of office space (240,000 sq. ft.) will rise above it.



BELL TELEPHONE has put \$175 million into postwar building

In an impressive advertisement distributed last month, the Bell Telephone Co. included this drawing—a fictional city composed entirely of buildings which Bell has either built or expanded since the end of the war. The 392 buildings pictured represent a construc-

tion total of \$175 million. The larger ones (numbered) are in (1) Atlanta, (2) Wichita, (3) Detroit, (4) Chicago, (5) Baltimore, (6) Indianapolis, (7) Boston, (8) Los Angeles, (9) White Plains and (10) Oakland. Not shown: 2,400 smaller projects.



PROGNOSTICATOR ROY WENZLICK charted an inflated past, a deflated future, a realty bust in 1955. Specifically, he pointed to a "period of considerable depression in real estate and construction" from 1955 to 1957. "If the present boom in real estate follows the average trend," the country will "cross the norm on the way down in 1950. Prices will begin to taper off gradually during 1949 and 1950, then stabilize until 1955."

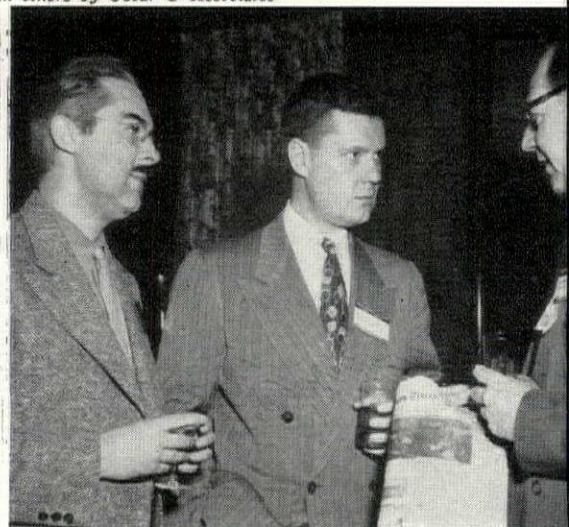
Bert Shepard, all others by Oscar & Associates



QUESTIONING FINGER of Kansas City's John Taylor is enjoyably pointed at a suspect site plan. Dallas' Hugh Prather (ad-



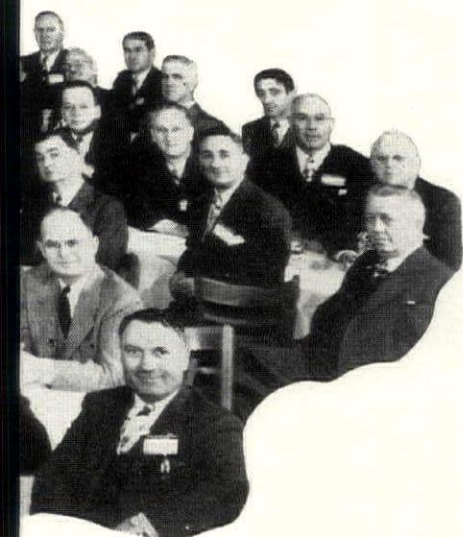
justing specs), Houston's Hugh Potter (with cigar) and Baltimore's bow-tied John Mowbray ponder the question.



AT FORUM PARTY Architect Morgan Yost of Keokuk, Iowa, and South Bend Builder Andy Place of South Bend, Ind., and Long Island's big Builder Al Gross.

HOME BUILDERS RENDEZVOUS IN CHICAGO

to fortify themselves for a new kind of market. Record attendance and record attention bespeak the industry's concern for economic trends, cost reduction, design improvement and selling houses. Lockwood is new president.



270-MAN BOARD OF DIRECTORS and alternates probably world's biggest.

NEW PRESIDENT RODNEY LOCKWOOD

Detroit (r) and First Vice President Thomas Coogan of Miami (l) at a word of advice from Retiring President Milton Brock of Los Angeles. Other new officers: Second Vice President William P. Atkinson of Oklahoma City, Secretary Nicholas Molnar of Cleveland, Treasurer Nathan Manilow of Chicago.



HALLWAY CONVERSATION: NAHB's Executive Vice-President Frank Cortright (l) and HHFA's Raymond Bley discuss latter's address on "economy housing."

The U. S. housebuilder is mighty proud of the record his industry established in constructing more than a million homes last year. He is proud of his part in establishing that record. He hopes that he—and the industry—will be able to do as well in 1949. But he is just a little bit worried.

He made these points clear at the National Association of Home Builders' annual convention in Chicago last month.

He signed his name almost 6,000 times on NAHB's roster. It was the greatest crowd the Home Builders had drawn in their five convention years; aside from those of the American Legion and the major political parties, it was the largest convention crowd in America since the war. There were enough builders on hand to twist Chicago's mammoth Hotel Stevens out of shape. But it wasn't a rowdy convention; the builders' energy was directed instead

ventions: "buyer's market." Again and again he heard it and used it—from the podium, from the floor, in the corridors and in informal clinic sessions. It gave special point to the one big fact the convention established: the housebuilding industry will be expected to turn out, not only a huge volume of houses, but a better house at a lower price. Past President Edward R. Carr, delivering the keynote address, made it clear: "You will be expected to increase your productivity, help to provide employment for all, pay taxes—and make a profit."

Thirty cent question

This new operating fact-of-life—recognition of a new kind of consumer demand—gave a sharp urgency to the builder's sober and serious question: How could this house be accomplished? He had been hopelessly fighting high prices for seven years. Costs were about as high now as they had been last year. What, then, was expected of him in 1949? Was he to build a lesser house? No; FHA Administrator Franklin D. Richards warned that FHA had no intention of lowering its construction standards. And the new house demand, as defined by almost every speaker, precluded the idea of a flimsier—or even a smaller—house. Again, then—how? Said Alden K. Smith, of Timber Engineering Co.: "If anyone can cut 30 cents off the price of a house, these guys want to know how."

If the builder did not get a specific answer to his vitally specific question he at least mulled it over long enough and earnestly enough at the convention to locate the answer in a general area. Said West Coast's Big Builder Fritz Burns: "There is no magic answer. . . . With the new era of ample materials, with the post-war proficiency of both labor and management improving, and with subcontractors keyed to a larger volume and now becoming highly competitive. . . . hope for the industry as a whole rests in improving and lowering the costs of all phases—materials, household accessories, heating, hardware, economical uses of lumber and longer-lasting paint."

Get a lawyer

Other speakers, in smaller, more informal clinics on cost-cutting, gave the builder technical advice and urged him to take advantage of all available building research. Victor Adler, of FHA, told him: "When you build first on paper, you can make changes easily and cheaply. You can't do that on the site." Purdue's Carl Bestor extended this plea by citing a penalty—he re-

(Continued on page 18)

toward shaping some kind of answer to the question rocking their industry: can they put up the houses that the country needs—and demands—during 1949?

"The last two conventions have been building up to this one," observed a university official who had been invited to participate. "At sessions last year these same men just stood up and proudly showed what they had done. This year there was less mutual admiration. The builders asked questions, and even got some answers from the experts and from each other. . . ."

The U. S. builder wasn't worried about his ability to nail the houses together, it was clear. He knew he could do that. The last year had proved it. But he wanted to know if the public would buy his houses once he got them up, and he wanted to know if he could get the financing necessary to get them up in the first place.

He put a new phrase into the five-year stenographic record of Home Builders' con-

minded the clinic that Economist Roy Wenzlick had said in another session that materials prices would remain 75 per cent above their prewar level even if the country had an economic bust. "A builder training program is a great need. I beg you to show willingness to plan, and to use research, and to try out the new. If you don't, and if costs are not affected by even a bust, you're not going to be in business at all."

This year the builder heard more than tirades against restrictive local building codes. Advised one experienced hand: "We've all been a little too squeamish about local codes, and let some building commissioner—likely only a politician—make the rules. We've got to get confidence, and if necessary a lawyer, and go to court. . . ."

The builder tracked his question to sources largely neglected—to discussion panels on design and prefabrication and radiant heating. All of these sessions were considerably more crowded than last year.

They sell more Chevrolets

A two-morning panel on design told him that the alternative to erecting substantially bigger or better equipped houses for the buyer's market was better product design. Architect L. Morgan Yost described a contemplated subdivision which would prohibit white houses. Said Yost: "Design is much more important at the low cost level in houses than at the high cost level. The family is more seriously affected by good or bad design in a \$10,000 house than in a more costly house, where errors can be dissipated in space."

This panel had an answer to builders who expressed concern at high design cost: spread the cost over many units. "A Chevrolet takes as much designing as a Cadillac," said Buffalo Architect John N. Highland, Jr., "but they sell more Chevrolets—and make more money on them."

Although still generally skeptical of the claimed advantages of complete prefabrication, the builder paid increasing attention to the subject, and made room on discussion panels for leading prefabers.

At one such panel (moderated by gadget-conscious Fritz Burns with the aid of an elaborate system of red and green stop and go lights), California's David Bohannon pumped for precutting of framing lumber, but admitted that he had learned the hard way that site assembly was more economical than factory fabrication. So had Burns. Small Builder Clarke Daniel, of Washington, D. C., went further. He said that selling his power tools had enabled him to knock \$200 off the cost of each house.

Highest hurdle

The builder's other big question was financing. Oklahoma Builder William P. Atkinson called it the "No. 1 barrier to a high volume of lower cost homes."

"If home builders are to continue their record rate of building," said he, "then they must have not only interim financing for construction, but permanent financing for



Oscar & Associates



BREAKFAST REHEARSAL of building technique discussion took place in Tower suite of Hotel Lustron. Moderator Fritz Burns (l.). Other panel members (l to r): William Scheick of University of Illinois' Small Homes Council; Bernard Savage of Celotex Corp.; Vice President Richard Jones of Lustron Corp.; and Builder David "Big Ponderosa" Bohannon of Los Angeles.

NOON HOUR RELAXATION at FORUM's headquarters is enjoyed by Builders Harry Durland of Detroit, Joseph Haverstick of Dayton, Revere Quality House Institute's William Smith and Seattle Builder Albert Balch.

the home buyer. This fresh supply of mortgage money should be made available especially for homes priced at \$10,000 and under." Many predicted that unless more money becomes available, building will fall off as much as 30 per cent in 1949.

Here they wanted two things: extension of the operation of the Federal National Mortgage Association to assure the marketability of all low cost housing loans, and an increase in the rate of VA loans to 4½ per cent. Joseph E. Merrion of Chicago packaged the opinion of some 2,000 builders assembled for one session in the Hotel's great ballroom. Said he: "It is high time that the Government take its head out of the sand and permit an interest rate on veterans' loans that will assure their sale in the open market. Until that time, we are going to see a constantly diminishing volume of home building." Added Joseph Meyerhoff of Baltimore: "Unless something is done to revitalize the 501 market, 501 is a dead duck."

They put the question directly to T. B. King, director of VA's Loan Guaranty Section. King began: "Many veterans cannot buy in the price range in which you gentlemen are producing housing. . . ." Merrion asked the 2,000 builders assembled if their experience indicated that the veterans' reluctance to pay the market price for a house was more responsible for the sharp reduc-

tion in GI homes than the inability to get a 4 per cent loan. They thundered: "NO."

The builder had another gripe against VA: its appraisal system. Seattle Builder Albert Balch cited an instance where VA appraisal was \$1,000 less than the mortgage insured by FHA. Said he: "VA appraisals in the northwest are so bad that it is practically impossible to sell a new house under VA financing."

Fatter Fannie May

At the convention's end, the builder endorsed a resolution asking legislation permitting RFC's Fannie May to purchase FHA and VA loans; RFC credit for construction loans; an FHA "restudy" of the mortgage limit for 2, 3, and 4-family units with an eye to "encouraging construction of this type of rental housing." The resolution also intensified NAHB's opposition to public housing and rent control.

The U. S. builder may not have been completely satisfied man when he checked out of the Stevens; no one had given him the pat and foolproof answers which would make 1949 a cinch. But he had done much as he could to formulate them. If the country was to realize its 1949 housing quest, the other segments of the industry—the government, building labor, all who were allied—would now have to check and help him out.

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Refer to Sweet's File,
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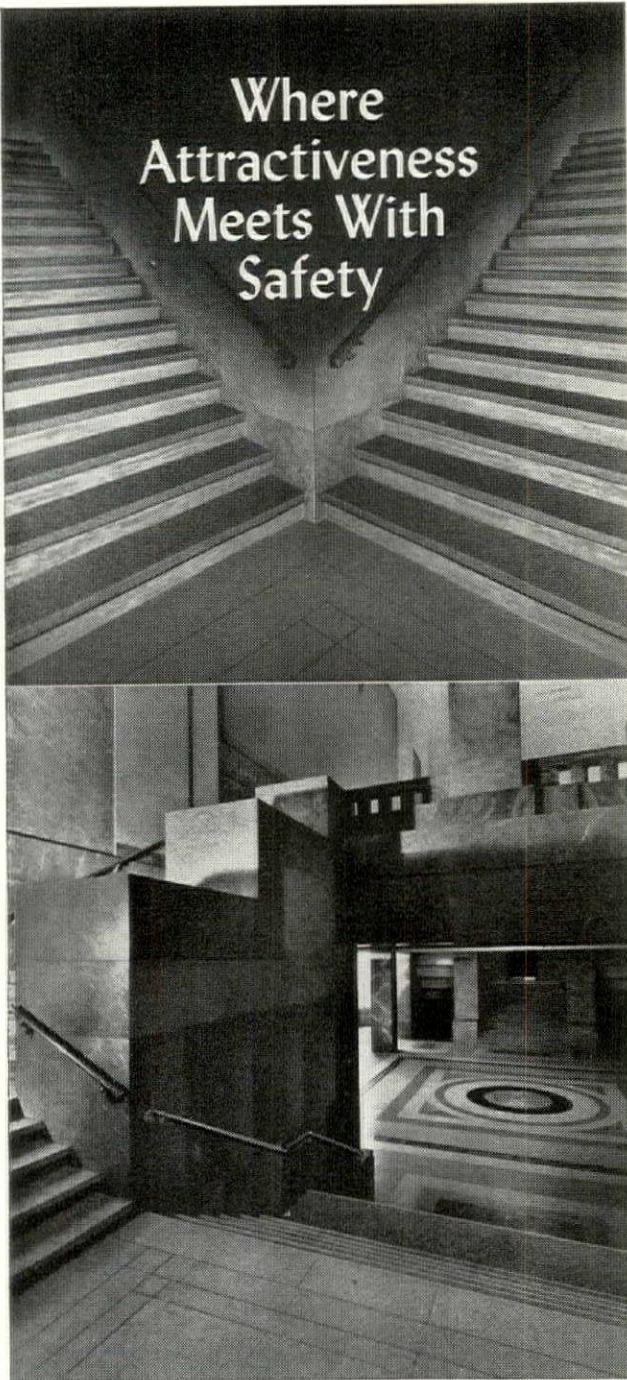
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(Chart from pamphlet, *No Vacancies*)

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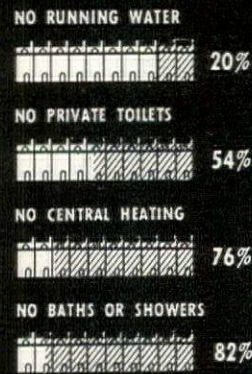


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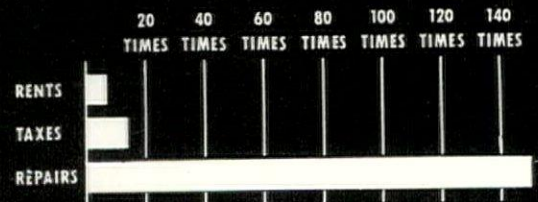
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LACK OF FACILITIES IN PARIS HOUSING, 1948



INCREASE IN RENTS, TAXES AND REPAIR COSTS, 1914-1948



FRANCE'S HOUSING TRAGEDY. Landlords, unable to make enough on rents even to meet the soaring cost of repairs (above), have been forced to let their property deteriorate. The result: a nation of inadequate houses (left).

reasons. Said he, in a pamphlet published by the Foundation for Economic Education, Inc., and broadcast worldwide by *The Reader's Digest*:

"A dollar a month pays a wage-earner's rent in Paris; quarters adequate for a family of six cost \$2 (equivalent to 11 packages of the cheapest cigarettes). Middle-class apartments of three or four main rooms frequently cost from \$1.50 to \$2.50 per month. Important officials or executives pay from \$3.50 a month to \$8 or \$10 a month.

"This may seem a desirable state of affairs, but there are drawbacks. There are no vacant lodgings; nor is anyone going to vacate, nor can the owners expel anyone. Young couples must live with in-laws. Practically no housing has been built for the last 12 years. . . .

"Paris has 84,000 buildings for habitation, almost 90 per cent of them built before World War I. Even a very lenient officialdom estimates that 16,000 are in such disrepair that they should be pulled down.

(Continued on page 22)



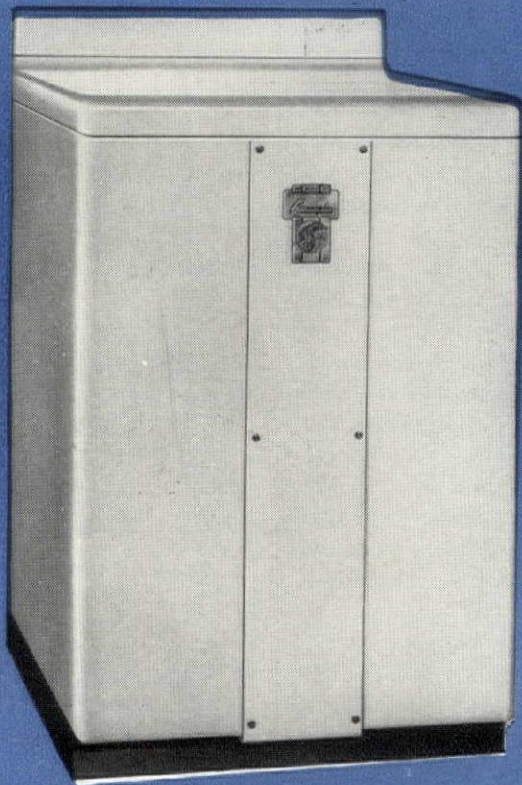
COOPERATIVE HOUSING for middle income families is gaining momentum. Last month in Queens, N. Y., a non-profit co-op housing corporation scheduled a modern development, with spacious ground and 728 3½, 4½, and 5½-room apartments, for summer construction. Fourteen buildings, each 14 stories high, will occupy only 13 per cent of a 10¼ acre site. The rest of the land will be used for parking, playgrounds and parks. First floor of the buildings will be set back, with stilts supporting the outer perimeter. Project sponsors (The Joint Queensview Housing Enterprise, Inc., headed by Gerard Swope and

Louis H. Pink) will acquire the land from New York City at cost, with a limited tax exemption for 25 years. The development will cost \$8,142,800, 80 per cent of which will be financed through a loan from the Mutual Life Insurance Co. of New York, the balance subscribed by tenant-stockholders. Monthly charges will average \$17.75 per room. Tenant preference will be given first to veterans, second to non-veteran moderate income families. Only families whose principal wage earner earns less than \$6,950 annually will be eligible tenants. Architects are George Brown and Bernard Guenther.

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This series is recommended for all doors in residences, small apartments and other light load buildings. It offers security, simplicity and charm wherever installed.

A smaller version of CORBIN'S famous UNIT LOCKS used on larger commercial establishments since 1899 the new "900" Series features ONE-PIECE FACTORY ASSEMBLY in cast brass or bronze. Installation is amazingly easy — a simple cut-out in the edge of the door — two small drill holes for the securing bolts and the "UNIT" slips into place.



CYLINDER LOCK Unit locks for outside doors operate by key from outside or knob from either side. Pin tumbler security. Outside knob can be locked by thumb turn on inside knob. Master keying if desired.

INTERIOR LATCH Operation by knob only from either side at all times. Screwless knob spindles. Reversible for right or left hand doors.



INTERIOR LOCK Operated by knob from either side. Center button on inside knob locks against outside operation insuring privacy. Emergency unlocking feature is provided in the outside knob.

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Nor are the others altogether satisfactory; 82 per cent of Parisians have no bath, more than half must go out of their lodgings to find a lavatory and a fifth do not even have running water. Little more than one in six of the existing buildings is pronounced in good condition by the public inspectors.

"Owners are not financially able to keep up their buildings, let alone improve them . . . Since 1914, rents at the most have multiplied 6.8 times, while taxes have multiplied 13.2 times, and repairs cost from 120 to 150 times the 1914 price . . . We got (to this condition) by easy, almost un-



Economist de Jouvenel

noticed stages, slipping down on the gentle, slope of rent control. . . .

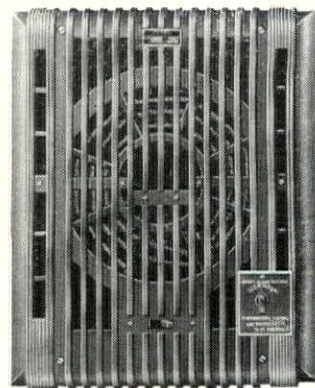
"New laws have provided for increases in rents, but retail prices increased much more. To put it briefly, owners of new buildings (built since 1914) have been allowed, in terms of real income, less than a tenth of what they got before World War II. Owners of old buildings, that is, nine-tenths of all buildings, have been allowed in terms of real income either 12 per cent of what they got in 1939 or a little less than 7 per cent of what they got in 1914—whichever is less.

"If today a builder were to put up apartments, they would have to rent for prices from 10 to 13 times present rent ceilings, in order to break even . . . Obviously, construction will not be undertaken. . . .

"Strange plans now being considered by the French Parliament would continue the tenant's right to retain his lodgings, but would set a 'fair rent,' part to come from the tenant and the rest from a special subsidy—an inflationary measure, of course, as are all subsidies.

"Not all this fair rent would go to the owner. A slice to correspond with the cost of upkeep would be paid to his credit in a blocked account, to make sure it did go for repairs. A much bigger slice for the reconstitution of the capital would not go to the owner at all, but to a National Fund for Building. Thus the dispossession of the owners would be finally sanctioned: they would be legally turned into the janitors of their own buildings, while on the basis

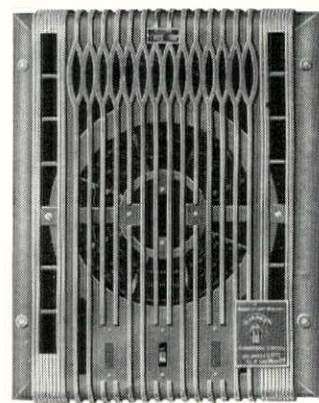
(Continued on page 24)



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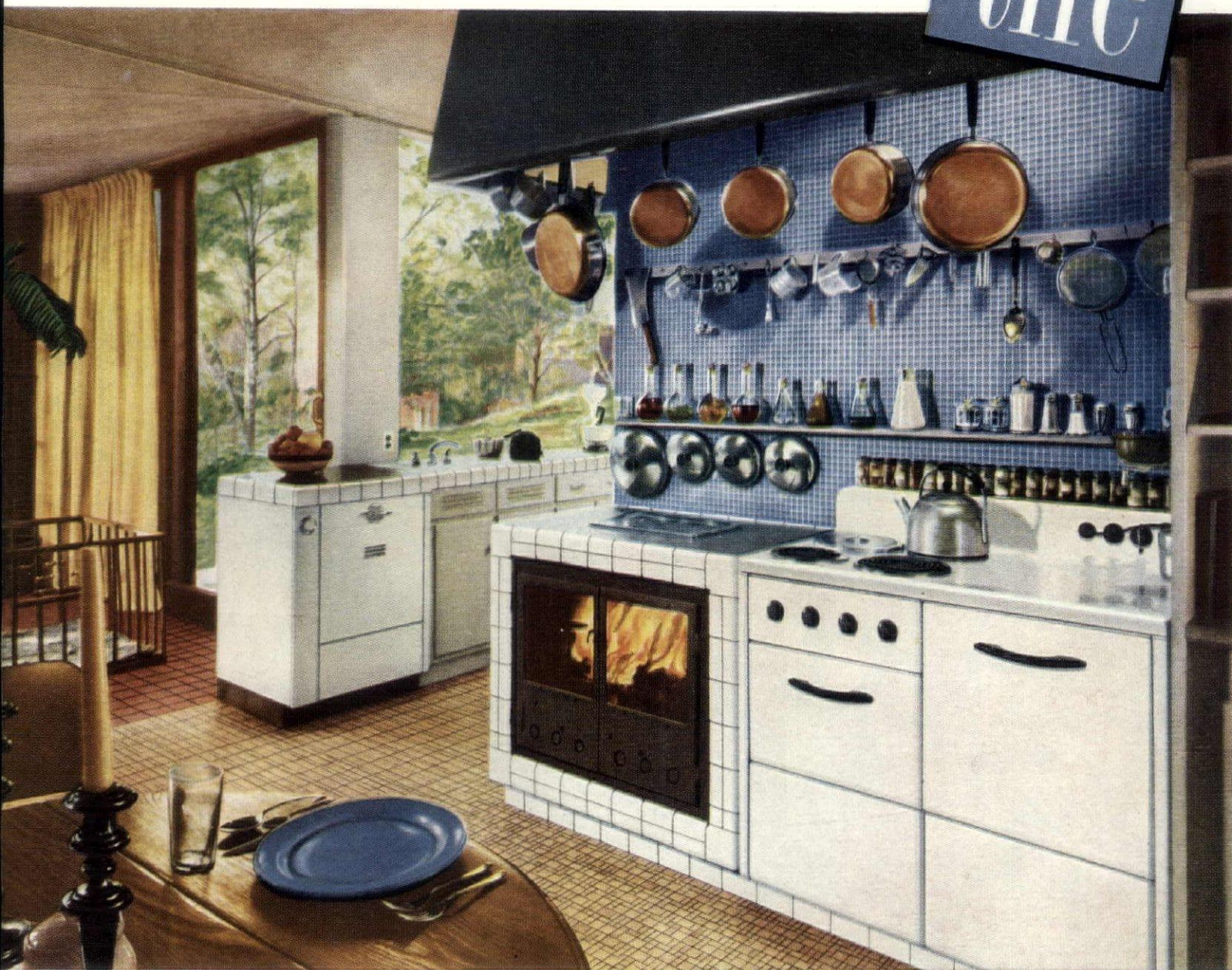


Photo by Ezra Stoller; Pictorial Services.

Design flexibility of tile makes possible such imaginative applications as this kitchen. Carl Koch, Architect, designed it for his own home at Snake Hill, Belmont, Massachusetts.

Sparkling tile colors can be used in modern arrangements or patterns to enhance any decorative theme. And, you know that colors won't fade or darken because tile's beauty is fired-in for a lifetime of loveliness.

Easy to clean and keep clean, tile never needs waxing, polishing or refinishing. Homeowners appreciate, too, the fact that water rolls off without leaving stubborn, streaky blemishes.

Bright and efficient, clay tile for floors, walls and countertops keeps its fresh, spic-and-span appearance for a lifetime. Exposure to heat or cold, dampness or dryness will not affect clay tile.

Long term economy of clay tile means lower end-cost for the homeowner. With no recurring charges for maintenance or replacement, tile is a sure sign of careful, thrifty planning.

For specific information regarding available types, sizes and colors, see *Sweets Architectural* or *E-C-A File*. THE TILE COUNCIL OF AMERICA, Room 3401: 10 East 40th Street, New York 16, N. Y. Room 433: 727 West Seventh Street, Los Angeles, California.

The Tile Council of America was formed in January 1945 to provide a central source of information about floor and wall tile, and to sponsor research and development projects designed to increase the usefulness of tile in all types of private and public building.

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of their dispossession a new State ownership of future buildings would rear its proud head"

JOB

CHEAPER CHURCHES

Diocese figures cost of one standard church will build three simple ones.

In the New York diocese of the Protestant Episcopal Church, there was a serious shortage of churches, and no overabundance of building money. To meet the situation, Rt. Rev. Charles K. Gilbert, Bishop of New York, held a luncheon in the undercroft of the Synod House in the gigantic cathedral of St. John the Divine, and explained a program for building low cost churches and parish houses in the diocese. It was a program which had little of the grandeur of St. John the Divine, whose serene granite vastness still is not complete after 50 years and \$20 million.

The new churches would have walls of cinder block, roofs of corrugated asbestos. Steel frames would support their roofs, as they do the cathedral's roof—but the latter day steel would be visible, and there would be no new buttresses. Standard steel frame windows would be used in place of the elaborate custom-built windows of most churches. Floors would be concrete. Stock plans and construction details would be used for the churches, four of which are scheduled for spring building. Preliminary sketches suggest that the character of the \$300,000 structures will be anything but modern, but clearly they will be simple and utilitarian—so simple that Archdeacon George F. Bratt told the meeting that three such buildings could be erected for the price of one "standard church."

Bishop Gilbert made another point: while congregations would be expected to furnish the interiors and add elaborations as they wished, they would receive the churches structurally complete and debt free.

CITIES

LOS ANGELES

With 30,328 house starts, it topped all other cities last year.

For the second year in a row, Los Angeles leads the country in new residential construction. The Bureau of Labor Statistics recorded a total of 30,328 house starts during 1948 for the West Coast playground capital. (New York was second with 24,751 starts; Houston third, with 7,500.)

Some cities think that the picture is not a fair one. BLS figures usually show only

(Continued on page 26)

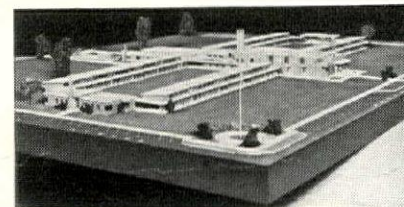


"Nicer than a big old School"

The Orlando (Fla.) Sentinel-Star recently asked a group of 9, 10 and 11-year-olds what they thought of Orlando's newest school.

A 10-year-old acted as spokesman. "It's wonderful," he said. "We think it's lots nicer than a big, old school."

The Fern Creek Elementary School is a source of pride to students, teachers and parents alike. Every detail in its construction is the last word in school planning.



Architect's model of Fern Creek Elementary School, Orlando, Florida. Equipped with Webster Moderator System of Steam Heating. Architect—L. Alex Hatton, A.I.A. Consulting Engineer—Robert H. Emerick. Heating Contractor—Swartz Service Co.

Heating of the school is by low pressure steam from a central boiler room. A Webster Moderator System of Steam Heating provides the temperatures desired automatically. Prefabricated Webster System Radiators are recessed in classroom walls. Webster-Nesbitt Unit Heaters are used in the cafeteria.

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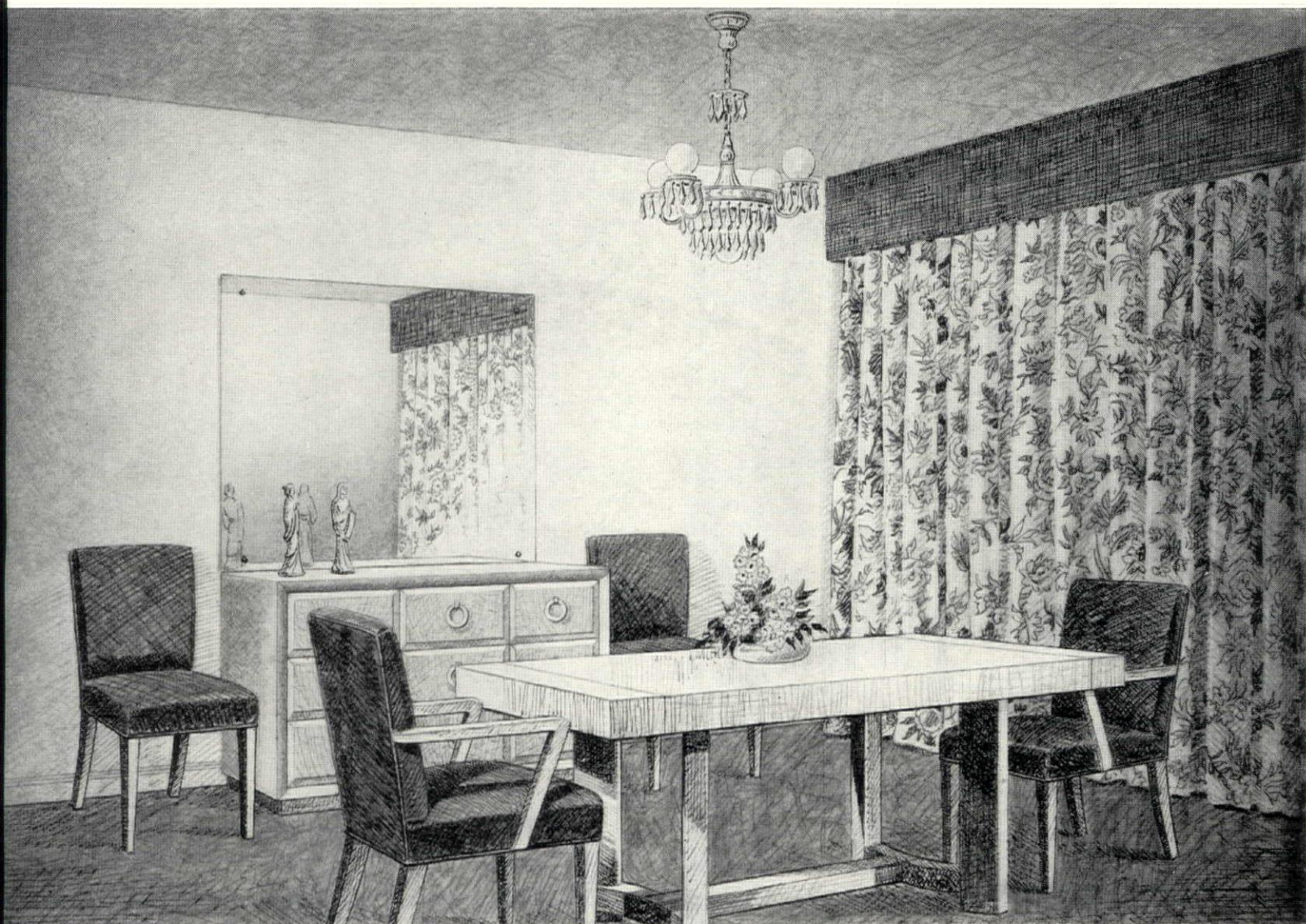
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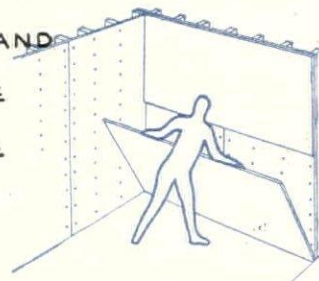
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A FASCO ventilator changes the air in average kitchens every 3 minutes! Removes heat, odors and airborne grease and dust quickly, quietly and without drafts. Flush-mounted, white-enamelled grille is attractive . . . easy to remove and clean. Just one control operates both outside door and fan.

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.



Formerly F. A. Smith Manufacturing Co., Inc.
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activity within a city's corporate limits; Los Angeles is one of the few U. S. cities whose limits (448.3 square miles) include those sections which other cities must consider as their metropolitan areas. Sensitive to the complaints, BLS next year will attempt to expand its evaluation of civic building activity on a metropolitan area basis.

CLEVELAND

Lumber company discovers new kind of market: "shell house."

When Cleveland veterans, attempting to beat the high cost of construction by doing their own housebuilding, started to comb the city's lumber lots for materials, one lumber company sensed a new kind of market. It began turning out "shell houses" for the amateur builders. By last month, the Broadway Lumber Co. had put up the shells of 85 houses, expected to construct 150 more this year.

The lumber company has half a dozen patterns. If the builder-resident has his own lot and lays his own foundation, the company sells him an average six-room "shell" for \$4,000, four rooms for \$2,500. The carpenter work on the house is complete. But the owner has to take care of the rest himself—plumbing, heating, electricity and painting. Stanley Hamm, construction superintendent of the lumber company, estimates that most of the veterans complete their houses for an additional \$1,500.

Financing is handled by the lumber company, with the aid of Cleveland banks which will put up as much as \$4,500 on FHA Title I loans.

NEW YORK

Prophets see it at century's end as a vastly different city.

What will the country's principal city look like at the end of the century? Throttled now by traffic and overcrowding, unable to move outward beyond the boundaries of its rivers, and apprehensive about moving upward because of its vulnerability to possible atomic attack, New York's Manhattan Island has posed a serious development problem for its planners.

Last month, for the *New York Times*, five experts ventured predictions of New York's appearance in 1999. Four of them saw a drastically changed city. Examples:

Architect Hugh Ferriss: "A city of several levels, of glass and light, with building masses separated by tree lined malls . . . run by atomic power. . ."

Harvey Wiley Corbett, Director of Planning, U. N. Headquarters: "A sort of modern Venice" on two levels. On the upper level, pedestrians will "move with safety

(Continued on page 28)

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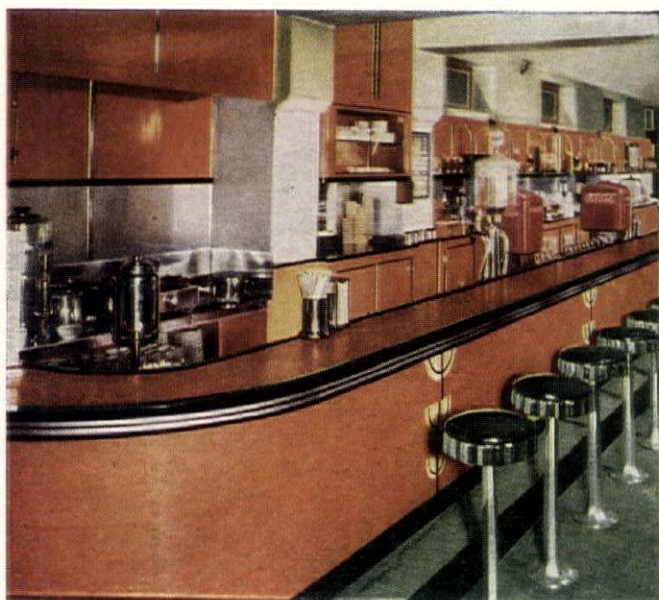
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See 1949 Sweet's Architectural File (section 13i, catalog 4) for more Formica information.

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and comfort, looking down on the canals below, filled, not with water, but with freely moving motors." The problem of bringing New Yorkers nearer their world will be solved by erecting "great buildings, each a block or more in extent, in the form of terraced domes and covered on the outside with living quarters, like frosting on a great cake. . . ."

Architect Eliel Saarinen: A decentralized city with three main sections "separated by open areas of park land." Each of the three concentrated areas "will retain only those related industries or businesses for which adequate residential areas can be provided nearby. . . ."

Architect Wallace K. Harrison: An enlarged and concentrated—not decentralized—city improved by "more parks, more sunshine in rooms, some elevated highways (and) laws which stop men with a rear end a foot and a half square from using an auto of 40 sq. ft. to carry it. . . ."

Only one prophet dissented from the thesis of drastic change. Robert Moses, New York's commissioner of parks, saw no vitally different city in 1999—"certainly not (one) unrecognizable by a local Rip van Winkle rubbing his eyes after a long snooze in the Palisades."

* * *

A piece of Manhattan real estate whose owner had played his part in shaping the U. S. heritage changed hands last month: Andrew Carnegie's 66-room Georgian mansion on upper Fifth Avenue was turned over to the New York School of Social Work on a 21-year lease.

Carnegie's mansion, built in 1900, followed the full cycle of the fabulous Fifth Avenue residences erected by America's



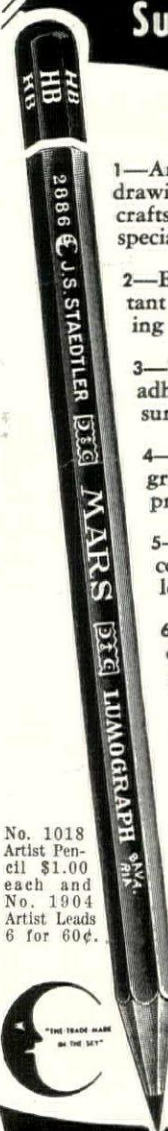
CARNEGIE MANSION: cycle completed

aristocratic rich and the dollar barons of the new century. Saddled now with heavy taxes and management costs, their famous builders dead and the era they typified lost to history, many of them have been torn down, closed up or converted.

The old steelmaker's property—including his residence and another 21-room structure next door—are assessed now at \$2,100,000. The school will occupy them both rent-free, will be billed only for maintenance and utilities.

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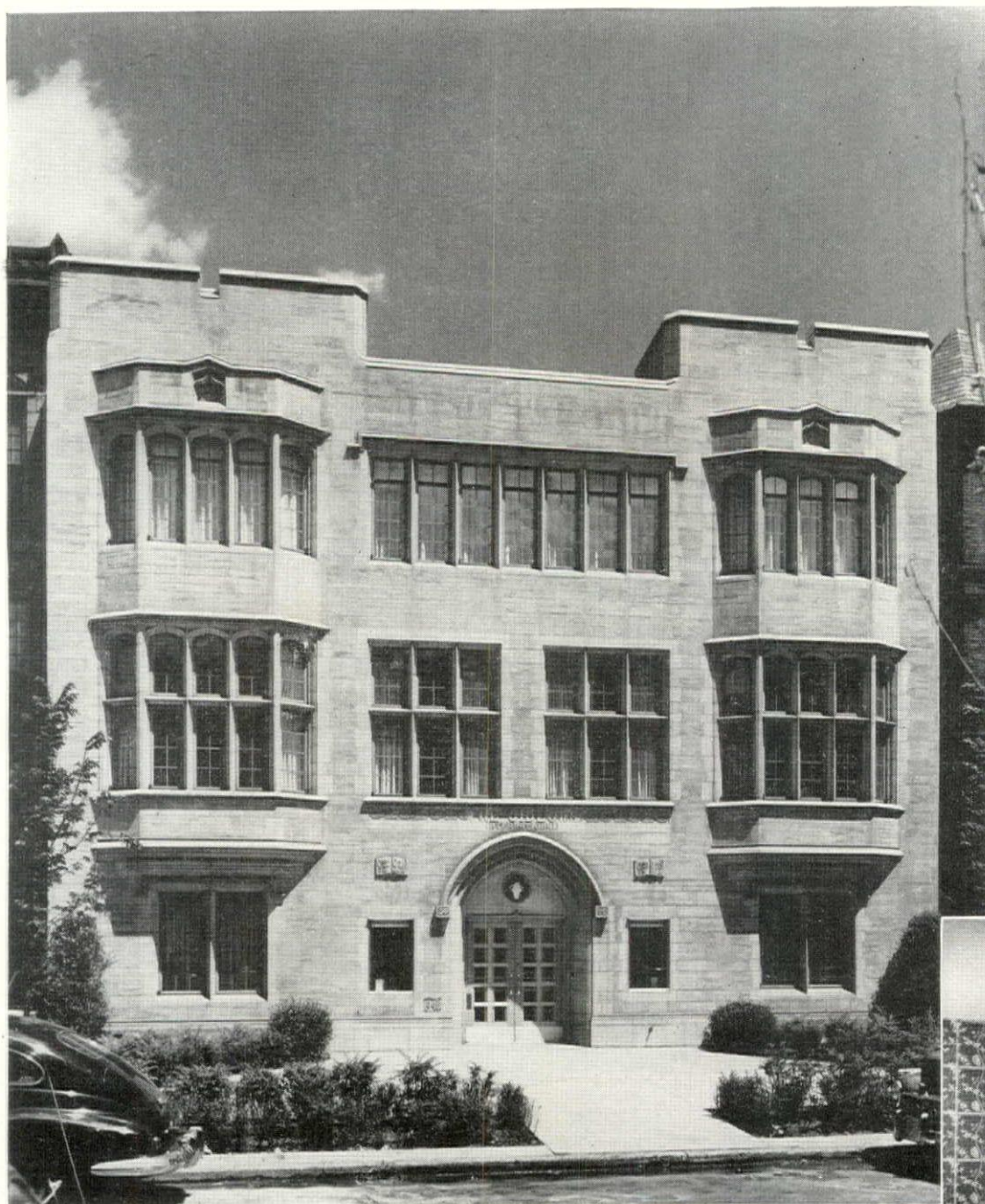
It's the new Norgé Model N-208 20-inch "Rangette"—ideal for multiple-dwelling installation or for small homes. Occupies little space, is strictly modern in appearance and finish, has all the desired features including oven temperature selector and control and 5-position broiler pan with gravy well. Insulation is approved glass fiber.

There is a special Specification Sheet for architects and builders . . . you are invited to bring your files up-to-date by writing for complete information to Norgé Division, Borg-Warner Corporation, Detroit 26, Michigan.

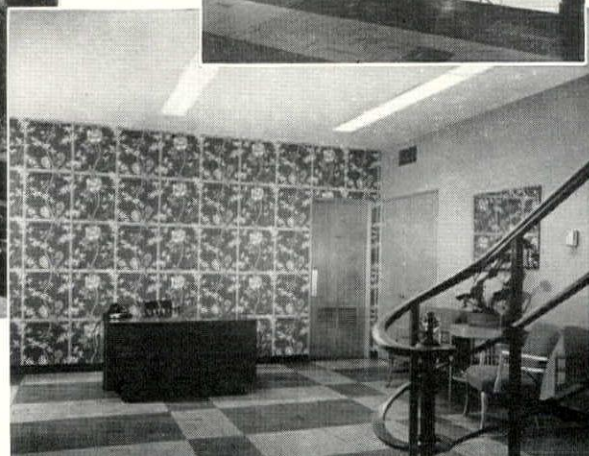
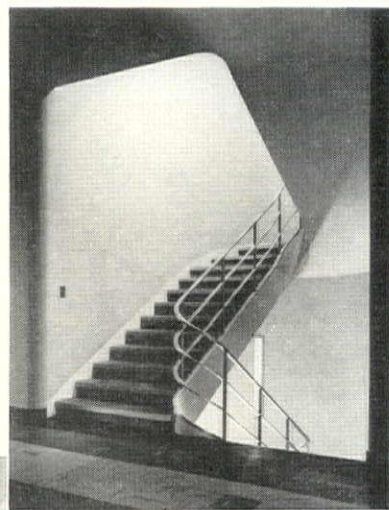
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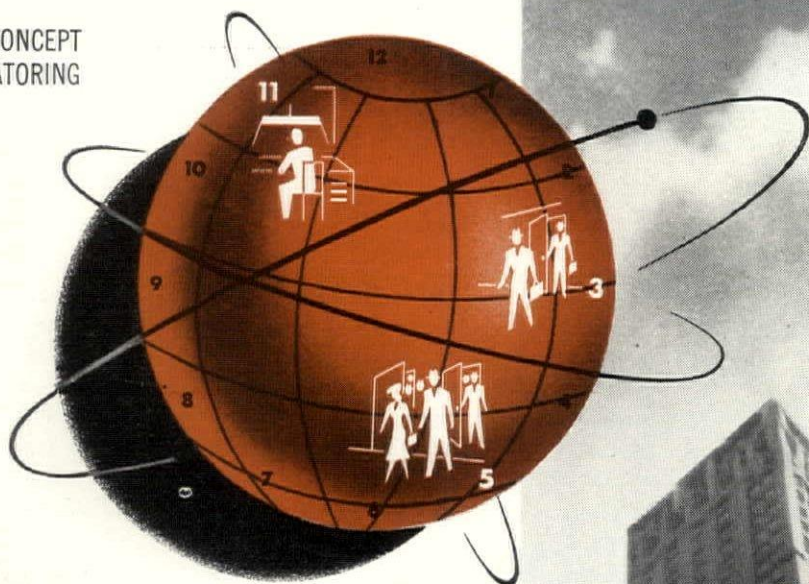
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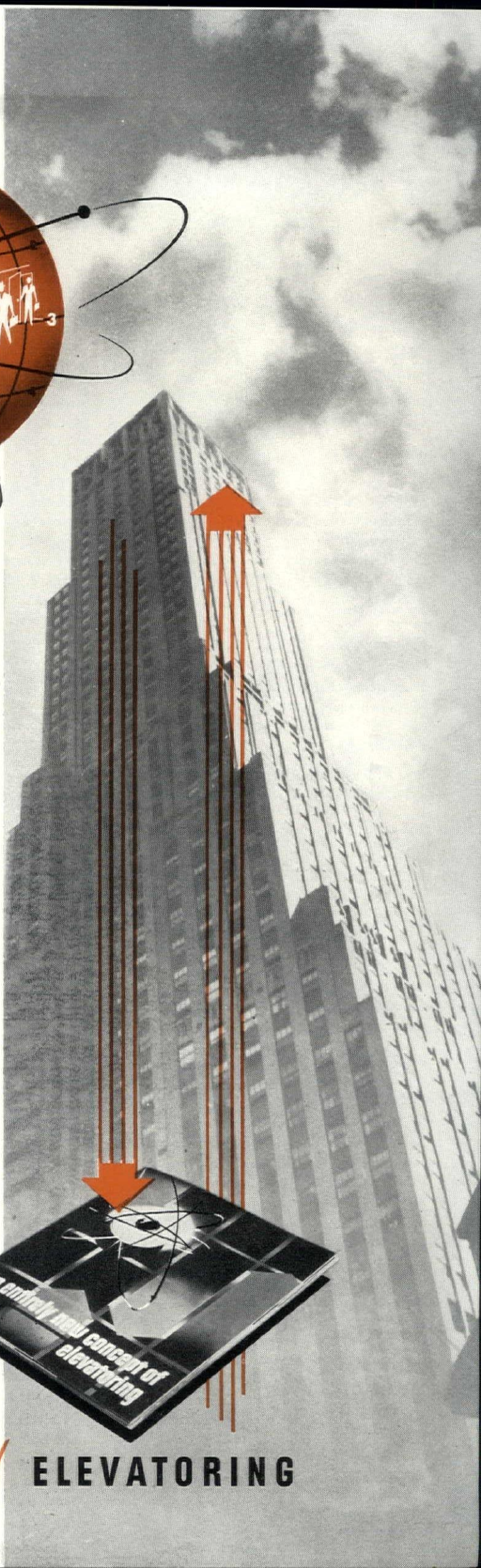
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LETTERS

Cover Comment . . . On Mies Van der Rohe . . . Mr. Wright's Gold Medal . . . Mural Painting, Light and Color . . . Nudes . . . Last Roundup on "Measure" . . .

NEW COVER

Forum:

Please accept my enthusiastic congratulations on your simple, straight-forward January cover.

J. STANLEY SHARP, *Architect*
New York, N. Y.

Forum:

I thought the January cover was very striking. The design is excellent and I think the type particularly good looking.

GEORGE C. RUDOLPH, *Architect*
New York, N. Y.

Forum:

Your January cover is visually exciting. It's a clean relief from all other magazines of the month. Congratulations.

ARNOLD ROSTON, *Art Director*
New York, N. Y.

FORUM appreciates these kind comments on its January cover. One advertiser called to say that if FORUM was not using the front cover, he would be happy to insert an ad.—Ed.

BROAD SHOULDERS

Forum:

I am not a fanatic in the matter of "who did what first," or "who gets the credit," but I write this to call you to task for being remiss in your editorial capacity of presenting architectural developments in their true relationships to the works of others. Belluschi's Equitable Building (FORUM, Sept., '48) was presented in a way that left the impression that said Belluschi is the Great Pioneer in the field of expressed skeletons. As a matter of fact, Belluschi's building must surely be a projection of the work of Mies van der Rohe in that field, and I feel strongly that it is your duty to take the matter up in editorial discussion, presenting perhaps a comparative analysis of the approaches of both men to the problem, with your comment on the merits of their solutions.

Also, Paul Rudolph dramatically presents the Revere house grouping unit, with the comment, ". . . we're more enthusiastic about this project than any project we have ever proposed," (FORUM, Dec., '48). Neither Mr. Rudolph nor the editors of FORUM can be so naive as to believe that the architectural public is totally unaware of Mies van der Rohe's earlier and admirable solution to this same problem. I believe you will find that the latter presented

a group of dwellings, or so called "court houses," on the same principles of arrangement at an exhibition in Chicago's Art Institute in 1938 or 1939, shortly after his arrival in this country. I daresay the enthusiasm of Ludwig Mies von der Rohe was as unrestrained as that of Paul Rudolph.

I question the integrity of neither Mr. Rudolph nor Mr. Belluschi, as I feel that both men are progressive architects of the type needed to develop new and worthy proposals in our profession, but the editors of FORUM are free to consider themselves spanked. It may be quite true that as architects we all stand on each others shoulders from time to time, but I feel it only fair that there should be an extra pat on the back for the man with the broadest shoulders at the bottom of the stack.

ROBERT M. KELLIHER
Chicago, Ill.

EARTHY PROBLEM

Forum:

Enclosed is a photograph I took this August on the road between La Spezia and Viareggio on the Italian shore of the Ligurian Sea. You might be interested in this example of a graceful solution to the earthy problem of transporting materials across a highway by means of cable cars to a large factory without endangering the highway or its users below. (Incidentally, most Italian roads of such width and excellence are subject to toll.) The reinforced



"... Clean-cut craftsmanship"

concrete parabolic arch is approximately 12 ft. wide and 45 ft. high, the outer face being slightly concave.

Italy is the most active country in Europe from the point of view of construction, not to mention things and activities political. The former displays clean-cut craftsmanship in stone, hollow tile and concrete.

The latter has a frenzied character which has become an integral part of the architectural facade throughout Italy. The paint-smeared slogans and the pasted posters reflect the distrust, frustration, striving and hope in the land.

MITCHELL VAN BOURG
Cambridge, Mass.

GOLD MEDAL

Forum:

Why the consistent lack of factual reporting of A.I.A. news?

The latest is the statement that the awarding of the Gold Medal to Frank Lloyd Wright ". . . will be the first time that the Institute has given its highest honor to a non-member," (FORUM, Jan., '49.)

This is not a true statement . . . A correction based on facts should state, that of the 16 distinguished architects who have been awarded the Gold Medal since it was established in 1906, six, including Mr. Wright have been non-members.

JOHN J. WHITE, JR.,
Field Secretary, A.I.A.
Washington, D. C.

FORUM erred. When Frank Lloyd Wright accepts the A.I.A. Gold Medal he will be the sixth non A.I.A. recipient of this honor, but the first American non-member. Others were: Sir Aston Webb, London (1906); Jean Louis Pascal, Paris (1913); Victor Laloux, Paris (1921); Sir Edwin Landseer Lutyens, London (1924); Ragnar Ostberg, Stockholm (1933).—Ed.

COLOR AND LIGHT

Forum:

Your article "How does Light affect Color" (FORUM, Jan., '49) interested me greatly because I deal in color; mural painting and interior design. Where does science end and art begin?

An all important factor which was not considered, yet admittedly caused the investigators considerable trouble, was the fact, which every artist knows instinctively, that colors only exist, or become effective, in their relationship to surrounding and contrasting colors. Where there is one color there is no color, regardless of light. In a well designed interior or in a painting, the design always calls for a balance of color. Thus a large area of gray blue may be balanced by a small spot of pure red. Colors are mutually beneficial or detrimental in their relationship to one another.

(Continued on page 34)



Your clients will appreciate this counsel

• Unless they're counselled wisely, far too many home builders make a costly mistake. They overlook the ever-increasing trend toward "better electrical living." Consequently, they fail to provide for an electrical system that will handle the electrical appliances they want now—to say nothing of the ones they'll want in the future.

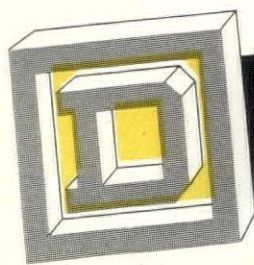
When you recommend adequate wiring and Multi-breaker protection, you are making sure that your clients can take full advantage of "better electrical living." There will be no overloaded circuits, no unnecessary service interruptions, no replacing of burned-out parts.

It costs them very little more to get the right electrical system at the time they build. They'll be faced with a major and costly re-wiring job, if they do it later. You'll generate a lot of client enthusiasm by giving them these down-to-earth facts.

SQUARE D's *Coilless* Thermal-^Λ Magnetic MULTI-BREAKERS Give Complete Circuit Protection and Customer Satisfaction

...because they

- hold harmless momentary overloads but trip on continuous overcurrents before wire insulation is damaged.
- trip quickly on "shorts" to localize damage.
- give repeat protection. No parts burn out—nothing to replace.
- are non-tamperable. Factory test-tripped and sealed.
- are safe. No live parts exposed. Anyone can operate them.
- include switching means as well as circuit protection.
- are compact. Room for expansion without excessive space.
- are attractive. Can be installed in most convenient location.



SQUARE D COMPANY

DETROIT

MILWAUKEE

LOS ANGELES

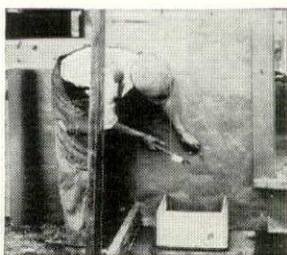
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LETTERS

Do You Know YOU CAN INCREASE QUALITY AND REDUCE HOUSING COSTS by specifying all three SISALKRAFT PRODUCTS

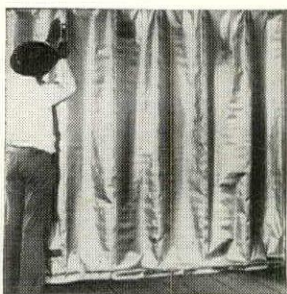
1. SISALKRAFT Reinforced Building Paper

SISALKRAFT is the best sheathing paper that money can buy! Costs very little more than ordinary tar paper . . . but it costs less to apply. Use SISALKRAFT for OUTER WALLS over sheathing . . . for INTERIOR WALLS, as a vapor-barrier (FHA-approved) . . . UNDER WOOD FLOORING . . . UNDER RUBBER TILE for "on-grade" floors . . . OVER SUB-FILL (under concrete slabs) . . . under radiant heated floor slabs.



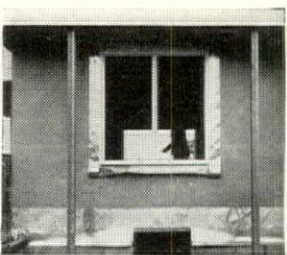
2. SISALATION Reinforced Reflective Insulation

At about \$25 per 1000 sq. ft., SISALATION saves 50% or more, compared with bulk or blanket-type insulation. SISALATION also costs less to apply. Provides BOTH sidewall insulation and vapor-barrier (FHA-approved). Lining attics with SISALATION makes them more livable and attractive. • SISALATION and SISALKRAFT, used together, provide modern DRY WALL construction . . . SISALATION for effective insulation and vapor-sealing from the inside . . . SISALKRAFT for weather-sealing from the outside. Highest QUALITY construction at low cost!



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For about 75¢ per window or door opening, you can get this pure copper flashing. Highest quality, low-cost, enduring protection . . . for flashing door and window openings, foundation damp-coursing, ridge roll and other flashing, waterproofing shower stalls . . . and other concealed flashing uses.



See Sisalkraft Insert in
Sweet's BUILDERS' File

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products for
quality housing
at low cost

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Even the distance and size of a spot of color affects their mutual appearance. A spot of gray will look greenish on a red background and the same gray will look reddish on a blue background. It is impossible to judge any color in any light when it is alone. (Something that never exists in reality.)

Thus designers and artists try to design in a balanced light, neither too warm nor too cold, and then use either daylight or a balanced artificial light to retain the planned effect. For the same reason, mural artists prefer to paint the mural in the actual room and under the actual light conditions in which the work will be seen. . . .

Color arrangement is to my mind, a matter of artistic feeling. The factors are so many and so varied, including psychology and taste, that for all practical purposes a scientific method of arriving at a good design would be far too complex and involved to be practical. The mind and imagination of the artist together with his experience and ability can do instantly and more accurately what might take years of figuring and slide rule scientific methods. Where there is no feeling no amount of rules help. No machine can cut a diamond as accurately as an expert diamond cutter "by hand. . . ."

Even in dramatic display of merchandise, the intensity of the light and the effect of background and surrounding objects, play an even greater part than the warm or cold light. Everyone knows that warm colors benefit by warm light. This is only one aspect of a very complicated problem. Perhaps one of the easiest to solve and needing no complicated guide book. If you have no feeling for the problem in its entirety then this little science will not help anyway. . . . The great colorists of history never used a color chart. Primitive peoples are notable fine colorists. Color is a matter of feeling. . . .

Do not think that I object to your magazine, I find it interesting and look forward to reading it.

TOM LOFTIN JOHNSON, Designer
Bedford, N. Y.

BRONZE FIGURES

Forum:

Do you know whether any firm makes available stock designs of female figures (nudes, etc.) cast in bronze or aluminum?

We have in mind the type which are mounted on walls or back of bars in taverns and cocktail lounges.

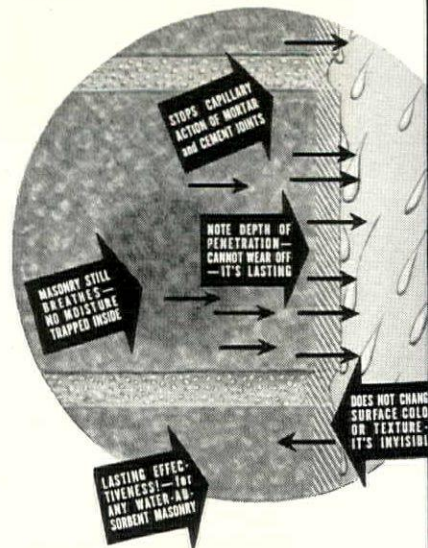
St. Louis, Mo.

NAME WITHHELD

Oh, that type.—ED.

(Continued on page 38)

TO KEEP OUT WATER
—THOSE WALLS NEED
CRYSTAL Silicone
WATER-REPELLEN



ONE APPLICATION
NOT A COATING—
IT PENETRATES

Brick, stucco, concrete blocks
pre-cast stone is rendered lasting
water-repellent by one application
of Crystal. Low cost—

Quickly flushed on with "stucco"
brush or with low pressure spray
One gallon covers 100 to 200
square feet.

Send for literature suggested
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Dependability

...One Quality a Sump Pump MUST Have

Your clients will not be satisfied unless the sump pump you specify can be absolutely depended upon to operate instantly when needed...no matter how long it has stood idle. Dependability is one thing a sump pump **MUST** have.

Highest quality construction gives Penberthy Sump Pumps this dependability. The design is simple and rugged. Materials are copper and bronze throughout...immune to corrosion. The motor is a special type designed for vertical operation, with maximum resistance to moisture and built-in overload protection. The mercury switch is sensitive, reliable, and particularly adapted to float operation; it has no mechanical contacts to wear or spark.

Penberthy Automatic Electric Sump Pumps are carried in stock by jobbers everywhere. Specify them for Dependability.

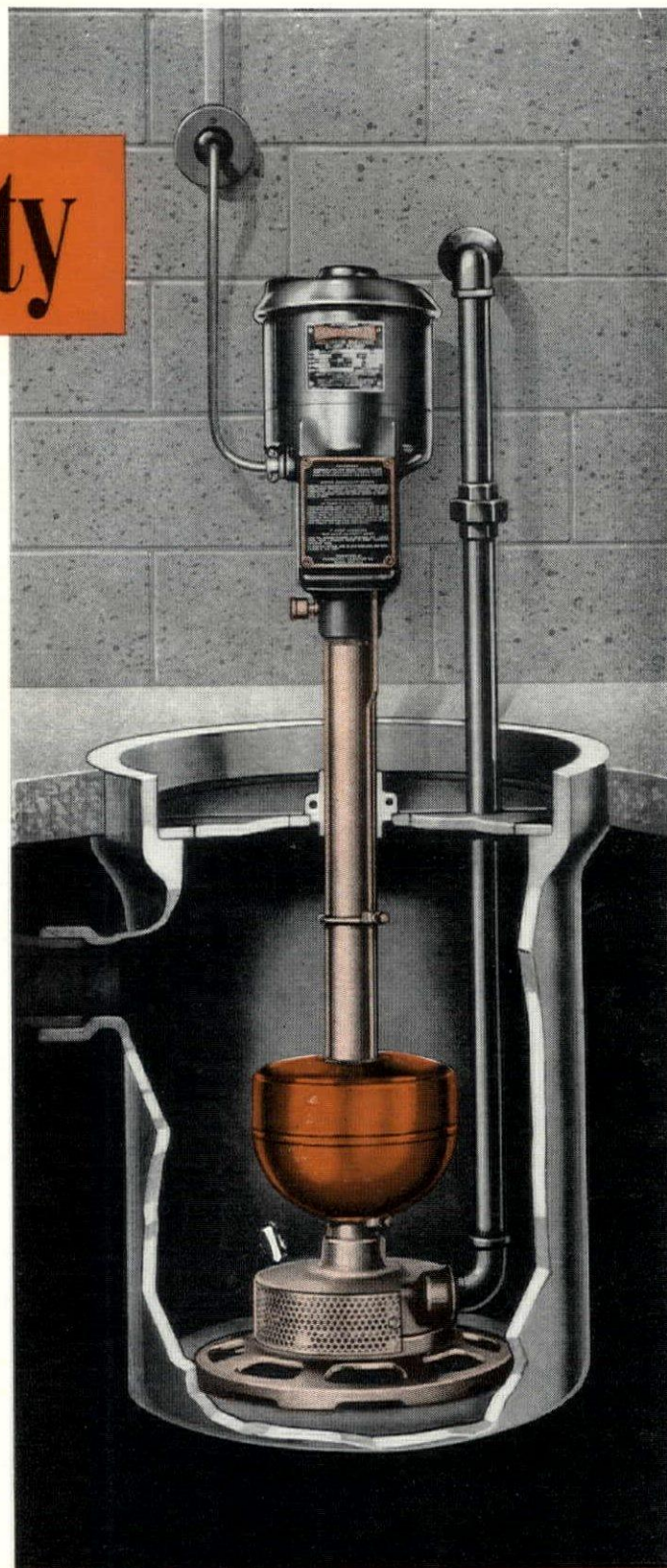


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Established 1886

Canadian Plant • Windsor, Ontario



**PENBERTHY AUTOMATIC
ELECTRIC SUMP PUMPS**

*Constructed of Copper and
Bronze Throughout*

Made in Seven Models and Sizes

A shape to have in

Wood, stone and brick have each dominated periods of design. Today the material is metal.

A sheet of metal shaped like this is in its strongest structural form. This is the shape of a Robertson Q-Unit.

"Q" stands for Quick. It symbolizes Robertson's engineering of wall and floor units specifically to meet problems in construction today which did not exist a few decades ago. They also relieve today's builders of much of the unpredictable element in field labor which penalizes other materials.

Q-PANEL

Q-Panel is a metal Q-Unit, plus incombustible insulation, plus a sheet of flat metal.

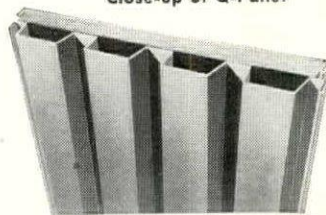
A Q-Panel only $3\frac{1}{4}$ " thick has a better U-factor than a 12" masonry wall. Panels come in two-foot widths and are light in weight. They arrive at the site requiring a minimum of field labor. A crew of 12 men can erect an area equal to an acre of wall in one week.

Q-Panels are the logical complement

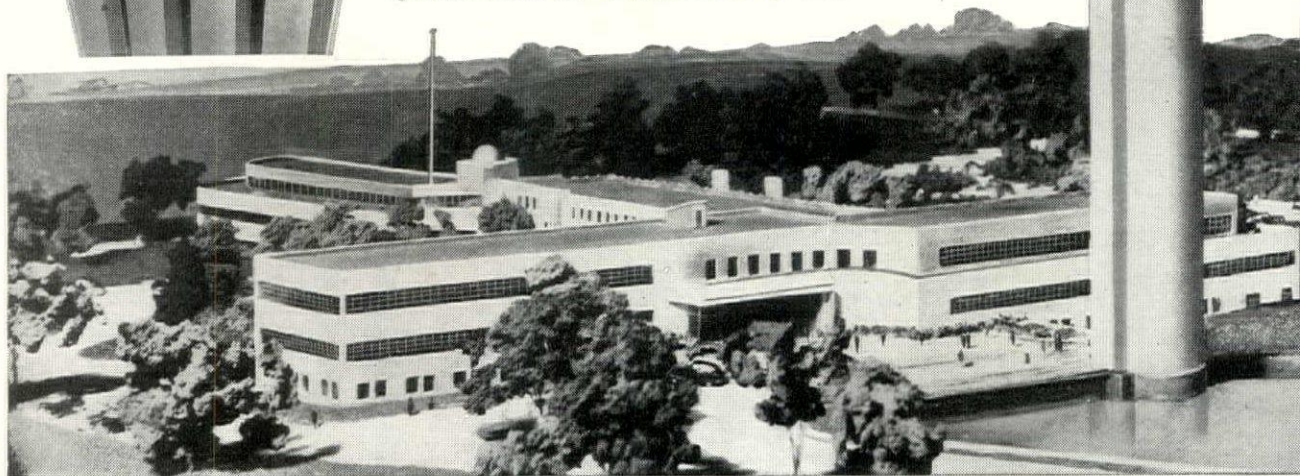
to steel framework. They are curtain walls and use metal to its utmost efficiency. They are a basic building material offering today's designers modern variations in appearance never before available. Exterior surfaces can be flat or fluted or combinations of both, achieving contrasts in light and shadow. You have the choice of metal coated steel, stainless or aluminum.

Q-Panels are available now.

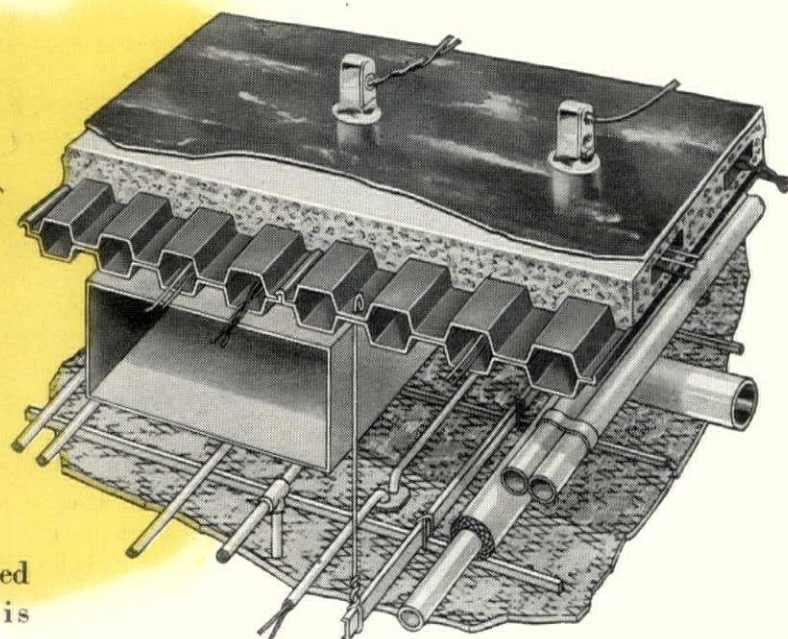
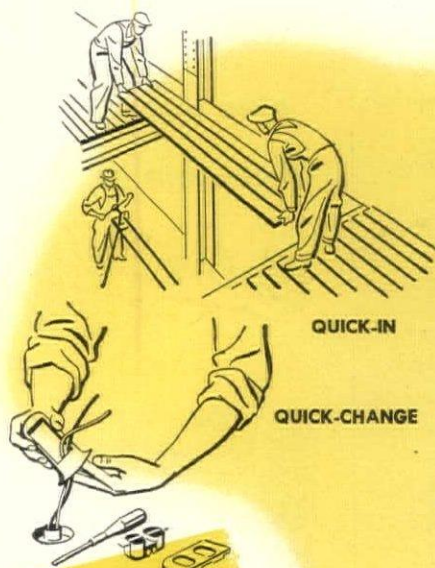
Close-up of Q-Panel



Federal Telecommunications Laboratories, Inc., Nutley, N. J. For buildings 1 and 2, the architect was Louis Weeks, of New York City. Buildings 3 and 4 and Tower are by Giffels & Vallet and L. Rossetti of Detroit, Michigan. Contractor was George A. Fuller Co., of New York City. Exterior walls are Robertson's aluminum Q-Panel. Floors are Robertson steel Q-Floor.



mind while designing in the 20th Century



Steel Q-Floor is shown here with suspended ceiling and a condensed presentation of mechanical equipment needed in a modern building.

Q-FLOOR Q-Unit engineered as flooring is Q-Floor. It answers the need of modern buildings for unlimited electrical availability. Q-Floor is the steel subfloor. The cells are crossed over by raceways which carry wires of any electrical service. It takes but a few minutes for an electrician to drill a small hole and establish a fitting on any six-inch area of the entire exposed floor.

Partitions and electrical outlets need not be planned until occupancy. This saves drafting room work. Also, the owner's investment is protected against obsolescence. With electrical alterations so easy, facilities can be kept up to date long after appearance may be outmoded. This is a financial point appreciated by builders. You can see Q-Floor

Fittings at any General Electric construction materials distributor's.

Q-Floor, because of quick installation (delivered pre-cut; two men can lay 32 sq. ft. in 30 seconds), and dry construction, has reduced construction time 20 to 30%. Also, it requires no preset inserts. Including suspended ceiling, Q-Floor weighs less than forty pounds per sq. ft. and has a four-hour fire rating.

Q-Floor is available now. For more details, call a Robertson representative or write

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Offices in 50 Principal Cities
World-Wide Building Service

LETTERS



Gives You YEAR 'ROUND COMFORT, CONVENIENCE, SAFETY AND ECONOMY . . . OFFERS "MAGIC PANEL" VENTILATION . . . SELF-STORAGE . . . PATENTED THERMOLOK® CLOSURE FRAME . . . AND MANY OTHER YEAR 'ROUND ADVANTAGES.

One of the products of The F. C. Russell Co. . . all of which are self-liquidating investments in comfort, convenience, safety.

A nationwide network of competent, reliable distributors and a staff of experienced field engineers give assurance that The F. C. Russell Company products you specify will be installed in accordance with your specifications. These same distributors and field engineers are at your service to give you the benefit of their wide experience with problems of insulation and protection for all types of windows—for homes, commercial buildings, institutions.

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The F. C. Russell Company line of combination windows offers a wide choice of designs to fit specific requirements . . . steel, aluminum, wood . . . all properly treated for weather resistance. ALUMINUM CASEMENT STORM SASH . . . RUSCO ALL-METAL, VENETIAN-TYPE AWNINGS . . . RUSCO ALL-METAL JALOUSIES . . . RUSCO ALL-METAL TERRACE AWNINGS . . . RUSCO ALL-METAL DOOR CANOPY . . . CINCINNATI CUSTOM-BUILT INSECT SCREENS . . . DUO-GLAZE INSULATION . . . THERMOPANE (with patented adjustable closure frame for picture windows).

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DEPARTMENT 1-AF39
CLEVELAND 1, OHIO



World's Largest Manufacturer of Combination Windows

TERRACE PLAZA

Forum:

I was indeed interested in the article you did on the Terrace Plaza (FORUM, Dec., '48.) I think that your coverage on this story is outstanding. The execution of the drawings, the general layout and the thoroughness of the reporting job certainly must have appealed to your readers. I thought your color photography and reproduction were terrific. . . .

L. W. O'BRIEN, Editor,
General Electric Co.

Nela Park, Ohio

Forum:

. . . . Your story on Cincinnati's Terrace Plaza Hotel (FORUM, Dec., '48) certainly is the nicest piece of magazine typography I have seen in some time, and your are to be congratulated on this work of art.

Allow me to congratulate you on a handsome piece of work.

ARTHUR L. LEE
General Manager
National Hotel Exposition

New York, N. Y.

MAGIC CIRCLES

Forum:

. . . The illustrations of round and hexagonal houses (FORUM Letters, Nov., '48) speak eloquently again of the fallacy of the idea, wonderful as it may look on paper.

Planning on a circle or a hexagon is like planning with the classic orders, there's no way to stop, once started. Contemporary architecture, through an organized flow of space which minimizes box-rooms, fixed partitions, and unusable acute corners, can have all the advantages of circular planning—even its economy—without its ugliness and awkwardness. Let's not be led astray by magic circles!

JAMES G. BOWMAN

Lawrence, Kan.

Forum:

. . . It has given us much pleasure to see the fine seven-page spread you gave our new home office building (FORUM, Jan. '49). The feature was well done and is a very nice compliment to North American Life & Casualty Co.

We certainly appreciate the fact that the Architectural FORUM considered our building worthy of such treatment in your fine magazine.

H. P. SKOGLUND, President
Minneapolis, Minn.

(Continued on page 42)

Cabot's

32 attractive shades

give you

freedom in

Color Selection



Architect: Eleanor Raymond

Cabot's Collopakes now offer you a choice of thirty-two attractive shades including many unique shades available from no other source.

Cabot's Paints have tremendous hiding power and lasting brilliance because they are made by our patented Collopaking process. Pure pigments are broken down into particles of sub-microscopic size and colloidal combined with wear-resistant oils. No fillers or adulterants are used. As a result, Cabot's Paints produce a porcelain-smooth finish which shows no brush marks . . . hold their color, and resist the elements for years.

WRITE TODAY for color cards and complete information. Samuel Cabot, Inc., 323 Oliver Bldg., Boston 9, Mass.

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KENCORK
Floors and walls

Let's get Personal!

Breaking in upon the privacy of a lady's boudoir, we find floor and walls of Kencork. There are many practical reasons for Kencork's being there. Natural cork, it is one of nature's insulators — warm enough in winter for barefoot walking, yet comfortably cool on sultry summer days. It is exceptionally quiet underfoot and the natural cork texture provides a non-slip floor surface.

But perhaps more important to your client is Kencork's rich, quiet beauty. Its neutral coloring of tans and browns makes an ever-changing, never-tiresome pattern that harmonizes with modern furniture and fabrics — fits into any color scheme. A room with Kencork walls and floor is a perfect starting point for an exquisite interior.

Knowing Kencork's many practical advantages, its lifetime durability and reputation for great luxury — many architects are agreeably surprised at its low initial cost. Ask your flooring dealer about Kencork or write us for the colorful Kencork catalog.

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Increased production now makes it possible to furnish Bruce Blocks for large and small areas.

For modern beauty... for long-time economy in apartments, homes, offices, stores, schools

This modern hardwood floor will last the lifetime of a home or building. Thus it's far more economical than floors or floor coverings that must be replaced every few years. It's a quiet, resilient, warm, comfortable floor... easy to keep clean and beautiful. Installation is simple: laid in mastic over concrete, or nailed over wood subfloor.

See our catalog in Sweet's, or write: E. L. BRUCE CO., MEMPHIS, TENN. • World's Largest Maker of Hardwood Floors



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HARDWOOD FLOORS

Timken Silent Automatic

"Duty-Designed" oil heating
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home demand for **quietness, dependability,**

compactness and fuel economy . . . plus low first cost

in keeping with small-home budgets.

- BUILT RIGHT
- PRICED RIGHT
- DESIGNED RIGHT

TO SPEED THE SALE
OF YOUR SMALL HOMES!



NEW "DUTY-DESIGNED" LO-BOILERS, incorporating every wanted, needed feature for finest small-home heating, are ready in a wide range of capacities from 25,000 to 110,000 Btu. per hour output. Two cabinet types—deluxe and special. Three heat exchanger types—copper coil, cast iron and steel. Tandem installations are recommended for larger homes. Write for literature today!

Other "Duty-Designed" units include Hi-Boilers, Hi-Furnaces, coil and tank-type Water Heaters, and standard-design Oil Furnaces.



Small homes *sell faster* when they're equipped with nationally advertised Timken Silent Automatic "Duty-Designed" oil heating equipment!

Here's a *complete* range of sizes and types of units—all built expressly to meet small-home heating needs. Newly engineered throughout—and totally unlike anything else on the market—these Timken Silent Automatic "Duty-Designed" units are truly in a class by themselves.

Because of their quietness, reliability, compactness, and fuel economy, they insure complete owner satisfaction. What's more, this quality-built equipment is priced to help you cut costs and offer better homes at lower prices. Today, more than ever before, *it will pay you to install Timken Silent Automatic!*



THIS WHISPER-QUIET WALL-FLAME
FIRES EVERY "DUTY-DESIGNED" UNIT

The famous Wall-Flame Burner—especially designed for unit operation and equipped to burn the new catalytically-refined fuel oils—is the heart of every Timken Silent Automatic "Duty-Designed" oil heating unit.



Models shown (OBD-50, OBA-65, OBG-85) illustrate three types of heat exchangers—copper coil, cast iron and steel.

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OIL HEAT

TIMKEN SILENT AUTOMATIC DIVISION
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LETTERS

Look At This Record of Trouble-free Service



**More Than
3,000,000
PAINE
REZO
Guaranteed
DOORS
have been specified by
architects and builders**

No other field of business is more insistent on proved performance in the products that it uses than the building industry. You know that. That's why you'll appreciate what the nation-wide acceptance of Paine Rezo doors means . . . in terms of satisfactory service to the building owner, and in terms of conformity to the attractive interior effects of architectural designers. And with these positive values goes initial economy, for this time-tested interlocking cell-type door costs no more to install than a common panel door. Expanded production facilities are now making the 1 3/4" Rezo door again available almost everywhere from coast to coast. Refer to Sweet's Architectural File, see your dealer, or write for an informative bulletin on this patented, best-engineered, guaranteed door.

U. S. Pat. 1,887,814
The exclusive interlocking grid core within the Rezo door allows constant air circulation, adds extra strength, and provides greater rigidity.

Manufactured by the
PAINE LUMBER CO., Ltd. *Oshkosh Wisconsin*
ESTABLISHED 1853

FINAL MEASURE

Forum:

For us the issue on "Measure," (Nov. '48) seems to be a very valuable contribution to the clearing up of problems around architecture, and may be able to have a vast influence on the educational principles hitherto applied in the architectural schools the world over. . . .

NILS HELGE HANSEN,
*The Royal Academy of Fine Arts
Copenhagen, Denmark*

Forum:

May I add a belated Hurrah! Your November issue was the best FORUM, yes, the best architectural publication to date.

I enjoyed it all, but especially that section devoted to Space. I have read Moholy Nagy's "Vision in Motion" and Geideon's "Space, Time and Architecture." After reading your "Space" these two books mean much more to me.

CHARLES E. JOHNSON
Portland, Ore.

Forum:

Please allow one who has been engaged in planning for many years to congratulate you on your November issue. "Measure" is a realistic and practical attempt to codify the confused technology of building.

SEWARD H. MOTT,
*Executive Director
Urban Land Institute
Washington, D. C.*

Forum:

We have read with much interest your very comprehensive study under the title, "Measure," of the new factors involved in adequate present-day design. Your careful and detailed treatment of this broad subject should contribute much to a more general use of the materials, methods, and techniques now available.

RICHARD WALBERG, *Contractor
San Francisco, Calif.*

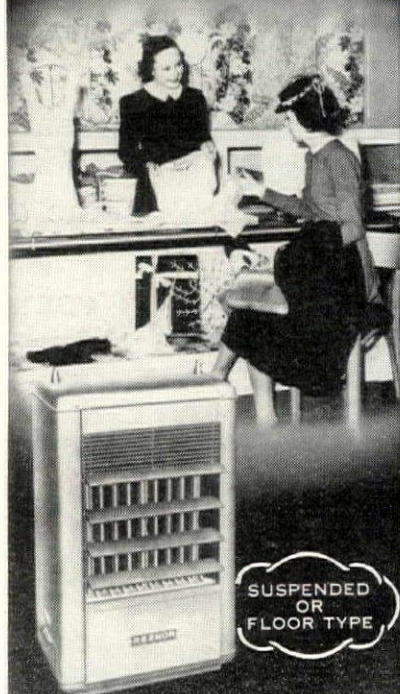
Forum:

I have re-read with care the November issue of FORUM. . . . It is a challenging presentation and in many ways the most interesting resume of the art. Careful preparation and enthusiasm are both evident. Your willingness to question many of the accepted but unproven "facts" is appreciated, particularly the emphasis placed on Dr. Tinker's challenge on the present concepts of illumination.

There is a tendency to subscribe to the thought that comfort, of itself, is ignoble and that you may only have comfort as a

(Continued on page 46)

Automatic **REZNOR** gas fired unit heaters.



PREFERRED

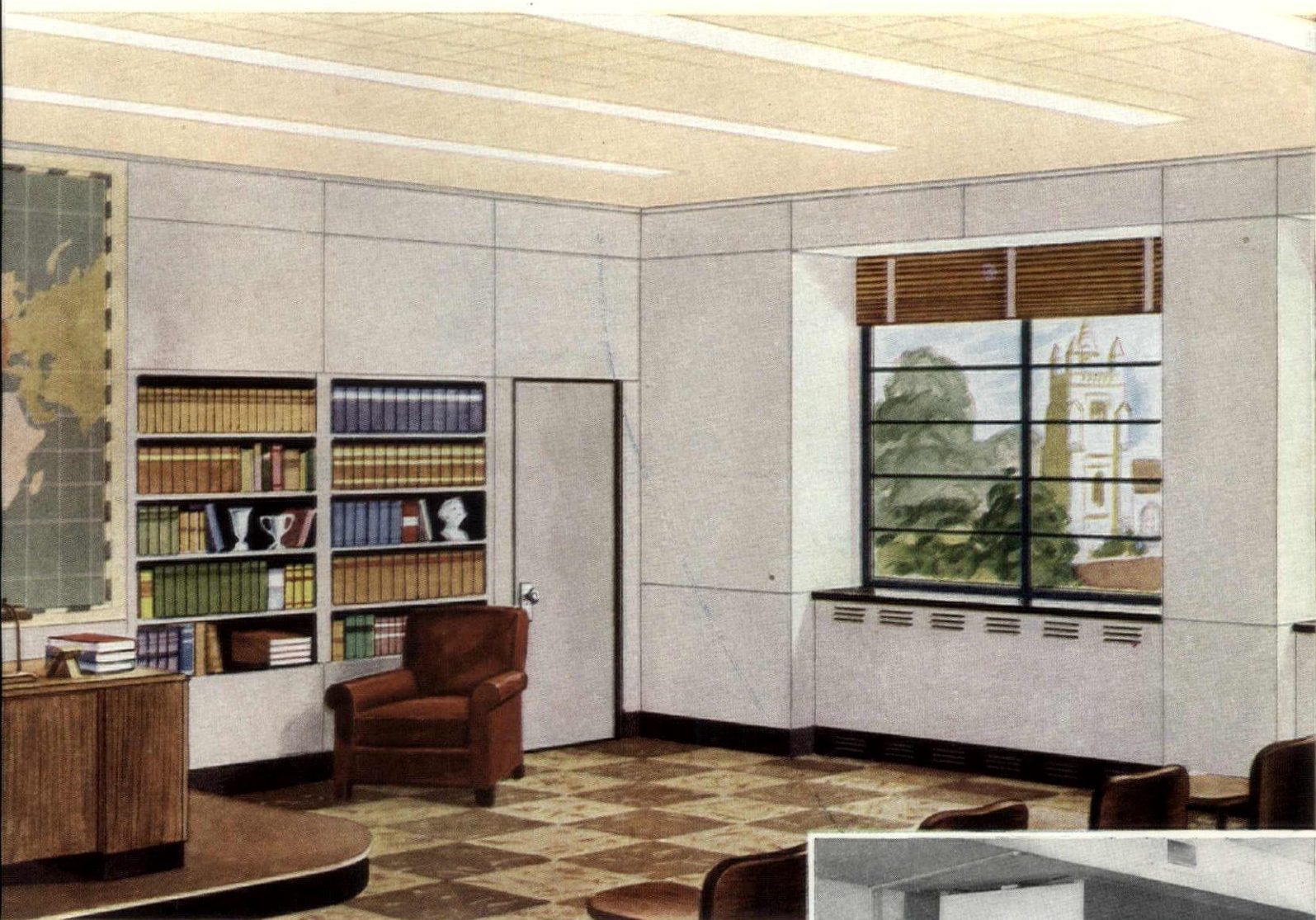
Join the big army of engineers, distributors, and dealers that recommend more Reznor gas fired heaters—floor and suspended—than any other. More are sold and more are in use than any similar type. Made since 1888. Want to know more? For outstanding and special features write today for Catalog U-45.

- FULLY AUTOMATIC
- EXTRA LARGE FAN
- SPECIAL HEAT EXCHANGER
- STRONGER CONSTRUCTION
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Gas Heaters Since 1888



SCHOOL BOARDS SAY *"Yes!"* TO THESE FLEXIBLE INTERIORS

Rooms where and when you want them!—That's what school authorities like about Johns-Manville Movable Transite* Walls

• With these asbestos-cement partitions, rooms can be enlarged, subdivided, or even relocated to meet ever-changing educational needs.

At the same time Transite Walls are more attractive, and so easy to clean they bring maintenance costs *way down*.

For school architects and school building authorities, Transite Movable Walls offer the ideal features needed to create that long-sought "proper environment for learning." In many cases, Transite

Walls are combined with two other Johns-Manville materials to provide the *complete* school interior: noise-reducing Acoustical Ceilings, and resilient Decorative Floors of Asphalt Tile or plastic Terraflex units.

Write for the brochures describing these important steps forward in school design. They may help you on your next project.

Address Johns-Manville, Box 290, New York 16, N. Y.

*Transite is a registered Johns-Manville trade mark

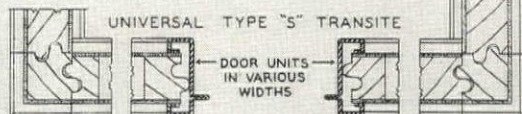


2 Types of Transite Walls

Shown above in process of erection is the Universal type of J-M Transite Wall. The finished wall consists of a sealed core faced on both sides with asbestos-cement sheets and is 1 3/4" in thickness. It is one of the easiest and most economical of all walls to erect and relocate.

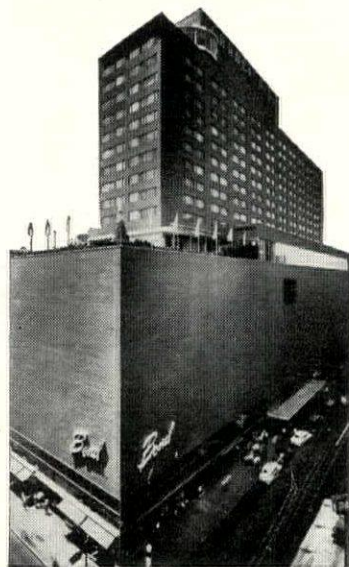
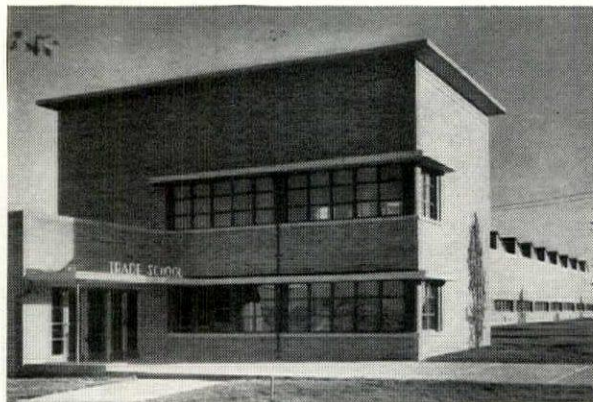
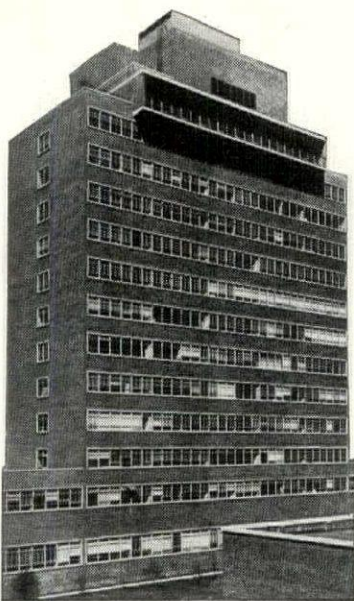
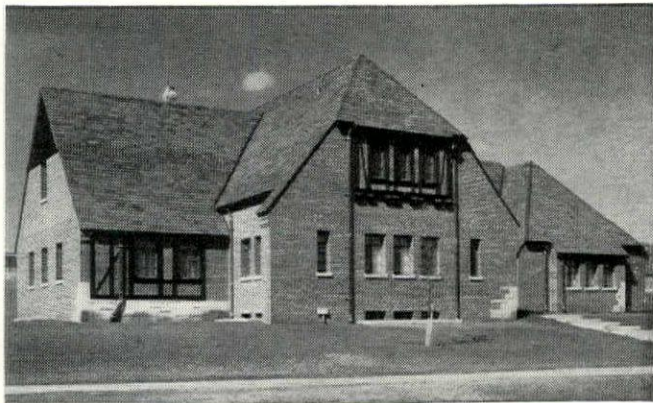
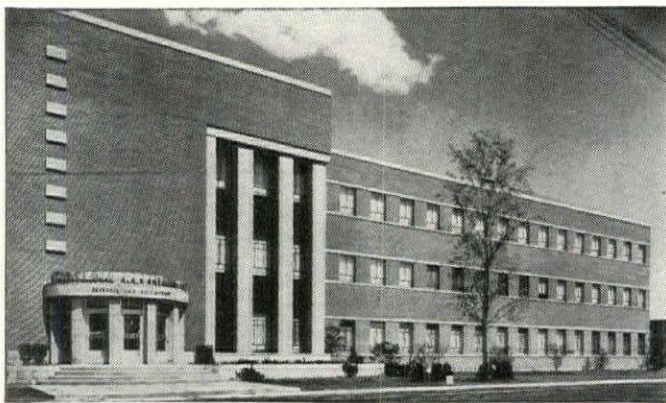
A second type of Transite Wall is called Imperial. Here the asbestos-cement panels are hung on steel studs, forming a 4" double-faced partition.

Both types are fire-resistant, rotproof, hard-to-mar, easy to maintain, and highly resistant to shock and abuse.



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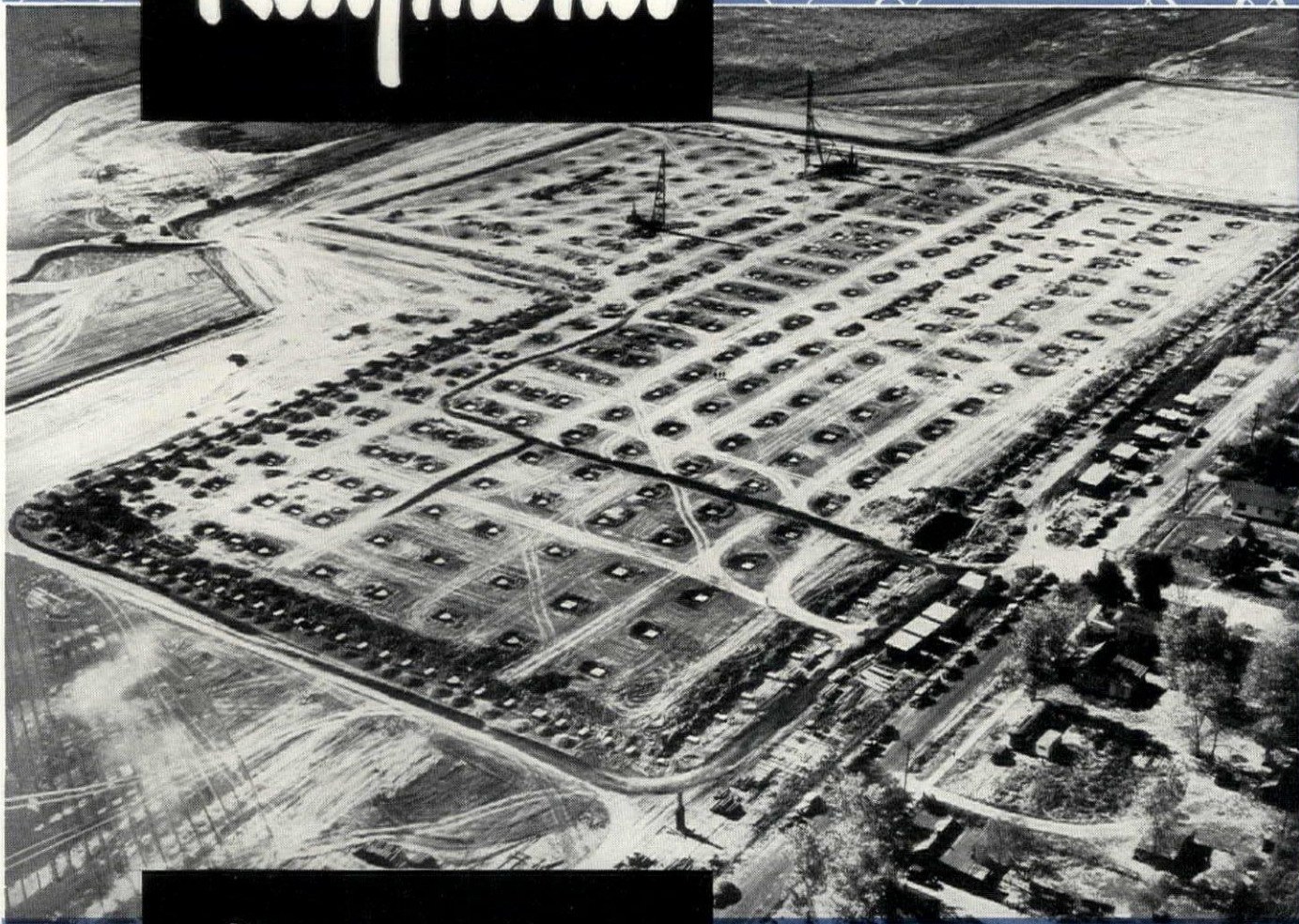
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* (U)

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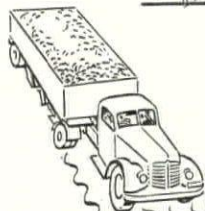
• protection against DRAFTS

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protection to health. For example, you first challenge the present concepts of illumination and then, in my judgment, overstress the health aspects. New housing and indoor conditions must be bad indeed before they can be proved to be a health menace. In 1948, we should be comparing good and better, not bad and good. Away with scare technique as a means of "selling" modern design!

I believe I detect error in some of the treatment with which I am most familiar, particularly in the treatment of radiation and humidity and their effect on comfort. On the points in question, I differ with many of my colleagues so, even if I am correct, this detracts but little from the importance of the presentation. Without minimizing the importance of formulas on the human heat balance as a means of aiding study, it must be realized that the body is not a mechanical appliance and that the final judgment of comfort is subjective.

Since I do not claim to be an expert on the subject of housing, I will speak freely. The dismissal of all former housing types seem a bit summary and, in comparing expensive modern with inexpensive traditional, a bit unfair. I think there is over-emphasis on the use of daylight, and particularly south daylight, and a tendency to minimize the importance of north light and north view. There appears to be a tendency to make ease of housekeeping synonymous with good living, which is oversimplification. It would be interesting to have a dissertation which placed greater emphasis on the means for obtaining privacy in the home where growing youngsters can frequently dispense with the companionship of their elders, and vice versa, also a treatment of the problem of the important changes in the housing need of any one couple during the development of their family.

Since, in the presentation, it is tacitly assumed that income has not kept pace with the cost of housing, it seems impossible for families of modest means to obtain liberal space. Perhaps it would be best if a young couple purchased barn-like space, providing gadgets and embellishments as they are financially able. Admittedly, housekeeping would be more difficult but there would be a chance of providing sufficient space, even that required to pace the floor while figuring how to obtain the wherewithal for improvements.

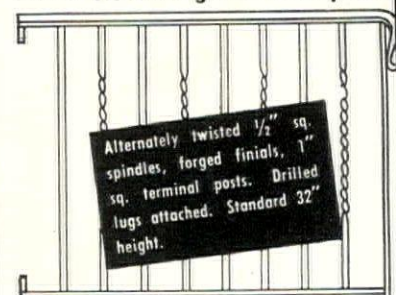
From the foregoing you appreciate that your article was stimulating and I repeat that I think it is an interesting and significant treatment of the subject.

CHARLES S. LEOPOLD, *Engineer*
Philadelphia, Pa.

(Continued on page 50)

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3

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2 FLEXIBILITY OF DESIGN

3 ECONOMY

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"We have used Stran-Steel construction in several recent school buildings.

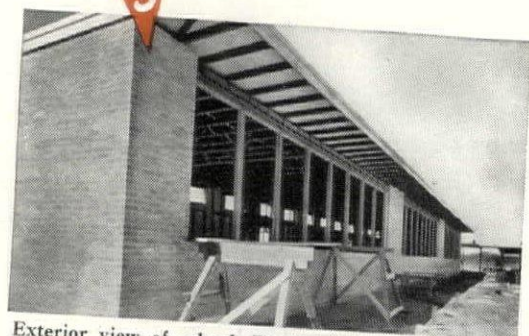
"Besides being most flexible for modern design, providing light cantilevered construction, thin window mullions used with collateral materials, economical suspended furring, Stran-Steel offers great rigidity with speed of erection for greater economy.

"Being able to nail to Stran-Steel framing gives the economy of wood framing for dry wall construction (Knox School) also eliminates furring for metal lath (Robstown Schools) in plaster construction. Fire-safety and long life is of paramount importance in school building construction, and incombustible Stran-Steel framework meets both of these requirements."

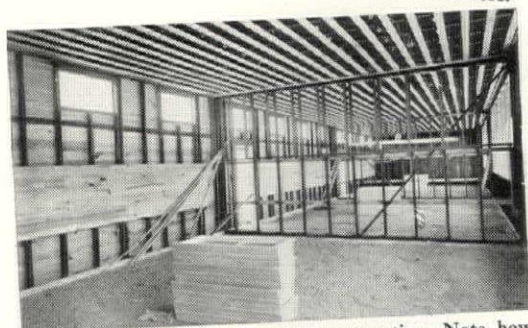
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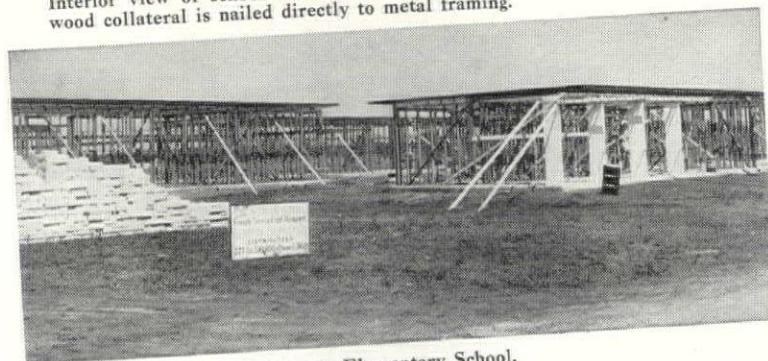
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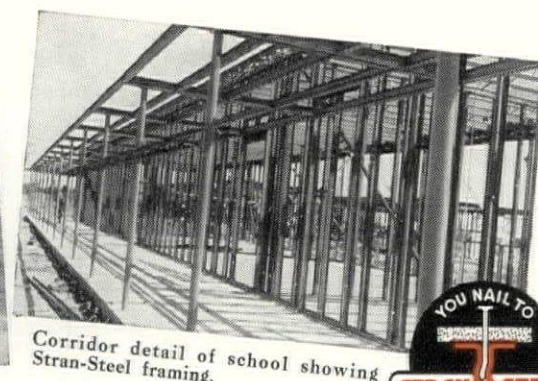
Exterior view of school. Electrical wiring is installed through factory-punched holes in frame members.



Interior view of school under construction. Note how wood collateral is nailed directly to metal framing.



Stran-Steel framing for Robstown Elementary School.



Corridor detail of school showing Stran-Steel framing.



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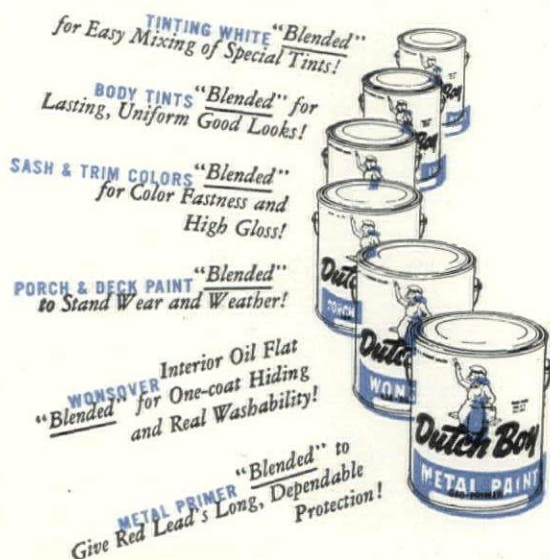
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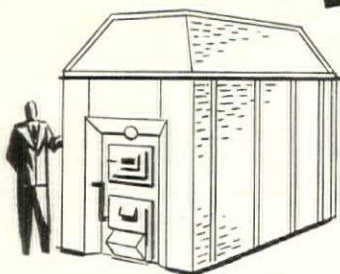
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Forum:

We are impressed by your efforts to bring before the industry such a comprehensive discussion of the fundamental requirements for healthful and convenient human environment. (FORUM, Nov., '48.) Your emphasis of the architect's unique opportunity to organize the vast array of knowledge from many fields in which he can obviously no longer be an individual specialist, is most timely. We are particularly interested in the sections on the fundamentals of heat, light and sound which describe many of the basic factors about which all architects and builders should be more widely informed if the houses which the nation builds are really to fit the American family's living needs.

As you know, the basic responsibility of this agency lies in housing and its research interests are directed to cost reduction through the specific channels of standardization of building regulations, together with standardization of planning, building materials and techniques. Therefore we hope that you find it possible in the near future to expand these specific subjects focusing them to the design of simple structures intended for dwelling use. If you are able to do this, our technical personnel will welcome the opportunity to cooperate closely with you.

RAYMOND M. FOLEY,
Administrator,
Housing & Home Finance Agency
Washington, D. C.

Forum:

... I want to compliment you and your entire staff for getting out the most informative piece of literature that I have ever read pertaining to our industry. (FORUM, Nov., '48). All of us in the industry can learn and enjoy learning from the ideas set out. My only regret is that many more thousands of people could not have had the privilege of reading this informative issue.

FRANK W. SHARP, Builder
Houston, Texas

Forum:

We lost a day of work in our office when the "Measure" issue of FORUM arrived. It went from hand to hand and is one of the most important issues in our magazine library.

I am only sorry that I was not among the first to congratulate you on this outstanding contribution to the designing profession.

GEORGE FARKAS, Industrial Designer
Miami Beach, Fla.

FORUM appreciates the responses to "Measure," and regrets only that it has not the space to publish them all.—Ed.

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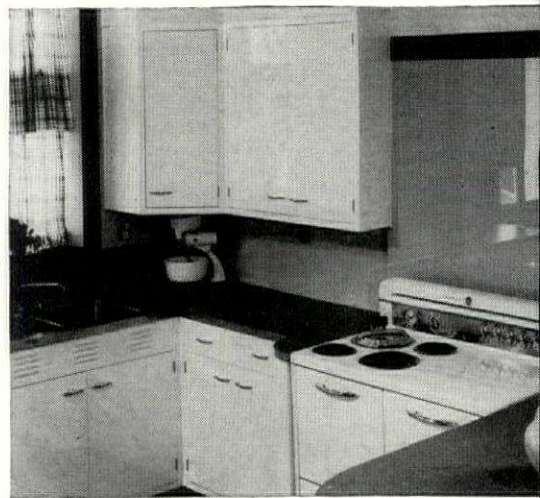
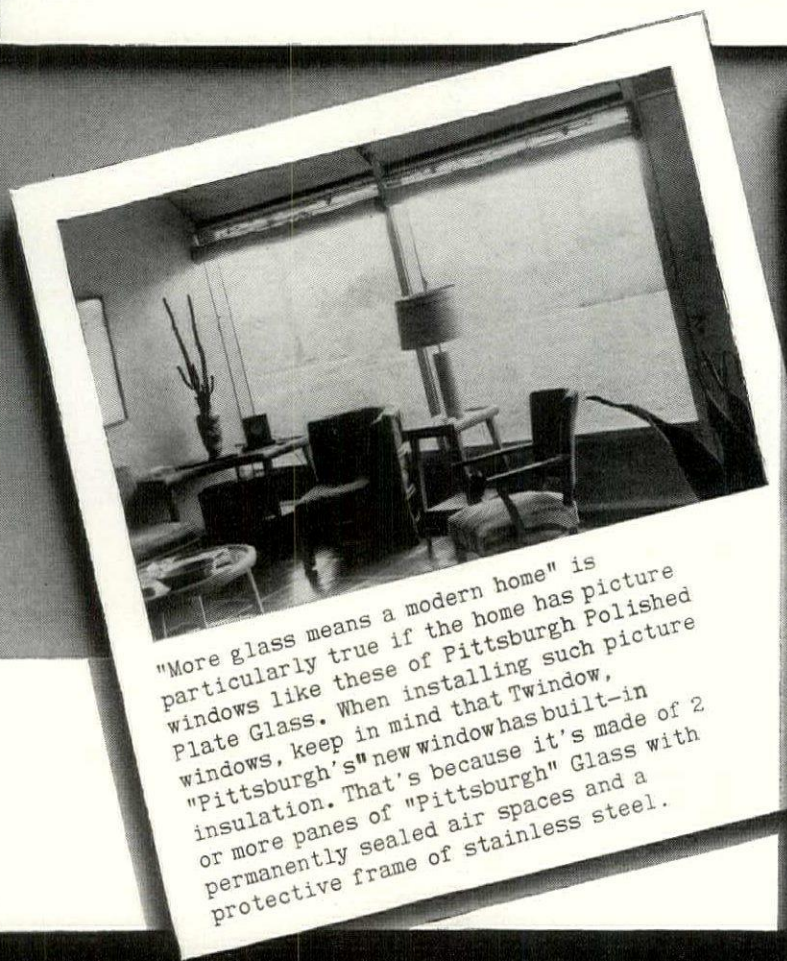
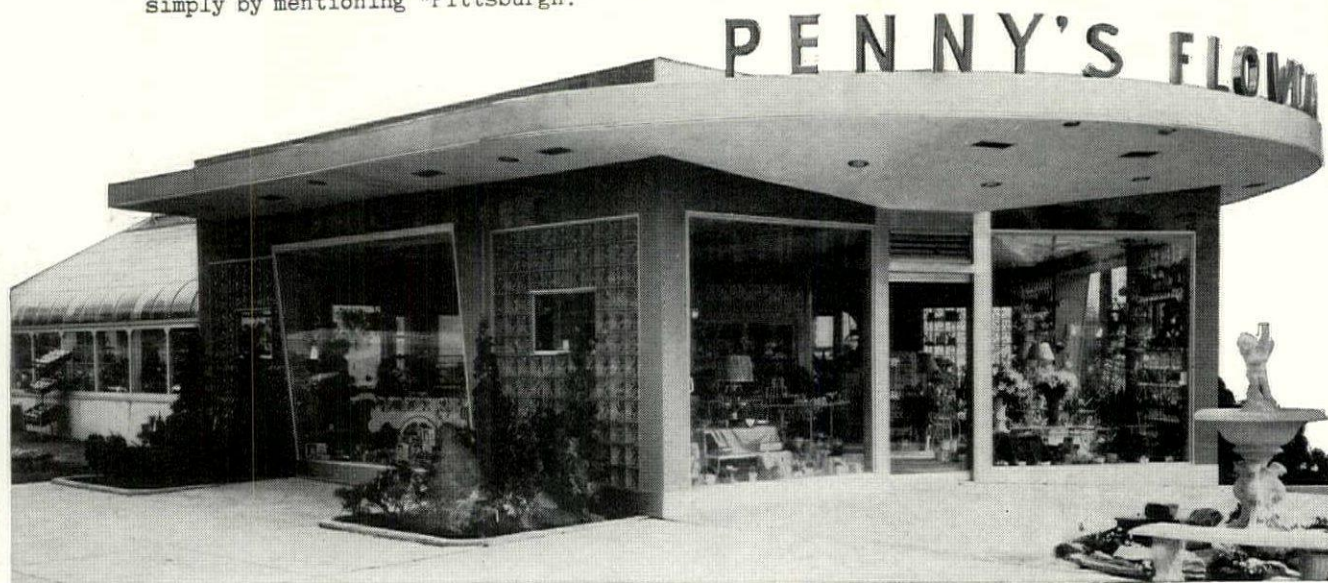
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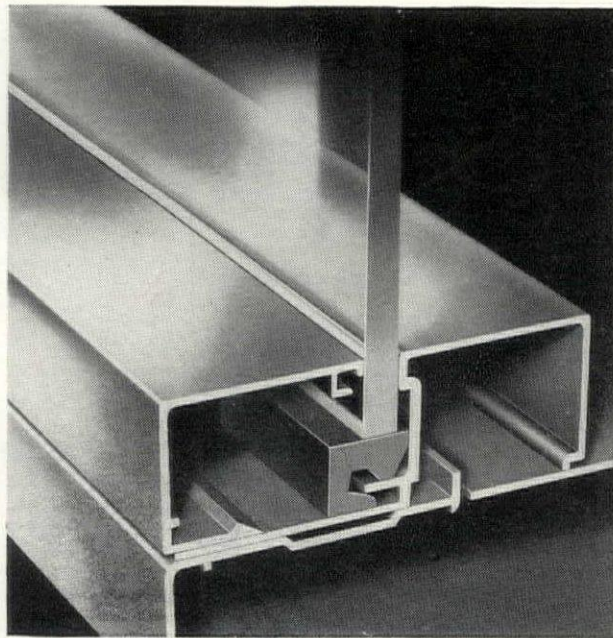
Because it is practical and long-lasting, as well as extremely good looking, Carrara Structural Glass is well-suited for walls and wainscots of kitchens and bathrooms. For splash panels, too...behind stove or lavatory...as a fireplace surround or for corner shelves or window sills—Carrara is certain to please customers. They'll like its pleasing colors (10 to choose from). Its easy cleaning. And the fact that it won't check, craze, fade, or absorb odors.

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AF-3



RALPH GULLEY has spent most of his professional life simultaneously practicing and teaching architecture. He taught planning and design at the University of Florida, Georgia Tech, Rensselaer Polytechnic Institute where he organized and, for 12 years, headed the Department of Architecture. In 1943, he joined Don Deskey as co-partner to prove again, as he did at Rensselaer, that "commonly accepted barriers in the fields of design and engineering should and can be broken down". Recent proof: B. Low-Sanford Carpet Co.'s nation-wide showrooms modernization program (p. 83).



WILLIAM A. AMENTA and **GEORGE LAVINO** have been partners in architectural practice since the summer of 1946. Lavino studied architecture at the University of Pennsylvania, designed for several Philadelphia architects before forming the partnership. Amenta received his architectural training on the job, working for architects, engineers and contractors. Most of the firm's work "fortunately (it's fun) and unfortunately (not very remunerative) residential." A recent design is Amenta's own home (p. 90) in F. Ayres, a Philadelphia suburb.



Architect **L. MORGAN YOST** has been designing houses from his office in Chicago's North Side since 1933. A graduate of the University of Illinois (class of 1930) he is vice-president of the Chicago chapter, A.I.A. **ANDREW S. PL** is purchaser, engineer and construction supervisor for Place & Co., builders of the Yost designed Revere-FORUM house in South Bend, Ind. (p. 92). Before going into the building business with his father in 1938, he studied engineering at Purdue University and worked for the Carnegie Illinois Steel Corp.



STEPHEN L. MACDONALD, Salt Lake City architect, left that metropolis in 1935 to study architecture at Massachusetts Institute of Technology. After graduation, he remained on the East Coast to do product design and calligraphy in Boston and New York. He returned to Salt Lake, the mountains and skiing in 1940, worked in several design offices, and at war's end, joined R. Lloyd Snedaker in a practice devoted largely to residential (Macdonald's own house, p. 112) and commercial design.

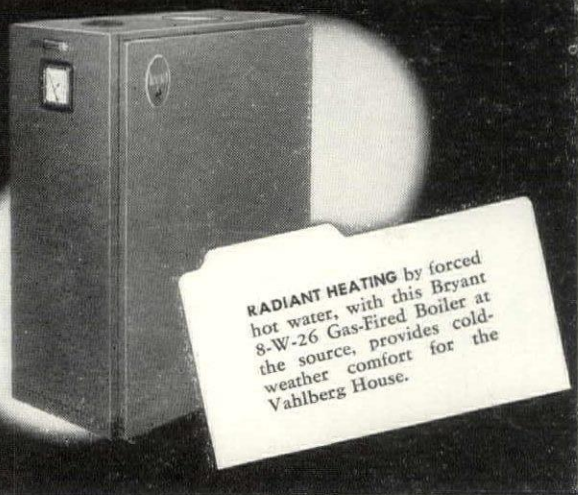


WALTER P. MARGULIES, of the New York firm of Lippincott & Margulies, is perhaps best known for his design of the trend-setting live bedroom units in Washington D. C.'s H. Statler. Born in France, he studied architecture at L'Ecole des Beaux Arts and the Universities of Rome and Vienna, came to the U. S. in 1939 to design for the New York World's Fair. The present firm was organized with J. Gould Lippincott in 1946. Lippincott's bailiwick product development, Margulies', interior design. New York's latest Walgreen Drug Store (p. 112) stemmed from Margulies' department.

IT'S A CASE OF
Quality...

The Robert W. Vahlbergs' house, Oklahoma City; designed by the owner-architect; built by Robert Parks Oklahoma City.

...in an architect's DREAM HOUSE



Installation by White & Messer Plumbing & Heating Co., Oklahoma City)

The dream house of the Bob Vahlbergs sprawls comfortably on a wooded slope. It is rooted to earth by a seventy-five-foot-long slab of concrete. From its wall of glass, framing a view to the South, to the Bryant Boiler that activates its unseen radiant coils, it is as modern as tomorrow.

Architect Vahlberg has definite ideas about the things a house should have. He believes firmly in open planning to create a feeling of space; materials that are natural-looking and complementary to the setting of the house; wide expanses of glass, to capture the outdoors for indoor enjoyment; *automatic heating that provides the warmth of Spring sunshine*, no matter what the weather outside.

In the year or so of its existence,

the house has *proved* these things, and more, to the Vahlbergs. It gives them everything they want for their living enjoyment... their *comfort*. That, in a word, is the proof. For, by and large, the components of anybody's dream house add up to just one thing: *comfort*.

We like to think of architects like Bob Vahlberg as men who deal in comfort, because that's a big part of *our* business, too. It's a kind of partnership... with *creative* architecture and Bryant *quality* heating going hand-in-hand to provide the stuff that dream houses are made of.

And we're mighty pleased that so many of these dealers in the much-sought commodity called comfort consider Bryant Automatic Heating part of their stock in trade.



Let the pup be furnace man
... and water boy, too!

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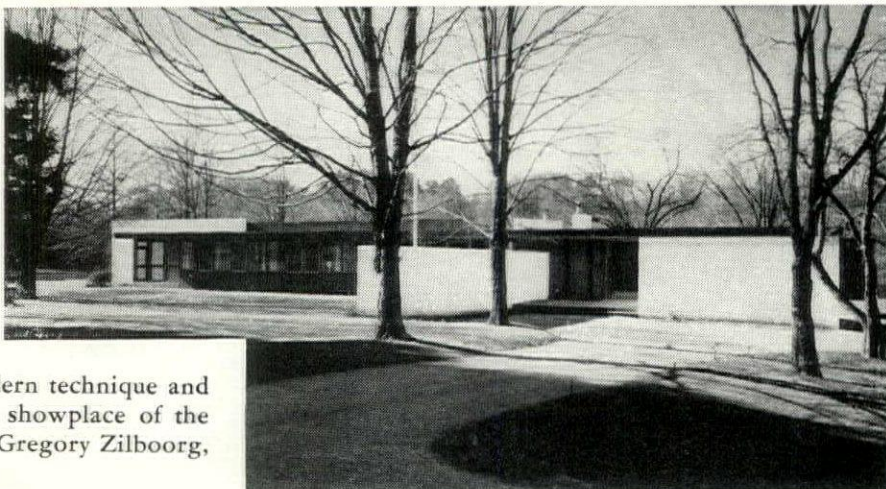
says Architect **ROBERT W. VAHLBERG**
3501 Maxwell Road, Oklahoma City

"Two seasons of faithful operation in my own house have borne out my confidence in Bryant equipment. I'm a particularly enthusiastic booster of the Bryant Boiler line, with its wide range of 35 sizes that provides a unit for almost *any* need."



WELDWOOD PANELING . . . one basic reason for the architectural excellence of THE ZILBOORG HOUSE

This interesting Dri-Built home was designed on a 4' module . . . to make most efficient use of Standard Weldwood Panels



ARCHITECT Percival Goodman's modern technique and use of modern materials make a showplace of the recently completed home of Dr. & Mrs. Gregory Zilboorg, Bedford Village, New York.

Almost every room is paneled in Weldwood, using either birch, maple, cedar or oak. And . . . taking advantage of the ease with which "built-ins" can be planned into Weldwood walls . . . Mr. Goodman provided extensive cabinet and storage wall accommodations in the bedrooms, kitchen, dining room and living room . . . all executed in matching Weldwood.

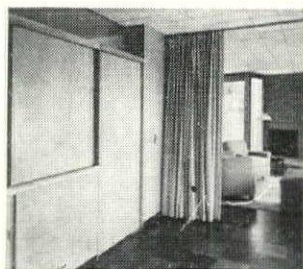
Other features include ceilings of acoustical tile . . . brick-paved flooring in the entrance foyer, with most of the other floors in cork tile . . . and a dead-flat built-up roof which is flooded with two inches of water throughout the summer for cooling purposes.

Another interesting detail is the use, in most rooms, of Keyhole Standards and Brackets extending from floor to ceiling between each Weldwood panel. This makes possible *easily moveable*, random width shelving almost anywhere in the house. In addition, the metal strips contribute an interesting decorative effect to the Weldwood-paneled walls.

Add other advantages of dri-wall construction, such as tight, rigid sheathing and sub-floors . . . fast, economical construction . . . and you can see why this particular design gives a client a house he will be proud of.

But don't limit your thinking of Weldwood just to the "modern" designs. Dri-wall construction and, especially, Weldwood-paneled interiors fit *any* architectural style.

So plan now to add extra appeal and convenience to your designs with Weldwood. There are many fine hardwoods, both domestic and imported, to fit right in with any motif. Write for complete information.



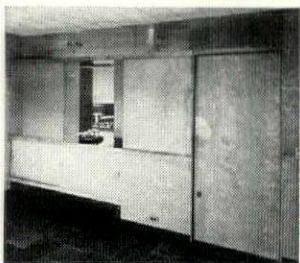
Looking from the dining room into the living room. Notice the commodious cabinets in dining room wall.



Maple Weldwood paneling and large windows make the nursery light and airy. Built-ins under the windows conserve floor space.



Again built-ins are accented in the birch-paneled living room and sliding-door closets in vestibule. Keyhole bracket, one of many used, is illustrated.



This Weldwood-paneled service wall saves many steps between the kitchen and dining room.

WELDWOOD Plywood

Weldwood Plywood and Mengel Flush Doors are products of

UNITED STATES PLYWOOD CORPORATION
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THE MENGEL COMPANY
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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, Kansas City, Kans., Louisville, New Orleans, San Antonio, St. Louis, Tampa. In Canada: United States Plywood of Canada, Limited, Toronto. Send inquiries to nearest point.

Weldwood* Hardwood Plywood
Douglas Fir Weldwood
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Mengel Flush Doors
Weldwood Fire Doors
Weldwood Flush Doors
Douglas Fir Doors
Overhead Garage Doors

Tekwood* (paper-faced plywood)
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Flexglass*
Firzite* and Satinlac*
*Reg. U. S. Pat. Off.



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Welded for Good

Weldwood Plywood is made in both Interior and Exterior types, the former bonded with extended urea resins and other approved bonding agents; the latter with phenol formaldehyde synthetic resin.

The owner-built home is not built in a day

The owner-built house is a plan that keeps on growing... a full-time, long-term project.

That's why House & Garden's high percentage of owner-builders* are important to anyone in the building picture. The houses they build are distinguished by the best materials, by all the important "extras" that are included in made-to-order, built-to-taste houses. Reach these people who have *the desire and the power to specify your product*... through House & Garden, their authority on building.

**Of those who will build...*

60%
have collected house plans

44%
have purchased land

27%
have consulted architects

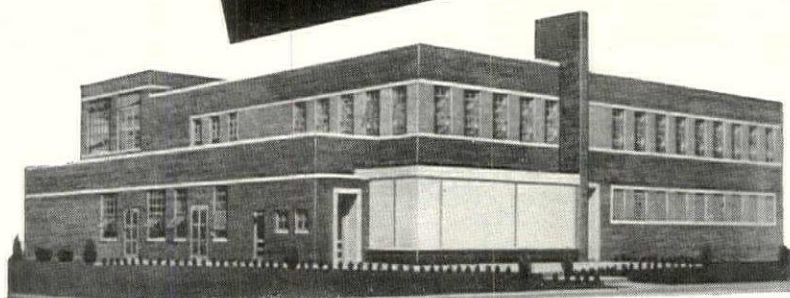
House & Garden

...for the Owner-Builder market

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in MODERN buildings... it's

ALBERENE



Modern dairy plant in Richmond, Virginia.
Architects: Ballou & Justice

In this attractive, modern plant, it's *mullions* by Alberene — because Alberene mullions match so well the shadow effect of the windows . . . blend so perfectly with the exterior of the building as a whole.

And . . . it's Alberene Stone, too, for modern-looking, durable, maintenance-free spandrels . . . sills . . . stools . . . trim.

Here's why —

- **Esthetically**, Alberene soapstone is *right* for giving a building — institutional or industrial — the modern touch. *Because* . . . its natural greenish-blue color harmonizes with any decorative pattern. *And* its moisture-proof surface does not chip, scale, or split — it *always* looks good!

- **Financially**, Alberene soapstone is *right* for pleasing even your most budget-minded client. *Because* . . . its reasonable price . . . its ability to be cut into thin sections . . . *and* its outstanding durability makes it *triple* economical.

Why not write or phone us today
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A NEW HARVARD FOUNDATION FOR ADVANCED STUDY AND RESEARCH, to further the needs of five graduate and professional schools—Arts and Sciences, Design, Education, Engineering and Public Administration. Harvard President James B. Conant set its principal objectives as providing student housing, research, fellowships and scholarships in the areas of graduate study encompassed by the schools. Estimated cost for instituting the center is \$5,000,000.

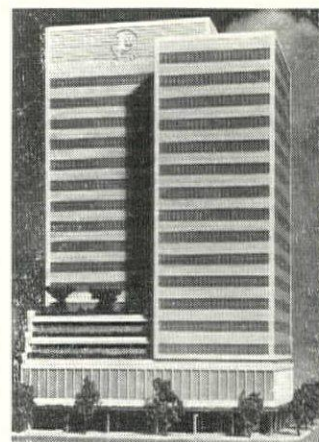
A 46-DAY TOUR through England, Italy, Czechoslovakia, Poland and Sweden, of special interest to architects concerned with Europe's approach to her problems of reconstruction, urban planning and building. Hermann H. Field, Architect and Director of Building Plans, Cleveland College of the Western Reserve University, will arrange for interviews with foreign officials and for attendance at the 4-day Eighth International Congress of Modern Architects to be held in Bergamo near Milan. Choice of air or steamship reservations to Europe is offered; all-inclusive cost for tourist steamer and expenses abroad from July 6th to September 6th will be approximately \$1,475. For information address World Studytours, Columbia University Travel Service, 2960 Broadway, New York 27, N. Y.

HOUSE IN THE MUSEUM GARDEN—"an up-to-date economic solution for the individually built, architect-designed country home,"—Museum of Modern Art, New York City, April 1 to November 1949. This showing will present not only a full-sized house by Architect Marcel Breuer but complete data on labor, materials and equipment costs.

THIRD INTERNATIONAL LIGHTING EXPOSITION AND CONFERENCE, Stevens Hotel, Chicago, Ill., March 29-April 1st.

AMERICAN INSTITUTE OF DECORATORS TRADE EXHIBIT, Hotel Pierre, New York City, March 22.

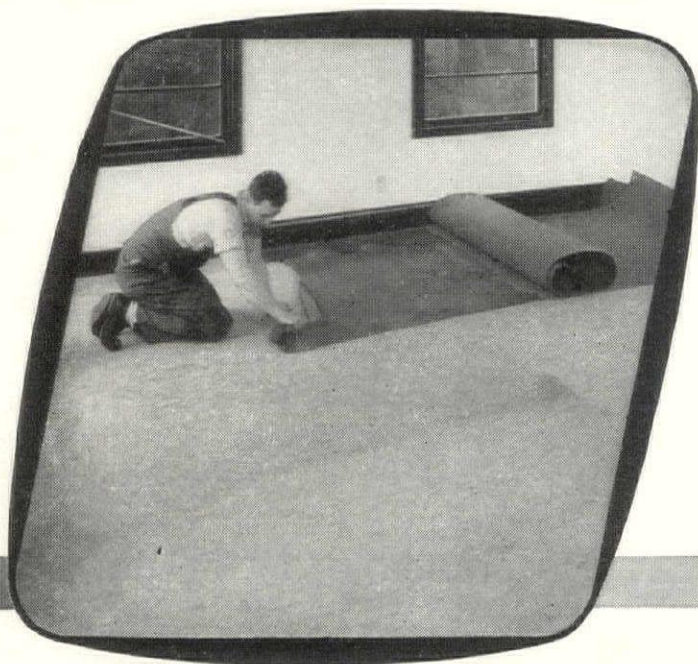
BUILDING PREVIEWS



A 20-STORY OFFICE BUILDING for the First National Bank and Trust Co. of Tulsa, Okla., to be ready for occupancy in late Spring 1950. This \$5,500,000 structure will constitute Oklahoma's first introduction to such standard postwar techniques in multi-story design as continuous windows, movable partitions, air-conditioning and flush lighting fixtures. Exterior walls are of gray brick trimmed with marble. The greater part of

the ground floor will be given over to an arcade—enclosed portions will have only glass walls. The design and construction team assembled for its evolution included: Carson Lundin, architects; Edward & Hjorth, structural engineers; Hamel & Gaynor Associates, mechanical engineers—all of New York and the Manhattan Construction Co. of Muskogee, Okla. John W. Harris Associates are serving as construction supervisors.

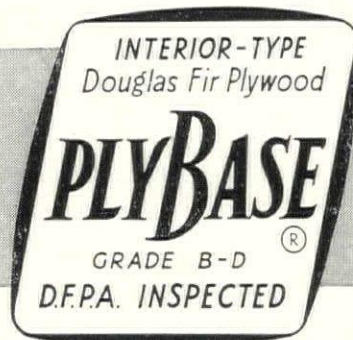
EAST DETROIT CIVIC CENTER, designed by architect Louis Redstone for a growing city of 22,000, really lives up to its title. The U-shaped building (brick exterior and exposed cinder block interior) will provide City Hall, Fire and Police Departments, Library, (Continued on page 60)



PLYBASE is a NEW grade of Interior-type Douglas fir plywood—manufactured especially as a smooth, firm, rigid base for linoleum, asphalt tile, wall-to-wall carpeting and other similar floor coverings. PlyBase is an excellent backing for wall tile and other panel materials.

Floor Coverings Look Better... Last Longer... When Laid Over **PLYBASE**

**Linoleum, Tile, Carpeting—
All Need This Better Base Panel**



Because it presents a smooth, solid base, PlyBase reduces wear on linoleum, carpeting, asphalt tile and other modern wall to wall floor coverings.

Quick and easy to install . . . there are several handy panel sizes to meet the needs of any job. Because joints and cracks are reduced to a minimum, the smooth, firm surface reduces over-all wear.

Sanded smooth, PlyBase presents a surface that is tight and solid for best finished covering appearance and wear. In addition to new work, PlyBase serves well in remodeling to cover old, rough, worn flooring with a smooth, firm surface for new covering.

For walls, too—PlyBase serves as a backing for wall tile and other wall coverings requiring a smooth, solid backing.

For Subflooring—PLYSCORD

Under PlyBase, or any other type of finish flooring, PlyScord is the ideal subflooring. It offers a rigid, sturdy working platform . . . insulates and protects against cold from below. PlyScord can be quickly, easily and economically applied for roof and wall sheathing as well as for subflooring.

PLYBASE is a NEW GRADE of Interior-type Douglas fir plywood with a face of B (solid) veneer, and a back of D veneer. All sanded both sides. For full details on PlyBase use and application, see Sweet's File, Architectural, or write for the new 1949 Basic Plywood Catalog. Also available is a new book—"The Wood of 1,000 Uses". Douglas Fir Plywood Association, Tacoma 2, Washington.

PLYBASE THICKNESSES: 3/16", 1/4", 3/8", 1/2", 5/8", and 3/4".

PLYBASE WIDTHS: 30", 36", 42", and 48".

PLYBASE LENGTHS: 60", 72", 84", 96", 108", 120", and 144".

Douglas Fir PLYWOOD

LARGE
LIGHT
STRONG

*Real
Wood*
Panels





This air conditioning story is written for you

"Merely a Matter of Air" is a non-technical discussion of the various ways to air condition office buildings, hotels, hospitals, and similar structures which contain many small individual rooms.

Although written for the layman who is interested in the air conditioning of a multi-room building, it contains a great deal of material for the architect and consulting engineer, too. It covers the development of air conditioning from the first central systems, through early unit arrangements, up to and including UniTrane, the last word in ductless air conditioning.

The importance of the two-circuit UniTrane room units with their independent control of room temperature, room humidity and ventilation air is shown by direct comparison with

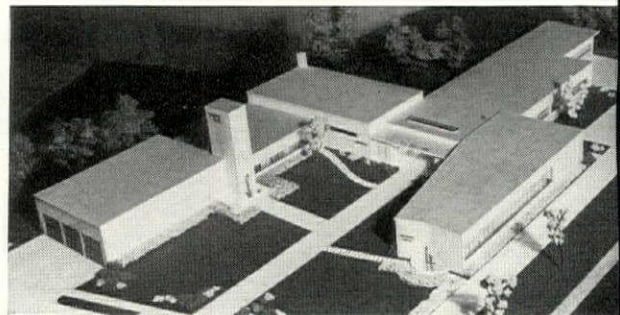
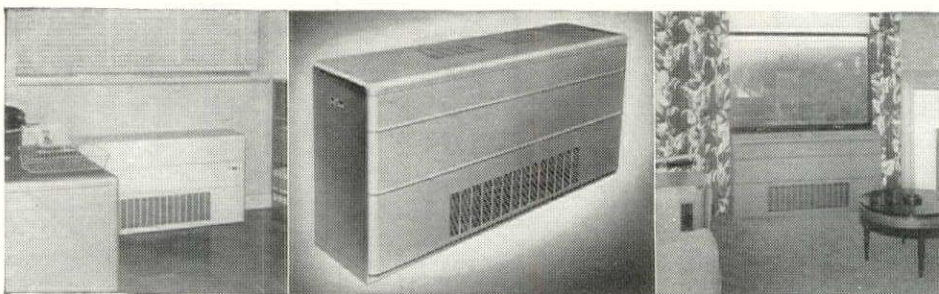
earlier attempts to achieve this ideal arrangement.

Publication of this type of material is consistent with Trane's long-time policy of doing everything possible to remove the mystery from air conditioning. A reading of this bulletin by interested laymen places them in a much better position to understand the multi-room air conditioning recommendations of their architect and consulting engineer. We're glad to provide copies of "Merely a Matter of Air" for any such people.

THE TRANE COMPANY... LA CROSSE, WIS.

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.

New UniTrane air conditioning eliminates all ducts, uses compact individual room units to regulate temperature, ventilation and humidity.

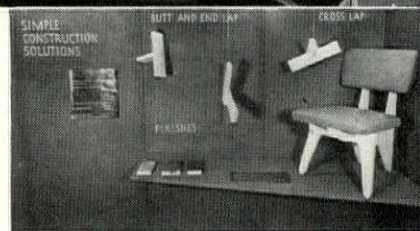


court rooms and auditorium. All rooms were designed for multi-purpose use. The 600-seat auditorium can be partitioned to accommodate two smaller groups. Library and courtroom are suitable for use in neighborhood meetings. The kitchen (primarily a firemen's facility) makes possible the service of banquets in the auditorium. The outdoor court is intended as a place for summer meetings and concerts. Construction of the Center will begin in May.

EXHIBITS



Overall and detail views of Cherner show contrast wood-working methods.



Low-cost furniture, as designers and manufacturers have come to realize, is a necessary offshoot of high-cost building (The \$50,000 contest of the Museum of Modern Art is the most striking current sign of this.) On a smaller scale the exhibit by Norman Cherner, interior designer, held at America House, New York City, in February, shows the same realization. Just across the room from each other stand chairs of very similar design—one using the custom-made mortise and tenon technique; the other, simple lap joints. The latter process which permits use of standard wood stock 13/16 inch thick can cut off two-thirds of the market price (from \$90 down to \$30). With a special regard for the manually apt veteran, Mr. Cherner shows his tricks of the trade. The chair requires only the simplest tools (saw, plane, file, hammer and screw driver) six hours of labor and \$6 for material. The construction joker of so many apparently simple plans (the presupposed \$80 power-saw) is notably absent from his requirements.

(Continued on page 64)

NO. 3 OF A SERIES

The PROFESSIONAL BUILDERS' BULLETIN

An "Idea Department" from the Engineers of Ingersoll



INGERSOLL LEADS WAY TO LOWER PRICES!

Expanded Distribution, Increased Volume Result in Revised Price Schedule

Continuing its rapid expansion in the small-home utility field, the Ingersoll Utility Unit Division of the Borg-Warner Corporation this month announces a new and lower price schedule for the Ingersoll Utility Unit and the Ingersoll Panel Core. Price reductions follow acceptance of the "Ingersoll Idea" by more than 150 of the nation's largest plumbing and heating wholesale outlets in the last six months alone, with corresponding increase in sales volume.

Now the Ingersoll Utility Units are more advantageous than ever for professional builders who already had shown enthusiastic acceptance of the Ingersoll "one purchase—one installation" idea. The Ingersoll line is more complete

and more flexible with the addition of two new furnaces, kitchen cabinets and work tops. Eight stack, vent and underground combinations enable the Ingersoll Units to meet 98 per cent of all building codes. This gives small home designers the widest latitude in individualized planning. It also results in the economies, convenience and simplicity of securing all components from a single, reliable source.

Assembled exclusively by A. F. of L. journeymen plumbers, Ingersoll Utility Units open up a wide new field for builders and architects eager to benefit from the small-home building boom anticipated under proposed new federal government legislation.

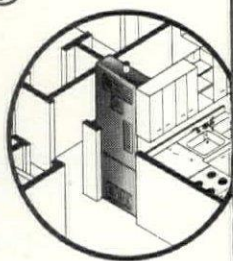


NEW CABINET LINE ADDS VERSATILITY TO KITCHEN PLANS



Individually-tailored kitchens are made more feasible than ever by the complete new line of Ingersoll steel kitchen cabinets. They harmonize in quality and design with other Ingersoll Utility Unit components. Line includes a wide variety of attractive under-sink and wall cabinets, with linoleum or plastic work tops.

Kitchen cabinets, in any combination, can be ordered along with basic Utility Unit, for arrangement as space available and architect's ideas indicate.



New Ductless Heating With Ingersoll "88"

Economical ductless heating in mild winter areas has been solved in a new way by the introduction of the Ingersoll "88" gas-fired utility furnace. Also ideal for multiple installations in ranch-type houses in any climate.

Ingersoll "88's" with 50,000 B.T.U. capacity occupy only 3 sq. feet of floor space. They can be used three ways—as space-heaters, mounted flush in walls or in closets, or with plenum chambers and short ducts where several rooms are to be heated by one furnace. Approved by the A. G. A.

SEND FOR NEW INGERSOLL CATALOGUE

Displaying Complete Line of Ingersoll Items!

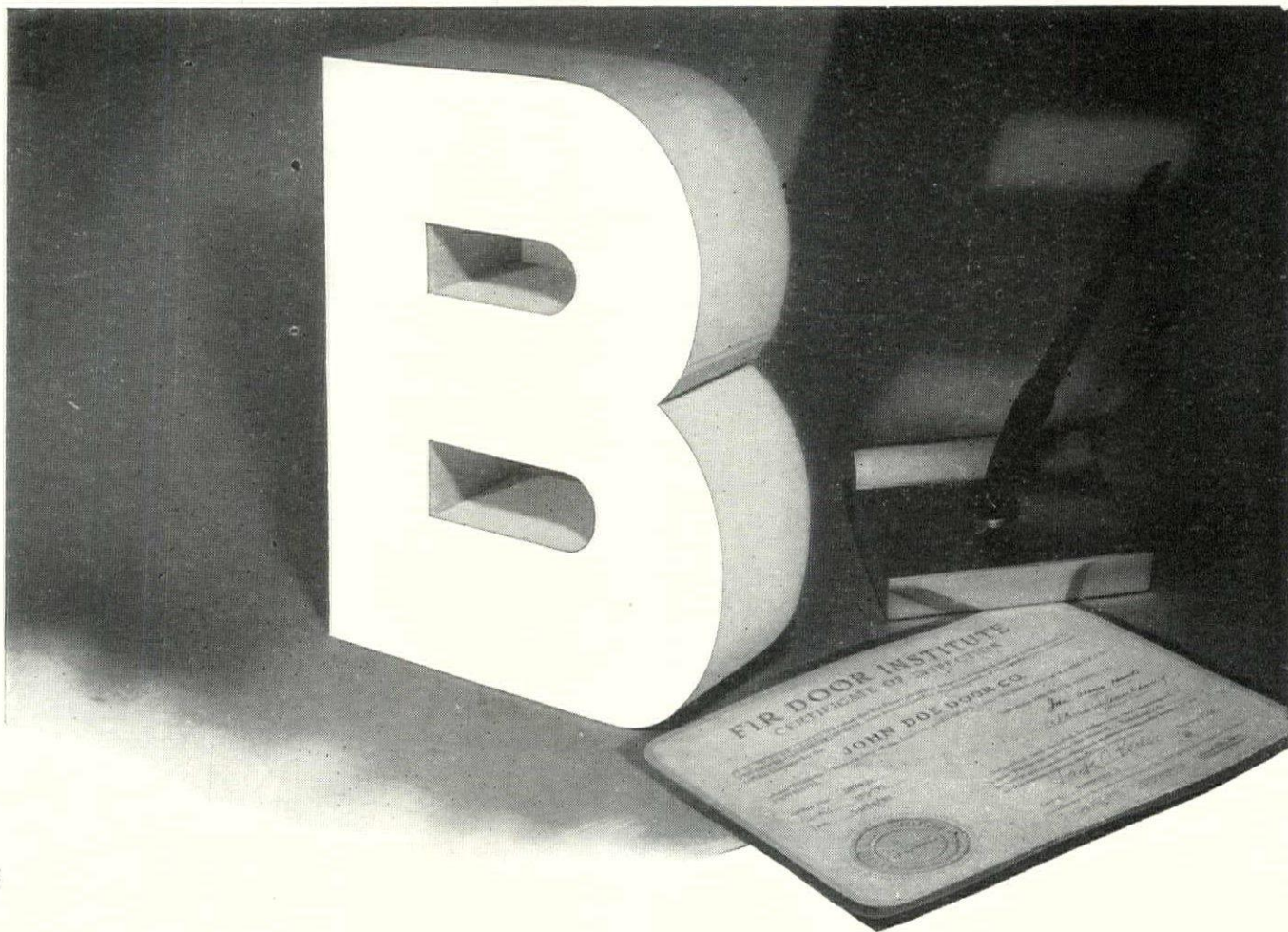
One letter gets you the catalogue—free of course—plus the current issue of the Ingersoll "House Plan of the Month," which offers suggestions for interesting small-home designs and features.



Write today to:

INGERSOLL UTILITY UNIT DIVISION

Borg-Warner Corporation
Dept. F3, 321 Plymouth Court
Chicago 4, Illinois



Douglas Fir Doors marked "FDI-B" meet these Department of Commerce Standards

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When the letters FDI appear as part of the grade trade-mark they certify that the doors so marked not only meet *quality* Commercial Standards CS73-48 but have been officially inspected by the Fir Door Institute and, at the buyer's request, will be covered by notarized Certificate of Inspection.

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

FIR DOOR INSTITUTE
Tacoma 2, Washington

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.

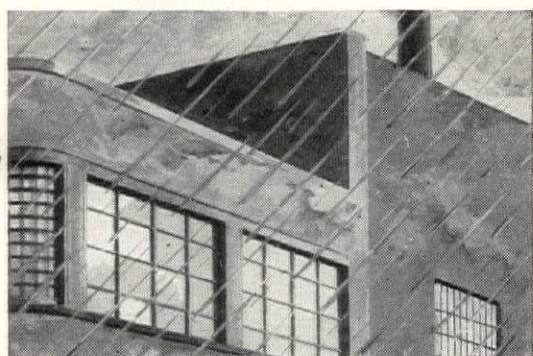
PANELS—RAISED—The standard thickness of raised panels shall be not more than $\frac{9}{16}$ inch before sanding and not less than $\frac{7}{16}$ inch after sanding. They may be either slash or mixed grain, or mixed woods and shall conform to the grade of the stiles and rails. Glued-up, solid panels are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

Call in **SONNEBORN** on these *Tough* Problems!



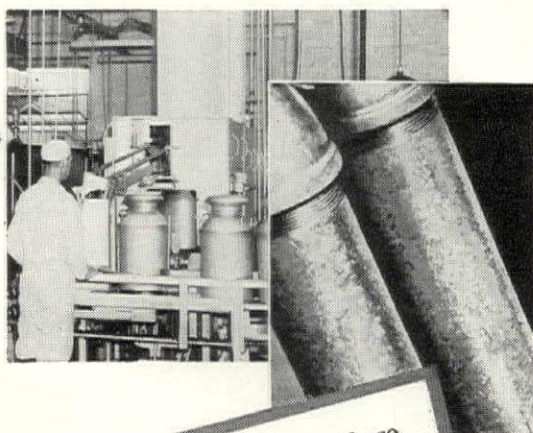
TREATMENT OF CONCRETE

LAPIDOLITH-treated floors last where heavy traffic and trucking break down untreated concrete or terrazzo. Makes traffic surface literally hard as granite. Exclusive, penetrating agent carries hardening agent deep into concrete. Application is easy as mopping the floor.



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HYDROCIDE for excluding water above or below ground, inside or out. There's a Hydrocide for every problem...from a transparent, colorless film that protects masonry walls from rain penetration...to a one-coat mastic as efficient as the conventional 5-ply membrane system.



PROTECTIVE PAINTING

MARVELWHITE won't yellow in spite of moisture, heat up to 200°, oil or chemical fumes. Amazingly brilliant white...one coat looks like baked-on enamel.

S. R. P. penetrates the scale and bonds to sound metal...stops rust. Better resistance to weather and brine than red lead. Non-toxic. Not affected by fumes or ordinary industrial concentrations of most chemicals.

If you have a tough problem in any of these three fields, call in your Sonneborn Man. Chances are, he has the answers, or can get them for you. If you don't have his name, write us your problem direct.

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BUILDING PRODUCTS DIVISION

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ONE-PIECE BONDED means seamless construction of heavier 18 gauge metal that allows all-welded fabrication . . . eliminates joints, crevices and bacteria breeding seams.

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ONE-PIECE BONDED means increased sanitation—quicker cleaning—easier dishwashing . . . it means the finest in modern sink design and craftsmanship.



*TRADE MARK

Only LUSTERTONE is one-piece bonded . . . guaranteed to outlast the home in which it is installed

NOW STOCKED IN 14 STANDARD SIZES

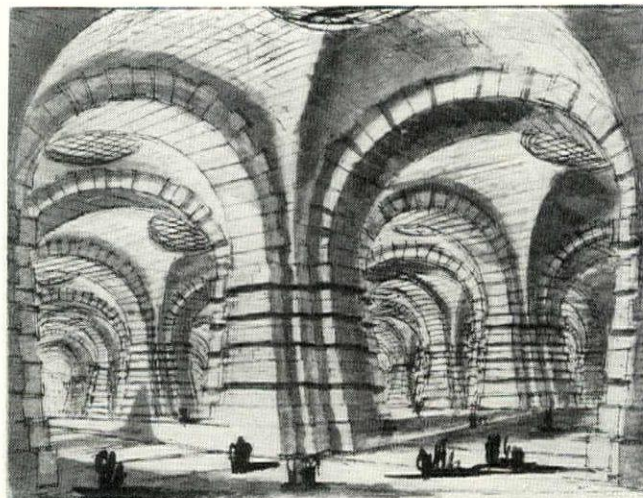
Available with and without base cabinets: Single Bowl models measure from 42" to 72"; Double Bowl models measure from 66" to 120". Also custom-built for any plan.

Consult 23a/4 Sweet's Architectural File (1949) or write for detailed information, prices or free estimates.

America's oldest manufacturer of Stainless Steel Sinks

ELKAY MANUFACTURING CO.

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The work of GIOVANNI BATTISTA PIRANESI, the 18th Century Hugh Ferriss, has been on view (January-March) at the Pierpont Morgan Library, New York City. In this collection of 79 sketches, watercolors and etchings, Piranesi illustrates and adds to the glamor of Renaissance and Baroque architecture. Most striking is his series of drawings of prisons (one shown above). Here he exploited—as perhaps never before in pen and ink—architecture for awe.

AWARDS

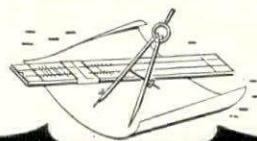
YALE UNIVERSITY has chosen Sven Markelius, Swedish architect and member of the United Nations' Architectural Commission, as winner of the Howland Memorial Prize. Last presented in 1944, the Howland Medal is "awarded to the citizen of any country in recognition of some achievement of marked distinction in the field of literature (Continued on page 68)

BAKER

**AIR CONDITIONING
AND REFRIGERATION**

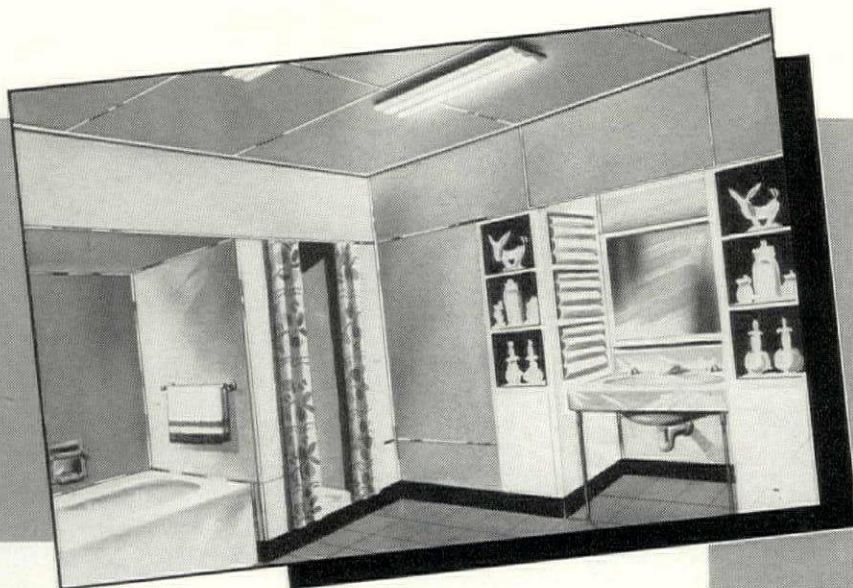
in Freon and Ammonia

**EXPERT
ENGINEERING
ALWAYS AVAILABLE
FOR
CONSULTATION**



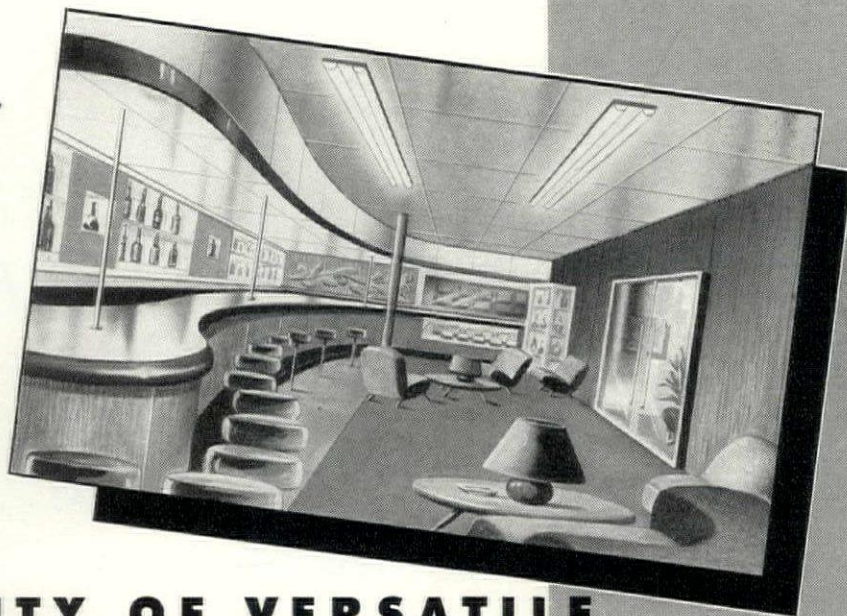
BAKER ICE MACHINE CO., INC., General Offices South Windham, Maine
Factories at Omaha, Nebraska and South Windham, Maine

Specify
Marlite
walls



FOR
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LET YOURSELF GO ON BEAUTY...



THERE'S PLENTY OF VERSATILE

Marlite NOW!

FOR
COMMERCIAL
INTERIORS

You can specify Marlite now - and what's more your clients can get it! For Marlite production is up - there's enough made now for everyone!

That's good news to architects. For Marlite is the versatile wall and ceiling panel. For modernization or new construction, it's equally appropriate. It comes in a variety of patterns and in many stunning colors. Marlite lends itself ideally to the creation of sparkling colorful interiors and is equally at home in surroundings of quiet, warm dignity.

And it's good news for clients, too. For Marlite's plastic

finish seals the original color in - keeps grime and dirt out. It cleans easily with a damp cloth. And Marlite goes up fast - over old walls or new - with a minimum of muss and bother and with practically no waste.

Is it any wonder that the news of Marlite's availability is good news to everyone who must stretch dollars now as never before? Investigate Marlite and you'll specify Marlite. See the Marsh Catalogue in Sweet's Architectural File or write for the new 12-page, full color catalogue.

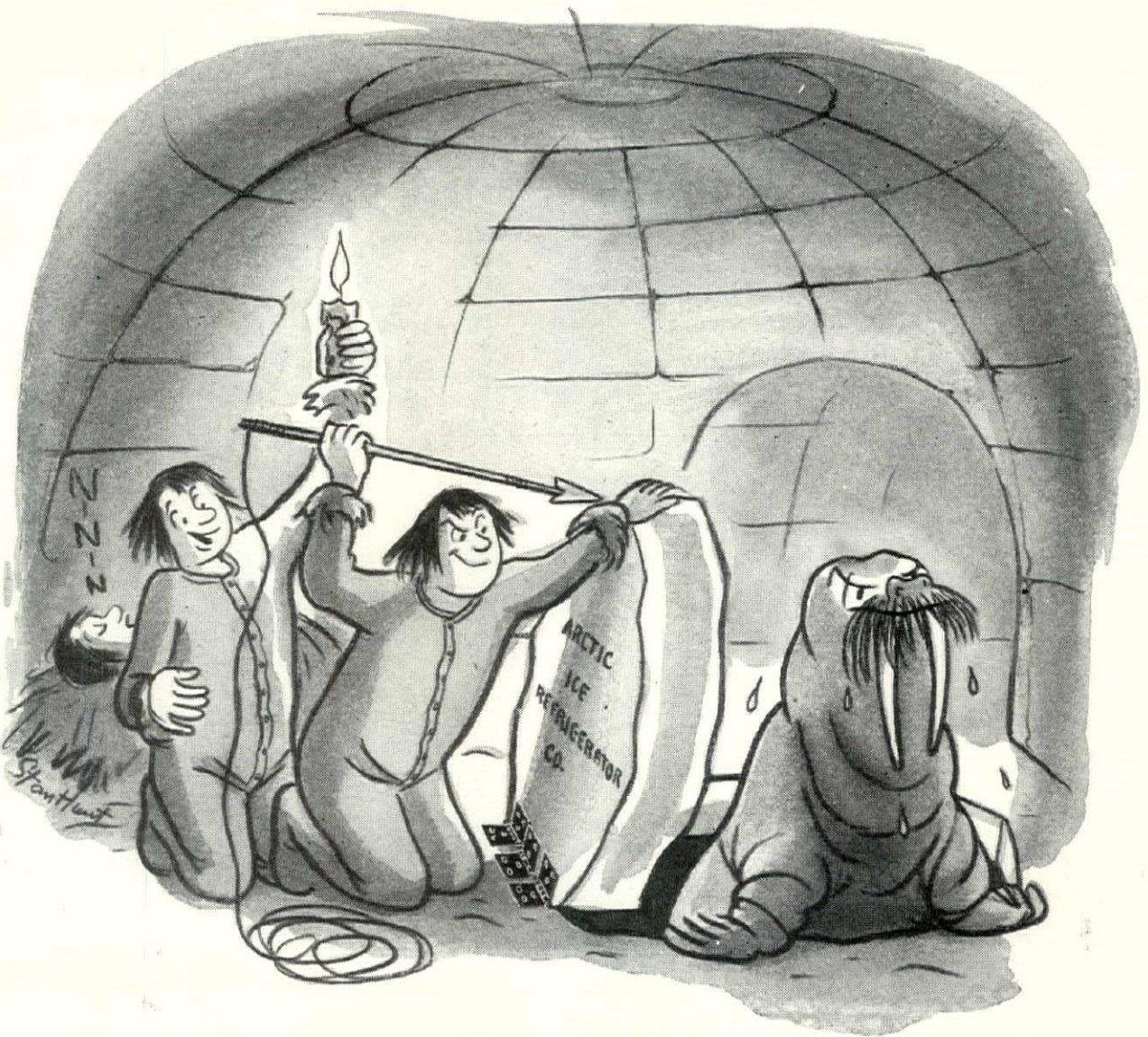


Marlite
PLASTIC-FINISHED
WALL PANELS

MARSH WALL PRODUCTS, INC.
301 MAIN STREET, DOVER, OHIO

FOR CREATING

BEAUTIFUL INTERIORS



STAN HUNT
FAMOUS SATURDAY EVENING POST
AND COLLIER'S CARTOONIST

"Raiding these new-fangled ice boxes
is a cinch . . . now that —

Everything Hinges on Hager!"



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FOUNDED 1849 — EVERY HAGER HINGE SWINGS ON 100 YEARS OF EXPERIENCE

AMERICAN-Standard

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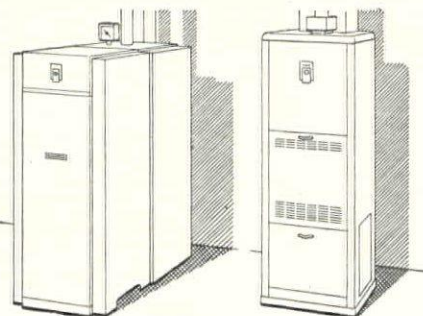
This "family kitchen" is planned to lighten household tasks—and so is the **ROYAL HOSTESS** Sink. The beautiful sink comes in models and sizes to fit virtually any kitchen plan. Fits easily into continuous cabinet arrangements, and the new **UNION STRIP** forms a watertight seal between sink and adjoining countertops.

Important step in designing a home . . .

Heating equipment and plumbing fixtures are of prime importance in designing a smart home. The modern sink in the kitchen; the comfortable warmth from an efficient heating unit; the sparkling cleanliness of a beautiful bathroom . . . these are essentials that add to the livability of any home. *The better their quality, the more desirable becomes the home.*

How can you be sure of the finest quality? By saying, "Make it American-Standard all the way." American-Standard quality is second to none. Yes . . . and that famous name also assures lasting client satisfaction. For no line enjoys greater public acceptance.

For information about the complete American-Standard line, contact your Heating and Plumbing Contractor. **American Radiator & Standard Sanitary Corporation**, P. O. Box 1226, Pittsburgh 30, Pa.



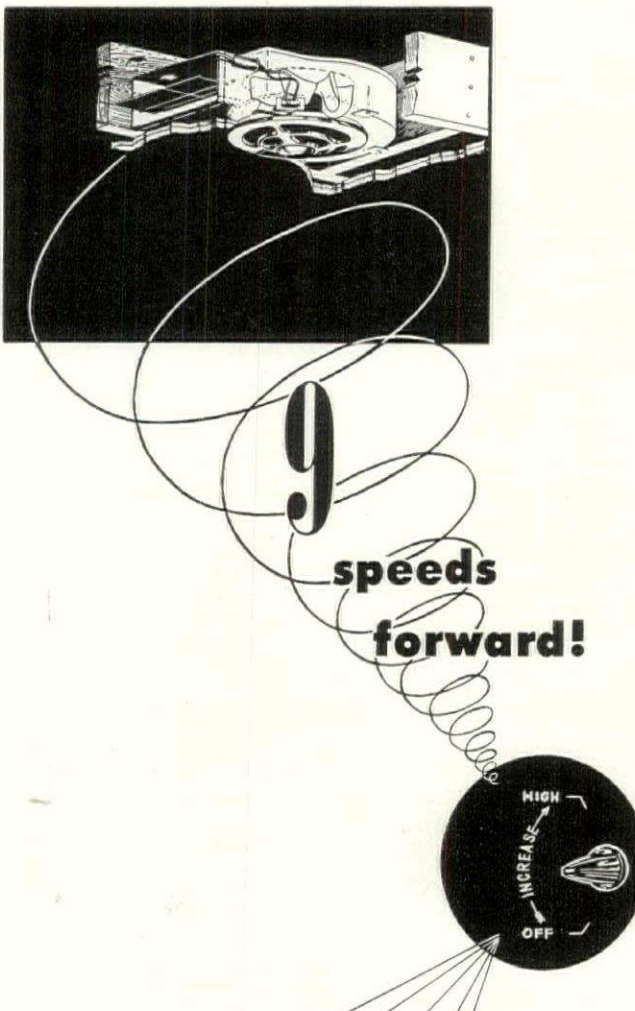
Two heating units by American-Standard designed for small homes, with or without basements. (Left) the oil fired **ARCOLINER** Wet Base Boiler. (Right) the gas fired **CHIPPEWA** Winter Air Conditioner.



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ANNOUNCEMENTS



9 speeds forward!

Blo-Fan
NEW EXCLUSIVE FEATURE

Mr. Architect: Here is something entirely new that you should know about. The new nine position control switch allows the housewife to choose the desired rate of ventilation as easily as she controls the thermostat on her kitchen stove. Send in this coupon to obtain information about this new feature found only on the Blo-Fan Model 210.

BLO-FAN INSTALLS OVER THE RANGE WHERE A FAN BELONGS — IN THE CEILING OR INSIDE WALL.

Please send me detailed information on the Blo-Fan nine speed control switch and names of local distributors.

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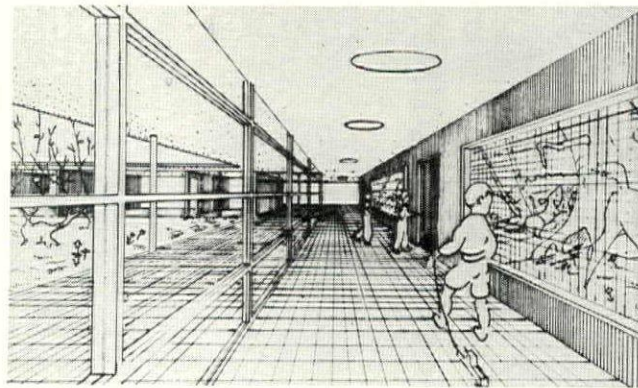
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or fine arts or the science of government." Designer of many office buildings, apartment houses and private villages, Mr. Markelius created the plan for the Swedish Pavilion at the 1939 New York World's Fair. He will receive the Howland Medal this spring when he arrives at Yale to assume the post of visiting critic in advanced architectural design.



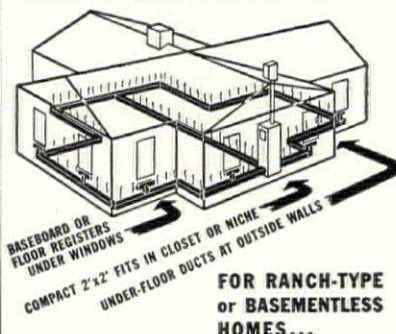
THE DESIGN FOR KINDERGARTEN, submitted by William Craig of Illinois University School of Architecture, won first prize in the contest co-sponsored by the Beaux-Arts Institute of Design and the Tile Council of America. Craig's rambling one-story school allows for direct individual access from classroom to play areas. As shown in the sketch above, it exploits the use of tile for floors and decoration—a basic requirement of the contest. Other prize designs were submitted by Carl Kohler, Pennsylvania State College; Joan Lam, University of Pennsylvania and Robert Warner, University of Illinois.

(Continued on page 72)

RADIANT FLOOR PANEL HEATING *plus* FILTERED CIRCULATING WARM-AIR

Both in one unit - At less than the cost of conventional heating!

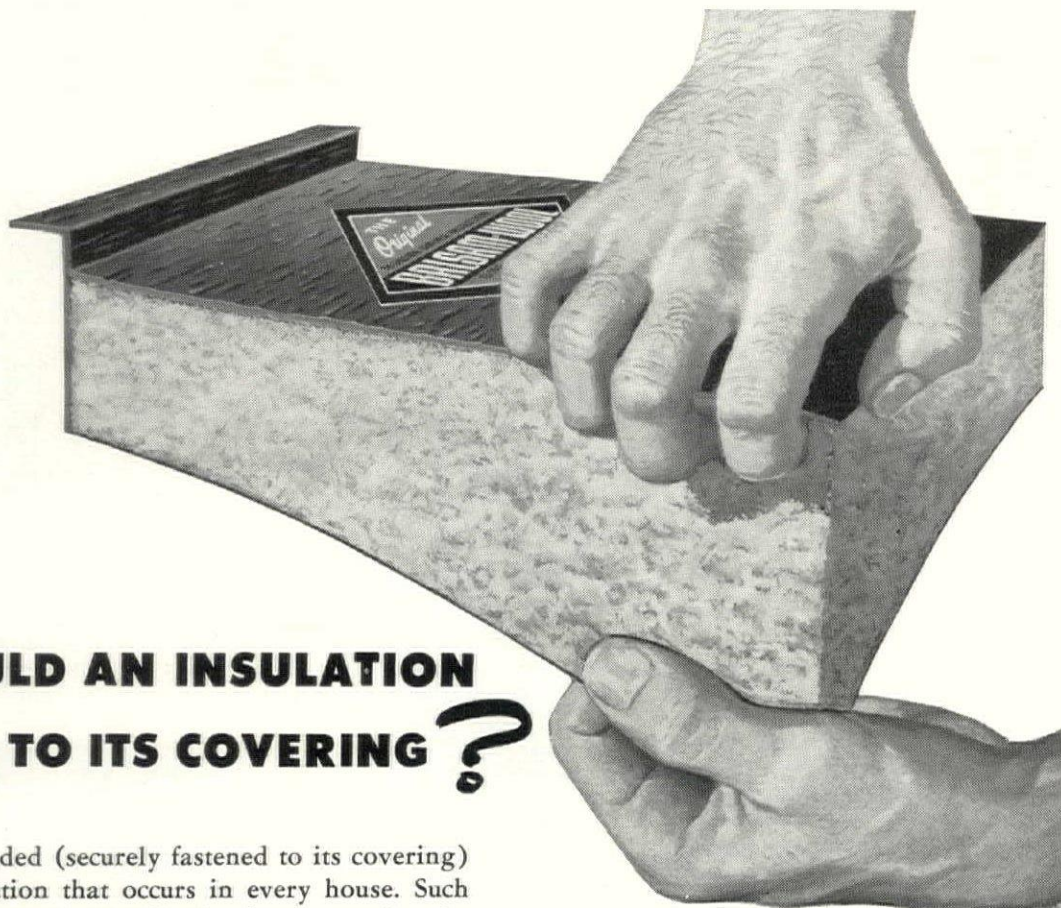
The INTERNATIONAL WARM-AIR AUTOMATIC OIL or GAS FURNACE



A truly great advance in modern heating engineering — that really overcomes the basic problems of home heating. Under-floor ducts eliminate cold floors and chilly walls... Base register banishes cold air cascading down windows... Elimination of air stratification assures uniform temperatures at all levels. Low cost installation — economical operation.

Send for literature giving details and typical layouts.

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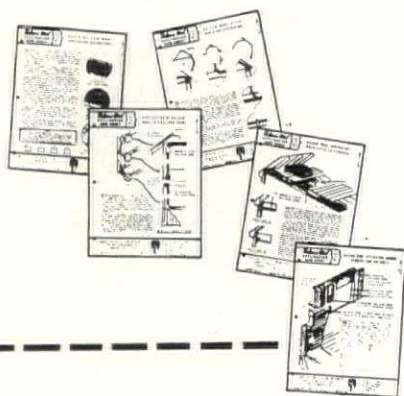
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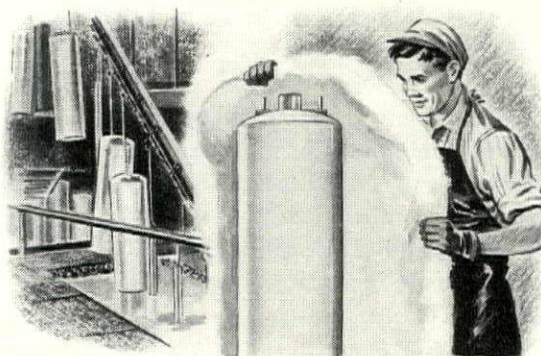
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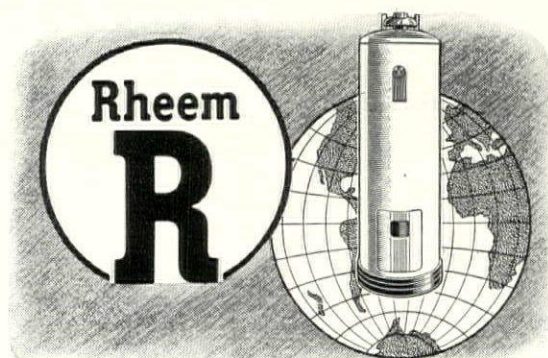
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PLASTER

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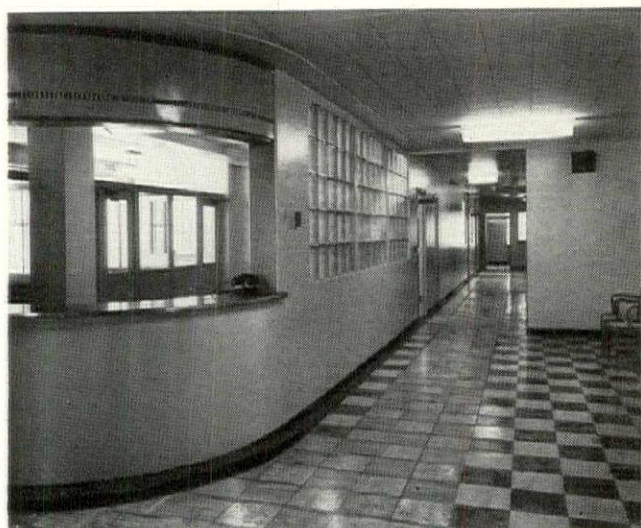
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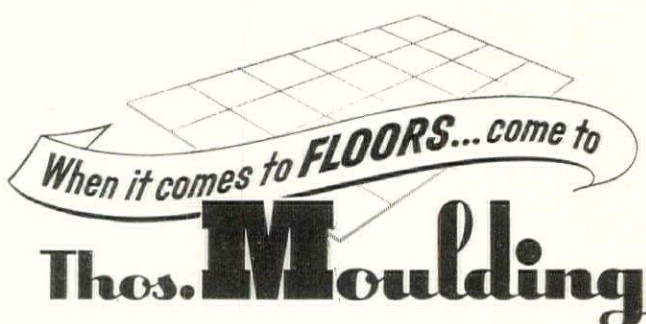
Broadlawns Hospital
Des Moines, Iowa

Dougher, Rich and Woodburn, Arch.

Moultilite brings to hospitals a colorful note of sprightly, sparkling beauty that cheers patients and staff alike. No "skin-deep" beauty, either. Moultilite colors are built right in, go all the way through. They never fade or show signs of wear, in spite of frequent cleanings or heavy hospital traffic. Buoyantly resilient, Moultilite affords a wonderful underfoot comfort to the doctors and nurses who walk miles of corridors every day. The smooth, non-porous surface does not absorb odors and affords fast economical cleaning. And the low original cost fits even the tightest budget. Yes, feature by feature, Moultilite is the ideal floor for hospitals.

Moultilite is a treat for you, too. Such a pleasure to work with! Thirty-three harmonizing colors and tile-by-tile installation enable you to design appropriate, distinctive floor patterns. There's a world of confidence, too, in knowing that Moultilite assures complete lasting client satisfaction. Whether your plans are for hospital or home, shop, show-room or show-place, be sure they include Moultilite.

Check Sweet's for complete information on Moultilite and the other Thos. Moulding floors. Or write for your copy of our new full-color catalog. THOS. MOULDING FLOOR MFG. CO., 165 W. Wacker Drive, Dept. AF-3, Chicago 1, Ill.



JOSEPH FUJIKAWA was awarded first prize of \$1,000, in the hidden talent competition co-sponsored by the Museum of Modern Art and *Architectural Record* for a design of a memorial community center for a midwestern city. The contest, limited to architects whose work had not been published in national magazines, was judged by a board of five architects: Joseph Hudnut, Wallace K. Harrison, Morris Ketchum Jr., Ludwig Mies van der Rohe and Eero Saarinen. Twenty-three prize-winning designs, together with a number of other drawings of special merit and interest, were exhibited in the Modern Museum's Auditorium Gallery until March 6th.

FELLOWSHIP

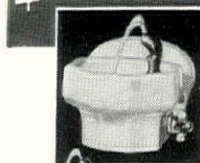
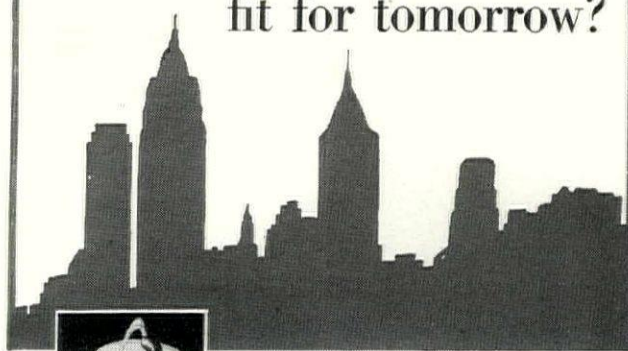
UNIVERSITY OF ILLINOIS, Urbana, Ill., announces the competition for the Kate Neal Kinley Memorial Fellowship, whose prize is \$1,000 to defray expenses for advanced study of the fine arts in America or abroad. While applicants should not exceed 24 years of age, consideration will be given veterans and very promising candidates. Requests for application blanks and instructions should be addressed to Dean Rexford Newcomb, College of Fine and Applied Arts, Room 110, Architecture Bldg., University of Illinois. Deadline for applications is May 1st.

APPOINTMENTS

EDMUND N. BACON, as executive director of the Philadelphia City Planning Commission. Mr. Bacon was co-designer (with Oscar Stonorov) of the Better Philadelphia Exhibition (see FORUM, Dec. '47).

IRA J. BACH, executive director of the Chicago Land Clearance Commission, and
(Continued on page 76)

Are yesterday's buildings fit for tomorrow?



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Halsey Taylor Drinking Fountains, for instance, are the choice of architects and building owners everywhere. Write!

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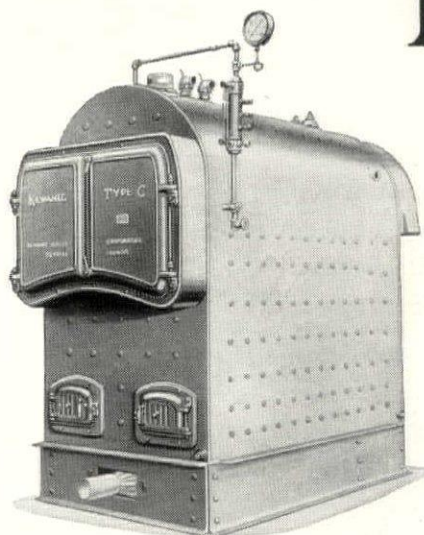
Entrance and lobby in new home of
 the MAGIC CHEF range, St. Louis

**Administrative
 Office and Sales
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Heated with

KEWANEE[☆]

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The outline of construction materials and equipment reads like a "Who's Who" of American industry. Significantly the heating boilers are KEWANEE.

Installed are two Kewanee Boilers, Type "C", 14,580 feet capacity, for gas firing . . . the preferred boiler for heating America's important large buildings.

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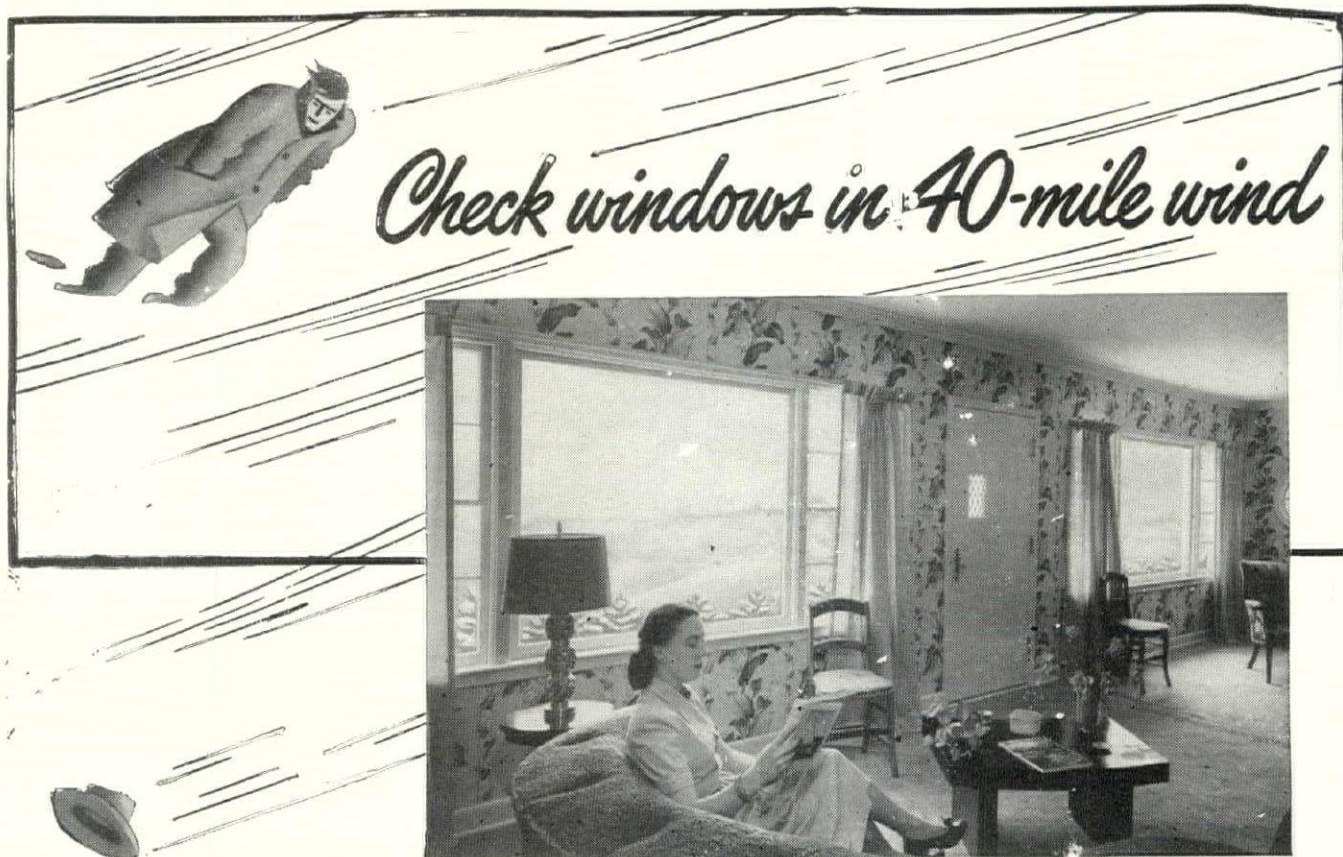
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and you'll choose CURTIS Silentite!

In a 40-mile wind you'd soon know the difference between Curtis Silentite and ordinary windows. For under such conditions, Silentite allows 20% less air infiltration than the famous original Silentite—America's first "insulated" window.

There are scientific reasons for Silentite's superior weathertightness. "Floating" weather-strips press snugly against the side of the sash, yet allow easy movement. Gone is the conventional check rail—in its place a new type rail with specially designed weather-strip members. Bronze spring leaf weather-stripping at the head and sill complete this superior window design. And Silentite is a *wood* window for maximum insulation value and reduced heating costs.

Silentite Windows are easy to operate—have no weights, cords or pulleys. They have the streamlined beauty that comes from slender mullions and wide glass areas. Toxic and water-repellent treated, Silentite windows assure lasting value in any size or type of home.

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Curtis Companies Service Bureau
AF-38 Curtis Building, Clinton, Iowa

Please send me book on Silentite Windows, including casements.

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Address.....

City.....State.....

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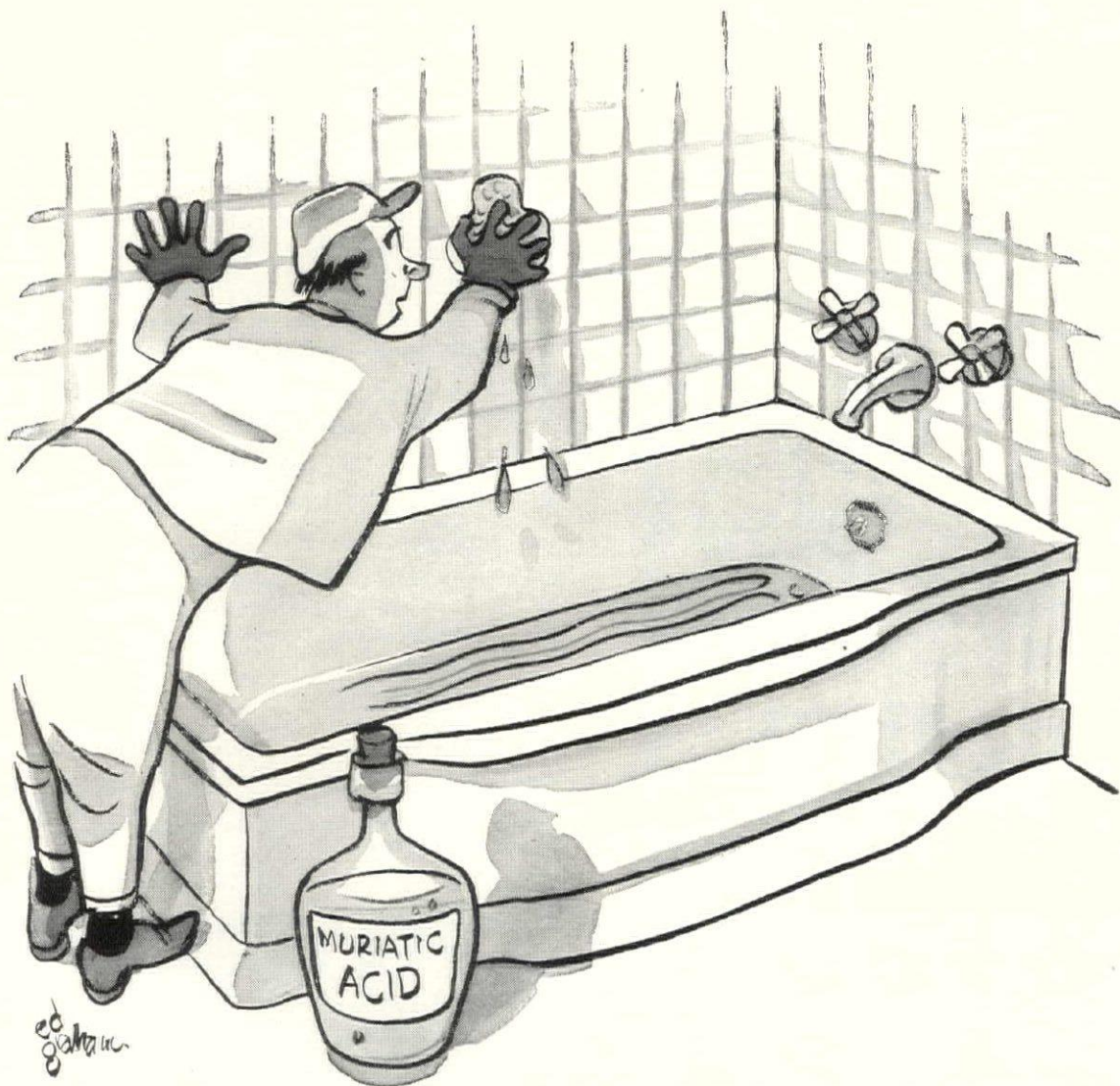
☐ Architect

☐ Contractor

☐ Prospective Home
Builder

☐ Student

(Please check above)

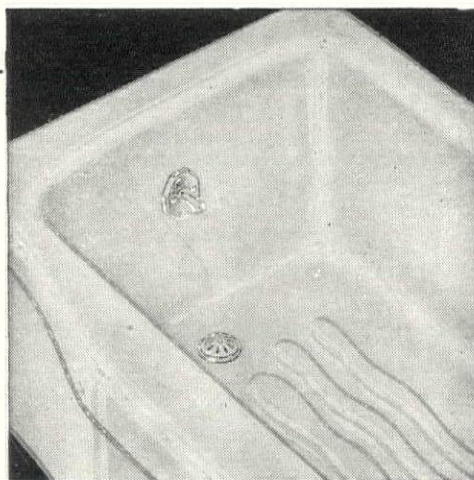


*For the acid test... count on a BRIGGS bathtub—
it's stainproof!*

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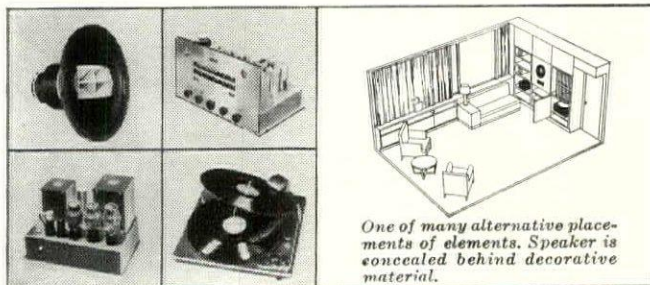
Stainproof (acid-resistant) porcelain enamel is only *one* of the safety, comfort and luxury extras which have placed Briggs Beautyware 'way out in front of the field. Only Briggs makes the tub with the famous Safety-Bottom. Other features include the wide-rim seat... greater area of level bottom... integral tiling flange which provides leakproof edges, tub to walls. Only Briggs prices all this revolutionary designing right down to earth for every American home! Write *now* for new catalog featuring Briggs plumbing fixtures and Briggs brass. Briggs Manufacturing Company, 3023-c Miller Ave., Detroit 11, Michigan.

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ALL Briggs bathtubs are furnished in stainproof (acid-resistant) porcelain enamel. Only steel fixtures give this extra protection and beauty at no extra cost! Note the patented Safety-Bottom, for safe tub and shower bathing.

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One of many alternative placements of elements. Speaker is concealed behind decorative material.

AN IMPORTANT NEW SERVICE FOR YOUR MUSIC-MINDED CLIENTS

For clients who demand for their homes everything that modern science now contributes to more gracious living, the Altec Lansing home system, comprising AM-FM Radio-Phonograph with or without Television, makes available for the first time supremely high quality sound reproduction which today's commercial radio-phonograph cannot approach. Each unit of professional equipment is cus-

tom installed in the wall, closet, door, book shelves or some other appropriate place designed into the building by the architect. Cumbersome radio cabinets are eliminated. Price is surprisingly moderate, and installation is simplicity itself. Write for illustrated brochure showing how this sound system of tomorrow can be fitted into your architectural plans.

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home music system



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1161 N. Vine St., Hollywood 38, Cal.

Robert S. Gruhn, assistant. Mr. Bach, Director of Planning for the Chicago Commission since May '48, had previously served as executive director of the Cook County Housing Authority and as director of the Metropolitan Denver Planning Commission. Prior to this recent appointment, Mr. Gruhn was the Commission's administrative assistant.

LAWRENCE M. ORTON, member for eight-year term of New York City Planning Commission.

ROBERT B. O'CONNOR, of the New York architectural firm of O'Connor & Kilham, now supervising architect of Princeton University.

ATHELSTAN F. SPILHAUS, as dean of the Institute of Technology, University of Minnesota.

LINWOOD G. MORT, partner in Argraves & Mort, consulting engineers of New Haven, Conn., director of the Real Assets Division of Connecticut State.

BEN NASH, 1949 president of American Designers' Institute; and Henry Glass, vice president.

EDWIN LUNDGREN, Washington, D. C. representative for the Kuljian Corporation, Philadelphia engineers and constructors; 1415 "K" St., N. W.

NEW OFFICES

ELMER J. MANSON and WM. W. CARVER, partnership for the practice of architecture, 410 W. Saginaw, Lansing 15, Mich.

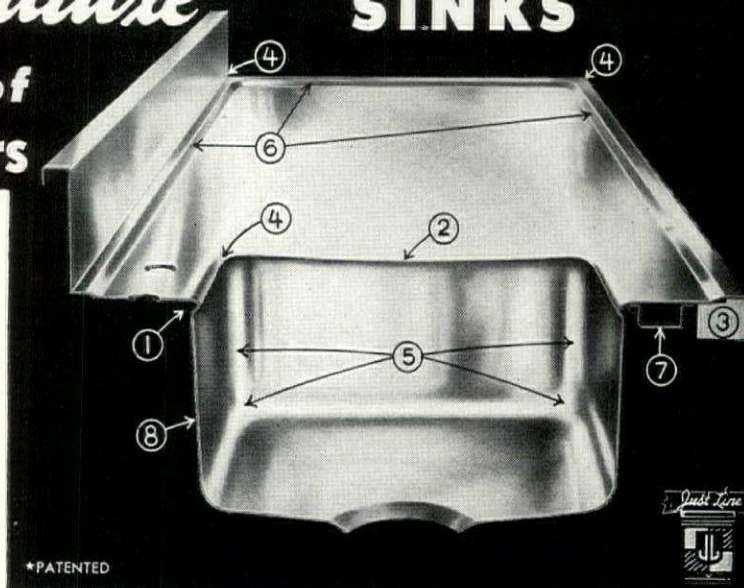
PERCY C. ADAMS, R.A. (formerly of Upman & Adams) 808 17th St., N. W., Washington, D. C. (Continued on page 80)

8 GOOD REASONS Why Just Line Radiiluxe are FIRST CHOICE of Architects and Builders

STAINLESS STEEL
SINKS

- 1 *Patented Anti-splash Rim around entire perimeter of the bowl at point where bowl joins the drainboards, seamless welded and polished.
- 2 *Patented Double Pitched Drainboards, gradually sloping lengthwise to the bowl and sidewise to center of drainboard.
- 3 Wood Frame around front and ends, facilitates fastening to the cabinets.
- 4 Seamless Construction, all joints welded and polished.
- 5 Radius corners in bowl—vertical radius 1½" at top tapering to 15/16" at bottom, all bottom horizontal radii are 15/16".
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- 8 Wood Deadened on the underside to prevent undesirable metallic sound.

Radiiluxe Sinks can be supplied in any size and shape and with either one, two, or more sink bowls—to meet individual requirements.



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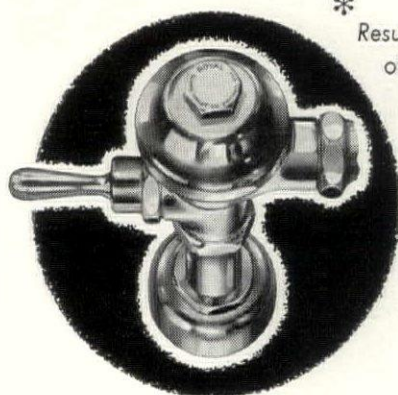
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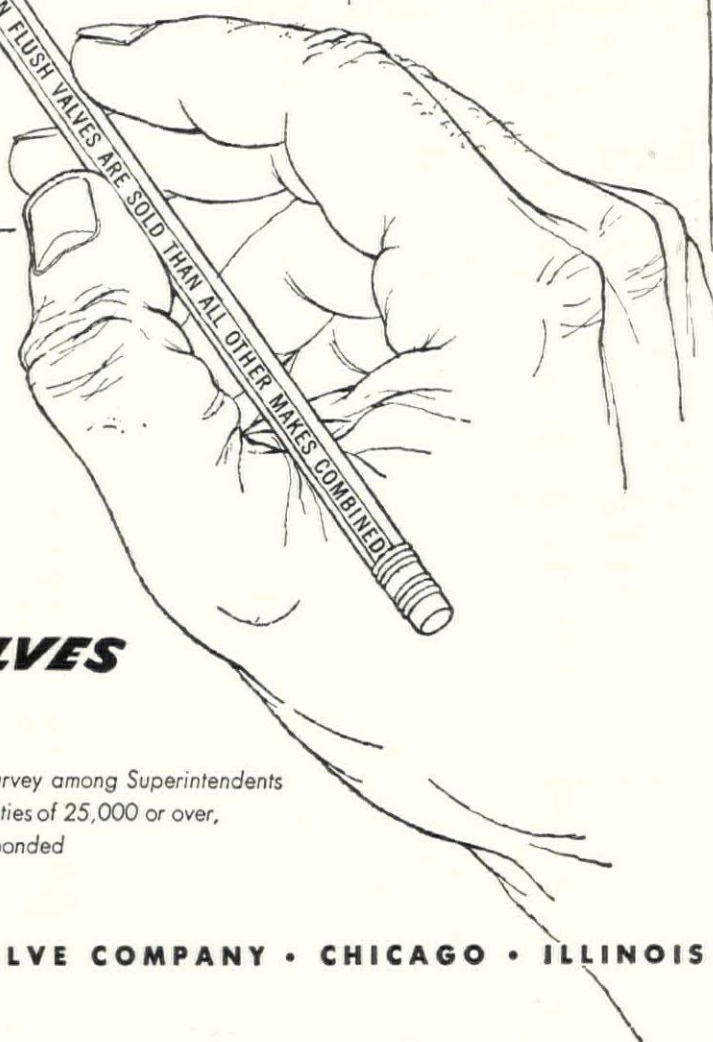
*...of these,
54.6% are
equipped with
SLOAN exclusively*

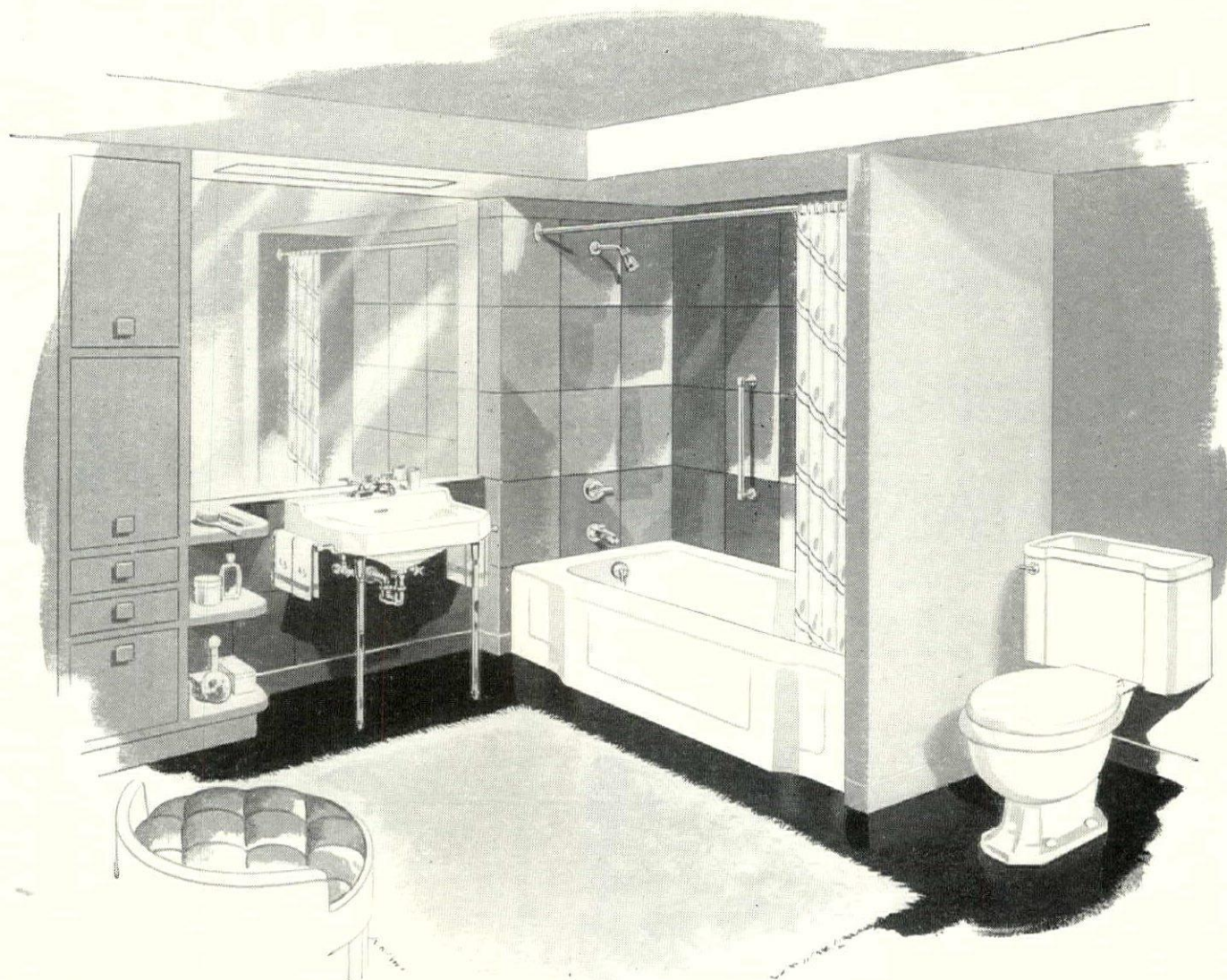
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* Results of nation-wide survey among Superintendents
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→ Practical planning starts with first quality . . .

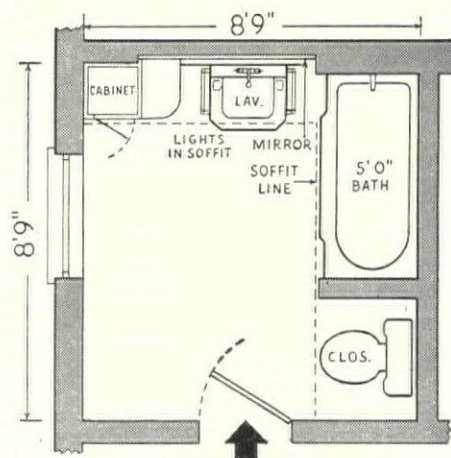
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The Cosmopolitan Bench Bath has a base of non-flexing iron, cast for rugged strength and rigidity, and coated with the famous Kohler enamel. The Triton shower fitting with Niedecken mixer is outstanding for convenience and ease of operation. The Wellworth closet, quiet and smooth-acting completes the set, which comes in pure white, and four delicate pastel shades. Kohler quality is now a 76-year-old tradition. Write for further information. Kohler Co., Dept. 2-H, Kohler, Wisconsin.



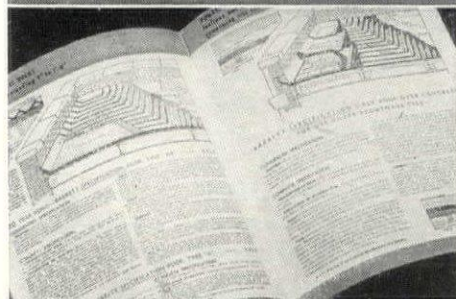
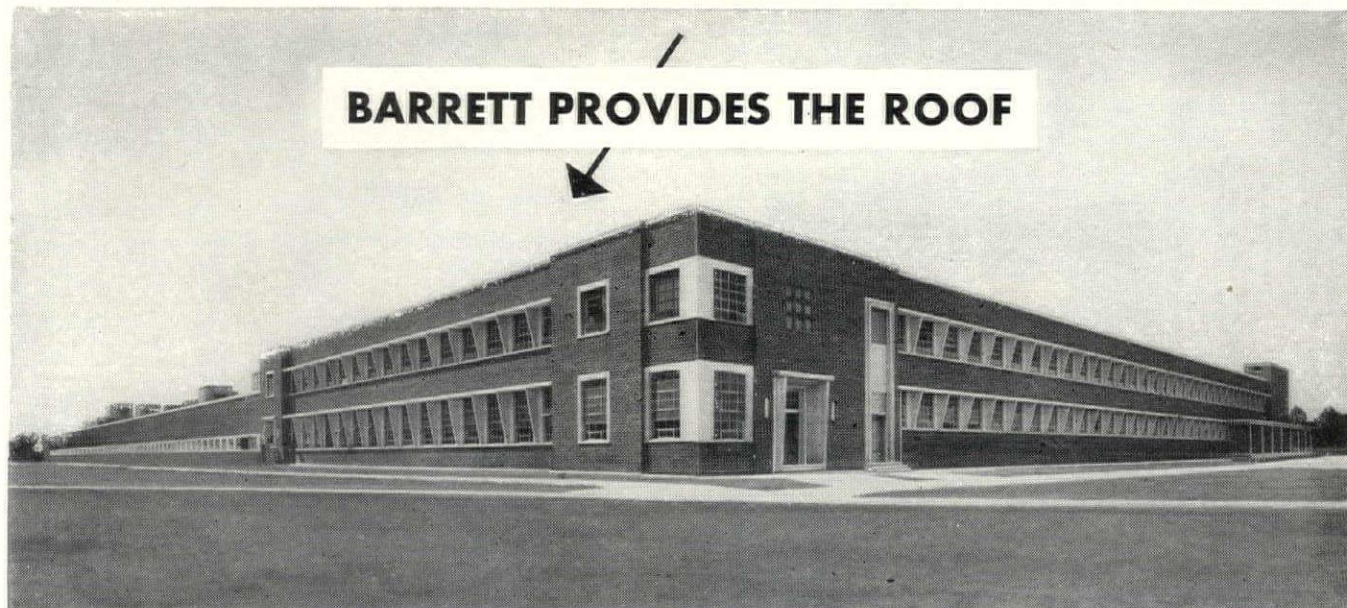
This arrangement is convenient, balanced, compact—allowing freedom of access to all the Kohler fixtures, and providing a large mirror, good lighting facilities, and roomy, practical cabinets of modern design.

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BARRETT PROVIDES THE ROOF



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Montreal, P. Q.

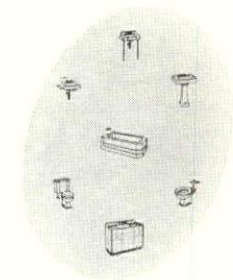
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a clique of fine bathroom ware...



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Universal Sanitary Mfg. Co.
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and two quality lines,
a century of experience is
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✦ Universal-Rundle merges the functional with the tasteful to make available to the trade a new *sharp* in bathroom equipment. Lustrous, long-life wares, with quality *all the way through*, characterize the Universal-Rundle complete line of vitreous china and vitreous enamel on cast iron... a solid family of exquisite charm, with prices tailored to range the market... engineered to serve the trade. Because homemakers fit Universal-Rundle smartness into their dreams, you'll find it profitable to fit Universal-Rundle into *your* plans.

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VAHLBERG, PALMER, VAHLBERG, general practice of architecture, 1323½ N. Robinson, Oklahoma City 3, Okla.

FREDERICK E. WIGEN (formerly of Merrill & Wigen, Architects), 132 S. Washington Ave., Saginaw, Mich.

THOMAS F. HOLIFIELD A.I.A., MILLARD P. BUCK and ROBERT D. CALDWELL, general practice of architecture and architectural engineering, 1806 Hillcrest Dr., Bartlesville, Okla., mailing address, Box 490, Bartlesville.

KAELBER & WAASDORP, 311 Alexander St., Rochester 7, N. Y.; Leonard A. Waasdorp, director.

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OSWALD FISCHER, architect, 35-10 Broadway, Long Island City 3, L. I., N. Y.

GEO. E. MCINTYRE, architect and engineer, 528 Dwight Bldg., Kansas City, Mo.

HARRY MILTON GRIFFIN, architect, Municipal Airport Bldg. No. 1, Daytona Beach, Fla.

ALBERT HENRY HILL, architect, 555 Clay St., San Francisco, Calif.

SAMUEL A. LICHTMANN A.I.A., architect and engineer, 1 N. LaSalle St., Chicago 2, Ill.

CHARLES C. CROSS, engineer, 117 West Pecan, San Antonio, Tex.

JACKIE PIEPER, interior and product design, 825 W. Lill Ave., Chicago 14, Ill.

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As specialists in the fabrication of bronze, aluminum, steel and stainless steel, we offer our services wherever hollow metal doors, interior trim, elevator enclosures, cold rolled mouldings and metal specialties are required.

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Primary and vital in the operation of this hospital is the maze of *steel piping* that transmits water, heat, steam, electricity, chemicals, and compressed air to implement the ministrations of the "men and women in white."

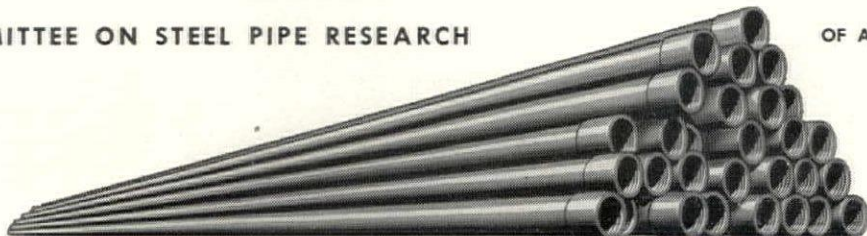
In the selection of materials and equipment for such services . . . where only the most suitable is

good enough . . . it is not surprising that *steel pipe is the first choice!* Architects, engineers, and contractors know, from more than half a century of satisfactory experience, that *steel pipe* combines the qualities of serviceability, durability, adaptability, and economy.

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COMMITTEE ON STEEL PIPE RESEARCH



OF AMERICAN IRON AND STEEL INSTITUTE
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MAGAZINE OF BUILDING



OR AND RICHNESS
TMOSPHERE HELP
SPLAY CARPETING
A NEW SHOWROOM

CARPET MERCHANDISING is spurred by design

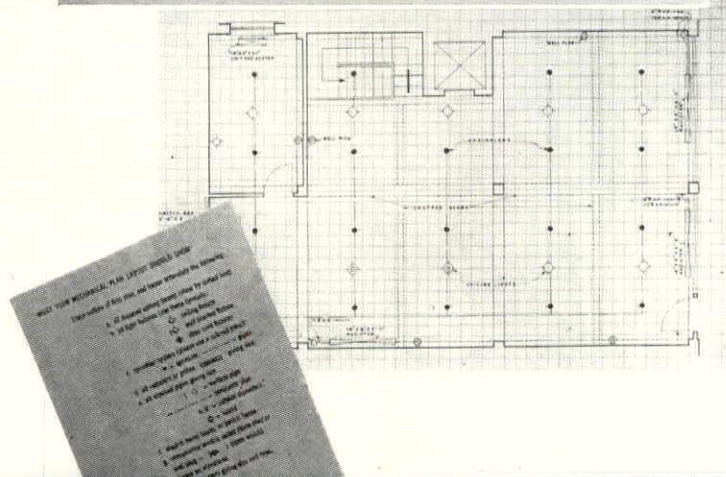
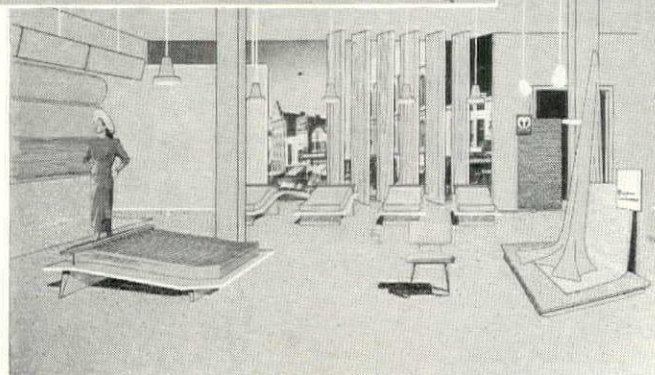
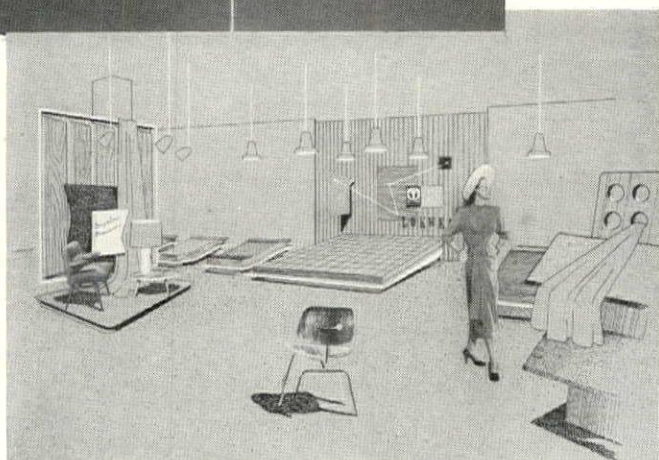
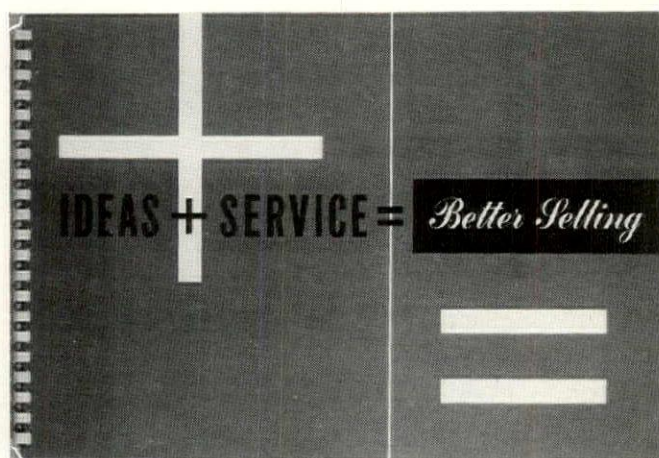
Bigelow-Sanford, biggest manufacturer of floor covering, engages a design consultant to refine the visual mechanics of its sales operation

DONALD DESKEY ASSOCIATES, Design Consultants

RALPH GULLEY, Architect

Project staff: Dana Cole, Arthur Finn, John Pile, Stanley Reese, J. Frederick Woerner, Jr., Frank Wallis.

KUHN, SMITH & HARRIS, INC., General Contractors for N. Y. Showroom

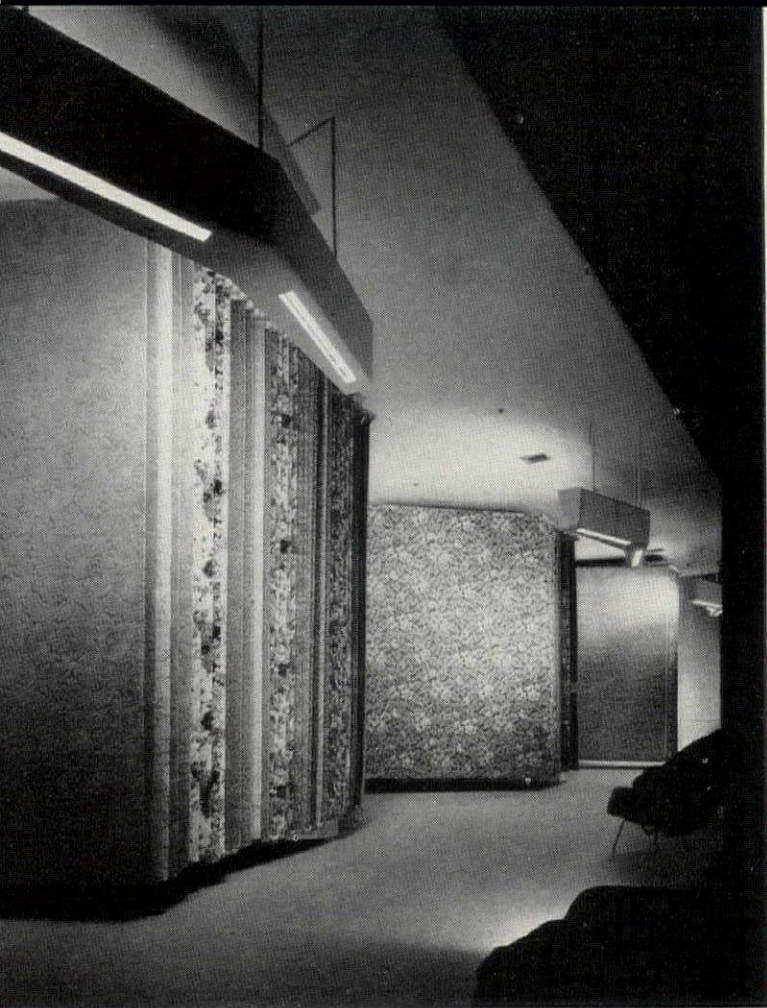


"Style sells style" is a quote from a Bigelow-Sanford Carpet Co. advertisement to dealers concerning carpets and carpet showrooms. It is a phrase which obviously comes from deep in the company's heritage—or at any rate deep in its merchandising mind. The idea behind the phrase has inspired and spurred a notable program of modernization and product presentation in Bigelow carpet showrooms throughout the country, culminating in the outstanding Bigelow offices and showroom in New York.

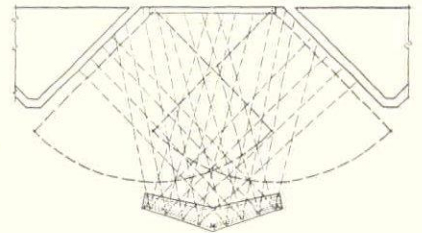
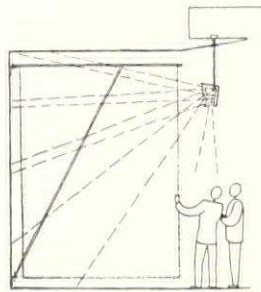
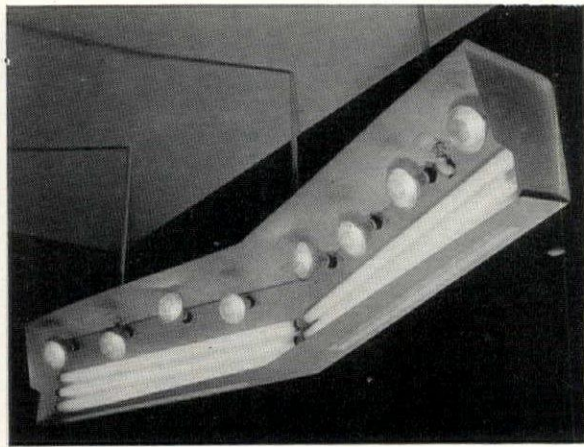
The design program began in 1945, six weeks after VJ day, when Bigelow management chose Donald Deskey Associates to undertake a basic study of its showroom requirements. The company did not seek merely a design for one showroom, or even for a single prototype. What was wanted was a thorough investigation by skilled designers into the entire visual and mechanical merchandising problem. Before the war Bigelow had been one of the first of the large floor covering manufacturers to abandon the common practice of distributing product through jobbers. The company had established its own nation-wide chain of wholesale showrooms to service retail dealers. But now, after the war, many of these showrooms had been lost, and those which the company had been able to keep in operation were deteriorating rapidly.

Their designers, Deskey Associates, started with the San Francisco Bigelow showroom as a practical working ground. In this job were the seeds of special fixtures (see pictures), several display devices and the general lighting theory which was to be used next in Chicago and then, during the following three years, in 19 other showrooms from Boston to Los Angeles. Design convictions were acquired from these jobs which later flowed in two directions—to the number one showroom in New York, and down to the floor covering departments of retail stores. The New York showroom is now complete and the retail dealers are being "sold" Bigelow ideas in a provocative booklet, some pages of which are shown to the left.

Bigelow and Deskey do not believe in showing dealers "Ideal Modernization" plans. Rather, they present ideas on planning, displays, fixtures, and lighting in this booklet, and invite the dealers to consult the Bigelow dealer invite planning service. If the atmosphere of the Bigelow-owned wholesale showrooms is not a stimulating enough example, inspire the retail dealers to follow similar courses, the company sales record might do the convincing. Bigelow-Sanford's dollar volume in net sales has increased in the last three years from 34 million dollars in 1945 to 85 million in 1948. This is big-time selling thanks, in part, to big-time design.



Ezra Stoller: Pictorial Services



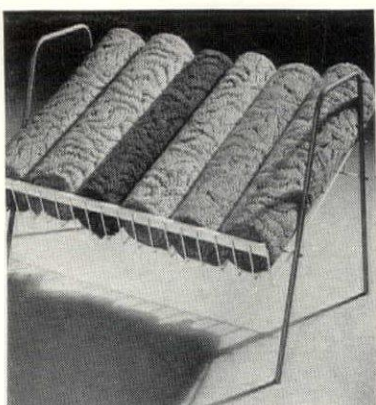
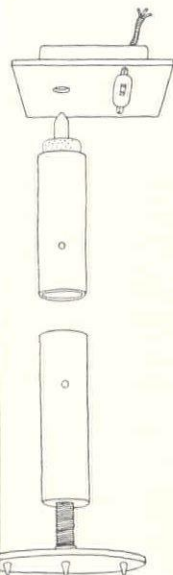
CARPETING IS BEST DISPLAYED VERTICALLY, according to the research of the designers of Bigelow showrooms. Only with use of wall panels (above) can the customer examine a large selection of big areas of carpeting with ease. But these panels require a high ceiling so they cannot always be used. Photos show ideal lighting for horizontally or vertically displayed rugs with the light directed as straight as possible into the pile. Right: view of the San Francisco showroom.

ALUMINUM POLES (to left) fit into any of the 175 special combination electrical outlet and pole receptacle boxes. Lighting, displays, wall sections or special devices can be placed anywhere in the show area.

THE THREE STANDARD CARPETING RACKS in the new line are made economically of pipe and wire. Not only do these cost but a fraction of usual more ponderous racks, but they do their job better, not diverting attention from carpeting to rack. Rack in center picture can be hung, combined with other sections, or set in wood frame. Prices of these fixtures to dealers are \$4.75 for the rack at left, \$23.75 for the center rack, and \$18.75 for the third.



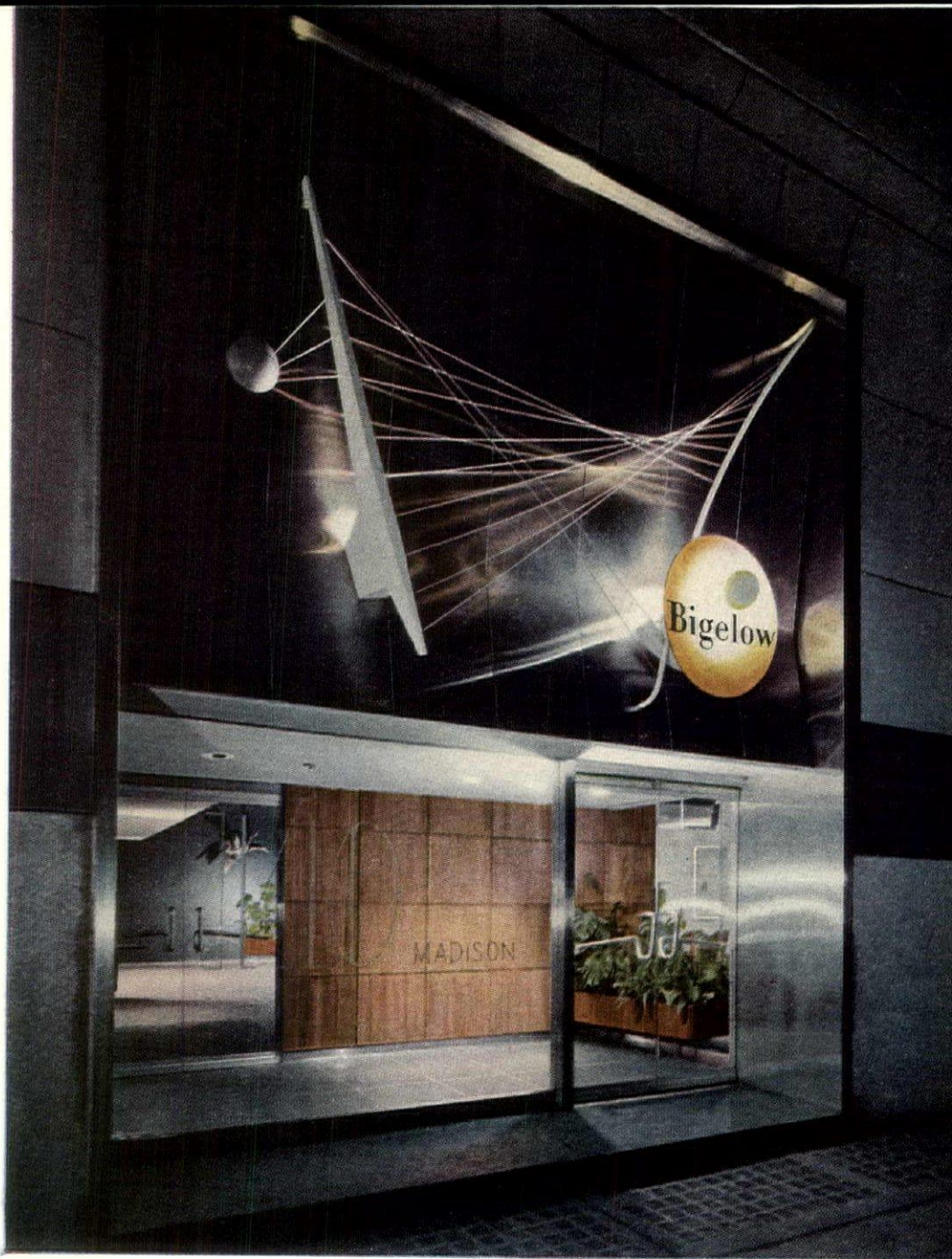
Photo by Stone & Steccati



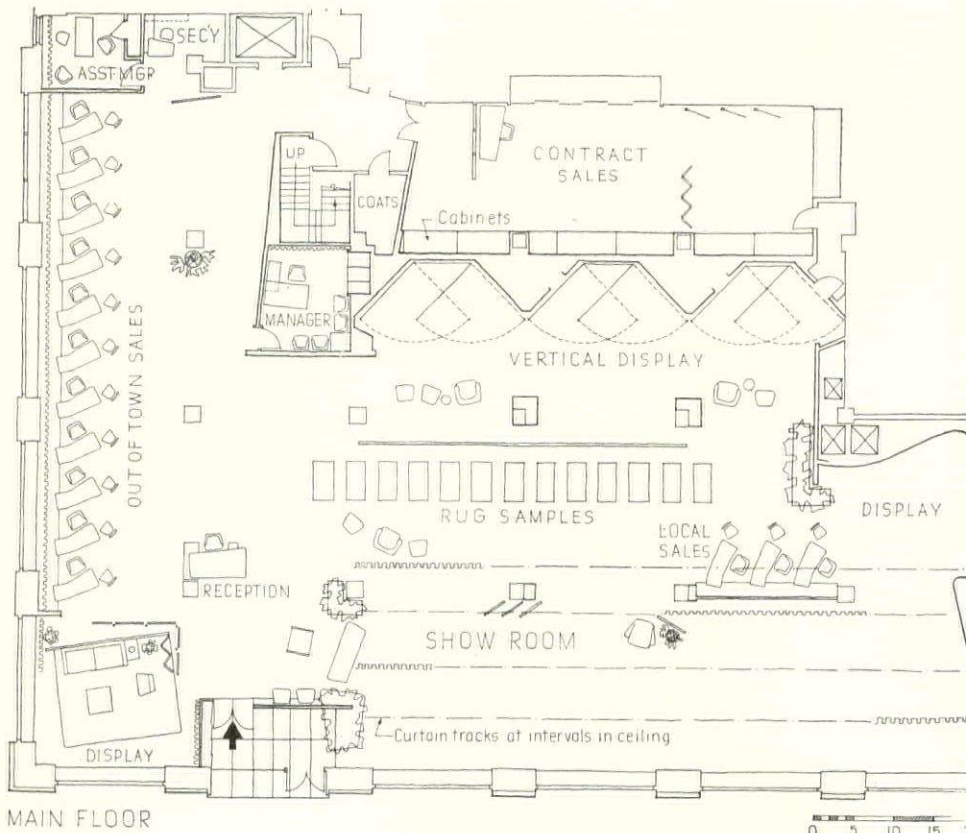
Bigelow's New York showroom is the climax of the program

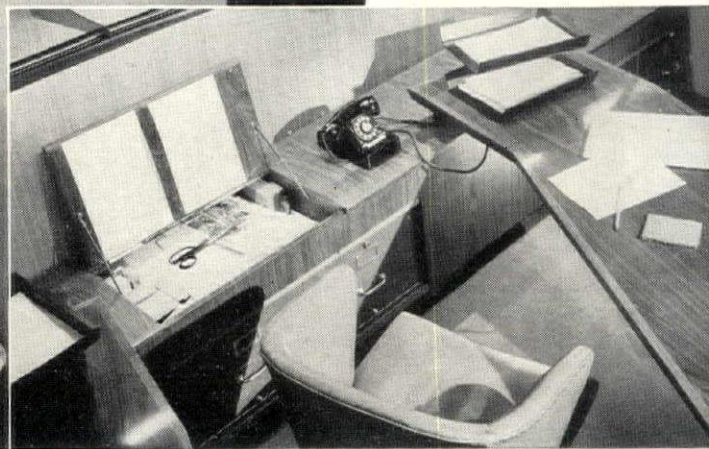
Just inside the entrance to the New York showroom, with its loom abstraction overhead, is a large carpet display area whose character is more than rich. It is lavish. The designers have used surfaces like an inner entrance wall of 2 in. solid split walnut sections, and other fine materials, hangings and furniture, to fulfil the luxurizing atmosphere suggested by good carpeting. Space, too, is used adroitly, with little opportunity lost to place desks economically or display a lot of carpeting. A calculated mixture of fluorescent and incandescent light is aimed at the weaves from the most advantageous angle.

Carpets actually are not sold here, except to dealers. Much of the objective of the design is company prestige; the big building bays on busy Madison Ave. are glazed to reveal the displays and interior. The first floor has three plan divisions, with a manager's office the crux. Along one outside wall, under a mezzanine, are desks for salesmen to the out-of-town trade. To the rear, entirely enclosed, is the contract sales department, with a selective combination of artificial lighting sources which can simulate almost any situation in which the carpeting will be used. The high ceilinged main area is for general display, designed stage-like for great flexibility in changing exhibits. Numerous ceiling sockets for lights and poles, and tracks in the ceiling allow sets to be moved in and out easily.



ENTRANCE SHIELD WALL of split walnut panels is seen from inside showroom, above, and through doors of street entrance in color photo.





Pictorial Services

SALESMEN'S DESKS, Deskey designed, are in long row under the mezzanine, with adjoining windows on side street screened by a long curtain. Same desk design, executed in polished walnut, is repeated often in this job.

MAIN SHOWROOM, seen below through window on Madison Ave., is constructed like a stage, with sets and lighting fixtures which can be shifted easily and quickly to set up carpet displays. Poles are sketched on page 85.



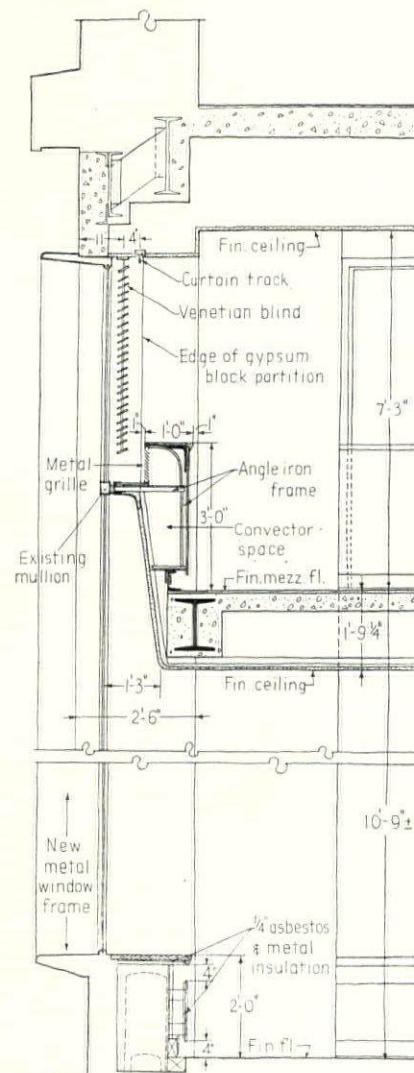


**Materials are lavish but space
layout is shrewdly economical**

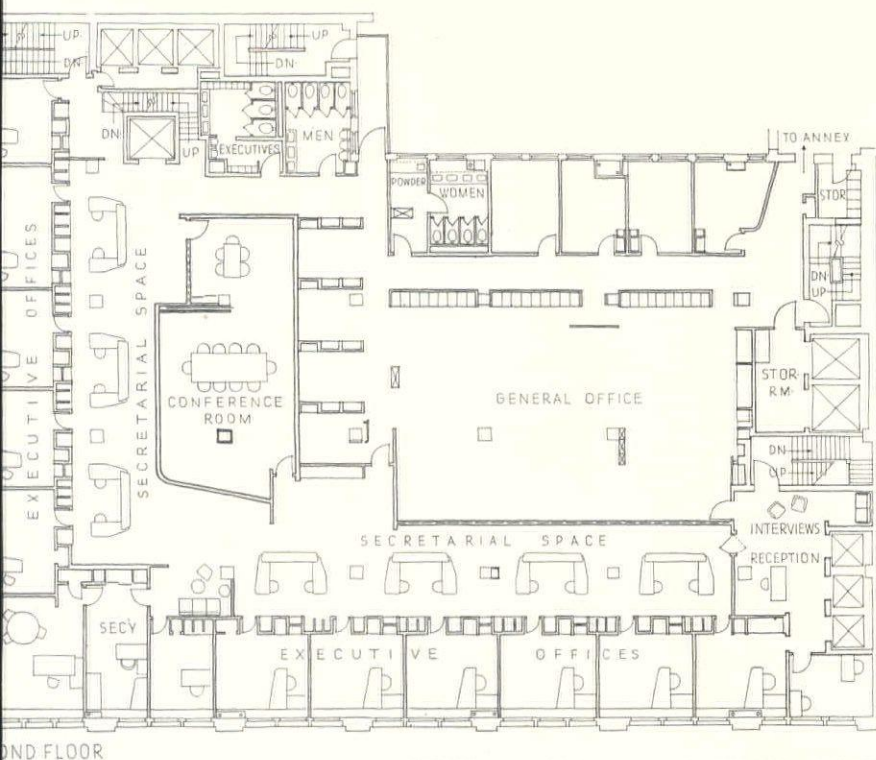
The mezzanine, hung neatly in front of the tall street window without breaking the facade, is one of the job's nicest achievements in design and economy. It sets off the higher ceilinged portion of the ground floor showroom handsomely, and holds a surprising number of desks and sitters. Mezzanine ceiling height is only 7 ft. 3 in. Careful, precise planning has kept the mezzanine offices comfortable. This space and the second floor offices are an epitome of the sleek modern office, but are at the same time executed with unusually good taste.

MOST OF THE PROPS for these sets in the main display area are rented. They are supervised by Deskey Associates, also serving as models for consumer magazine ads. Fleece Hardoy chair above has been sold nine times to impressed carpet buyers. Wall curves at end of showroom.

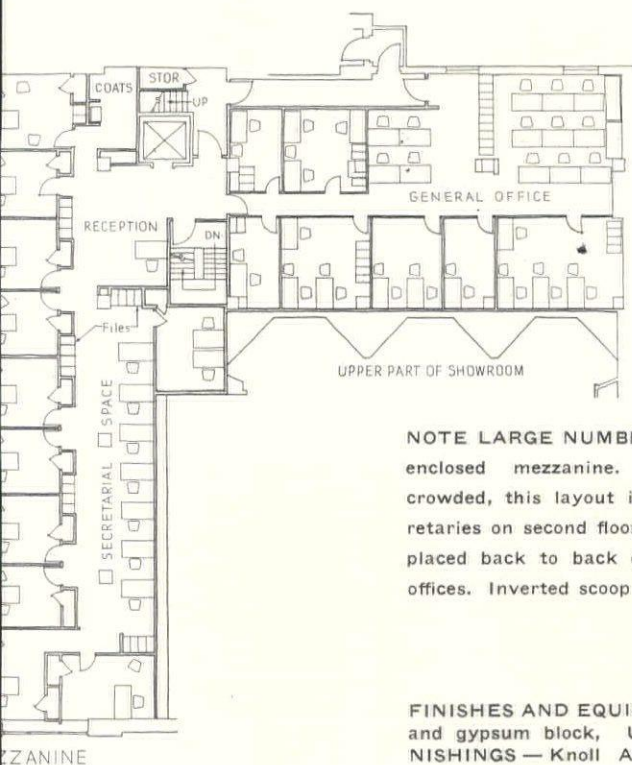
Esra Stoller: Pictorial Services



VERTICAL EXTERIOR WALL SECTION
SHOWING MEZZANINE

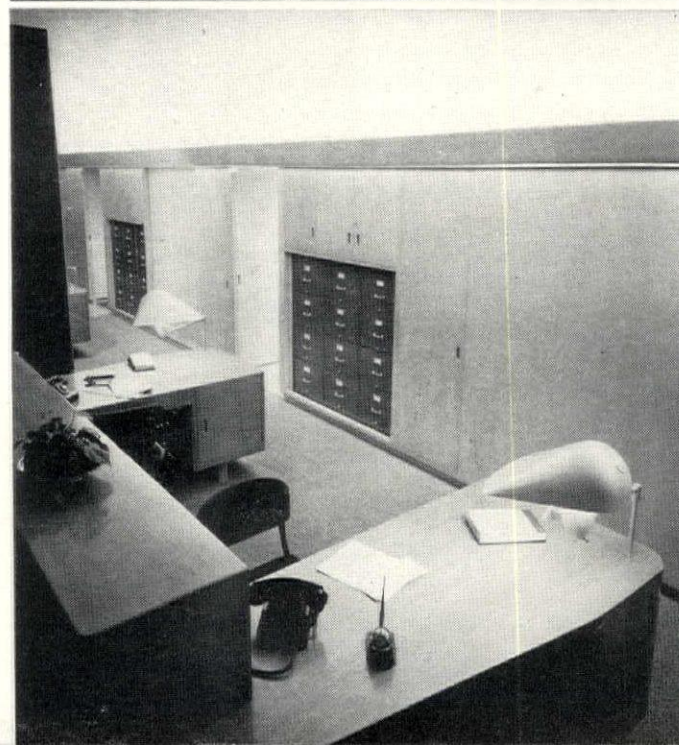
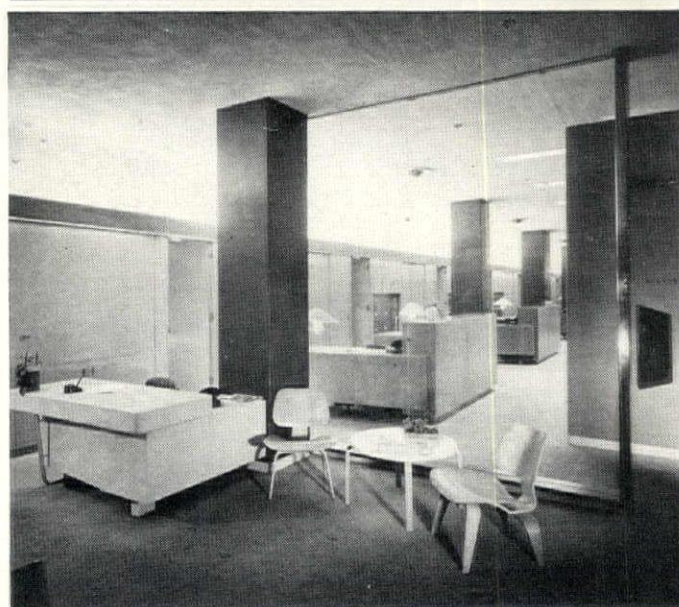
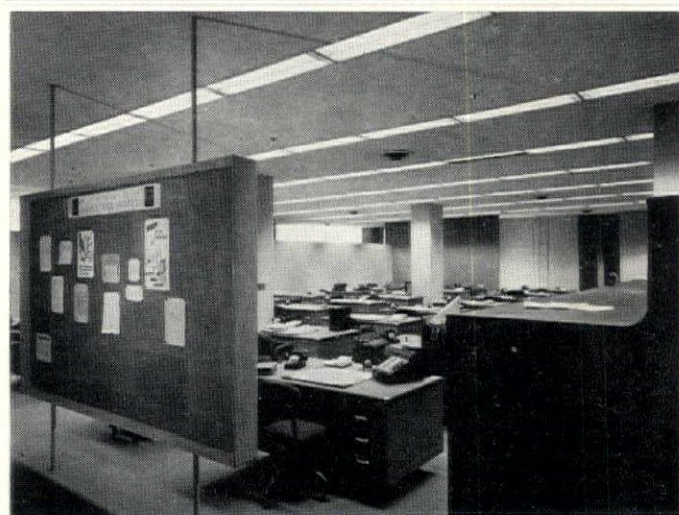
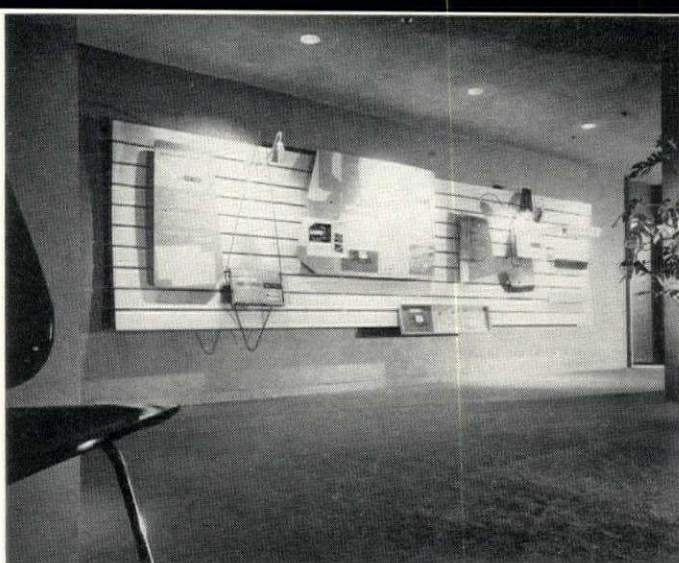


SECOND FLOOR OFFICES have glass topped partitions, continuous troffer lighting to increase feeling of spaciousness. Glazed wall of conference room is of double glass; its insulating qualities are used here to lessen sound transmission, increasing the privacy of the conferences within.



NOTE LARGE NUMBER OF DESKS placed on enclosed mezzanine. Although plan looks crowded, this layout is very comfortable. Secretaries on second floor (see photo to right) are placed back to back outside row of executive offices. Inverted scoop lamps are special design.

FINISHES AND EQUIPMENT: Interior—plaster and gypsum block, U. S. Gypsum Co. **FURNISHINGS**—Knoll Associates, Finsven, Inc., Herman Miller, Domor Chairs, Shaw Walker and Donald Deskey Associates. **EXTERIOR DOORS**—Herculite, Pittsburgh Plate Glass Co. **ELECTRICAL FIXTURES**—Ledlin Light Co. Century Lighting Co. and Edward F. Caldwell. **HEATING**—steam system, duct control, humidifying and dehumidifying, Carrier Corp.



HOUSES

Architect's home has utility core between living and sleeping area

Photos: Cortlandt V. D. Hubbard

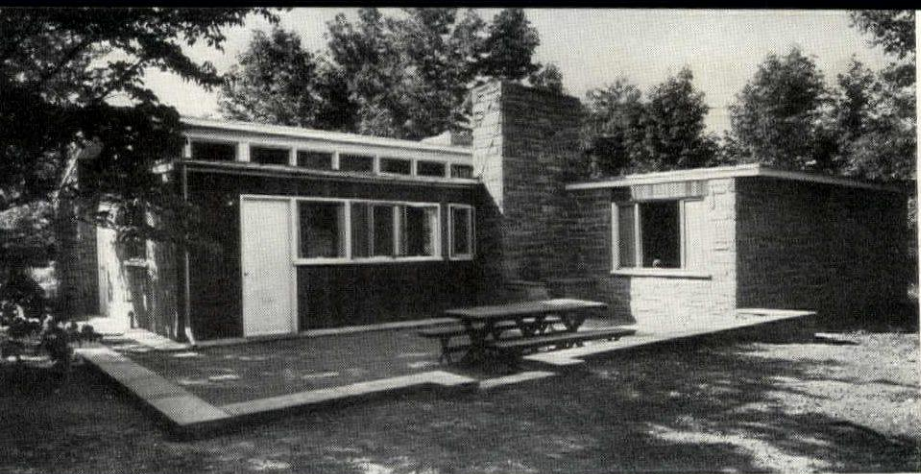


E. GEORGE LAVINO and WILLIAM A. AMENTA, Architects

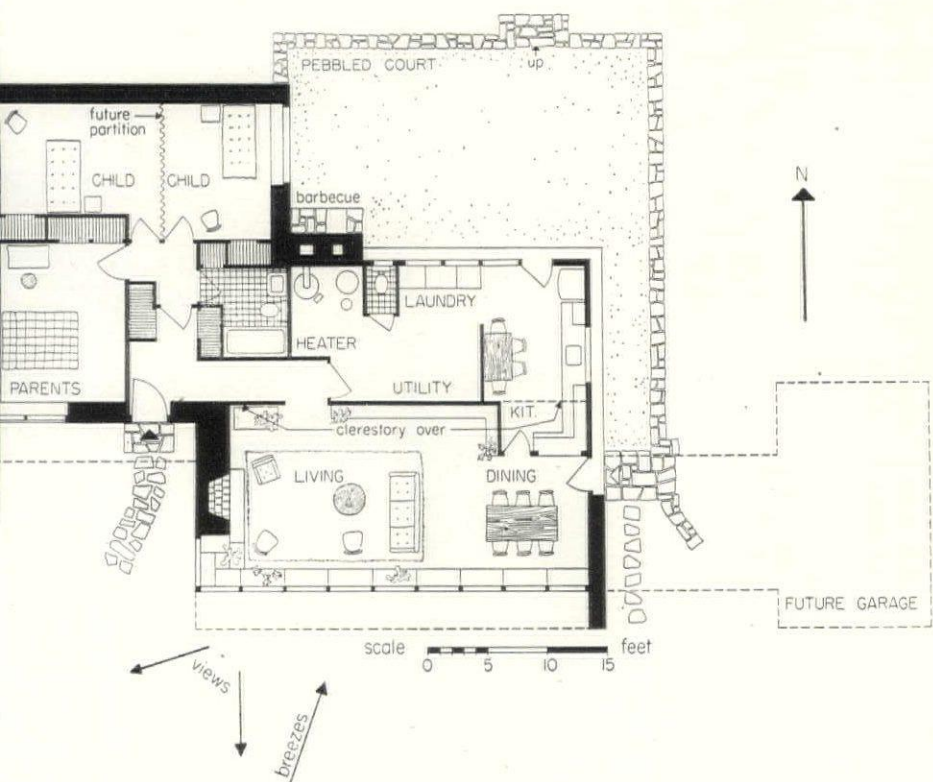
In designing this Bethayres, Pa., house for himself, Architect Amenta was guided mainly by a desire to preserve the rocky wooded atmosphere of the site, to provide flexible and convenient accommodations for his two young children (boy and girl) and to keep within a limited construction budget. "Chestnut Hill stone" obtained inexpensively from a nearby sewer excavation is the principal construction material and it is handled economically in simple masses—never appearing over openings.

The plan features 1) an interior bathroom with ventilating skylight, "warm in winter, cool in summer, absolutely private," 2) an adjacent laundry-utility-heater room with a toilet located conveniently for the children when playing out-of-doors and 3) a large play and sleeping room for the children, well separated from the living-dining area, which may be subdivided with a movable partition.

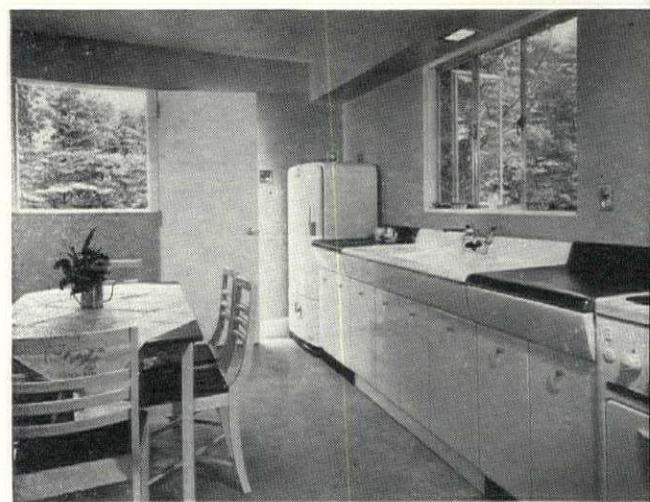
CONSTRUCTION OUTLINE: Exterior walls—stone, furring, insulation; frame section of red-wood siding, building paper, sheathing, studs and rockwool. Interiors—plywood, U. S. Plywood Corp., or Masonite, Masonite Corp. Floors—concrete slab. **ROOFING** (pitched)—aluminum, Reynolds Metals Co.; flat—built-up tar and gravel, The Barrett Co. **WINDOWS:** Sash—aluminum casement, J. S. Thorn Co. Glass—Libbey-Owens-Ford Glass Co. **DOORS:** Paine Lumber Co. and Roddis Lumber & Veneer Co. **HARDWARE:** Schlage Lock Co. **KITCHEN EQUIPMENT:** Range—Electromaster Co. Refrigerator—Frigidaire Div., General Motors Co. **HEATING:**—radiant coils in concrete slab. Boiler and burner—Aldrich Co. Pipe coils—Bethlehem Steel Corp. Circulator—H. A. Thrush & Co. Regulator—Minneapolis-Honeywell Regulator Co.



PEBBLED COURT WITH BARBECUE IS FOR OUTDOOR DINING AND ENTERTAINMENT

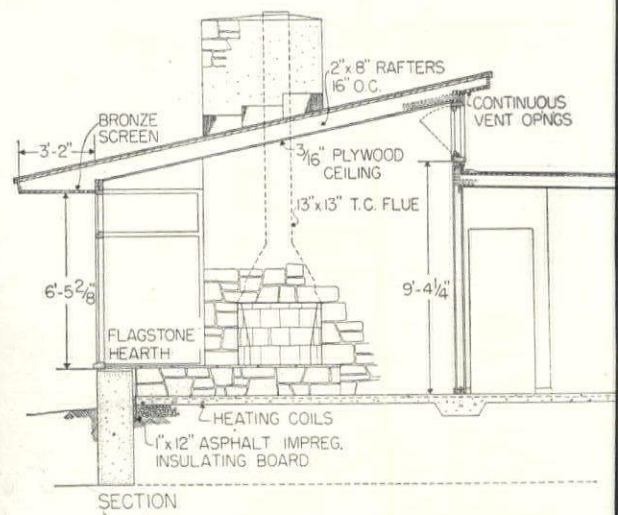
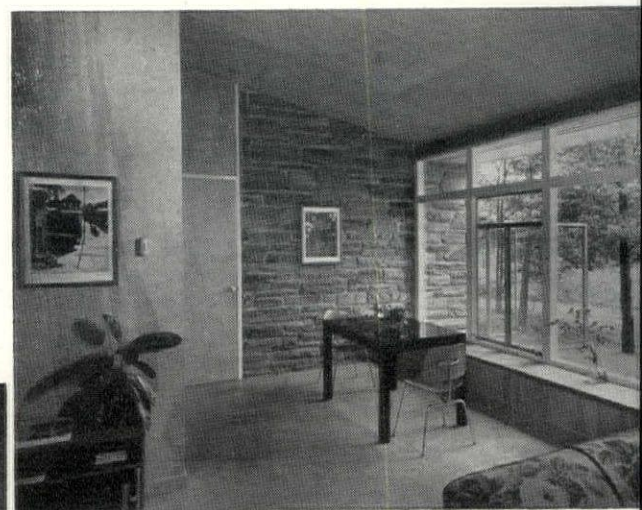


LIVING ROOM'S NORTH CLERESTORY BALANCES LIGHT FROM SOUTH WINDOW WALL



IN-LINE KITCHEN OPENS ONTO PEBBLED COURT

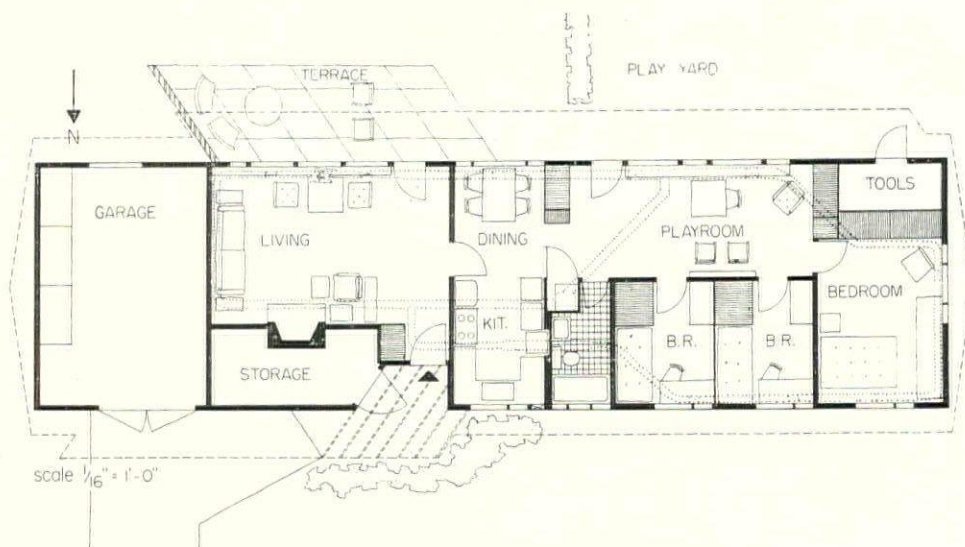
DINING SPACE IS EXTENSION OF LIVING ROOM



Revere Institute's Indiana house is based on a thrifty rectangle

L. MORGAN YOST, Architect

PLACE & CO., Builders



Photos: Hedrich-Blessing,

Sponsored by Revere Copper & Brass Co. as one of its nation-wide demonstrations of merchant builder-architect teamwork, this South Bend house packs a lot of sense within its simple 20 x 77 ft. rectangular shell. The limitations of a \$17,000 sales price (including lot) and a shallow 63 x 137 ft. corner site, influenced the shape of the plan. Within it, unusually careful attention has been paid to the various family living activities. Placed to avoid through traffic, the 13 x 20 ft. living room is reserved for "polite living" and enjoys a maximum of wall space for flexible furniture layout. Work and play are accommodated in a large separate area which, like the play yard, is easily supervised from the U-shaped kitchen. Opening on the playroom, the two children's bedrooms are justifiably small. To offset the lack of both basement and attic, a large dead storage room is provided to the left of the main entry, supplemented by an oversize garage and, at the opposite end of the house, an outdoor "closet" for garden tools and children's wheeled toys.

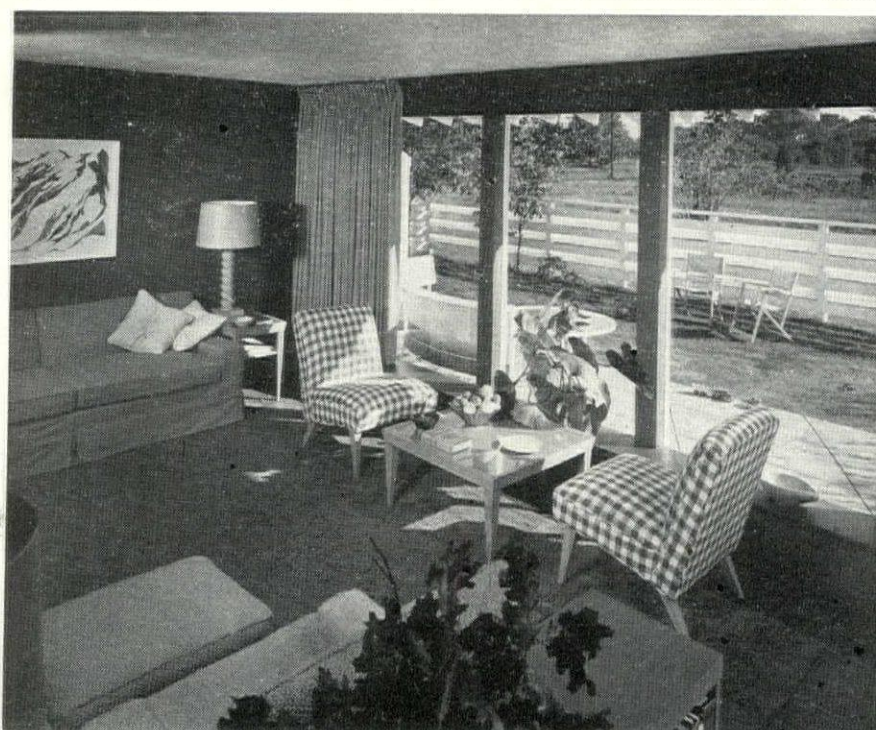
Warm air heat is generated in a centrally located down-draft furnace, circulated in two loops (metal ducts) in the perimeter of the concrete slab and exhausted into the rooms beneath the windows. A single return grille above the furnace completes the air circulation cycle.

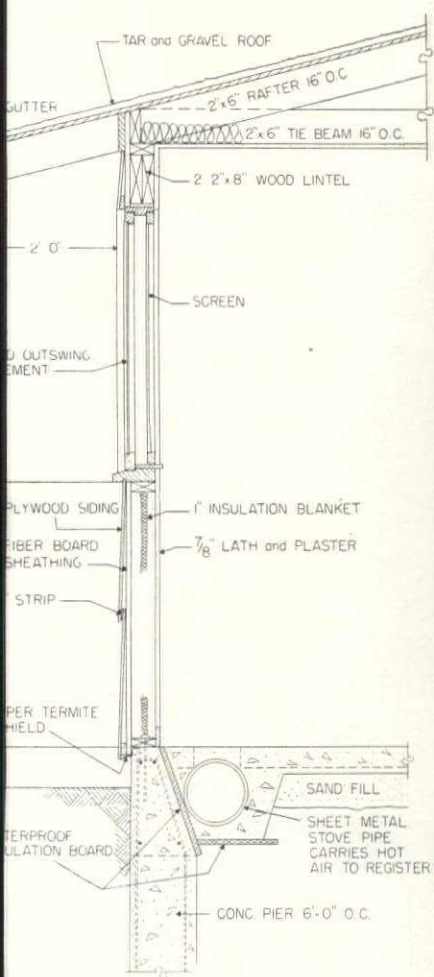
CONSTRUCTION OUTLINE: Exterior walls— $\frac{1}{4}$ in. Kimpreg siding, Kimberly Clark Corp., fiber board sheathing, studs; inside—lath and plaster. Floors—asphalt tile, Tile-Tex Co. on concrete slab. ROOF—tar and gravel. INSULATION: Walls—1 in. Kimsul, Kimberly Clark Corp. Attic floor—rockwool batts. FIREPLACE: Damper—Colonial Fireplace Co. SHEET METAL WORK: Ducts—26 gauge galvanized iron. Remainder—16 oz. copper, Revere Copper & Brass Co. WINDOWS: Sash—wood casement and fixed. Glass—double strength, quality A. and plate. WALL COVERINGS—Mira-Tex tile, Tile-Tex Co. PAINTS—O'Brien Corp. HARDWARE—International Brass Co. ELECTRICAL FIXTURES—General Electric Co. and Sylvania Electric Co. KITCHEN EQUIPMENT: Range—Magic Chef, American Stove Co. Refrigerator—Servel, Inc. Cabinets—Youngstown Mullin Mfg. Co. Fan—Midwest Corp. WASHING MACHINE—Bendix Home Appliances, Inc. BATHROOM EQUIPMENT—Kohler Co. HEATING—warm air, oil-fired system, International Oil Burner Corp. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—Cleveland Heaters Co.



RECESSED ENTRY WITH PROJECTING EAVE ADDS INTEREST TO LONG FACADE

LIVING ROOM'S BIG PLATE GLASS WINDOWS OVERLOOK CONCRETE TERRACE





TERRACE DOOR AND LOUVERS ON EITHER SIDE OF FIXED TRIPLE WINDOW VENTILATE LIVING ROOM



WOODEN CASE, standing clear of ceiling, separates dining space from playroom and contains two closets. Adjacent to the rear entrance, the larger closet accommodates children's outdoor togs.



MASTER BEDROOM HAS TWO EXPOSURES, TWO CLOSETS



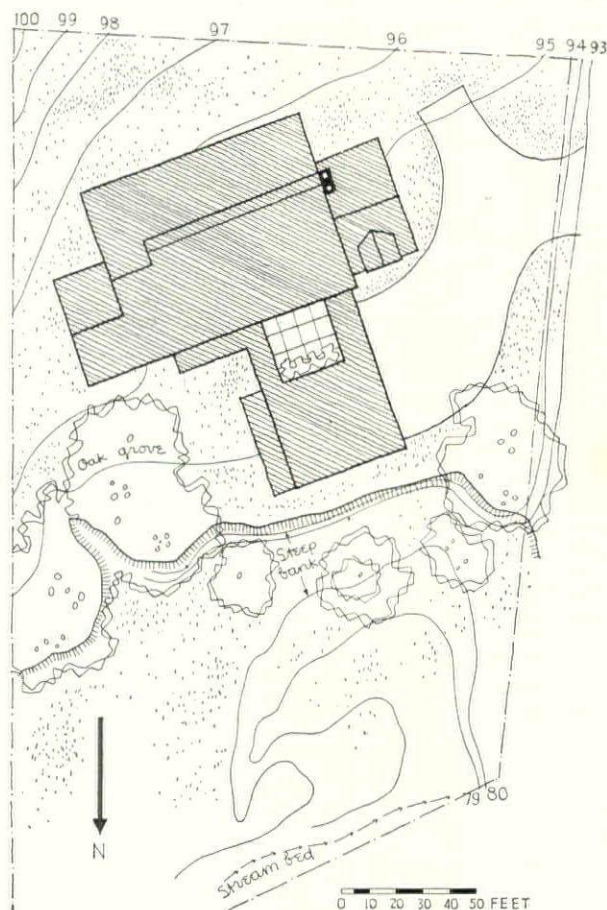
Architect's house and studio demonstrate unusual heating system

LOCATION: Salt Lake City, Utah

SNEDAKER & MACDONALD, Architects

W. J. DEAN SONS, General Contractors

Positioned around an economical grouping of the kitchen, utility room and two baths, the major rooms of this noteworthy house are arranged for maximum convenience, privacy, view, sunlight and for simple distribution and return of air in the unusual heating system detailed on page 96. Beyond the living room and isolated from it by a sonic barrier of closets, double doors and a fireplace wall is the architect's studio-workshop, itself a buffer between street noises and the rest of the house. Now actually part of the living room, the open studio may easily be converted into a third bedroom. Though there is no basement, ample storage space has been provided. Each bedroom has two large closets and even corner space in the kitchen, usually wasted, is made useful. The carport doubles as a sheltered outdoor play area for children and is backed up by a battery of handy outdoor storage closets.

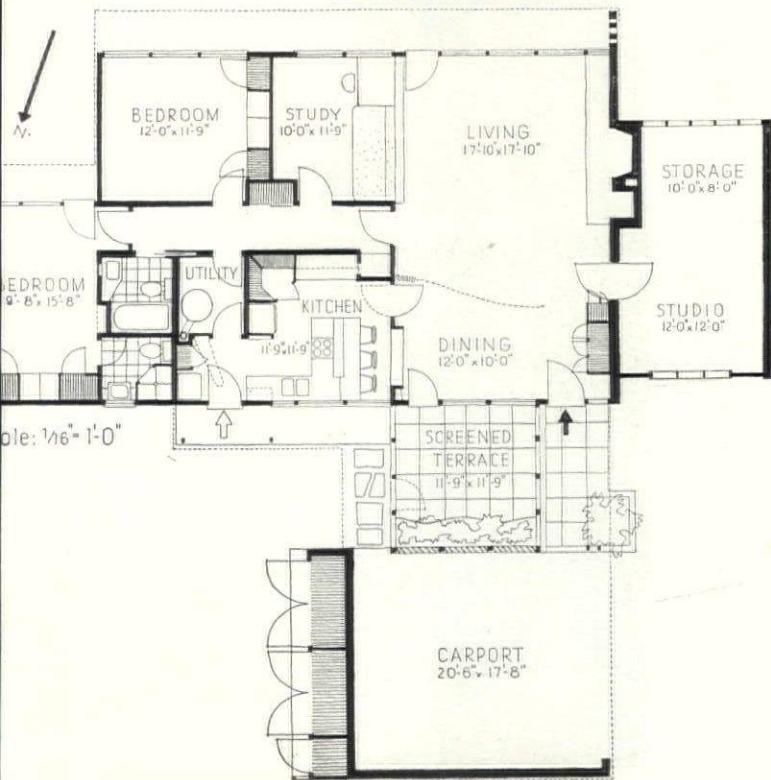


SCREENED TERRACE BEYOND REAR ENTRY AND KITCHEN IS CRADLED BETWEEN HOUSE AND CARPORT AND ACCESSIBLE FROM DINING AREA





SOUTH FACADE IS OPENED TO MOUNTAIN VIEW BUT PROTECTED FROM DIRECT SUN

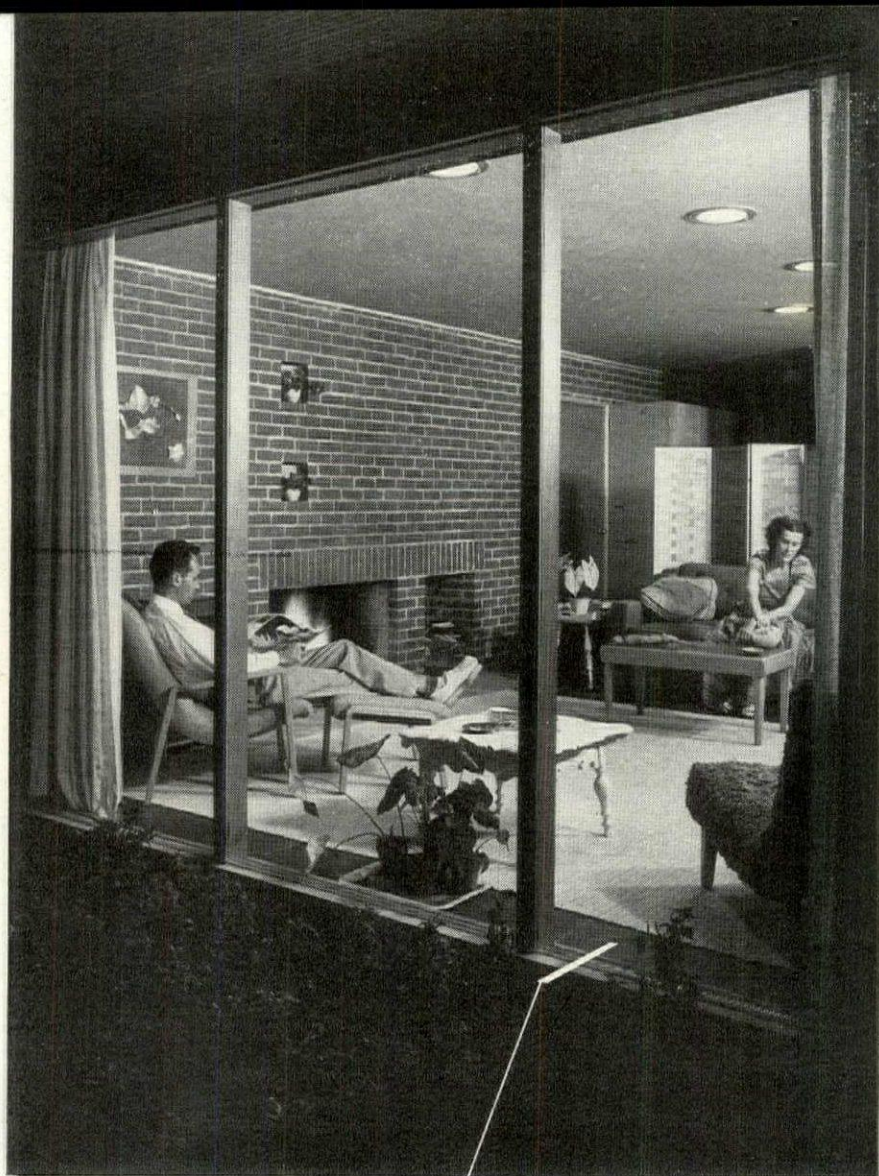


Photos: Phil Fein



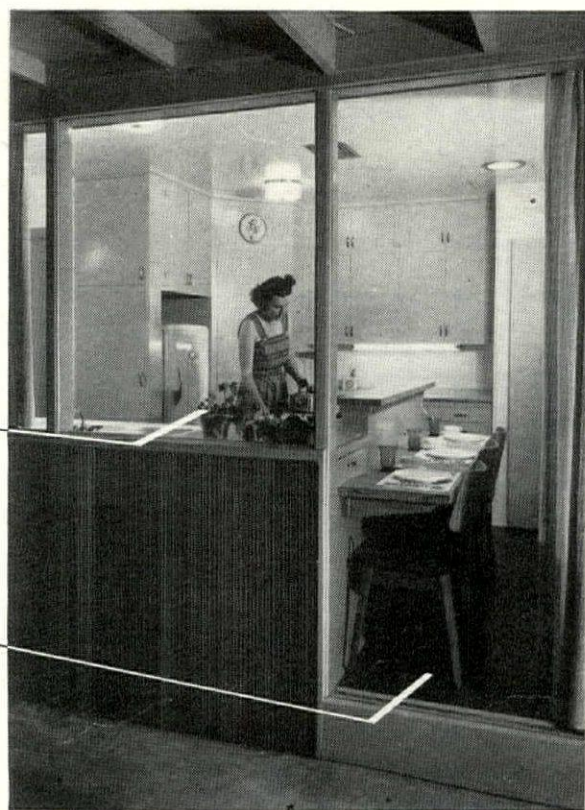
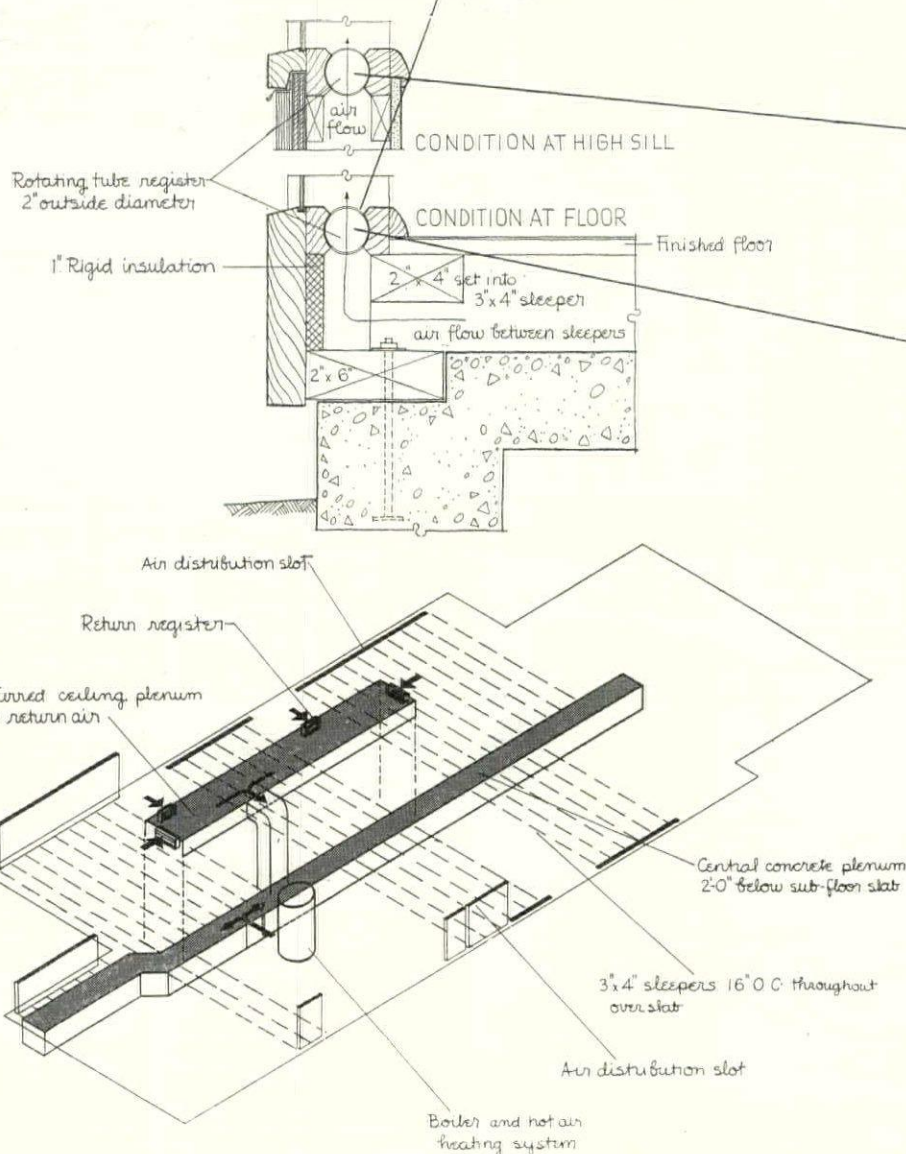
BUILT-IN CABINETS MARK THE DIVISION BETWEEN LIVING ROOM AND THE ARCHITECT'S SMALL STUDY





Heating system involves water and air

Unusual in many respects, the heating system in Architect MacDonald's house features a floor panel, plus forced air combination and a hot-water to hot-air conversion. The cycle begins in a gas-fired boiler which heats domestic water as well as the air conditioning-type coils in a heat exchanger. Air is forced through the coils down into a concrete duct running under the center of the house. From here it passes through the sleeper spaces between the concrete slab and the plywood subflooring and enters the rooms through adjustable tube registers beneath the windows. The air is returned through grilles in the furred-down plenum above the central hall to the centrally located heating plant. Benefits claimed of the system are warm floors, elimination of window condensation and neutralization of cold down drafts from the windows.

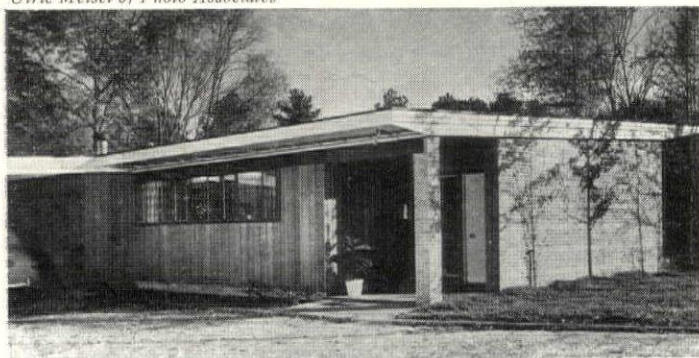


CONSTRUCTION OUTLINE: Exterior walls—redwood over wood studs; inside—plaster board. Floors— $\frac{1}{4}$ in. tempered Masonite, Masonite Corp., over plywood sheathing. Ceilings—plaster board. **INSULATION:** Outside walls—2 in. Kimsul batts, Kimberly Clark Co. **ROOF:** 3 in. mineral wood, U. S. Gypsum Co. **SHEET METAL WORK:** Flashing—aluminum. Ducts—aluminum lined with Celotex, Celotex Corp. **WINDOWS:** Sash—Whitco adjusters, Vincent Whitney Co. Glass—quality B. **PAINTS:**—Pratt & Lambert Co. **HARDWARE:**—Schlage Lock Co. **ELECTRICAL INSTALLATION:** Switches—General Electric Co. and Bryant Electric Co. Fixtures—Pittsburgh Reflector Co. **KITCHEN EQUIPMENT:** Range—Hotpoint Inc. Refrigerator—General Electric Co. Fan—Trade Wind Co. Washing machine—Lauderall, F. L. Jacobs Co. **BATHROOM EQUIPMENT:**—Crane Co. Shower—Fiat Metal Mfg. Co. **HEATING:**—warm air radiant system. Water heater—Mission Heater Co.



Astute design and orientation produce a distinguished house

Ulric Meisel of Photo Associates



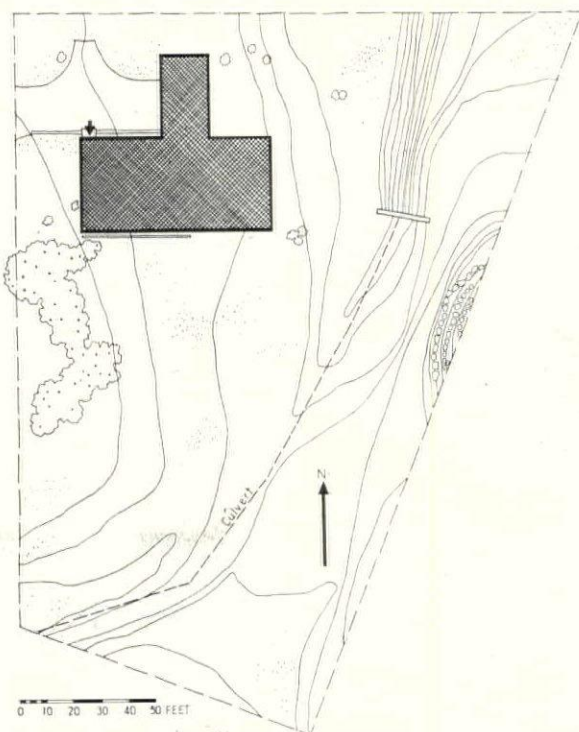
Tucked into the northwest corner of its one-acre suburban lot, this house of smartly simple design opens southward to the view, sun, breeze, garden and play yard. The latter was created by placing two big culverts in the bed of a drainage ditch running diagonally across the property and then filling in the valley. The small rear yard makes room only for the carport and driveway which form an entrance court at the northwest corner of the house—a sensible arrangement for a residence whose occupants and visitors usually come and go by automobile.

LOCATION: Shreveport, La.

SAMUEL G. WIENER & WILLIAM B. WIENER, Architects

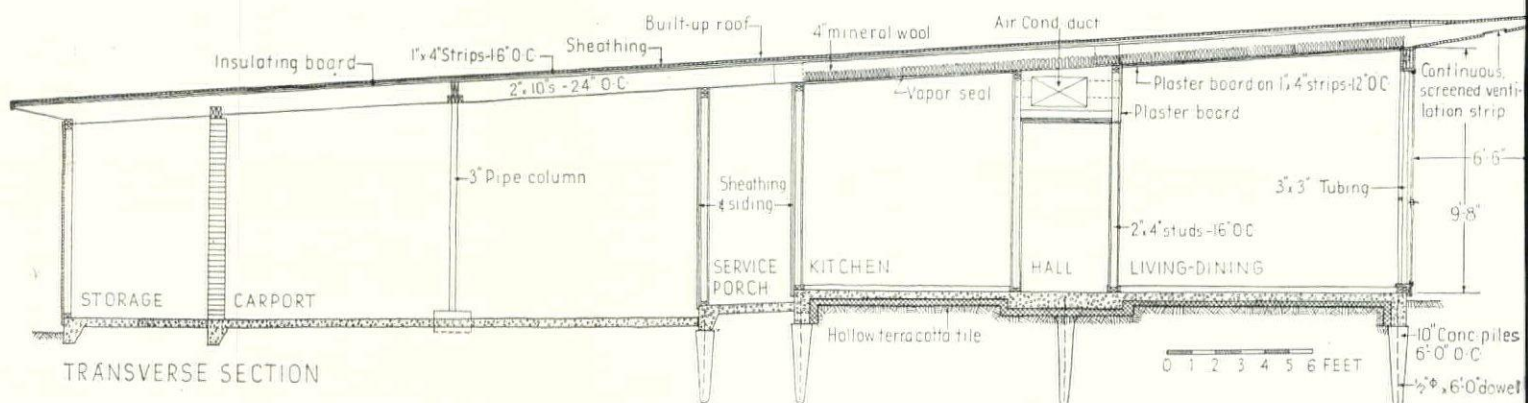
SYLVIAN W. GAMM, Owner

SANDEL & LASTRAPES, Contractors

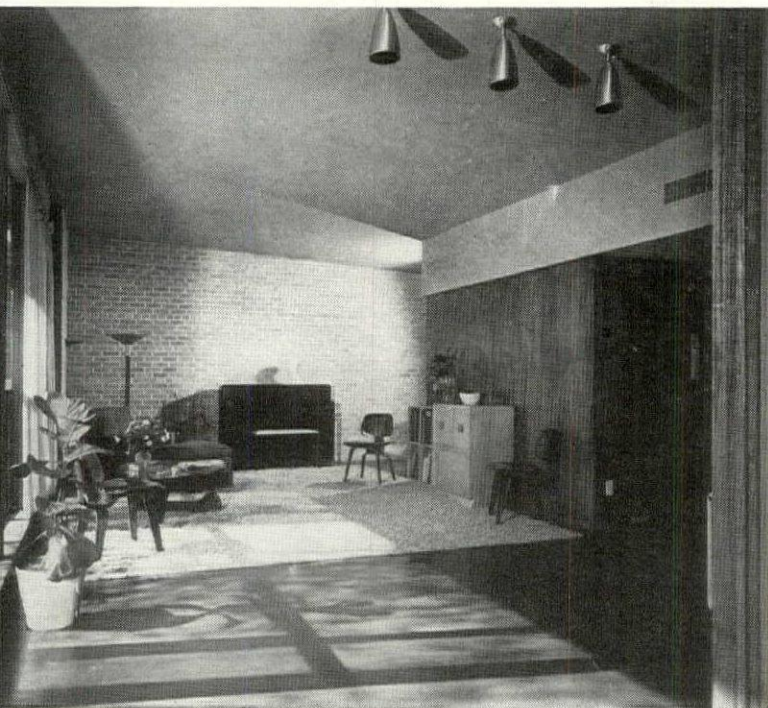




DINING SPACE AND GAME ROOM ARE DELICATELY SEPARATED BY GLASS-TOPPED PARTITION HOUSING LARGE SLIDING DOOR



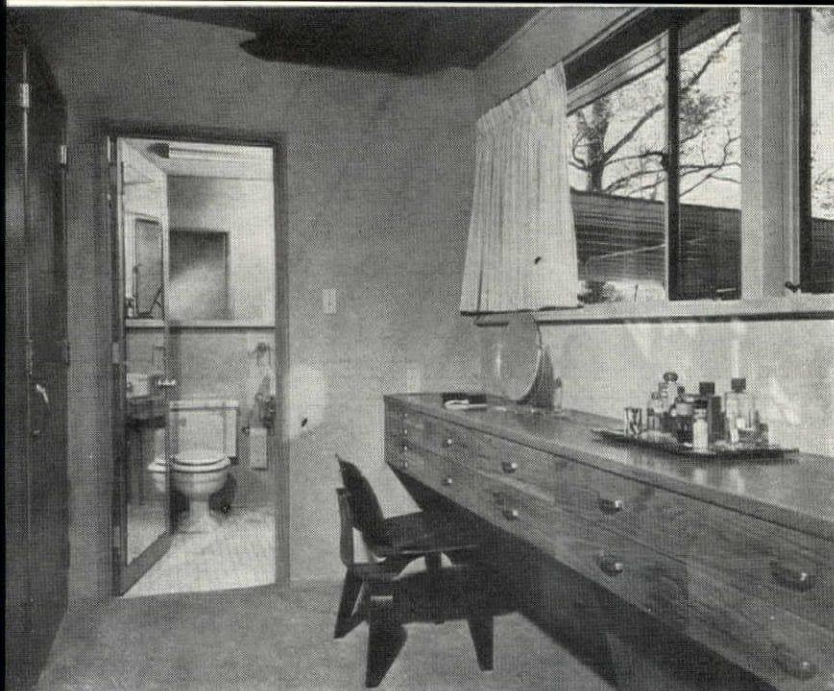
LIVING AREA'S BRICK WALL EXTENDS TO THE MAIN ENTRY



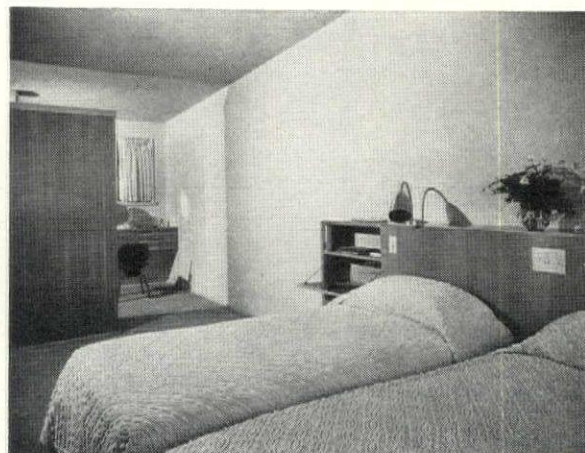
Straightforward design, based on an economical rectangular plan and an easy framing pattern, was essential to balance the owner's space and cost requirements. (The main rectangle covers 1,975 sq. ft.; the much less expensive carport-service wing, 594 sq. ft.; together they cost \$30,900 or about \$12 per sq. ft.) Another design influence was the fact that the owner suffers from arthritis and therefore desired a floor plan which would cut housekeeping steps to the minimum. This also influenced the size and layout of the master bedroom.

Within the basic rectangle, all service elements, including the main entry, are strung along the north side. Also on this side is the appended carport, conveniently adjacent to the service entry and integrated with the house by an extension of its low-pitched roof. Supplementing the two bathrooms are an auxiliary toilet and lavatory in the central utility room, accessible via the service porch. This tandem arrangement of service elements freed the glazed south side of the rectangle for the living, dining, recreation and sleeping areas.

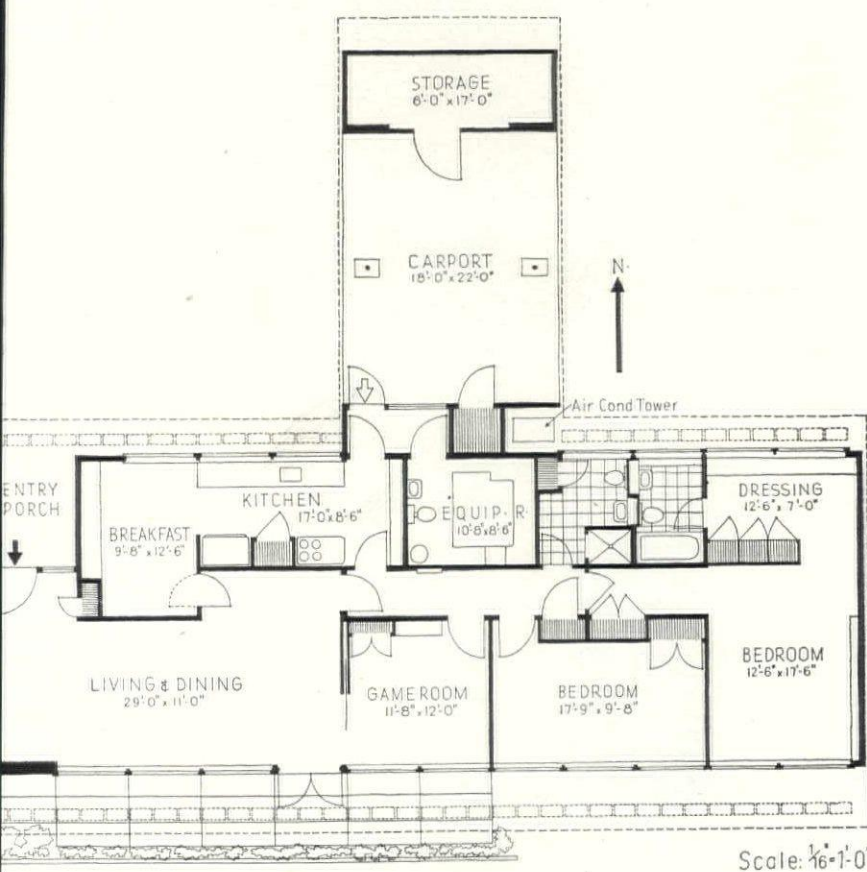
As shown in the section above, the concrete slab floor is built over insulating hollow tile laid on fill and is supported by concrete piers around the periphery and down the center.



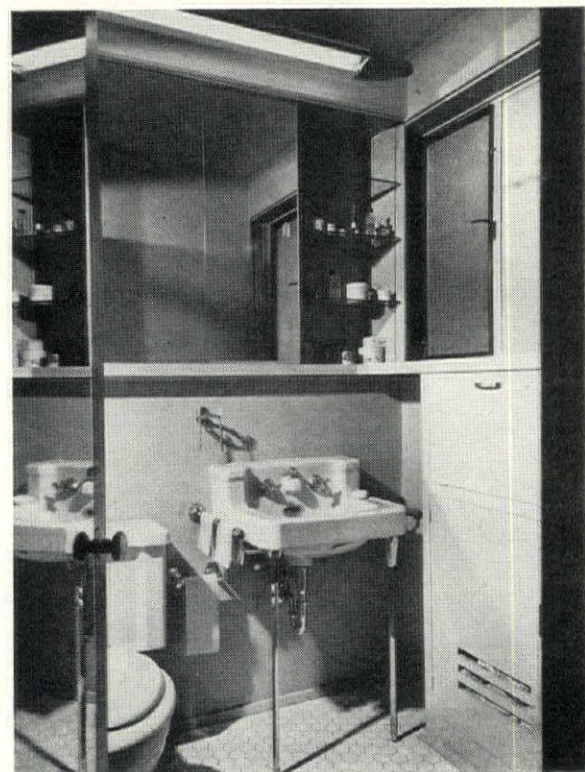
DRESSING AREA IS FLANKED BY CLOSET PARTITION AND WALL CABINETS



MAIN BEDROOM'S NORTH END IS DRESSING AREA



BATHROOM WALL CABINET HAS SLIDING MIRROR

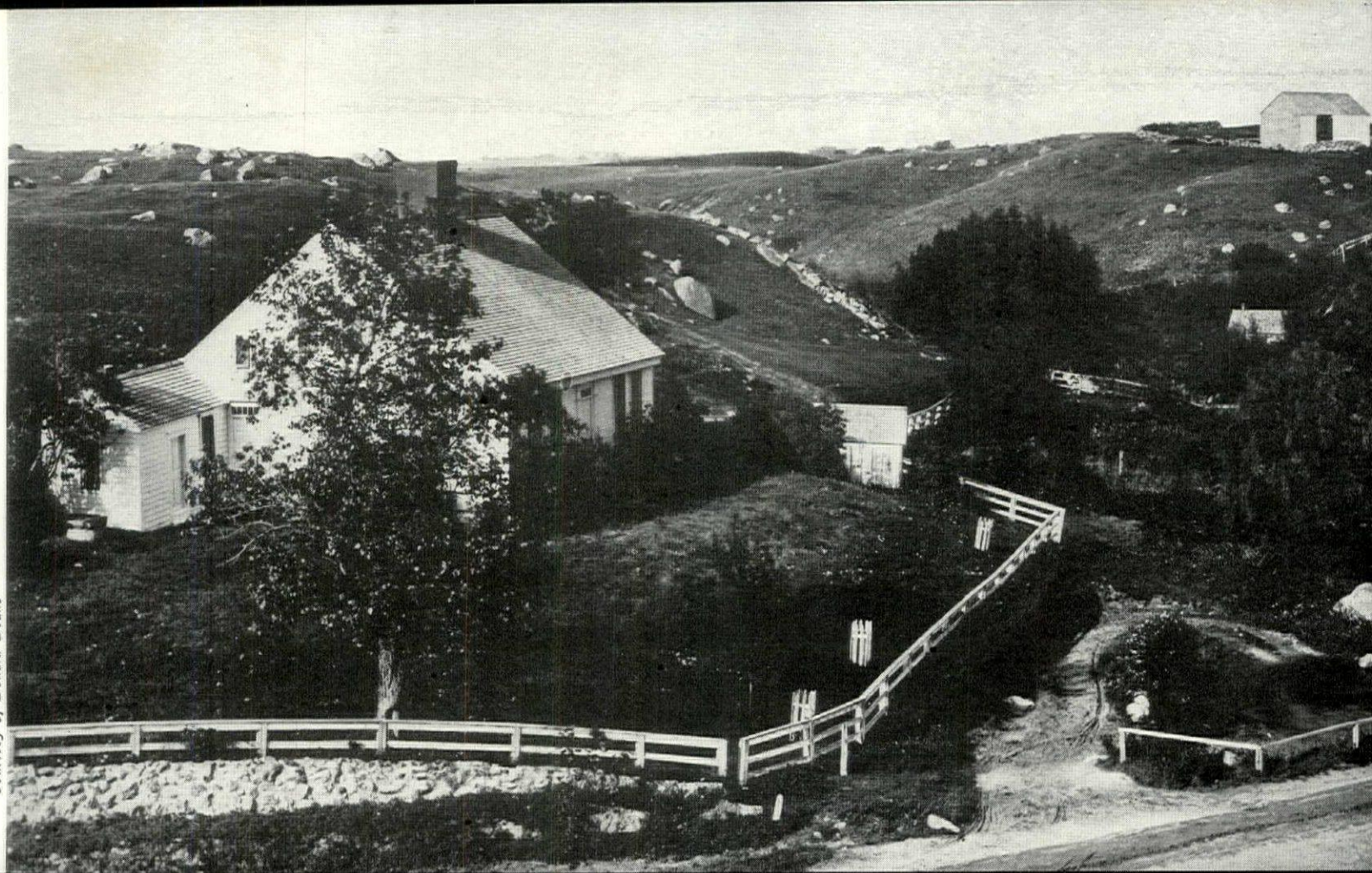


SOUTH WINDOWS AND TERRACE ARE SHELTERED BY 6 FT. ROOF OVERHANG



CONSTRUCTION OUTLINE: Foundation—concrete and tile, Acme Portland Cement Co. and Acme Brick Co. Exterior walls—redwood siding, studs or brick, Acme Brick Co.; inside—plasterboard and plywood, U. S. Plywood Co. or exposed brick interior. Floors—concrete, A. C. Horn Co. Ceiling—plasterboard, U. S. Gypsum Co. **ROOFING**—built-up, Bird & Son. **INSULATION**—Celotex Corp. and Libbey-Owens-Ford Glass Co. **SHEET METAL WORK**—U. S. Steel Corp. **WINDOWS:** Sash, casement, Truscon Steel Co. Glass—Libbey-Owens-Ford Glass Co. **FLOOR COVERINGS:** Living room—concrete, colored, A. C. Horn Co. Remainder—Kentile, David E. Kennedy, Inc. **PAINTS**—Devoe & Reynolds Co., Inc. and Sonneborn Sons, Inc. **HARDWARE**—Schlage Lock Co. **ELECTRICAL WIRING**—Romex. Switches—toggle. **KITCHEN EQUIPMENT:** Range—Magic Chef, American Stove Co. Refrigerator—Crossley Div., Avco Mfg. Corp. Dishwasher—Hotpoint, Inc. Fan—Blo-Fan, Inc. **BATHROOM EQUIPMENT**—American Radiator-Standard Sanitary Corp. **HEATING AND AIR CONDITIONING**—winter-summer system, Servel, Inc. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—General Controls Co.

Courtesy of Donald Doane



Thomas Airview



THE CAPE COD COTTAGE PART 2.

Neither the builder, the bureaucrat, the editor, the architect, the realtor, the banker, nor the customer is to blame for the questionable revival of an eighteenth century building form

"The 'Cape Cod Cottage' is one of those pleasant alliterations that spring readily to the lips of real estate salesmen when they are describing a small, trim, story and a half house . . . The name has degenerated into 'Capies' in the jargon of some of the boys." Samuel Chamberlain, House Beautiful Building Manual, 1937.

"Of all the thousand and one awful looking houses that are built for speculation, probably the Cape Cod Cottage is the least acutely painful." Talbot Hamlin, architectural historian.

"The Cape Cod was and still is the most efficient house ever developed in America." Alfred Levitt, architect for Levitt & Sons, builders.

"It is a perfect mirror of a society most of whose members are desperately afraid of acting like independent individuals." Tomorrow's House, George Nelson and Henry Wright.

THE Cape Cod Cottage is perhaps the most familiar building style in all of twentieth century America. Since the 1930's, when the modern version of this design began appearing regularly in the home magazines, it has become almost a national institution. From an isolated seaside setting of sand dunes and fish flakes, this small, white, shuttered box has invaded the entire country: the tree-less streets of iron-lunged industrial towns, the neat grass-edged drives of a thousand suburban Westwoods, even the palm-fringed boulevards of semi-tropical paradises. It may be seen in the dreary identical rows of gridironed subdivisions and on the sparsely-settled fringes of rural villages. Seldom has one house design achieved such universal popularity with builders and homeowners alike.

But the modern Cape Cod Cottage is built in an America vastly different from that of its colonial ancestors. No longer does it shelter a family whose members work with the candle mold and the butter churn. Its new owners prefer the electric mixer and the mazda lamp. Sailors and sea captains have given way to bank clerks, retired insurance salesmen, truck drivers, radio corporation executives and bolt tighteners on the assembly lines of automobile factories. Instead of primitive draw knives for hand shaving its pine shakes, the rolling machine of a giant industrial plant spits out the new Cape Cod's asphalt shingles in yard-wide strips. Originally a logical solution to local site problems, primitive construction methods and a craft organization of society, its resulting form has been transplanted in time and space to climates which do not require

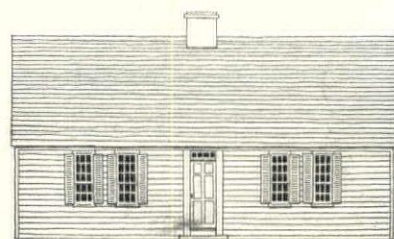
it and to a mass production culture for which it was not planned.

Why was the Cape Cod Cottage, designed in the seventeenth century, revived to house twentieth century America? It is not a developing craft architecture, passed on without break from generation to generation like the peasant homes of Switzerland and Italy. Until the 1930's it was restricted to a tiny section of our country. In the Victorian Age, between the colonial and modern periods, America did not copy past glories, but built in its own Victorian style. No matter how laden with ginger-bread and antimacassars, these houses were a forthright expression of nineteenth century building techniques and the Victorian manner of living. But the Cape Cod Cottage, designed by a primitive, pioneer society, bears almost no relation to the modern way of life.

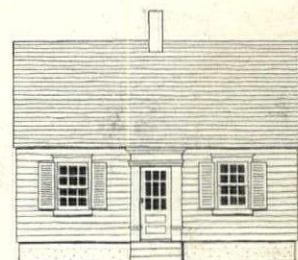
The Builder's Reason

There are a number of reasons why the Cape Cod Cottage became modern America's most popular house design. Since the turn of the century there has come into being what is known as the "builder's economic house." This is not the large, expensive top-of-the-market home. It is the house size called for by the middle income group which constitutes the largest part of the homebuilding market. Up through the 1920's when America was in a heyday of prosperity, the economic house was the two-story cube. To alleviate the ugliness of its box-like shape, this basic house form was dressed up with various kinds of applied decoration. At first the Cotswold Cottage applique ran away with the field. After World War I fashions changed and Dutch Colonial and English Tudor dressing became the most popular fancies.

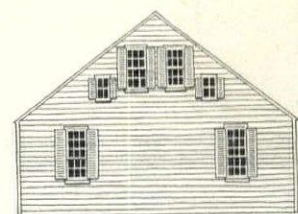
In 1929, the spiraling stock market wavered, righted itself and then crashed, catapulting the country into a depression undreamed of in the modern world. When the crumpled building industry pulled itself together a few years later, the pre-depression demand for large houses had almost disappeared. The two-story economic house had become such a habit, however, that the first attempt to recapture an escaping market was to shrink the old two-story cube. This produced a peculiar looking structure, all height and no base, which was quickly recognized as impractical. Someone finally hit on the ingenious idea of building a one-story home. But again there was trouble. The heavy Dutch and English gingerbread of pre-depression days looked overpowering and awkward on the new,



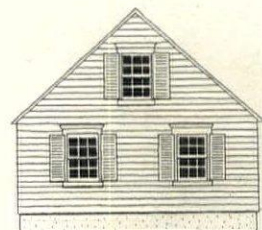
OLD



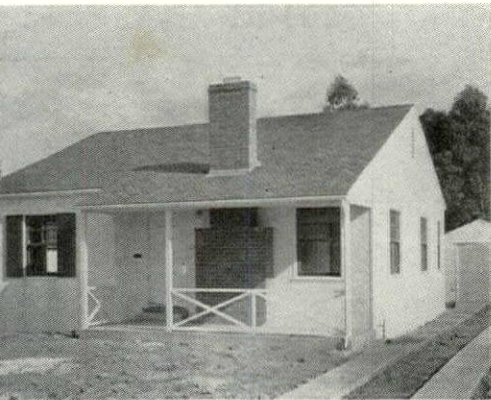
NEW



OLD



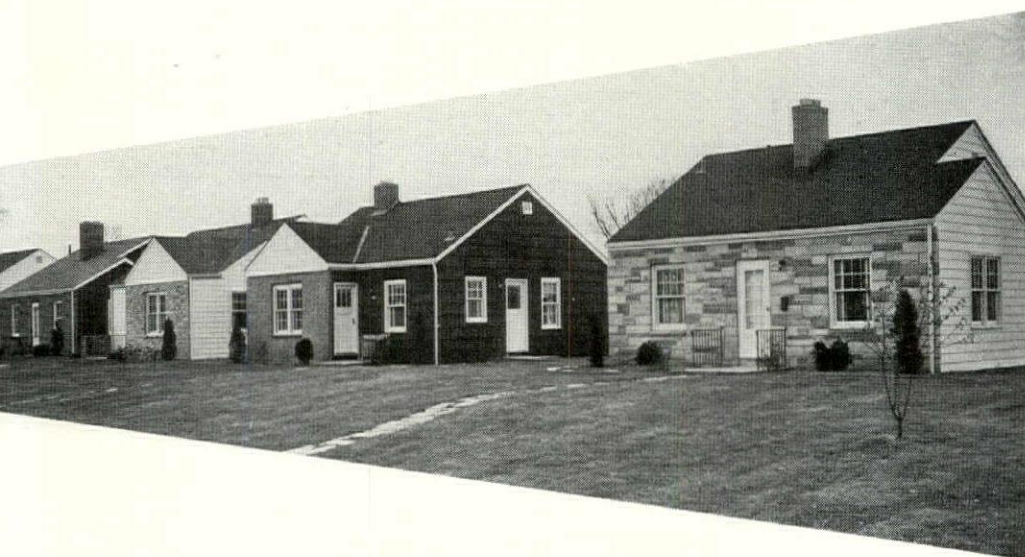
THE NEW CAPE COD has grown 3 ft. in height, shrunk 11 ft. in breadth and 4 ft. in depth.



BUILDERS VARIATIONS on the Cape Cod theme break its simple clean-cut lines into modern gingerbread. A front porch and chimney are added (left), gabled front door and shuttered picture window (below).

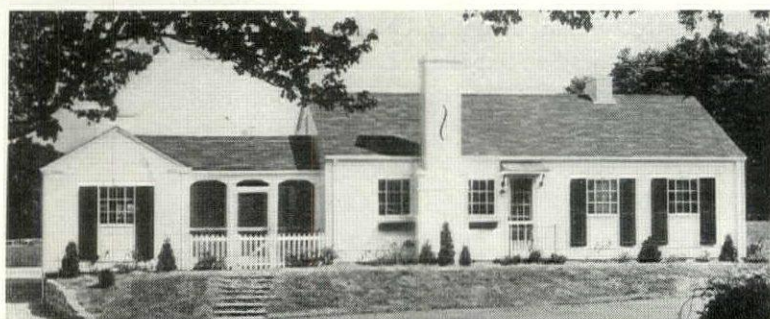


ZIG-ZAG ROOF LINE and dormer window add little more than confusion to the basic box shape (left). Fake fieldstone and brick fronts (below) are particularly ill-suited to the Cape Cod style.



EXPANDED COTTAGE which approaches two-story size, wastes under-eaves space, requires expensive dormer windows in order that occupants may see and breathe.

PREFABRICATED CAPE COD is built of large wall panels. Unusable shutters, pilasters, plaques, entrance hoods and wrought iron rails are then applied as "architectural treatment."



pocket-size economic house. Casting about for a more suitable style, builders hit upon the Cape Cod Cottage. Thus, like its colonial ancestor, the new Cape Cod came into popularity and flourished during a period when no one had a great deal of money.

The Cape Cod Cottage seemed the perfect solution to dressing up the new one-story rectangle. A simple, untortured design, fundamentally a box to begin with, it was much more one with itself than preceding fashions, which were merely roof and eave details laid over a house they were never meant to fit. It was excellently suited to assembly out of stock parts. In addition it was flexible. By shrinking the original dimensions the box could be made into a one-story house, small enough for a minimal market. By swelling them, an almost two-story house could be achieved, merely because of the roof pitch. Two-thirds of the modern Cape Cods built during the past 18 years have been minimum one-story structures. Others contained expansion attics. Some provided a finished upstairs, with bedrooms, bath and dormer windows, but in these cases the cost of the house was found to be even greater than an orthodox two-story home with the same number of bedrooms. Therefore the modern Cape Cod is, in general, much smaller than its colonial forebear. Its interior plan, too, has been changed. No longer organized around a central chimney block with a large kitchen workroom across the rear, the typical modern cottage is chopped into four small rooms—a tiny kitchen, two bedrooms and a slightly larger living room—without any focal point of organization.

The Bureaucrat's Reason

The FHA, offspring of the unsettled post-depression economy, was another potent influence in the spread of the Cape Cod Cottage. In setting up standards for small house design, officials hit upon the Cape Cod as an excellent model, and publicized it through thousands of local offices. The average home builder, desperately in need of financing and knowing little if anything about architecture, seized upon an "approved" design as a sure way to obtain his money. Actually, in picking the Cape Cod Cottage, he displayed an innate good taste. Among numerous overstyled models, the simple, neat lines of this little house were by far the best.

When he chose the Cape Cod style however, the modern owner was not choosing the truly graceful proportions of the colonial original. Standards set up by the FHA produced a house quite different from the authentic Cape cottage. FHA ceiling heights are placed at a minimum of 8 ft. while the original cottage had only 7 ft. ceilings. Foundations, absent in the original house, added a couple of feet more. In reverse, the room dimensions were set at a smaller size than those of the colonial model. Thus, the new Cape Cod has shrunk in width and depth and grown in height, producing a much less pleasing proportion than that of its authentic ancestor. Add to this the fact that windows have been made broader and larger-paned and often include only one instead of two on each side of the

door, and the result is a house whose scale is out of whack. FHA requirements for light and ventilation are also responsible for the frequent addition of dormer windows in the upstairs area, a commendable attempt to alleviate the bad lighting and ventilation which were major faults of the original house, but an addition incompatible with the simple, clean lines of the true Cape Cod. To eliminate drafts, 6 in. walls and 7¼ in. window jambs, much thicker than the original construction, have also become standard practice. But these features coupled with machine methods of lumber cutting have eliminated the structural delicacy which was an integral part of the handcraft model. Standardized dimensions have further destroyed the peculiar charm of the original cottage, bringing in exact, equi-distant spacing of doors and windows. Thus, the modern Cape Cod is smaller, boxier and cruder than its eighteenth century model, where scale was delicate, off-centering of doors and windows extremely subtle and craftsmanship a fine art.

The Editor's Reason

Another factor of some importance in popularizing the Cape Cod Cottage was the consumer magazine. Long having worshipped the cult of the antique and having drained nearly dry the European fountainhead of French chateaux, English manor houses, Mediterranean villas and Spanish patios, the editors of mass media turned gratefully to American colonial. The power of the popular press in putting across architectural fashions should not be underestimated. The stamp of approval from "House and Home" means to most Americans that the design presented is safe, unfreakish, recommended by specialists purporting to have good taste and perhaps built by a family whose income and social position is better than theirs. During the decade between 1930 and 1940 no style was seen more often in the mass magazines than the Cape Cod Cottage. By the time editors had squeezed the last drop of publicity from this modest little house, not only were its dimensions thrown off, it was being designed with brick fronts, stone fronts, pergolas, front porches, back porches, fake gables over the doorway, end chimneys, no chimney, dormer windows, picture windows, of Spanish-type plaster and all-in-one prefabricated panels.

But the Cape Cod Cottage, despite any amount of falsification, is a sturdy style. Today it is being challenged by such rash newcomers as the western ranch house and even thoroughgoing modern design. But by a nose it still leads the market in houses priced under \$10,000.

Perhaps the most important reason for the Cape Cod's continuing popularity is that, for a minimum house, the 1½-story box shape remains as practical and thrifty today as it was in the colonial period. It is the cheapest cubage that can possibly be put together. But in the modern Cape Cods three vital mistakes have been made. The first mistake is one of siting. The original house was almost a part of its natural setting. The neat, broad shape and low eaves looked at home against the sand dunes and shrub oak of the rolling Cape countryside or along

the windmilled street of the seaside village. Modern Cape Cods have been built en masse, in great developments, and here the design is particularly unfortunate. The house demands space. Crowded together in repetitive rows, the roof lines create a jagged sawtooth effect which is the essence of monotony.

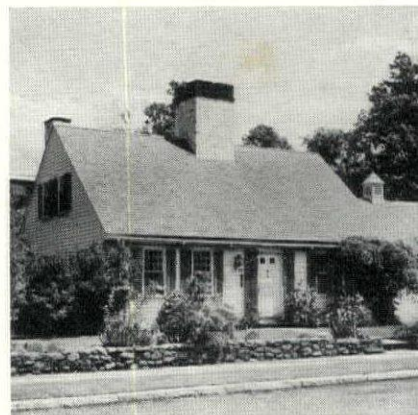
The other two mistakes are in detailing and size. Small windows, shutters and shingle or clapboard finish, protections against weather in the early houses, were retained, like the vermiform appendix, after they had become not only useless, but actually detrimental to the comfort of the house. On the other hand the low, graceful proportions of the original cottage were lost as the box was squeezed smaller and taller with tiny rooms, higher ceilings and added foundations. Thus, the new Cape Cods, in spite of their fake decorations, are so awkward and out-of-scale that they look very little like the original model. The over-all proportion of the authentic Cape house is the only feature which has remained even remotely valid in a changed society and technology. But this is the very feature which the builder's version has eliminated, while retaining the useless shutters and small-paned windows.

The Architect's Reason

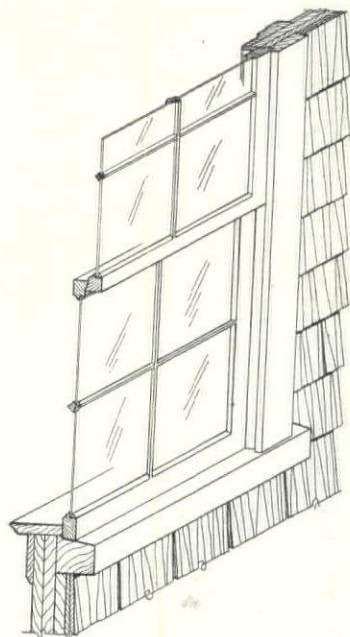
The organic concept of design which is the basis of contemporary architecture would seem to eliminate the arbitrary box exterior. Modern design proceeds from the inside out, requiring that the shell of the house follow the interior layout rather than vice versa. Open planning, the uniting of indoors and outdoors, scientific lighting and ventilation with consequent large glass areas are, of course, incompatible with a strict traditional style. Primitive methods of construction, heating and insulation formerly made it desirable to have as little exterior wall area in rooms as possible. Thus, the box shape with small windows was a necessity.

With modern heating, well-insulated walls, tight windows, storm sash, double glazing and the exploitation of solar radiation, this shape is no longer the best choice. An inline, L-shaped or staggered plan, only one-room deep with windows on both sides is much more desirable. Modern families are beginning to demand the excellent lighting and view of the outdoors which this freer layout can provide. In addition, the pitched roof is no longer a necessity. New and sturdier construction methods have made the flat or shed roof equally practical even in the most severe climates. The insulating advantages of collecting snow on the flat roof for winter warmth and water for summer cooling have been proved over and over again.

In the minimum house field, however, there still remains a practical feature of the Cape Cod Cottage which appeals to many families. This is the extra space provided by the pitch of the roof. Although unnecessary from the point of view of weather, and a distinct disadvantage in providing adequate light and ventilation, it is desirable as a means of getting extra space at little cost. In such cases, the Cape Cod shape can hardly be waved aside. If ap-

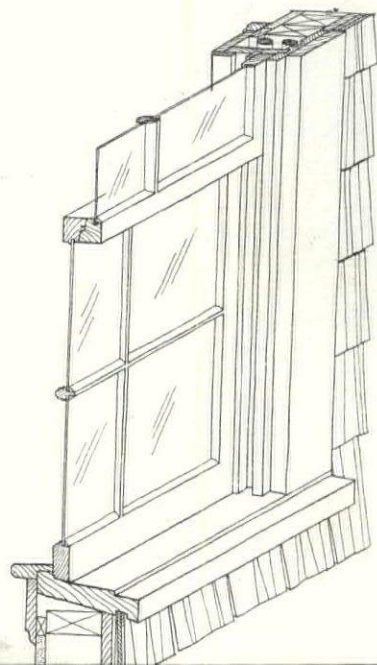


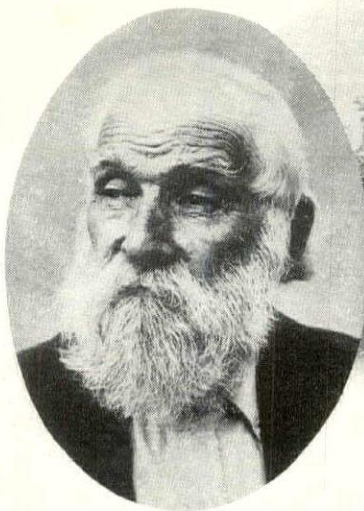
ROYAL BARRY WILLS is the only twentieth century architect who has managed to copy the original Cape Cod Cottage without ruining it. This is a difficult feat since construction must meet changed standards and the plan accommodate a changed family.



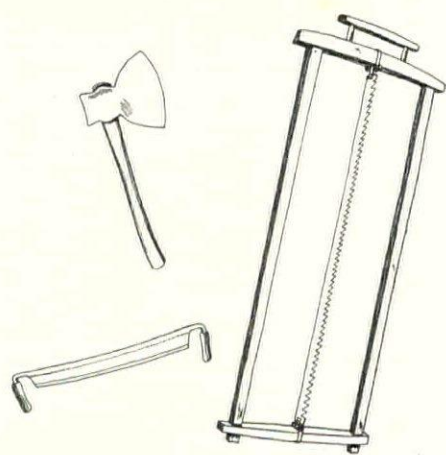
THIN WALL AND WINDOW construction, narrow sash and muntins, and small panes were fundamental elements in the original Cape Cod (above). No separator was used between upper and lower sash and the window trim projected only ½ in.

	Authentic	Modern
sash width	1 ft. 11 in.	3 ft.
wall depth	3 in.	6 in.
window depth	4½ in.	7¼ in.
muntin bar	½ in.	¾ in.
meeting rails	2½ in.	3½ in.





WARREN LINCOLN, one of the last of Cape Cod's famous nineteenth century sea captains who lived in a cottage built with primitive saws, hewing axes and draw knives.



proached from the modern point of view, however, the Cape Cod proportion, desirable because of its compactness and economy, can be handled in a manner compatible with twentieth century standards. The problem of upstairs ventilation could be at least partially met by attic fans. In the lower story, stock windows in large sizes or combined in a ribbon placement could provide the necessary illumination and alleviate the summer heat to which these houses are subject. This, in turn, would free the interior organization, since the traditional door and window arrangement is one of the major restricting factors in the plan of the modern Cape Cod.

Room layout still remains difficult, however, within the small, circumscribed rectangle. But sufficient attention to space use can improve it tremendously. One of the worst drawbacks of this small house is that the living room is apt to become a corridor for other rooms. This problem has been carefully studied in a house of Cape Cod proportions by Samuel Glaser, which illustrates the contemporary approach within a traditional building shape. Living room activities—sitting and dining—have been placed at opposite corners. Between them, diagonally across the room, and disturbing neither, is the path of circulation—leading from the front door to the first floor bedroom and stairs. Another ticklish proposition is the expansion attic. Many builders include this upstairs space without solving the problems which go with it. In Glaser's house this, too, has been carefully thought out. The first floor bathroom is placed next to the bedroom and also next to the stairs in such a manner that occupants of the upper floor can reach it without entering or being seen from the living room. The foundation, which was partially responsible for destroying the proportions of the modern Cape Cod, is another feature helped by contemporary thinking. In the Lustron prefabricated house and the Levitt builder's cottage, foundations have been replaced by the flat slab, thus restoring the earth-hugging form of the original cottage. This is a trend spurred by the increasing use of radiant floor heating.

The Lustron house, Glaser's design and a few other minimum homes with excellent plans and fenestration would never be recognized by the average homebuyer as Cape Cod Cottages. In designing for modern technology and modern family life, the general proportions of the Cape model have been retained, but style details which restrict functional planning have been eliminated. This, of

course, is exactly the opposite of what most builders do. Because they sacrifice planning and retain "style," their Cape Cod Cottage fails in two ways: as a copy and as a design for contemporary living.

The Realtor's Reason

Why have the fake shutters and small windows been kept while no effort is made to improve interior design? One answer is, of course, that most builders and realtors have no conception of contemporary planning. They take the familiar stock design, change a cupboard here and a clapboard there and present a new model to their customers. Among more enterprising builders, the answer is that the public wants shutters and they will therefore give the public shutters.

This is just the top of the argument. A more fundamental reason is actually responsible for much of present day eclecticism: the changed conception of a house. Unlike the authentic Cape Cod Cottage which was designed as a home for succeeding generations and constantly enlarged with ells, the modern builder cottage is designed for only a few years of ownership. It is angled at the young married couple with one or two children who hope to move to a larger house when more children arrive. Even if they stay in the house until their children are grown, expansion is seldom considered, for the new generation is expected to move out into homes of its own rather than take over the family dwelling.

In addition the family itself has split apart. In our specialized, mass production culture, home is no longer the center for both work and relaxation. Factory or office has long claimed the master of the house for most of his waking hours. Now, with the increased speed of electrical housekeeping, the mistress, too, may hold at least a part time job. Daughters no longer need to stay at home to help with the spinning, weaving and baking; they go to business school, college or start immediately to work. The supermarket and the department store, supplying food, clothing and furniture which formerly took long hours to make at home, have created more leisure time for all. But again, modern mass entertainment, from movies to baseball games, from the juke joint to the Lion's Club dance, lure families away from home to enjoy this leisure. The automobile, symbol of the twentieth century, speeds the family into town or away from town for an evening or weekend. Even the baby is piled into the back seat for the regular Sunday afternoon



ONE COMPONENT of the twentieth century's blind market, possibly an accountant, who occupies a standardized, cottage erected with powerful machinery like the tractor base-layer (above).

rive. The average twentieth century house, and particularly the Cape Cod Cottage which caters to small, middle class families, has thus become a transient sort of shelter—a kind of attachment to the garage, a place to get away from as quickly and often as possible. Under such circumstances a convenient, functional plan for home living is not considered of first importance. And the absence of such plan in turn drives families more and more often away from home.

The Banker's Reason

Perhaps the one really important feature of the twentieth century house then is resaleability. In the original Cape Cod Cottage, selling never entered into calculations. It was built to live in generation after generation. If a family wanted to move, the house was not sold but hoisted over the pines or floated across the bay to the new location.

Today's house is no longer built as a home. It is built as a speculative commodity. Banks which lend money and FHA which insures that money are interested primarily in protecting their investments and in ascertaining that there will be no difficulty in locating a new owner if the original one defaults. This has, of course, led to certain improvements such as insistence on good materials, tiled bathrooms and efficient furnaces, without which the house could hardly find a buyer. But it has also resulted in the lowest common denominator of design. The idea is not to plan the most attractive and convenient shelter possible with modern materials, tools and techniques of building—the aim of the original Cape Cod Cottage. Today's goal is to stuff the changed patterns of modern living into a safe, time-tested shell whose main virtue is a similarity to other shells around it. Since all are fundamentally alike (and since most customers never get a chance to see anything better), none can come a drug on the market.

Builders, architects, realtors, bankers and mass magazines have thus unconsciously conspired to give America a dream house—a graphic desire which will insure the continuing popularity of thousands of mediocre homes. But in addition to like colonial cottages, the newest lighting fixture and the newest furnace must be sold. Thus, at the same time that the American public has been bewitched in a wash of shuttered sentiment it has also been bombarded with the latest mechanical gadgets which the twentieth century can supply. Because of this, America's dream house has turned into a rather peculiar fantasy. It is a little white cottage equipped with a vine covered wall—and a television aerial. It has quaint green shutters decorated with flower-pot cut-outs—and the latest in radiant heating. Tiny dormer windows poke in old fashioned charm from the pitched roof—and behind them fluorescent tubing illuminates the bobby-soxer's dressing table.

The Customer's Reason

Lest the building industry feel that it is unjustly accused, it must be added that the American public has been peculiarly susceptible to this combination of gadgetry and standardized charm. Eager for the

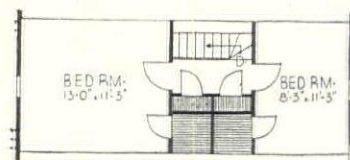
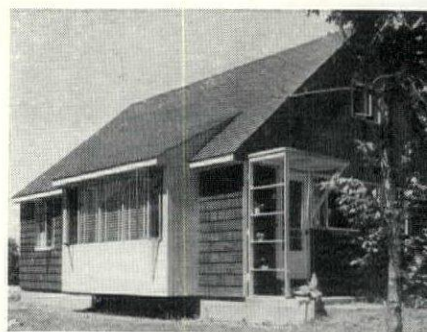
latest mechanical toy, modern Americans nevertheless have centered a great deal of nostalgic emotion around the word "home."

To the generation of the Victorian Age, who had definite ideas and tastes of their own and expressed them forthrightly in architecture, the world was a safe and stable place. The future seemed limitlessly bright, business was excellent and manners and morals were as dependable as the nineteenth century stock market. But to the generation of the twenties and thirties, born to the war, nurtured on Freud and the hip flask, shocked by the emergence of communism and fascism, caught in the wild stock market speculation and then plunged into the bread line, the world seemed to be resting on a series of time bombs which exploded now here, now there, without warning, without apparent cause and quite beyond anyone's power to control. Under these circumstances it is small wonder that nostalgia took a firm hold on the American public, that the vine-covered cottage and the quaint, green shutter gained an irresistible appeal. In a chaotic world, the traditional house offered a sense of security, however illusory, that was extremely comforting.

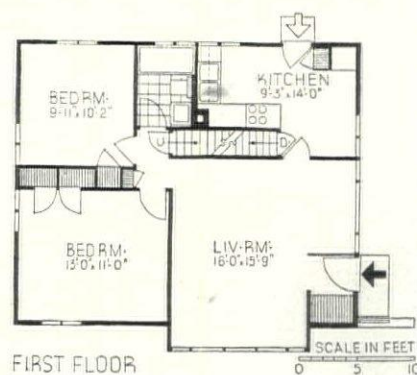
As a background for shattering world events was another disquieting factor: the hum and roar of an expanding American mass production. World War I had given a forward surge to machine manufacture and in succeeding years this country rushed into an industrial boom period. For the first time, clothing, furniture, even electric razors, were available to the average man at a price he could sometimes afford to pay. But mass production exacts another price—specialization. For the first time in our democratic country, the destiny of the average man was, in a certain sense, removed from his own control. To earn a living in Colonial Cape Cod one had only to make a fishing net or a hoe and get to work. The necessities of life were produced at home rather than bought in a store, and everyone was a self-reliant jack-of-all-trades. Modern specialists—and everyone today from corporation president to file clerk is a specialist—have gained much in the abundance of material things. But as never before they have become dependent on each other and on economic forces beyond their control.

Specialization has thus stolen from the average citizen the only standard of judgment which is real and solid: his own experience. Cape Cod fishermen knew a good house when they saw one because they had built houses, had worked with wood in making chairs and benches, had the feel of structure and material in their own hands. Today most jobs are but a small part of a larger operation. The bearing cap installer on an assembly line, repeating one movement over and over again, never knows how his particular piece of work fits into the total finished product. Office workers are even farther removed from any real knowledge of how the products they use are made. Such a complicated structure as a house is, of course, a complete mystery to the average man, witness the saga of the unfortunate Mr. Blandings.

But specialization robs modern man of another kind of self-reliance. Unlike the Cape settler, who



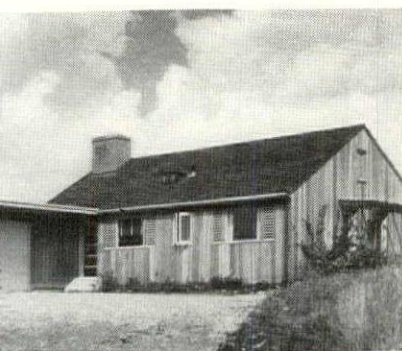
FUTURE SECOND FLOOR



FIRST FLOOR

CAPE COD PROPORTIONS have not prevented Samuel Glaser from designing a cottage with excellent lighting and circulation. The stairs are strategically located to be out of the path of downstairs traffic, and also to allow private entrance to the bathroom from upstairs bedrooms.

MODERN DESIGN WITHIN THE CAPE COD SHAPE



MALCOLM DUNCAN foiled the FHA by making required "shutters" into functional slat ventilators.



HUGH STUBBINS creates a clean-cut contemporary design by expert handling of detail and trim.



PHILIP MOORE proves that window walls and indoor-outdoor living can go with a pitched roof.



ALFRED LEVITT designs a builder Cape Cod which combines space appeal with modern plan and detailing.

depended only on himself to wrest a living from the earth or ocean, modern man must depend on other people to hire him or to buy his goods and services. He himself has, in a limited sense, become the commodity. Even the most highpowered executive dances to a peculiarly modern tune: "sell yourself."

Something happens to a man when he loses his economic independence. More than anything else he wants to be approved of and to keep in step with the crowd. He is apt to live on canned opinion, following popular attitudes rather than thinking things through for himself. In choosing a house this has an obvious effect. It never occurs to the average man to question the validity of a prevailing style. Furthermore, through his home he seeks to establish his social, even his business position in the community. The house is his front, his statement of respectability, and he wants nothing "freakish" or "extreme" which could set him apart from the accepted norm. Although courage is not a quality usually associated with homebuilding, it actually takes a courageous man to build a modern home in a conventional community. For all his freedom of opportunity and behavior, modern man has thus become subtly regimented, the perfect customer for a regimented architecture.

The Real Villain

The copying of past house forms, always an American trend because of this country's lack of a cultural heritage, gained its greatest impetus when fabrication moved from the site to the factory, from a specific client to a blind market. When, in the late nineteenth century, studs, beams and window frames began to be dimensioned in distant plants, stock patterns were needed for the factories to follow. Lacking any precedent in machine manufacture, craft house designs were called up to provide these patterns. Eclecticism thus became mechanized, assuring wholesale adoption of styles which, in a craft society, merely inspired decorative details for an indigenous architecture.

The stock part and the blind market in turn created the standard plan. Here, the monotony inherent in the system reached full flower. Because of the need to satisfy an all-important norm, catering to individual requirements went by the boards. Today the atypical family has real trouble finding a livable shelter. For instance, it is almost impossible to get a loan on a one-bedroom house. A family which needs four bedrooms is similarly thwarted by the standard two- or three-bedroom design. Customers may have a choice of house plans A, B or C, but farther than that they may not go. The family must be fitted to the house rather than the house to the family.

This has created a paradox: only the custom-built home—a reversion to a craft product—has, in our technological society, been able to provide the flexibility necessary to accommodate the modern—technological—family. Because of our inexperience with the new and unprecedented techniques of factory production, we were not able to control, for our own ends, the machine we had created.

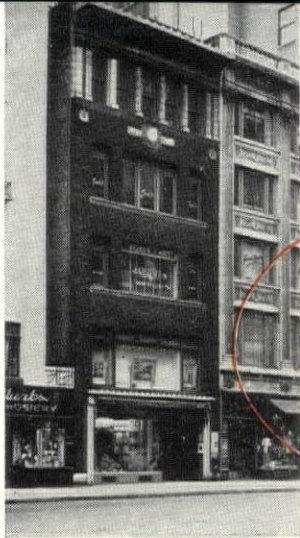
Recently, however, this situation has begun to change. In the past few years some of the best architectural and engineering minds in the coun-

try have applied their talents to the problems of factory fabrication. Modular dimensions, sheet materials of all types and sizes, new window designs prefabricated wall and floor panels and standardized steel framing are but a few of the results. Others will undoubtedly be forthcoming. The potentialities of materials and manufacturing processes rather than arbitrary styles are setting these patterns. The resulting challenge to architects and builders is a new and stimulating one. Using these more flexible parts to their greatest design potential may yet resolve the paradox of machine architecture versus modern living.

Tomorrow's Cape Cod

But to successfully resolve the paradox a change in the customer is also necessary. Here and there are indications that such a change may be underway. Already the Cape Cod Cottage and other traditional styles are losing their first fine flush of popularity. The western ranch house has taken the lead and in all price brackets the demand for modern design has risen spectacularly in the past few years. We are too close to the reasons to be able to assess them at the moment. Perhaps a citizenry just recovering from the second world war and already threatened by a third has decided that quaint green shutters are something less than an adequate defense against the atomic bomb. Perhaps inflation and television are keeping families at home and they are beginning to realize the defects of their closed-boxes. Perhaps they have just been reading *House Beautiful*.

At any rate, people the country over are beginning to demand the advantages of solar heating, open planning, indoor-outdoor living space, planned storage and other amenities which are part and parcel of contemporary design. They are just beginning, but the day when builders could put up unplanned boxes in lieu of homes is on the wane. The popularity of the ranch house, although frowned upon by the high priests of modern architecture as just another style, is actually a step in the right direction. It indicates a changed desire on the part of home buyers. Retreat behind a shuttered wall has given way to a more expansive attitude. The sprawling informal design of this house, with its large windows, terraces and flexible plan shows that living is coming back into its own. All the forces which led to the popularity of the Cape Cod Cottage are still with us. But other forces are making themselves felt. Proof that this is true may be found in the performance of William Levitt, largest builder of low- and medium-priced homes in the country. His eminently successful theory is and always has been to give the public what it wants. For 20 years he has built traditional houses. In 1949 every Levitt house of more than 4,000 scheduled for erection will bow to modern. His \$8,000 home, which is guided by the maxim of the most house for the money, has large double glazed windows, a two-way fireplace between living room and open kitchen-dining area, and the general proportions—complete to expansion attic—of the Cape Cod Cottage. To designers who frown on even this compromise, the challenge remains to beat the Cape Cod shape for the small home market.



BOOK STORE

Old New York building becomes modern home for a publishing house — a distinguished design

WARNER-LEEDS, Architects

Project Staff: Walker Field, Cy Loftus,
Lucretia Pile, Suzanne Sekey

ENNERLY CONSTRUCTION CO., General Contractor

This remodeling of an old Madison Ave. store building has been described widely as the best recent redesign in New York City. Only a quick appraisal is necessary to understand why. The job also continues to bear up under scrupulous inspection fully as well as it does under the casual glance of the pedestrian on either sidewalk of the busy street.

The design problem is an old one—the housing of a merchant's offices and sales rooms with compact efficiency and with the addition of that memorable identity which is so valuable on a city's commercial streets. The tenants here are the Scandinavian publishing house, Albert Bonniers; the merchandise: books, periodicals, phonograph records, Scandinavian homecrafts, and furniture. (See page 174). The first two floors of the building are used as the selling area—and are unified as neatly within the building as they are well expressed in the two-story plate glass of the front. An overall coat of white paint is an economical remodeling of the rest of the facade.



Lionel Freedman: Pictorial Services

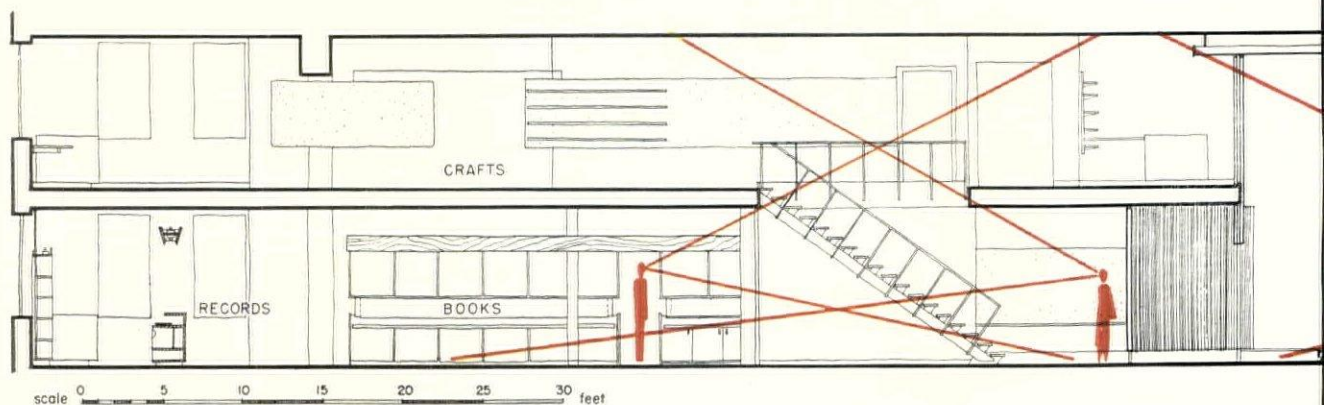
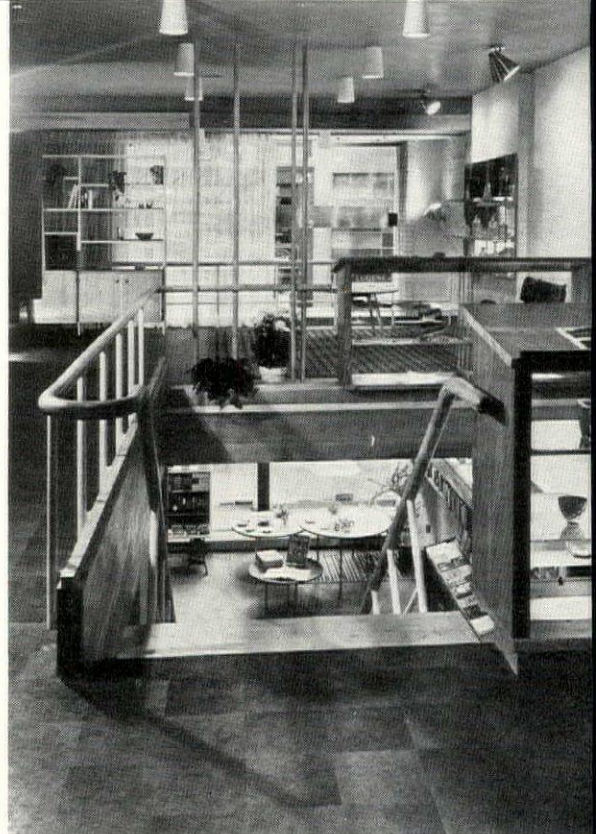


View of first floor interior from front display window; above, left, building before remodeling, and in color photo, completed exterior.

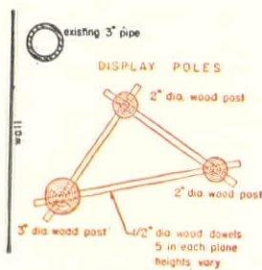


In this design the architects rejected the commonplace idea of a street level bookshop with a separate gift shop upstairs, in favor of the integration of both levels into a single two-story selling space, with implied architectural divisions rather than partitions between departments. Space is continuous, if merchandise is not. To this end the upper floor was cut back from the street line and pierced by a central stairwell. Bulk was avoided in design of the very important stairway, from whose foot every selling area in the store is visible.

The entrance area was reserved for store-wide display; and the stair was positioned to set off the rest of the street floor for the general book department, with a recess at the rear for records. Upstairs the well itself provides the natural division between furniture display at the front and the Scandinavian book and gift area to the rear, with home crafts in their own alcove. Fixtures—part of the complete design by Warner-Leeds—vary with departments, but all display maximum amounts of merchandise.

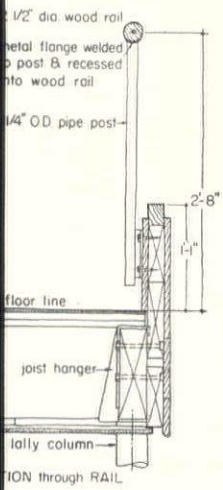


Photos by Wheaton Galetine

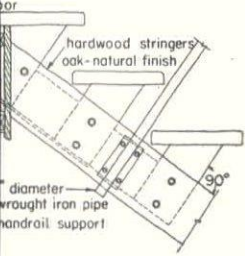


Large, unconfined feeling of interior is explained by section above. Stairwell and, particularly, two-story front reveal full size of store to customer in any section, or even to passers-by.



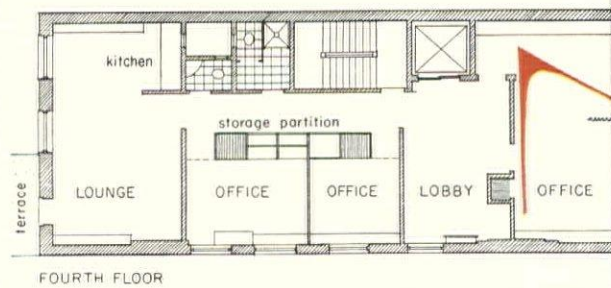


Lionel Freedman: Pictorial Services

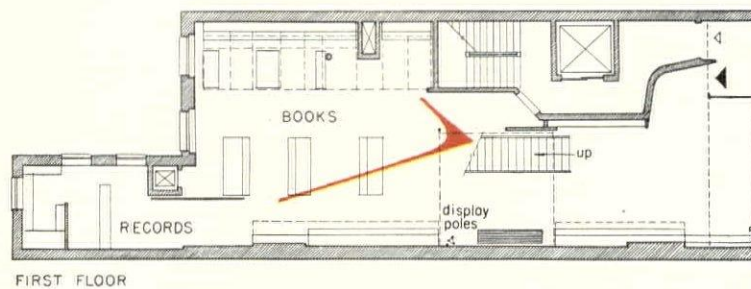
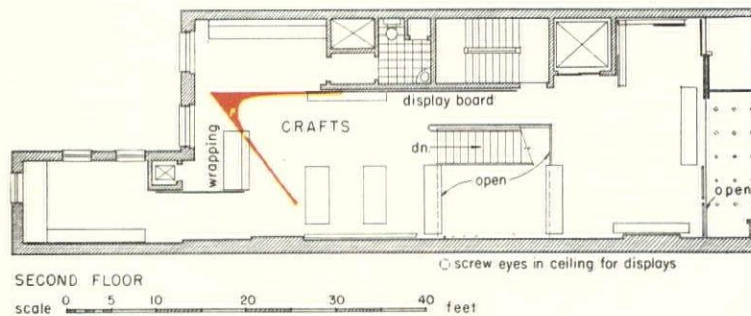




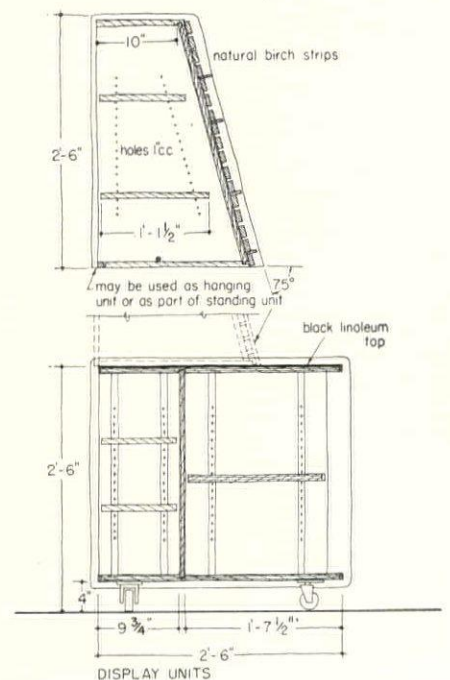
Design differentiation of the two levels is by means of lighting and flooring. In the gift and related departments upstairs (photo immediately below) a cork floor was selected for its rich color, its quietness, and its reduction of breakage. The street level (lower photo, book department) is floored with a new product made of marble chips—for wear—embedded in a rubber base—for resiliency. In the gift departments all artificial light is from downlights and spots, and is designed to emphasize the merchandise itself, with a general low space lighting level achieved by reflected and spilled light. Downstairs, considerable indirect light for reading is added by fluorescent fixtures built in the book and entrance areas. Bonnier offices, on the fourth floor, are simply planned, for a quiet staff. An office lounge and kitchen are included for occasional entertaining. The Bonnier seal on these pages is another part of the inclusive design program entrusted to Warner-Leeds.



Lionel Freedman: Pictorial Services



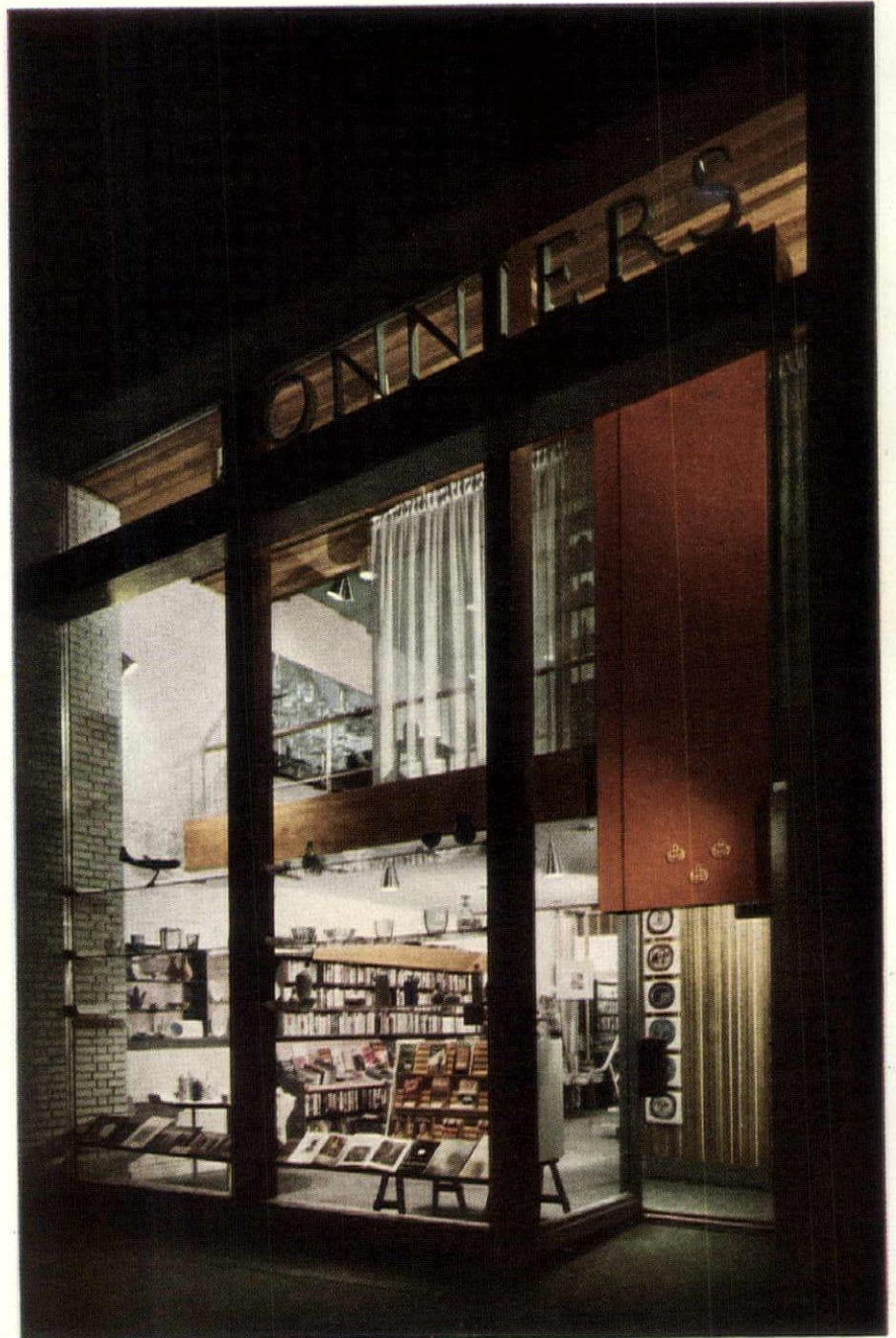
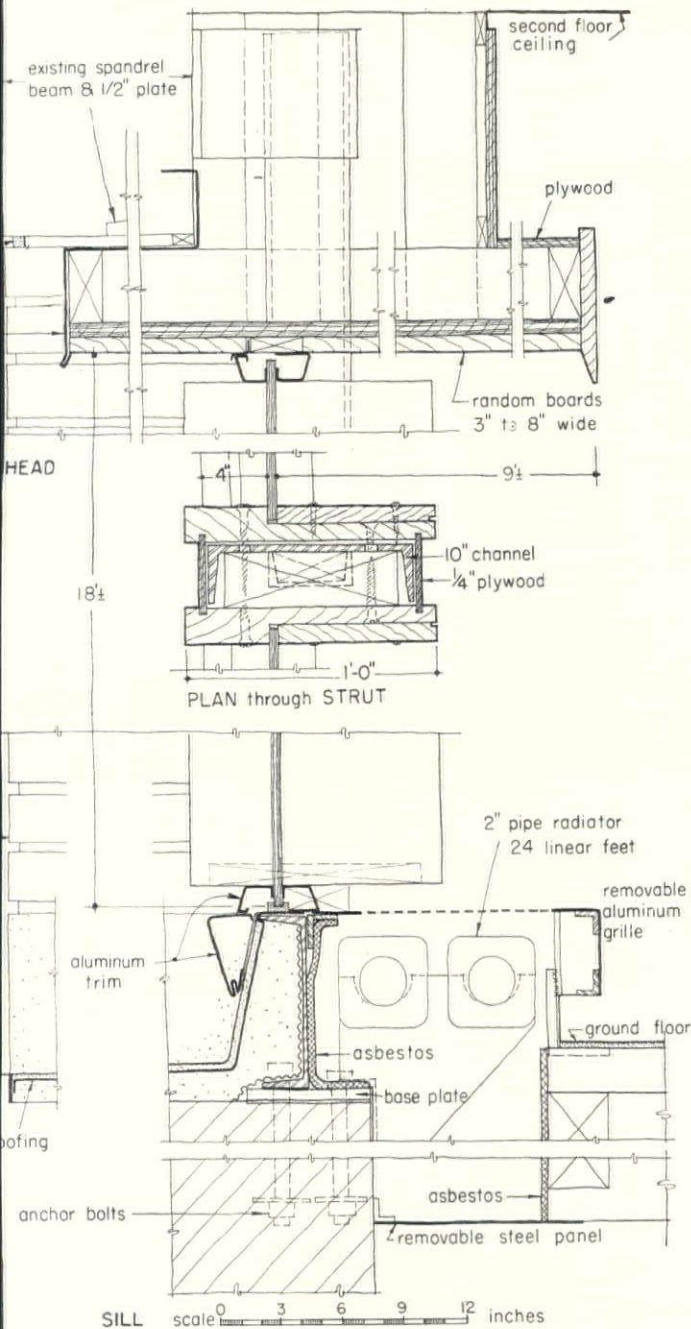
Fixtures like bookrack below are all of birch, and designed for several display situations, with movable shelves and demountable sections.



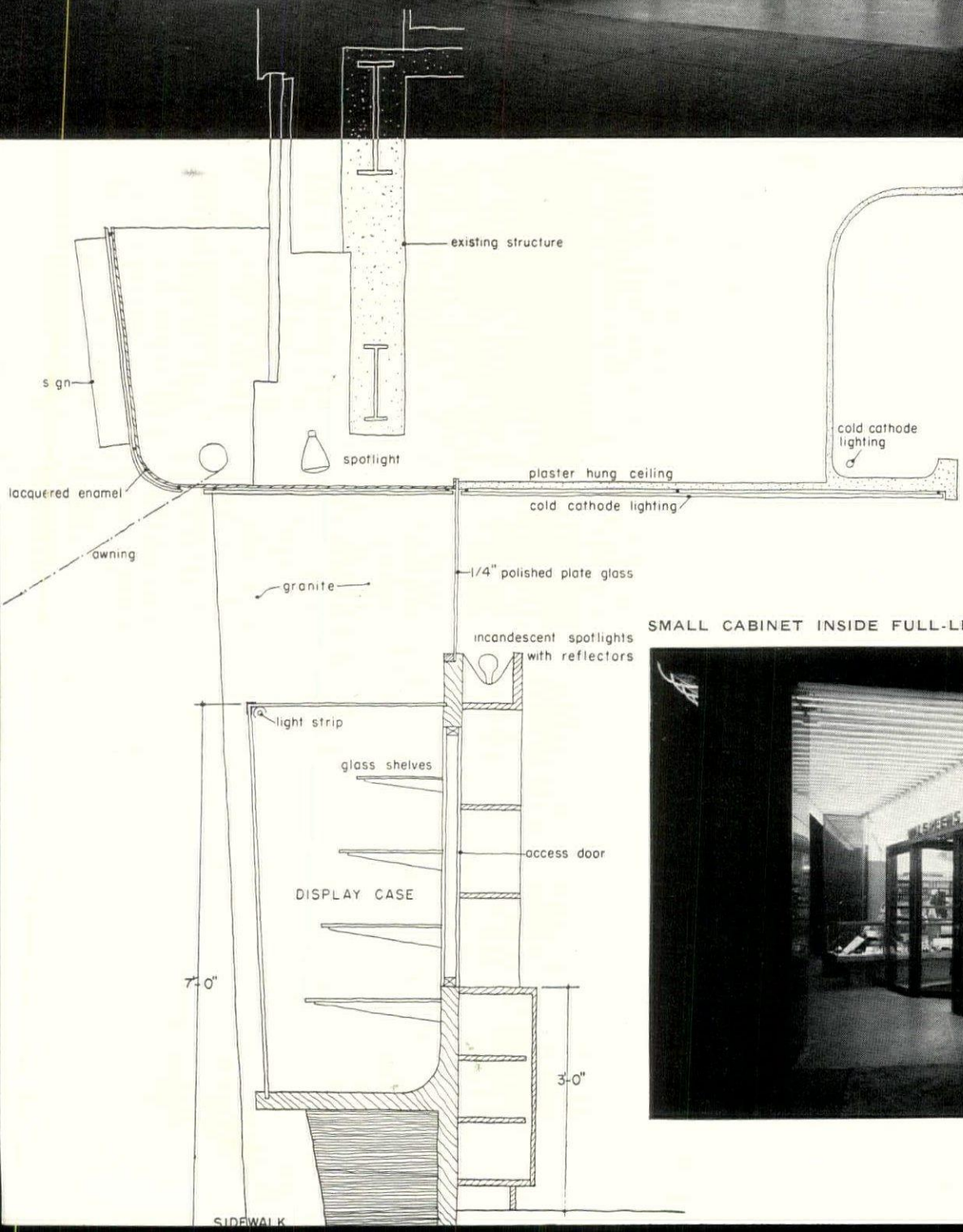


FINISHES AND EQUIPMENT: SHOW WINDOW—plate, Pittsburgh Plate Glass Co. FLOOR COVERINGS: Main floor—Ter-Tex, Crossfield Products Co. Others—cork tile, Cork Insulation Co. and David E. Kennedy. WALL COVERINGS—Wall-Tex, Columbus Coated Fabrics. Display panels—Accopac cork, Armstrong Cork Co. FURNISHINGS—Knoll Associates, Functional Furniture Mfgs., Nordiska Kompaniet and special architect's designs made by Frank Haberle. EXTERIOR DOORS—Pittsburgh Plate Glass Co. and Engel-Craft Products Co. PAINTS—National Chemical & Mfg. Co. ELECTRICAL FIXTURES—Century Lighting Co. and Gotham Lighting Co. KITCHEN EQUIPMENT—Dwyer Products Co. HEATING—steam system. Radiators—Vulcan Radiator Co. Grilles—Engel Craft Products Co.

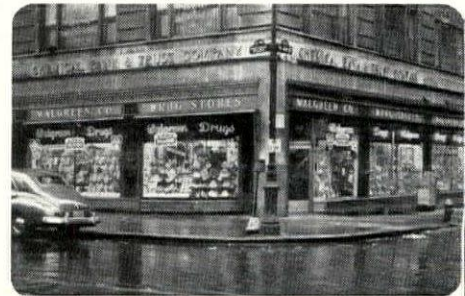
Manager's office, above. Below, night street view. Stainless steel box under lettering houses awning.



DRUG



BENT COLD CATHODE LIGHTS LEAD CUSTOMERS INTO STORE. CUT-OFF CORNER GIVES SPACIOUS FEELING



SMALL CABINET INSIDE FULL-LENGTH GLASS WALL ACCENTS DISPLAY



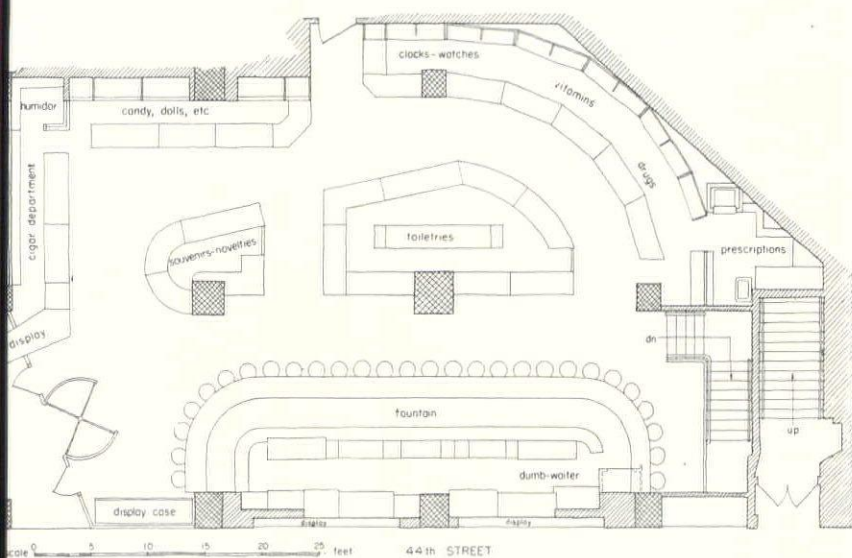
STORE in Times Square avoids the garish, makes simplicity a virtue

PPINCOTT & MARGULIES, Designers

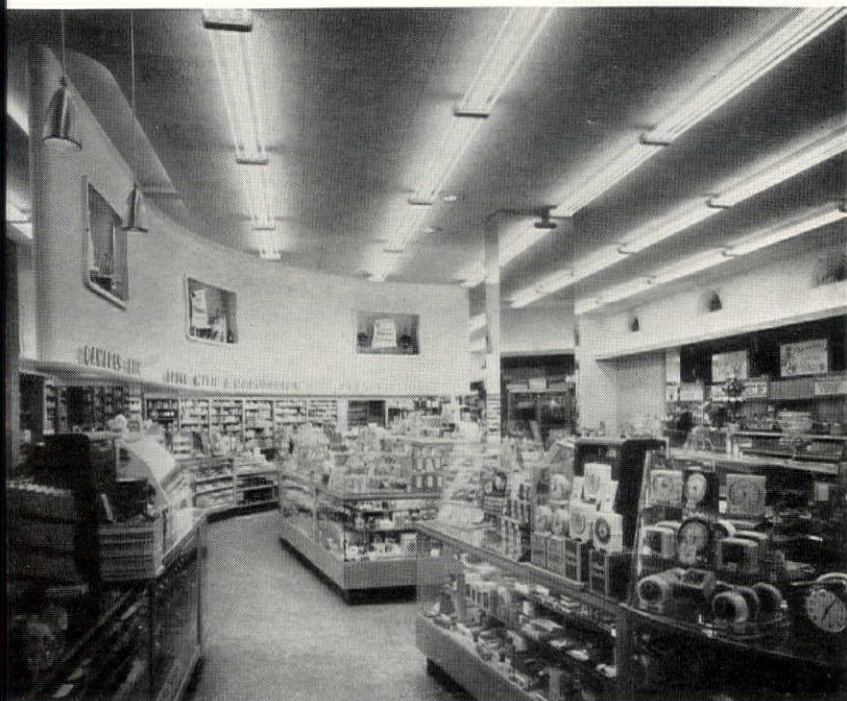
CHARLES E. TILTON, Architect

KINLEY, EDWARDS CO., General Contractor

Lighting and display in Times Square presents special problems because the customer is being beckoned with everything from neon-draped monumental statues to over-developed sound systems. The new Walgreen drug store proves, once again, the tremendous impact of simplicity. The store invites rather than aggs the customer inside—and does it without recourse to “spectaculars” or mechanical arms. The showcase front and unusual lighting installation meld the interior of the store into its brilliantly lighted surroundings. Once inside, however, the customer is aware only of the merchandise on display. Fifty foot-candles of light are maintained throughout the store by means of parallel banks of Slimline fluorescents and a series of 56 cold cathode tubes. The latter run vertically and form a background for the neon Walgreen sign, then take a right angle turn and continue horizontally 5 or 6 ft. along the ceiling inside the store. Public floor space is about 2,400 sq. ft. and roughly rectangular, but, judicious placing of equipment, counters and mirrors makes it appear much larger and quite irregular in shape. Modern fountain equipment and skillful planning allowed the designers to cut space occupied by the fountain more than half, to about 20 per cent of the total. The space thus saved has been used to advantage for the other seven departments in the store. Each department, though separate, is integrated as part of the whole interior.



Lionel Freedman: Pictorial Services



CONSTRUCTION OUTLINE: Exterior walls—plate and structural glass, Pittsburgh Plate Glass Co. Existing masonry faced with granite, Vermont Marble Co. Interior—glazed tile, Architectural Tile Co. Floors—terrazzo, Bruno de Paoli, or asphalt tile, Armstrong Cork Co. STAIRS—steel, Trio Industries. Rail—bronze, American Bronze Co. and Hierculite glass, Pittsburgh Plate Glass Co. DUMB-WAITERS—Otis Elevator Co. Doors—Peele Co. EXTERIOR DOORS—Revolving Door Div., International Steel Co. ELECTRICAL EQUIPMENT—Automatic Switch Co., Standard Panel Co., Continental Sign Co., Ruby Philite Corp., General Lighting Co., Inc. KITCHEN EQUIPMENT—G. S. Blodgett Co., American Stove Co., Salvajor Co., Illinois Range Co., Cunningham Co., American Radiator-Standard Sanitary Corp. and Chicago Faucet Co.



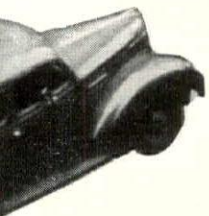
FOUNTAIN'S LOCATION IN FRONT INVITES CUSTOMERS





MARKETS IN THE MEADOW

By-passing the downtown "trap," shopping centers set new retail patterns for customers



International News Photo

In an era when subdivisions were being hacked out of the wilderness and resorts were rising from swamplands few saw that retail business, too, could be moved out to where the air was purer. To Kansas City's shrewd, legendary J. Clyde Nichols, however, the idea was a natural as far back as 1922. In the midst of his fabulous "Country Club" development, which was eventually to house 50,000 persons on 5,000 acres of manicured prairie land, up went 11 shopping centers, bringing homesteaders everything from beauty parlors to candy stores. Although many were larded with Castilian gingerbread and designed in what his critics called "Painful Spanish," they were nevertheless a financial bonanza. With all the *eclat* of a circus band, Nichols introduced a new technique of retail merchandising. Yet like television, it had few takers at the time.

By 1949, however, there was no longer any doubt that the established pattern of retail selling in the U. S. was undergoing a change, and that Nichols' germinal idea—clusters of stores serving specific trading areas, with most of the services and none of the frustrations of downtown shopping—has at last found root. Los Angeles's mammoth Broadway-Crenshaw center (above), Richard Guelich's remarkably successful developments around Buffalo and Rochester, San Diego's Linda Vista, Seattle's "North-

gate" and "Bellevue" projects, and Boston's Midsex Center are all cash-on-the-barrelhead tribute to a growing conviction that modern retail business centers can be successfully created away from the high-rent, congested sections of the city.

In perspective, the trend is logical enough. In the first half of the 20th Century has witnessed the gradual centralization of business—with the focus of sales shifting from the previously self-sufficient small towns to the city, and from the neighborhood to the downtown shopping district—the second half promises to complete the reversal of this trend. In modern cities, the concentration of retail outlets around a core of department stores in one major area has virtually reached the saturation point. Traffic, far from being a value-enhancing factor, has begun to be a palpable disadvantage. The consumer, thanks to the automobile, has become mobile enough to transcend the fixed concentrations of retail stores, where congestion and lack of parking space makes shopping an ordeal. In a sense, the successful downtown merchant today is like the goose who laid the golden egg, and then found that it was too big to sit on.

Such an obvious fact does not mean that R. H. Macy's will move to the country, although, like many of the nation's department stores, Macy's has hedged against the increasing mobility of the con-



Pacific Air Industries

and merchant alike



sumer by colonizing in the suburbs. The shopping habits created during 50 years of intensive urbanization are not easily modified. What is transpiring, rather, is the dispersal of retail business in groups of integrated stores, designed to provide for the shopping needs of a given economic area in relation to its transportation facilities.

In this sense, the shopping center is a return to the pattern of retailing which prevailed almost up to the present century. The Roman forum, the medieval market place, the glass-covered "gallerie" in Milan and Naples, the town squares and "emporiums" of America are all permutations of the communal aspects of shopping. They are something more than this, too, for they must meet the complex needs of the modern shopper: coiffeurs as well as coffee pots are among the demands of the average housewife.

From the point of view of the investor, the realtor, and the merchant himself, the studied development of new commercial centers can help eliminate the bad location planning that is responsible for perhaps a majority of the retail business failures in this country. And from the standpoint of our economy as a whole, the shopping center can rationalize the hitherto unplanned—and frequently wasteful—growth of retail business along the "Main Street" pattern.

Economic Pattern

Perhaps the most important fact about shopping center development is that it has compelled businessmen to discard the outdated "formulas" that have constituted so much of the folklore of American merchandizing. Not until the universal acceptance of the automobile did merchants see that the value of their central location had been determined by the relative inflexibility of the consumer's mode of transportation. The institution of the trolley line, which largely set the pattern for shopping layout in this country from 1890 on, had forced the average storekeeper to line up along the main axis of commerce and bid for his share of the passing trade. The gradual disappearance of the trolley from the late 1920's on, left him to fight his way out of an economic bunker. The automobile, emancipated the consumer but not the merchant. Land values along the old streetcar routes fell, yet storekeepers hung on with the persistence of those who defend an institution that once served them so well.

Some, it is true, scurried to the subdivisions in search of a new market. Others settled on the "hot shot" corners bordering residential neighborhoods. Many attempted to "ride the boom" downtown. Most of them found the going tough.

It was left to the chain stores, supermarkets, and mail order retail outlets, during the depression, to prove that good merchandizing is more than an adequate substitute for established retail "locations." With plenty of capital, and an elite of merchandizing specialists, such as no independent store owner could hope to duplicate, they proved that fewer stores, strategically located, could garner a lion's share of the retail business. Today, the supermarket is the economic anchor for virtually all small and medium-sized centers.

Market Determination

In deploying his center outside the established retail locations, the developer must use radically new merchandising yardsticks. He must determine the size of the area his projected center will serve and whether it is to draw upon a neighborhood or an entire suburban region. He must estimate the business potential of the area by translating annual income and expenditures into units of purchasing power. And he must know what percentage of the potential he can reasonably expect to get.

Such estimating may sound easy, but is it? Uniquely, shopping centers do not rely on the drawing power of existing markets in the area. They are creating a new market where the emphasis is on a balanced group of stores rather than cutthroat confusion. A cumulative pull, based on the customer convenience of parking, a one-stop, big-purchase service, and a program of controlled merchandizing is their stock-in-trade. Orthodox marketing surveys will not give the answers. The right kind of planning is expensive. National Suburban Centers, in Boston, spent a half-million dollars in its initial planning operation. David Bohannon, California developer, spent a year getting marketing surveys for his Hillsdale Center before working out a site plan. He checked it again, then tossed most of it out the window and started all over.

Materials available for the study of economic patterns of a given area include: internal revenue figures, auto registrations, retail sales statistics, number and valuation of housing units in the area. All this information should be supplemented by an independent marketing analysis. One of the most scientific marketing studies ever made for a shopping center was done by Architect Kenneth Welch for the National Suburban Centers, Inc. of Boston. Beginning with the basic data, Welch defined his area by figuring out the amount of time it would take a woman to drive through both congested and parkway traffic to get to his center. He came up with two figures: a 17 minute time-distance factor for a woman shopping for food only and a 30 minute time-distance factor for a woman shopping for other goods, but including food. This gave him his geographical area. He eliminated 50 per cent of his total potential customers because of low disposable income, then determined what his competing facilities would be and again deducted accordingly. The result was that Welch recommended a center which could handle a trade volume of less than 12 per cent of that purchased by residents of the basic trade area.

Traffic Factors

A careful study of traffic flow in and around the area where the development is located is essential, especially in the case of large autonomous highway centers. Says Appraiser Harold C. Frantzen of the Western Savings Bank in Buffalo: "The same factors that contributed to community growth and the establishment of downtown retail centers have a definite bearing on the success of any shopping center. Too much weight should not be given to the fact that most of the customers will be arriving by private

THIRTY MOST IMPORTANT NEIGHBORHOOD STORES

(Source: Urban Land Institute)



1. Drug Store, Cash & Carry Grocery, Cleaner & Dyer shop, Beauty Parlor, Filling Station, Bakery, Shoe Repair, Laundry Agency, Variety Store, Barber Shop



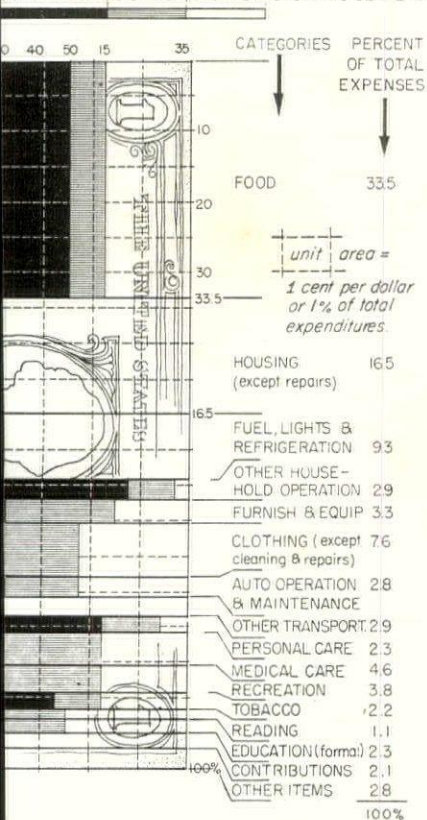
2. Service Grocery, Florist, Milliner, Radio & Electric Shop, Five & Ten, Shoe Shop, Gift Shop, Candy & Nut Shop, Lingerie & Hosiery, Liquor Store



3. Fix-It Shop, Dress Shop, Theater, Frozen Foods, Restaurant, Book & Stationery Shop, Dentists & Physicians, Baby & Toy Shop, Haberdashery, Athletic Goods

These groups are based on the assumption of the physical expansion of the center after the establishment of the primary group of stores. All recommendations in the above chart are subject to modification by variations in amount of walk-in trade, size of merchandising area served by the center and also local habits and customs, Urban Land Institute points out.

ESTIMATED PERCENTAGES OF EXPENDITURES IN EACH CATEGORY SPENT IN NEIGHBORHOOD, DISTRICT, & OTHER SHOPPING CENTERS



automobile. An indefinite number will arrive by means of public transportation and this factor alone may spell the difference between a profitable and unprofitable venture." This interesting observation is backed up by the experience of realtor Sterling Klein's Park Lane center in Baltimore which is located at an important bus intersection. Klein admits that he underestimated the value of a location where people wait for busses.

Raw figures of traffic flow past a given site, however, are of little value. A qualitative analysis is needed to determine what proportion of the passing cars contain prospective customers. How much of this trade will stop at the center, moreover, depends upon the nature of the stores in the group. So will the amount of trade that can be "captured" from competitive trading areas.

Store Types

An economic valuation of a given area, no matter how correct, is of little value unless directly related to the scope of merchandising within the center itself. Such surveys should be conducted always with an eye to determining (a) what type of retail facilities the center should contain and (b) how large each of these retail outlets should be. In general, a neighborhood development must serve a minimum of 500 families, a district center, a group of neighborhoods or an entire suburb, and a regional center several suburban areas. Under-development especially in terms of the variety of stores in a given center, can ruin the economic prospects of the stores already leased.

The key to store type and size is the economic character of the area to be served. The type of stores already located in the district is another important consideration. To these, a shopping-center entrepreneur must add the all-important factor of the cumulative pull that integration of stores will have on the drawing power of his center. Says Dave Bohannon: "We bear in mind that they can't all be high-rent, No. 1 tenants but rather a balanced variety which will be attractive to the shopper."

A small center, serving 500 families with some drive-in trade will generally reflect the basic group of stores that are to be found in all shopping centers. These are the stores selling convenience goods—those which are purchased frequently and with a minimum of effort, such as meat, groceries and drug items. Such centers also contain the basic service outlets—dry cleaner, beauty parlor and shoe repair.

But, for the larger center the developer must provide opportunities for comparison and selection of shopping goods items which are bought with some forethought. The most effective way to do this is to locate a large store in the center and surround it with smaller specialty shops, which can serve as a comparison-shopping foil for the large store. It is interesting to note that Sears Roebuck (to choose a typical example) sets certain basic limitations on the type of stores that it requires around it when it goes into a shopping center. Before signing up with the Cameron Village Center in Raleigh, N. C., Sears required a five-and-ten, hardware store and supermarket, and several service outlets.

Financing

Shopping center financing is based almost solely on the validity of the individual leases. As a result in a shopping center of any size, mortgage men prefer to see some large, well-established regional national chain store as an "anchor." Says Baltimore mortgage dealer James Rouse: "It's the national leases that count." But Hugh Potter, developer of the highly successful River Oaks center in Houston questions this, as does Detroit realtor Newton Farr: "A center should not be made up too much of chain stores. Rather than enlarging in the same location, chains tend to open new branches in competing centers. The individual owner, on the other hand, will enlarge his present location. If tenants are carefully selected and given the right kind of assistance by the center owner, the development as a whole will benefit."

Leases in shopping centers are usually based on a percentage of the gross receipts, running from as low as 1 per cent for supermarkets to as high as 15 per cent for beauty shops. A common type of percentage lease provides for a minimum guaranteed rental, from which the owner derives enough to cover amortization and operating costs, plus a small return on his investment.

In addition, it is often advantageous for a shopping center to offer both long-term percentage lease and short-term percentage leases and also very short term fixed rentals. Flexibility in this regard is important, especially with regard to small stores in centers where the developer might want to rearrange the types of stores as he expands.

In small centers, the square foot rentals for the principal tenants are considerably lower than those for adjoining stores, and in some cases the owner in effect subsidizes the principal tenant at the expense of the smaller occupants.

The danger here is that while it is necessary to obtain one or more large stores as a nucleus around which the shopping center can be created, it is just as necessary to retain continued occupancy of the smaller stores to show a profit on the whole investment.

In answer to this, a prominent firm of marketing experts point out: "When the major tenants are located, there will be an assurance of pedestrian traffic which will allow the developer to obtain higher minimum rents and more generous percentage clauses from the smaller tenants than would otherwise be possible. These smaller tenants thrive on the business created by the major stores but the major stores must make a very heavy investment in publicity and special merchandising plans in order to develop the maximum pedestrian traffic. Consequently, totally different considerations control the thinking of the two classes of tenants." The basis that Boston's North Shore Center uses in fixing minimum rentals, for example, is 2 per cent of estimated sales for large stores, and 4 per cent for the smaller shops.

Despite the proven success of the shopping center, mortgage men are inclined to agree that the gold rush aspects of the idea are giving way to a more realistic approach. The return of the buyer-market will squeeze out the marginal shopping center store.



Julius Shulman

CENTWOOD FARMERS' SHOP in Los Angeles gets customers inside via main entrance "barn." Shops face interior street. Design is somewhat obvious but fits in with sales motif.

just as inexorably as it will the marginal neighborhood or downtown retailer.

Store Design

One of the earliest integrative devices of the shopping center was to set it off in a distinct architectural style. Shops which might otherwise be juxtaposed along the street in a hodgepodge of "store front" Americana found themselves under a single and frequently bizarre esthetic canopy. Fortunately, this coincided with a period in U. S. history when moving picture houses were expected to resemble oriental mosques, and the public found it not inconsistent to buy its groceries in markets which ranged from Nichols' baroque Spanish to Shaker Heights, Ohio's New England colonial. For all their straining toward either quaintness or the fanciful, these efforts to impose an identity on shopping centers were largely successful. The public could hardly ignore them, and their movie-set facades, no matter how inappropriate to the locale, frequently masked a functional unity which proved to be of real value.

Developers, for instance, wielded a power over the tenants of the center that no downtown building operator had dreamed of. Nichols worked into his leases the right to control the nature of display signs. A further integration was achieved through landscaping. Most developers were choosy about their tenants, restricting direct competition among stores where it was economically justified, and laying out shops in such a way as to eliminate the weak sisters, or marginal locations.

If anything, unity of design during this period became too much of a rigid fetish, and tended to subordinate the individuality of the various shops to an artificial standard. Shops in New York's Rockefeller Center development, for example, exhibit a monotonous uniformity of appearance. Modern centers, having learned this lesson, are more flexible: a contemporary style, with a certain amount of streamlining, imposes fewer gimcracks and gets its

unity in a more truly functional way. A canopy over the sidewalk may tie the unit together, while a saw-toothed, or recessed, front separates the various shops for the benefit of the passerby. A single entrance, in the large centers, controls the movement of circulation off the street, while parking space orients the overall development in terms of its immediate surroundings and the passing traffic. So important is this latter factor that at least one developer insists that the parking space be laid out first, and the center built around it.

Internally, the circulation problem is intimately related to the merchandising "plan" and in the long run, to the economic health of the center. From the design point of view, it is somewhat simplified by dividing the stores into specialized and general categories. Large stores such as supermarkets, drugstores, and department stores require special consideration and their location will be rather inflexible. Service and specialty shops, however, have generally similar requirements, and give the architect an opportunity to manipulate the smaller stores around one or two "anchors." This is not only an architectural factor, but a merchandising consideration as well, for it is axiomatic that the larger stores must be situated so as to attract the bulk of the trade.

Controlled Circulation

Controlling the access to the center is the most common method of doing this, and the larger stores are frequently designed to provide a walk-through to the rest of the development. At the Shirlington, Va., center, walk-through has been so pin-pointed that it is restricted to only the largest stores in the center. As a result of walking—and perhaps buying—at the big stores, the shopper comes out in the middle of the center, with smaller stores on both sides of him. All the leasees benefit by this arrangement.

Another device for controlling shopper circulation is to group the stores by products. This follows the well known principle of comparison shopping. Richard Guelich, the Buffalo developer, believes that all the food stores should be together, with the supermarket as the "anchor" and bakeries, delicatessens, and candy stores adjoining it. Drugstores should be in the same general area, while a department store and specialty shops require their own section.

Guelich also recommends one-floor centers, since stairways hamper circulation. From a design standpoint, the single floor layout is one of the unique characteristics of shopping centers. Among its potentialities—as the Westchester center has demonstrated in Los Angeles—is the use of the roof for parking space where sufficient land is not available.

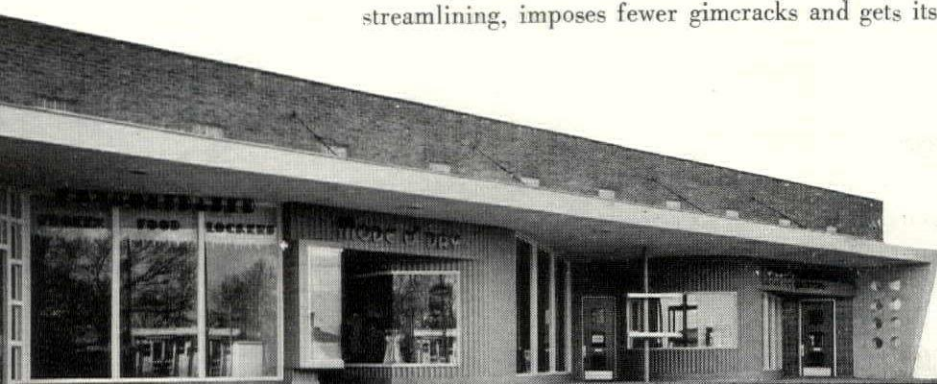
Parking

Many of these problems are not germane to the small center, in which the stores usually open directly onto the street. Nor are many centers located under one roof. The tendency, with almost all the larger developments, is to construct separate buildings for the main enterprises, and to group the buildings around a central mall. National Suburban Center's Middlesex development is laid out in the form of a carnival midway, with the main attrac-



SIDEWALK CANOPY unites a group of stores at the Broad Center, in Shreveport, La. Different shops are freed from rigid unity, however, by use of saw-toothed front.

RECESSED STORE FRONTS in Village Center, at Dallas, encourages window shopping while the marquee neatly integrates the various shops into single development.



tions (a theater and a department store) at either end and the balance of the stores along the sides. The Shaker Heights center is in the form of a plaza, and emulates the "town square" of New England. Shops border the four sides and parking is done in the middle.

It is evident that parking arrangements will be largely determined by the layout of the center. The factor of parking facilities can hardly be over-emphasized, for the initial justification of the shopping center is that it takes the "problem" out of parking. Many of the earlier developers, who built closer to urban concentrations than is now the general practice, discovered that they had allowed too small an area for their car-borne trade, and were forced to buy adjoining land.

Associated Press Photo



GROUPED MERCHANDISING (R.) ELIMINATES TYPICAL HODGEPODGE

Studies by the Urban Land Institute indicate that a two-to-one ratio of parking space to floor area is a minimum for most centers, and that where the majority of the shoppers arrive by car a ratio of three-to-one is not too high. Guelich bases his parking facilities on the estimated annual volume of the center, allowing space for 125 cars for each million dollars of sales. If the center has a theater, he allows one additional parking space for each three seats.

Having determined the amount of space needed, the developer must relate it most strategically to his center. Here, a number of factors enter in, including convenience, merchandizing pull, and psychology.

Front parking abets the "drive-in" psychology upon which most centers base their appeal and generates impulse shopping on the part of passing traffic. On the other hand it creates some disadvantages when walk-in trade is an important factor, since pedestrian shoppers must detour through, or around, the parking space to get to the battery of stores.

Rear parking means orthodox store siting, with a clear-cut separation between walk-in and car borne trade. Its limitations are primarily those of inconvenience for the drive-in shopper, since he must first drive to a rear lot and then walk back to the front of the store. Rear entrances have eliminated this problem in some centers, but—as in the case of supermarkets, with their checkout system—they are not always feasible. The best solution seems to be the walk-through principle, discussed above.

Best Solutions

The Urban Land Institute Community Builders Council, following several seminars on shopping centers, advocates *split parking*—parking in both front and rear—as the best general solution. The purpose here is to catch both the "impulse" shopper, who happens to be driving by, and the regular customer, who will go to the back. From a merchandizing viewpoint, the great difficulty with split parking is the location of the main entrance to the center. The average merchant wants to put his best front on the street, yet in the average split-parking store most of his customers come from the rear.

The best solution to the whole question of location is perhaps exemplified in the *peripheral parking* which characterizes the Middlesex Center and others. Parking areas surround the stores and the interior court is a mall. A relaxed psychology is created within the center, since parking and other distractions are curtailed off by the stores.

In the Middlesex Center, arcades provide entrances between the parking area and the mall, at approximately 200 ft. intervals. A customer coming into the arcade has a choice of ramping up about 4 ft. to the second level of stores along the mall or down about 10 ft. to the first

level. Escalators are also provided within the mall area for this purpose.

Says Architect Kenneth Welch who, with Ketchum, Gina & Sharp and M.I.T.'s Frederick J. Adams worked out this solution: "The maximum separation of vehicle and pedestrian traffic in the center itself is a definite advantage and is reassuring

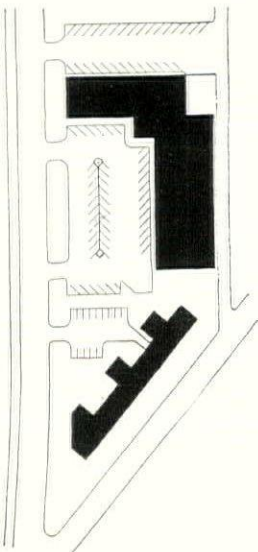
Western Airphoto Co.



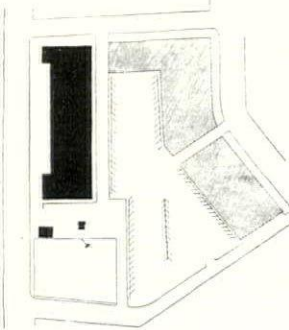
ROOF PARKING CAN RELIEVE SPACE PROBLEM

to the customer who often has her children with her. When the customer takes the trouble to become a merchandise-seeking pedestrian in our centers, she is protected, not only from the hazards of automobiles but she doesn't even have to see one, much less hear or smell one." Here, the most important planning problem has been solved—getting customers from their cars to the focal retail points of the shopping center as efficiently as possible.

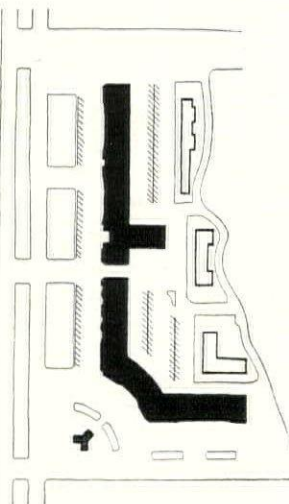
PARKING LAYOUT



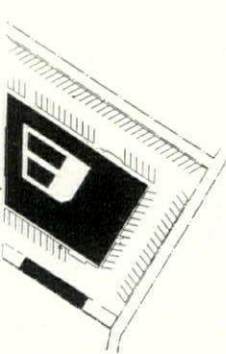
FRONT



REAR



SPLIT

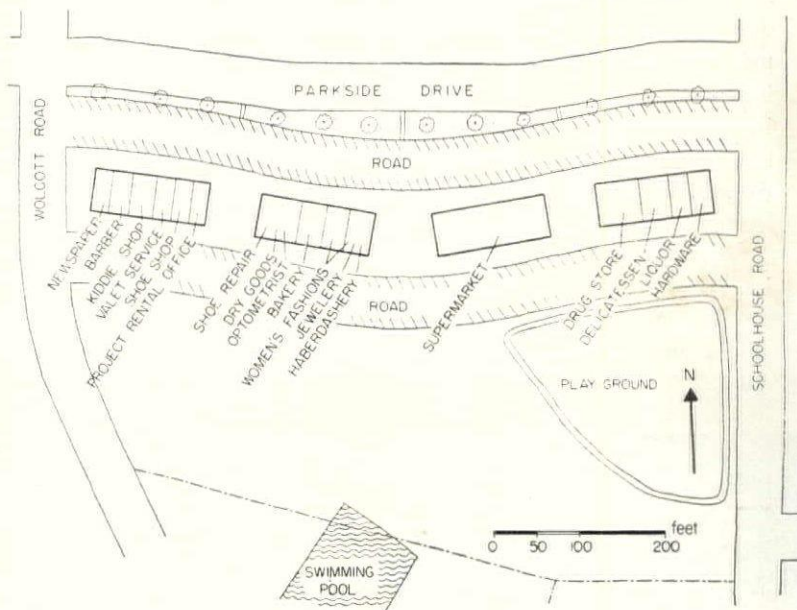


PERIPHERAL

NEIGHBORHOOD CENTER for a housing development at Levittown, L. I., caters to 2,000 families

One of the country's most prolific housebuilders is Long Island's well-publicized Levitt & Sons, whose Levittown will house 10,000 middle-income families by the end of 1949. One good sales argument that Levitt used on prospects was the planned development of three convenient neighborhood shopping centers. Center No. 1 (shown below) cost about a million dollars, including a playground, bowling alley, and swimming pool, and is designed to serve 2,000 families. Centers No. 2 and 3, when finished, will bid for the trade of another 4,000 families each. Strung out between two large parking areas, they are simply, almost austere, designed. Store fronts face both sides of the block and are ringed by a sidewalk which effectively keeps parking from interfering with the shopper, once he has demounted. Although virtually all of the trade will come from the immediate neighborhood, Levitt still expects that most of it will arrive by car and he has allowed a 60 to 40 ratio of parking area over floor space.

Stores provide a well-balanced group of services. Included is a dry cleaning establishment, newspaper plant, photo studio, kiddie shop, drugstore, supermarket, and a trading post where thrifty neighbors of Levittown carry on a sort of continuing rummage sale.



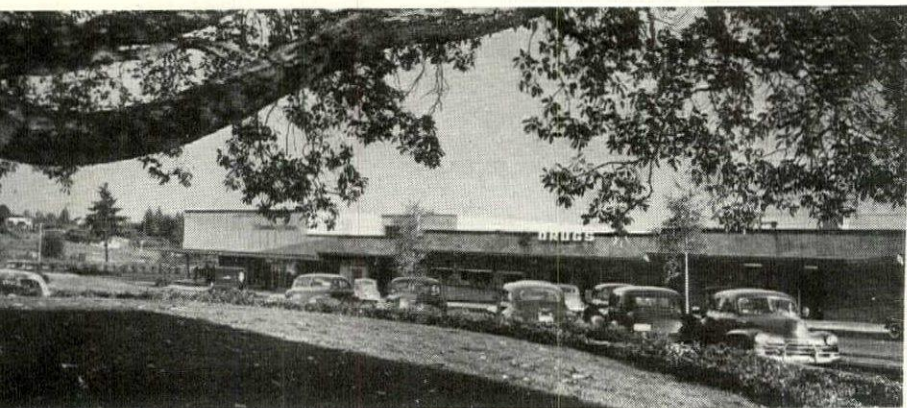
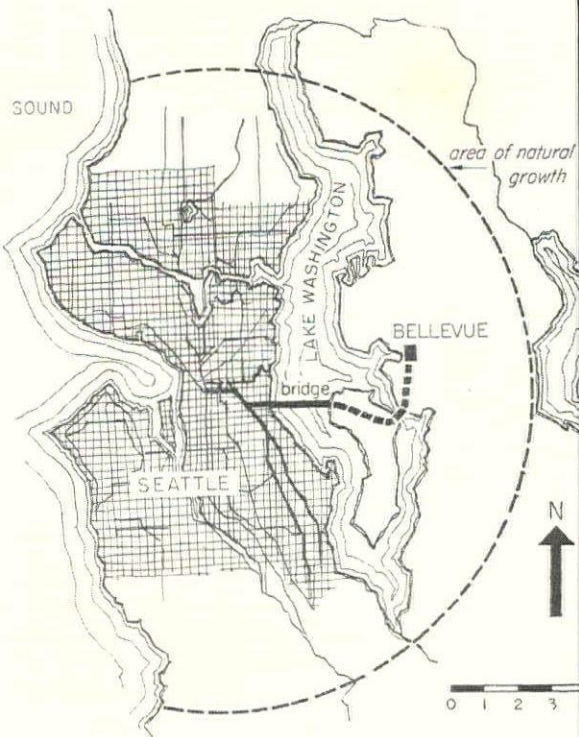
Thomas Airviews



DISTRICT SIZE CENTER is typified by this modern, 35 store shopping square at Bellevue, Wash.

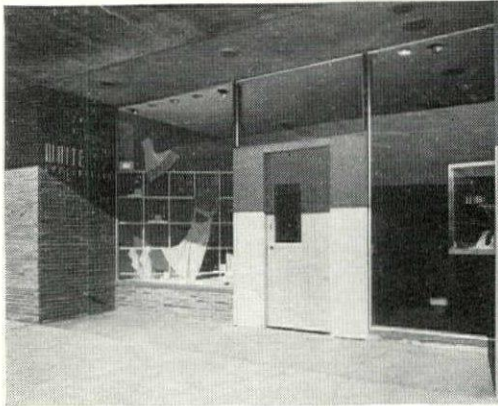
One of the most completely integrated shopping centers in the U. S. is located at Bellevue, Wash., where two brothers, Kemper and Miller Freeman, developed a 35 store group in three major building units, plus a service station and medical clinic. The Freemans, who have lived in Bellevue since 1928, got the idea when Seattle's famous Floating Bridge was built across Lake Washington in 1940, telescoping what had formerly been a slow ferry ride into an easy two mile auto jaunt. The population of Bellevue doubled. Most of the newcomers, the Freemans discovered, were commuters who had moved out from Seattle.

Since real estate developers had ignored Bellevue until the bridge was built, land was plentiful and—most important—unplatted. The Freemans bought an old, ten acre apple orchard and laid out their project in a modified version of the New England town square, with a core of buildings in the center, sur-



rounded by facing units at the sides (of which three sides, up to the present, have been developed).

To give their development a basic merchandizing nucleus, the owners first signed up Seattle's best known department store, and put it in the center group. A large food store staked down one corner of the quadrangle while a 560 seat theater and a restaurant anchored the opposite wing. Specialty shops—florist, haberdasher, cleaner, variety store, druggist, etc.—adjoin the main enterprises. Unique among shopping centers is the emphasis on professional services that has been worked into the plans. Besides a bank, the development includes a law office, doctors offices, the clinic, a newspaper, nursery, and a charity exchange. space for which was donated by the owners. Planned for future construction: a funeral parlor, more doctors offices, another bank. Catering to a population of some 50 to 60 thousand, Bellevue already serves a trading area far beyond the original boundaries of the community.

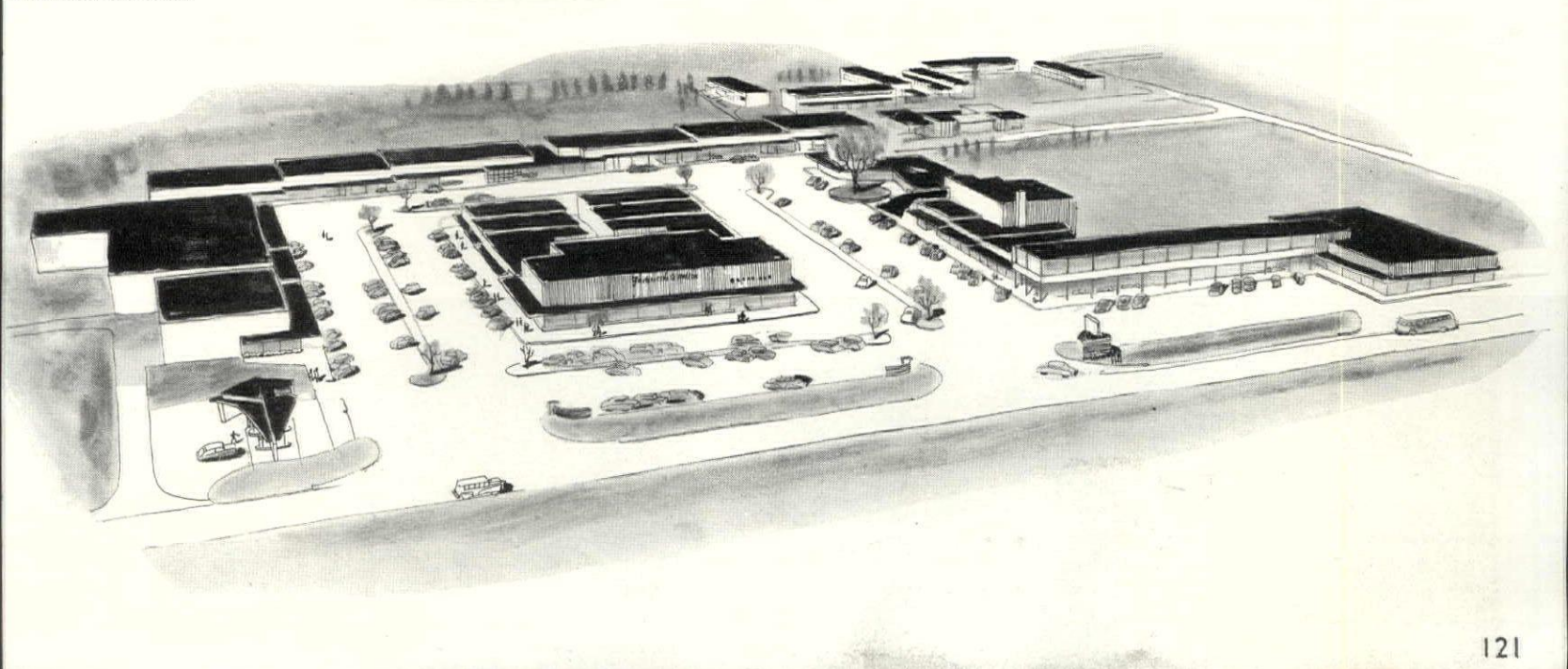


WIDE, PLAZA-TYPE STREETS SPEED CIRCULATION YET LEAVE AMPLE ROOM FOR BACKING AND FILLING BY CAR-BORNE CUS





otos by Dearborn-Massar



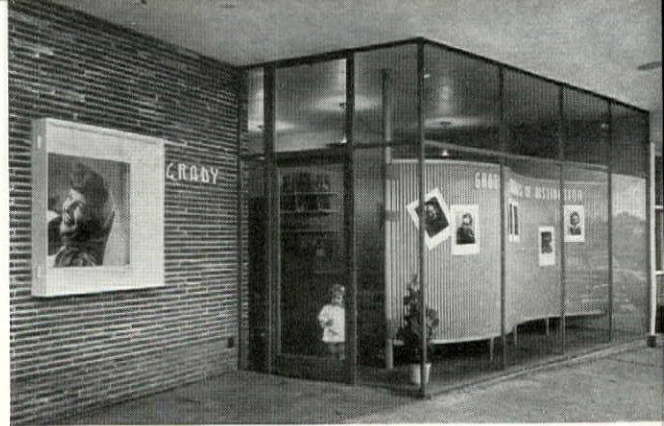


WIDE MARQUEE UNITES CENTER STORES, ENCOURAGES IMPULSE BUYING

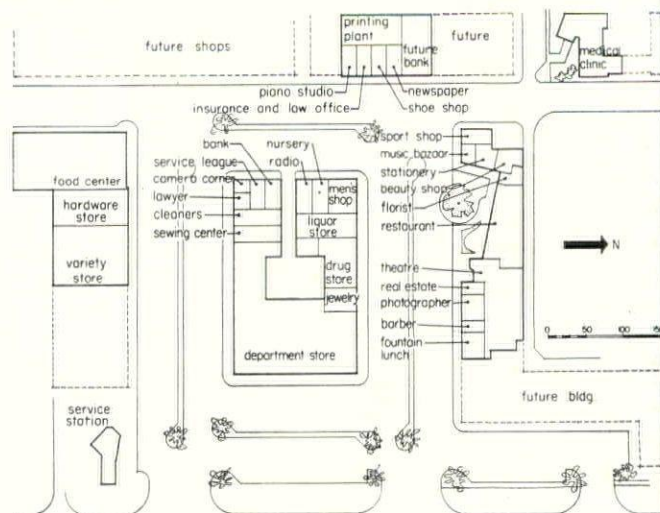
Bellevue Shopping Square is a good example of how the old land rush psychology of retail development has been avoided in favor of an integrated merchandising package. What might have been a wasteful and unplanned confusion of stores and services is, instead, a pleasant center, with plenty of space to park and a leisurely atmosphere in which to shop.

From a design point of view, Bellevue is particularly good in that it uses a simple, contemporary style to give unity to the project while allowing each tenant maximum individual identity. In most cases the design tells the story. Says co-owner Kemper Freeman: "We feel the buildings are the shell for the merchandiser to use. What we are trying to do is provide the most effective structure for the purpose, and to give it as much dress as is needed to help sell the shop's wares. My personal opinion is that too many people who have some money have decided to build a monument to themselves in their shopping centers, and do not let the merchandise run it. They lose sight of the objective: to provide convenient, attractive facilities for use."

Bellevue avoids the monotone effect of too-closely controlled centers. Integration is achieved through the layout of the buildings, by which a majority of the stores face each other. The center block is further unified by a cantilevered marquee neatly balanced on columns, and extending the same distance inside (8 ft.) that it does over the sidewalk. Front walls are mostly glass, from street to roof, and partitions behind them, to form display windows, have been left out to make the store interior a display itself. Landscaping is quite elaborate and in the case of the restaurant has been designed to form an outdoor dining terrace. Architects: Bliss Moore Jr. & Associates.



"SHOWCASE" ENTRYWAY SETS TONE OF PHOTO STUDIO



PARKING IS IN FRONT, AT OBLIQUE ANGLE TO CUR

AL FRESCO DINING IN SUMMER IS MADE POSSIBLE BY SET-BACK FROM SIDEWALK. GLASS FRONT UNITES TERRACE WITH THE INTERIOR



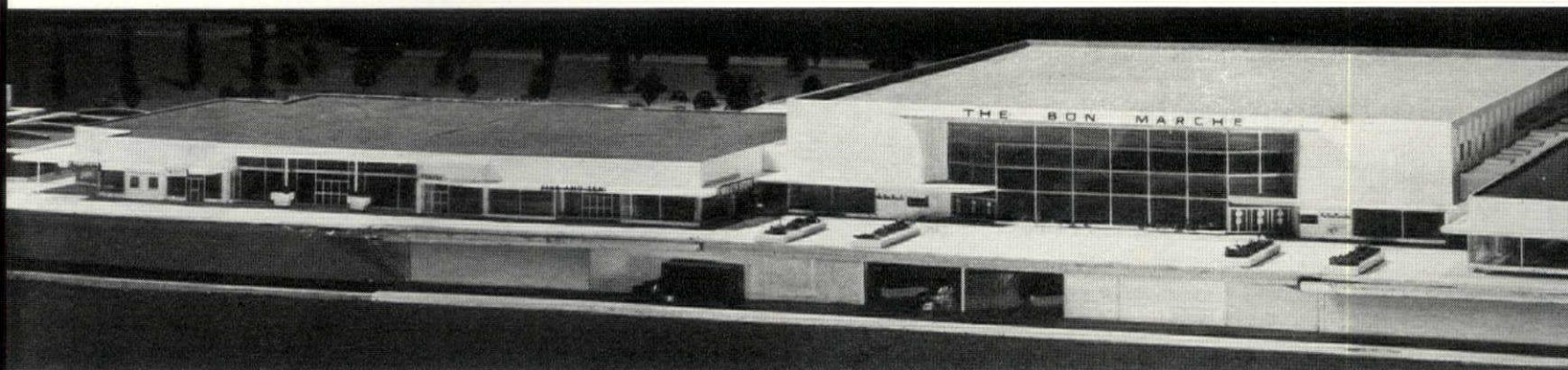
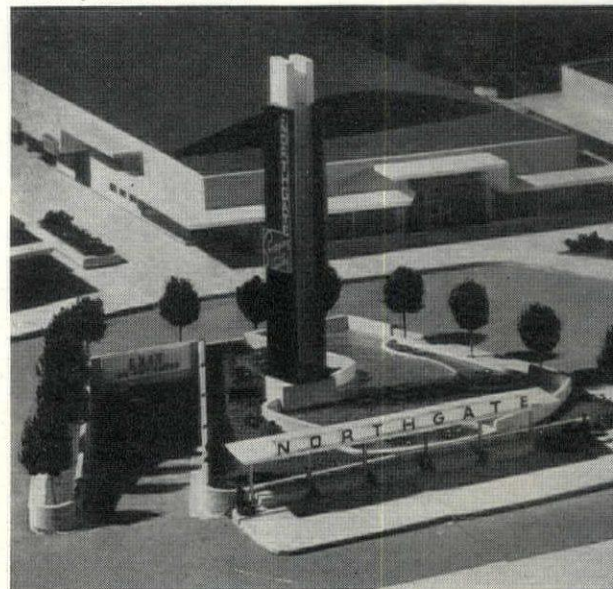
REGIONAL SHOPPING CITY for Seattle's north end will serve five mile radius, and 335,000 residents

Like the Bellevue Shopping Square, Northgate Shopping City is an up-to-the-minute center designed to keep Seattle's booming population from having to travel downtown for its food, fun, and furnishings. When completed (probably by the end of this year) it will be the largest thing of its kind in the country, according to its developers, the Suburban Co. The project will cost upwards of \$20 million and is geared to do a \$60 million annual gross, based on a five mile shopping radius that is expected to house 335,000 people by 1950. (Seattle's north end, in which Northgate is located, has had a war and postwar population jump of 39 per cent.)

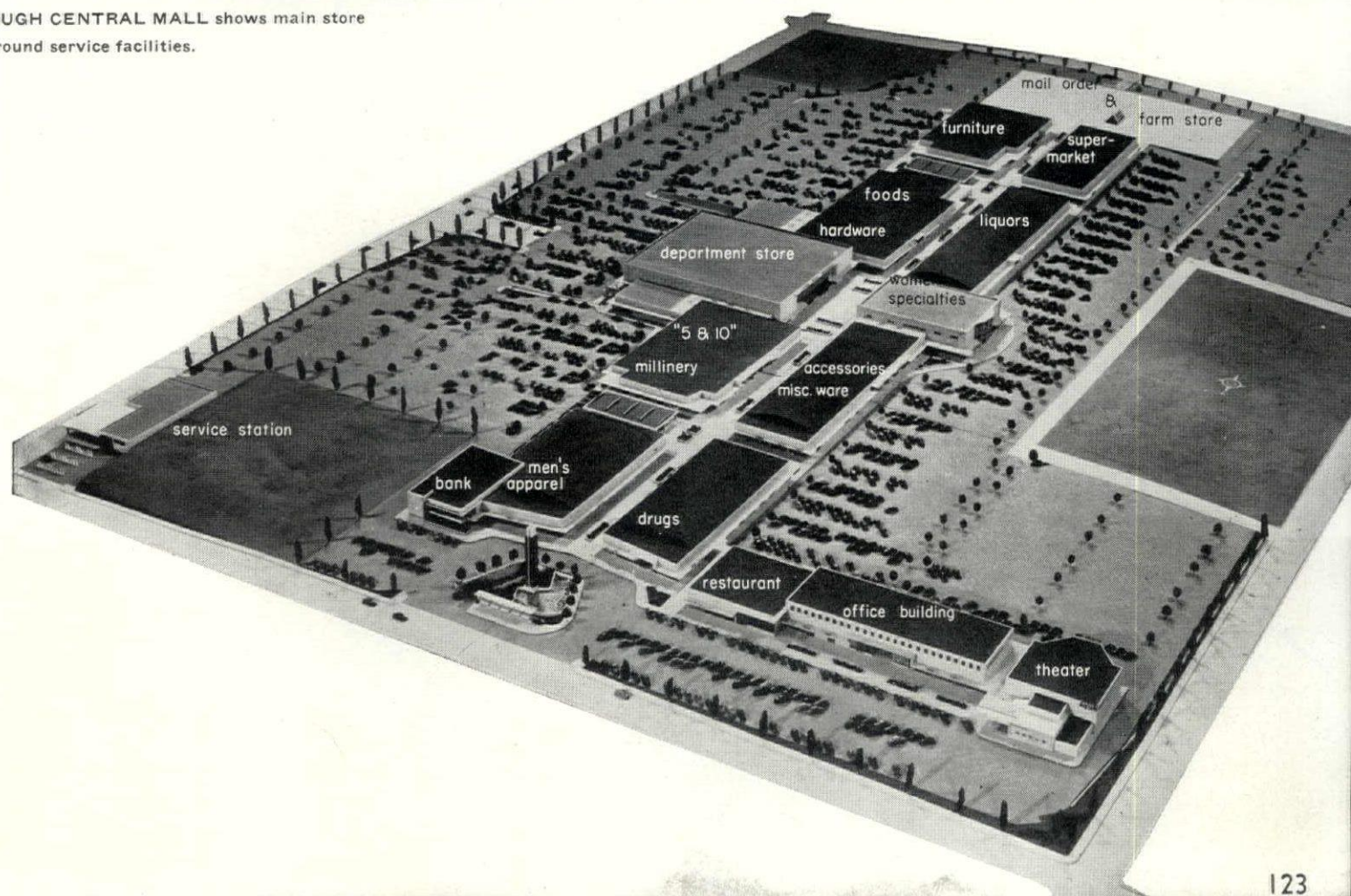
Northgate's 57 acres provides space for 50 stores and 4,000 cars, and pivots around a \$3 million department store, which is given the right to approve all other tenants. Design is contemporary throughout, with stores opening onto center mall in front, and the parking area at rear. The pylon (right) marks the exit from an underpass which provides access to basement loading platforms.

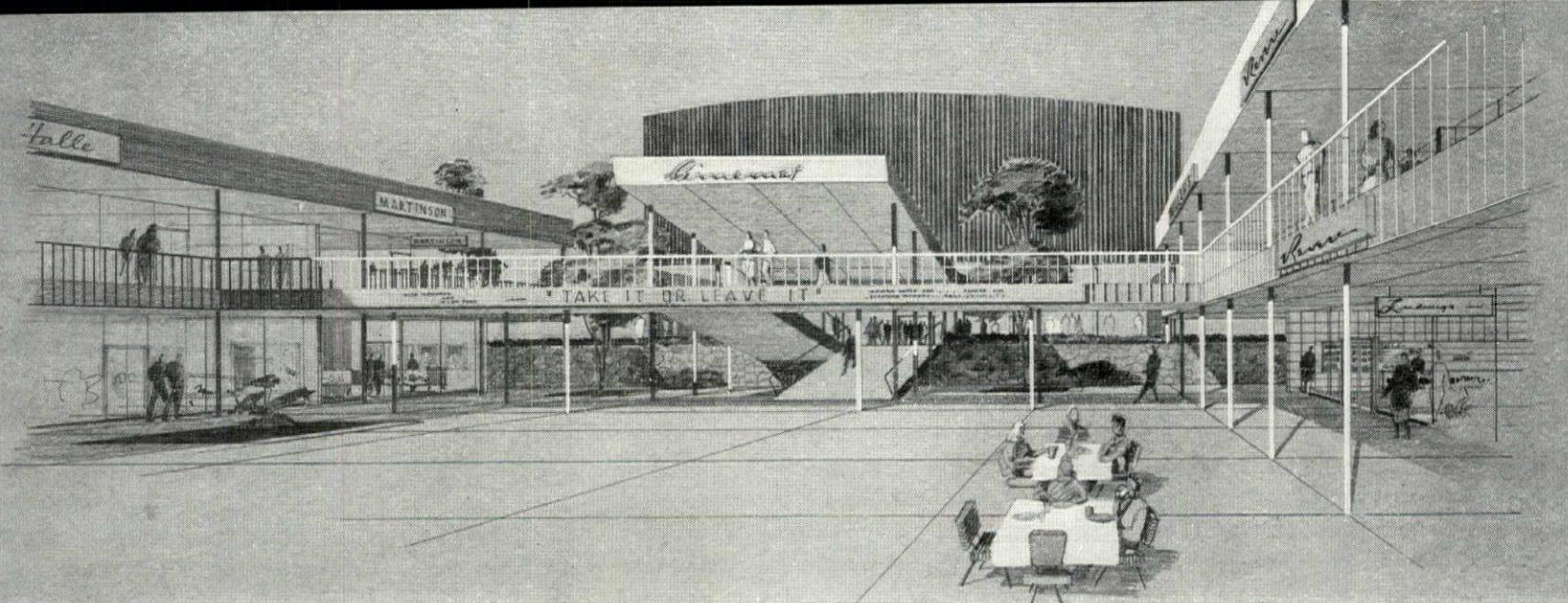
More than most shopping centers, Northgate hopes to lure part of its patronage from among those who want to have a good time. Included is a large amusement center containing a theater, roller skating rink, bowling alleys, a ball hall and skating-swimming arena. Architect: John Graham & Co.

Photos by Kenneth S. Brown



SECTION THROUGH CENTRAL MALL shows main store level and underground service facilities.



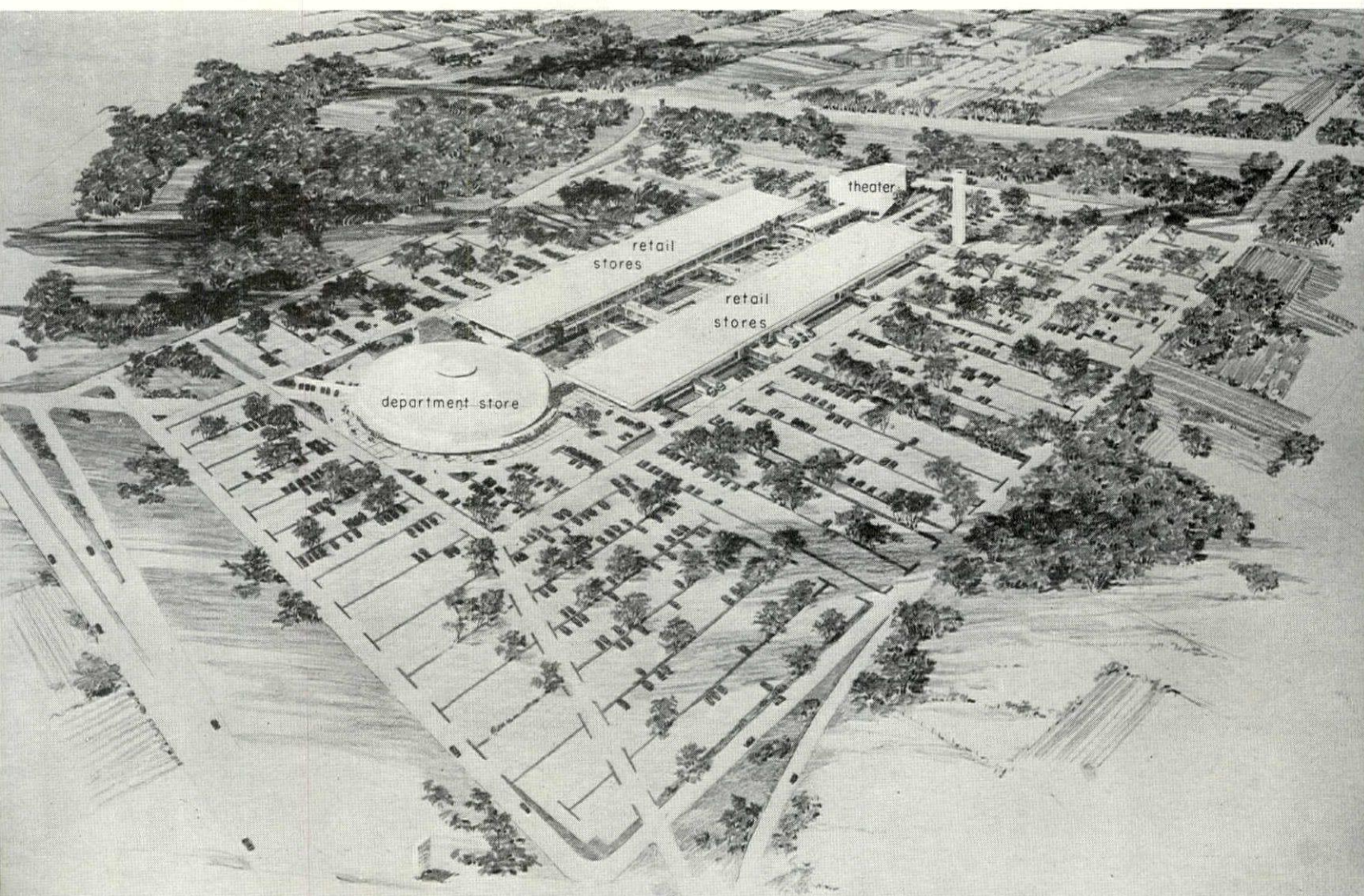


REGIONAL CENTER at Framingham, Mass. is one of several to be developed from a master design

Probably the most ambitious attempt on the part of retail business to break out of the downtown trap and recentralize in the hinterlands is suburban Boston's mammoth Middlesex Center, at Framingham. Developed by National Suburban Centers, Inc., which has equally big ideas for other overgrown U. S. cities, plans for the \$5 million Middlesex project are similar to those of nearby North Shore Center (FORUM, '47). Since the master design for these, and other projected centers, were first drawn, plans have grown even bigger. Originally designed one-story buildings, the stores which face each other across a mall have been elevated to two stories, with the upper floor serviced by its own gallery of walks.

Middlesex will provide space for about 60 shops, plus a theater and restaurant at one end of the mall and a circular department store at the other; shoppers will thus be encouraged to make the grand circuit during their visit. Peripheral parking will accommodate 4,000 cars.

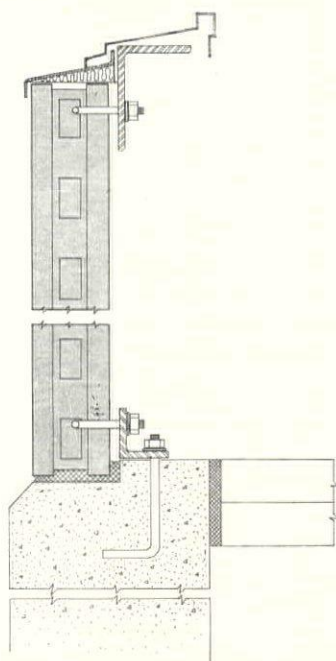
Both Middlesex and North Shore centers are examples of a development which has been planned to serve an entire economic region. To allow for future suburban growth, National Suburban Centers has bought plenty of land on which more buildings can be erected. Present schedule calls for the initial group of stores at Middlesex to be open for business by the spring of 1950, and for the North Shore Center to be completed during the summer of that year.



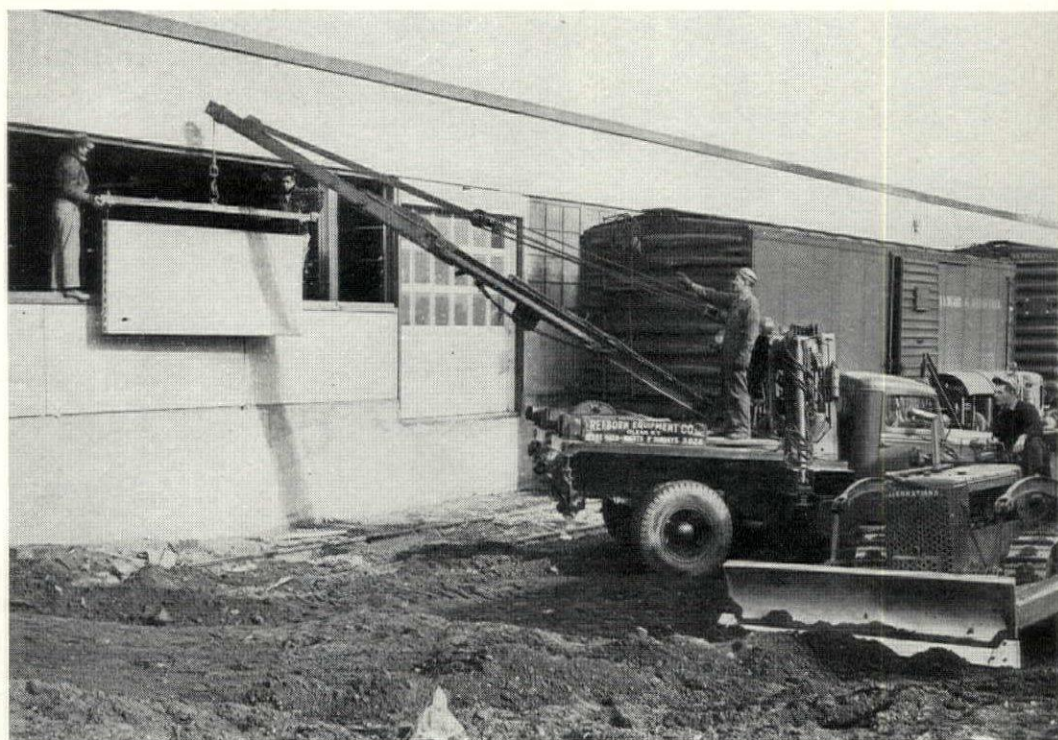
PRODUCTS AND PRACTICE

CONCRETE CAVITY PANEL —

Two thin slabs mounted on a steel chassis are a new prefab wall section



FABRICON PANELS, 4 x 10 ft., are linked to building frame with mechanical connectors, assemble quickly with aid of winch to form a strong wall with good insulating qualities. Section above shows twin slabs and cavity.



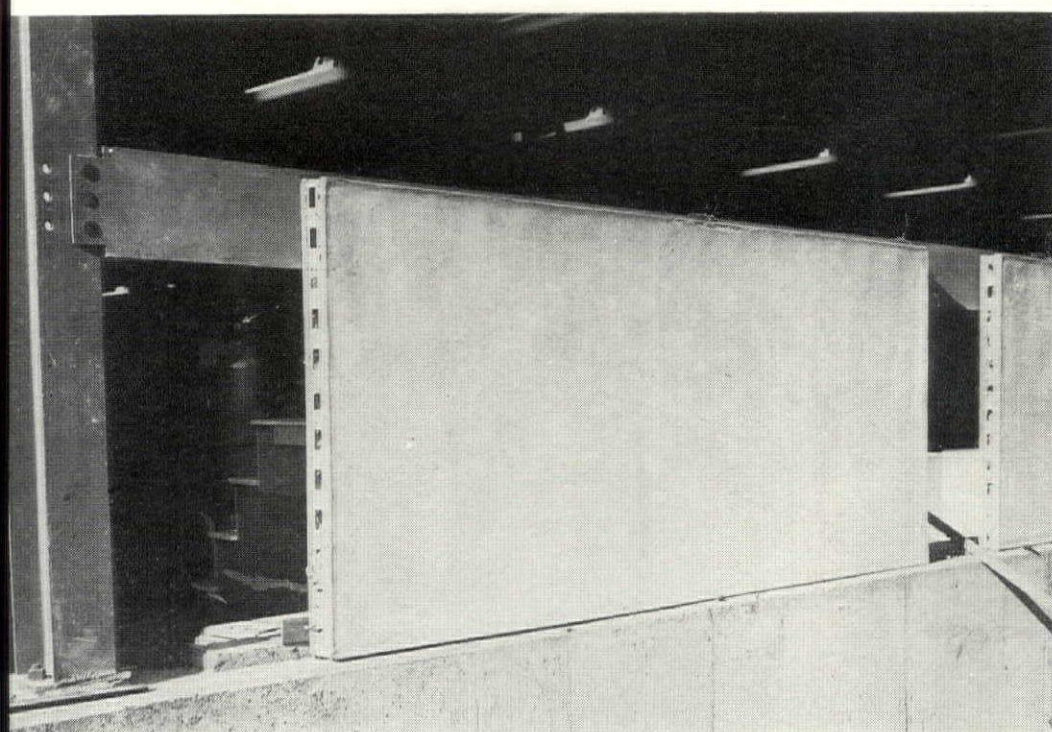
Fabricon, a reinforced concrete cavity panel developed by American Type Founders Inc., is one of the newest products of technologists' search to find a lean, light substitute for heavy masonry walls. The new prefab panel has a light metal chassis, supporting two thin slabs of concrete with an insulating cushion of air between them. The total thickness of the panels, including cavity, is 4 in.; they are made 4 x 10 ft., to be joined into walls with mechanical connectors. Advantages in their use are simplicity and speed of erection, strength, good weathering qualities, and fire resistance.

The two 1 1/8 in. slabs of concrete which

form Fabricon panel's double shell are held 1 3/4 in. apart by the steel studs of the frame. The cavity may be filled during manufacture with various insulating materials tailored to fit climatic conditions where the wall will be built. Studs are made of 16 gauge, cold rolled galvanized steel, shaped to form small channels, spaced 12 in. on centers. Concrete slabs are reinforced at mid-thicknesses by 4 in. x 4 in. x 12 gauge galvanized wire mesh welded to the studs. Aggregate used in the concrete which forms the slabs may be varied over a wide range without changing other details of manufacture, again increasing flexibility to meet various specific economic and geographic requirements. Panels average 18 lbs. per sq. ft.

A warehouse erected in Olean, N. Y., designed by Architect D. M. Ach, (see photographs) is the first large job on which the panels have been used. Labor figures derived from this job are the basis for conservative estimates that a crew of four semi-skilled workers can erect a completely finished Fabricon bearing or curtain wall at a rate of 150 sq. ft. per hour.

Fabricon joints may be left exposed, filled with plaster, or covered with decorative strips. The panels may be set vertically or horizontally (see photo next page) and may be cut to special sizes with an abrasive wheel at the manufacturing plant or on the job. Like other mechanically connected prefab panels, Fabricons have the advantage of mobility. The panels can be removed simply from the steel frame when additional openings are required, partitions are to be moved, or building plans are changed. Under unusual conditions when extra insulating qualities are needed, a double panel wall may be erected, or a brick facing



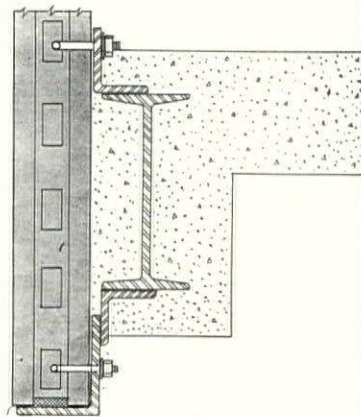
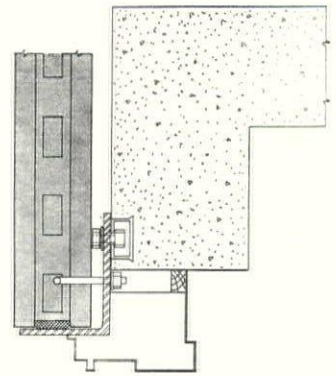
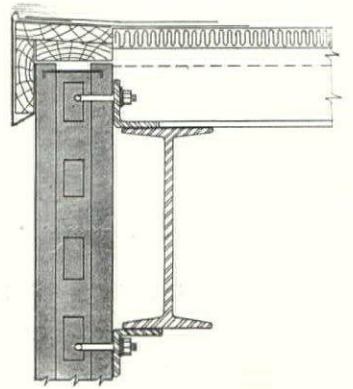
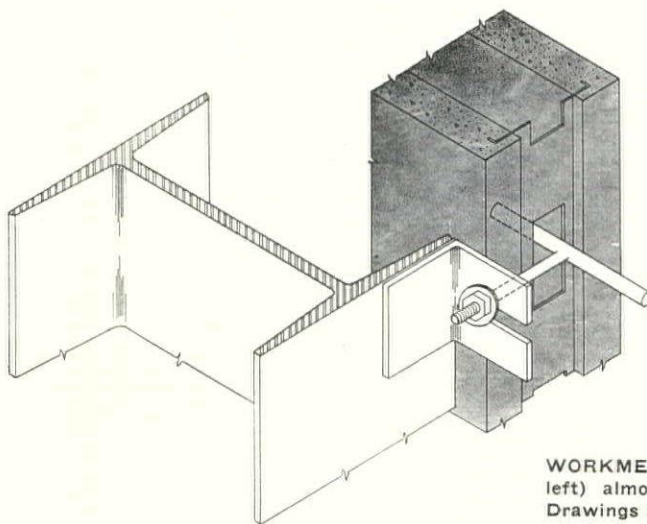


wall may be laid in front of the panel wall.

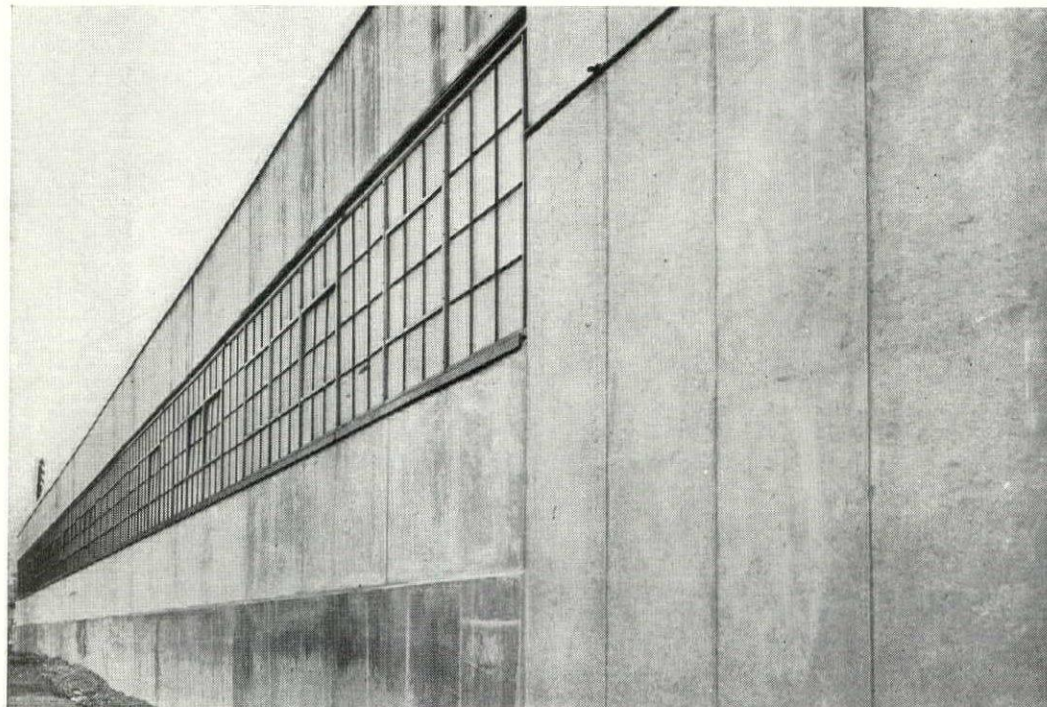
ATF says that a single wall of their Fabricon panels insulated with rockwool has a U value of .20—slightly better than a brick wall of 8 in. backing block with 4 in. brick facing furred with metal lath and plastered on the interior. Compressive strength is said to be equal to that of a 12 in. brick wall. Condensation can be fought with a vapor barrier on the inside face of the outer slab.

ATF is interested principally in licensing manufacture of Fabricon panels, rather than in large scale panel production. The company plans to sell manufacturing equipment to strategically distributed plants, and has developed the production process to a highly efficient degree. Producing one panel takes less than ten minutes, before curing, starting with the welded metal frame. First, the frame is sunk into one of the concrete slabs, newly poured and shaped to size, until the 4 x 4 in. wire mesh is equidistant between the outside and inside faces of the slab. Vibration is applied for approximately 20 seconds, after which an ATF patented high vacuum process is used to dewater the slab. Then this first slab and the reinforcing cage are rotated over on a second slab until the frame is embedded the right depth there. While the second slab is getting the vibration and vacuum treatment, the mold for the first slab is rotated back to its original position. And when the second slab has been thoroughly attached to the frame and dewatered, the second mold is removed, also by rotation, and the Fabricon panel is ready for the storage rack.

Cost of Fabricon panels will vary with location, and volume of production, but it is estimated that large savings over equivalent masonry construction are certain in all situations. Although the panels delivered on the site may be somewhat more expensive than components of a masonry wall, erection cost has run a quarter that of brick, because of the speed with which Fabricon walls are built.



WORKMEN SET WINDOWS into Fabricon wall (above left) almost as fast as they can build the wall itself. Drawings above are sections of Fabricon wall at roof, window, and at floor level and, to left, illustration of T-bolt connector. Below is photograph of a completed Fabricon wall, unpainted.



PUMICE — one of the oldest light-weight building materials is making comeback in western U. S.

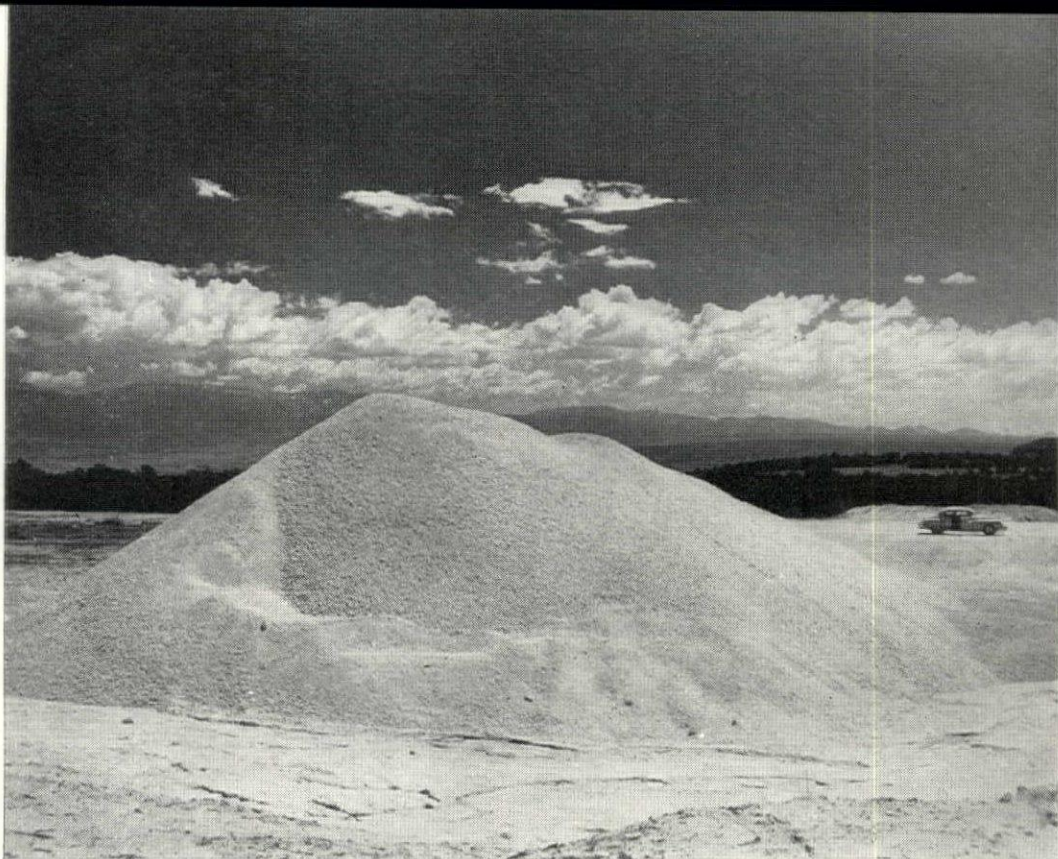
Along the eastern seaboard of the U. S. pumice is apt to be thought of exclusively as either an abrasive or something used in soap. Western architects, contractors and builders, however, are fast learning that pumice is a lightweight concrete aggregate of no mean properties. This is important because the concrete block industry needs a lot more lightweight aggregate. In July, 1948 the Pumice Producers Association was formed to work on the problem of nation-wide distribution. Pumice may now be bought anywhere west of the Allegheny Mountains for \$4.50 to \$7.50 per cu. yd.; east of the Alleghenies it costs approximately \$8.50 per cu. yd.

Composition. Pumice is a cellular, glassy lava material, essentially unaltered since its formation, and comprised of these substances:

Silica (dioxide)	72%
Alumina (oxide)	14%
Potassium oxide and sodium oxide	7%
Calcium oxide and magnesium oxide	2.5%
Iron oxide (ferrous and ferric)	1.0%
Loss upon ignition	3.5%

There is some variation in individual analysis. About as hard as feldspar, somewhat softer than quartz, pumice has a true specific gravity of 2.5, though up to five days may be required for its cells to become completely saturated. When tossed into water, some pumice floats, some sink and others remain suspended in mid-water. Variations in its cellular structure are responsible for this phenomenon.

Properties. The lightweight of pumice makes it easier and cheaper to handle than conventional aggregates; it also makes possible the use of a lighter steel frame. Since the "K" factor of pumice concrete varies between 1.86 and 2.20, no further insulation is required except for refrigeration or furnace installations. This low thermal conductivity holds condensation to a minimum. Pumice concrete is fire safe. Average fusion point of pumice is 2,450° F. At 1,400° F., however, the extreme outer fibers contract or shrink. Since the heat of an average fire seldom exceeds 200° F. and is usually nearer 900° to 1,000° F., it is readily seen that after a fire pumice walls will remain standing. Ordinary concrete has a modulus of elasticity ranging between 3,000,000 and 5,000,000. Pumice concrete, without sand, and with ultimate 25-day compressive strength at 1000 p.s.i., has a modulus of elasticity between 680,000 and 750,000. Modulus of elasticity for pumice concrete with higher p.s.i. is between 1,000,000 and 1,500,000. This is expressive of three to six times the flexibility of ordinary concrete and makes pumice concrete very resistant to earthquake shock.



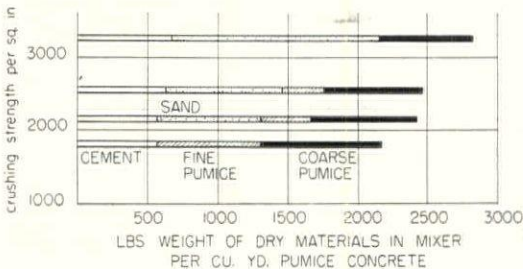
An ungraded pile of pumice aggregate from a New Mexico mine. Deposits are so extensive they are measured in square miles rather than in acres.

Application. Pumice must be handled carefully if it is to be successful. Because it will float, it must be pre-saturated before use. The stockpile should be sprayed for at least 48 hours or the pumice should be saturated in the mixer before use. Unless this is done, cement particles will be drawn into the cells of the pumice and excessive shrinkage may occur as a result of loss of water from the mix to the pumice particles. Two-thirds of the total water required should be added to the aggregate before cement is introduced. The concrete should be water-cured for at least seven days after which time the outer fibers will have become strong and dense enough to protect against evaporation and resultant too-rapid drying.

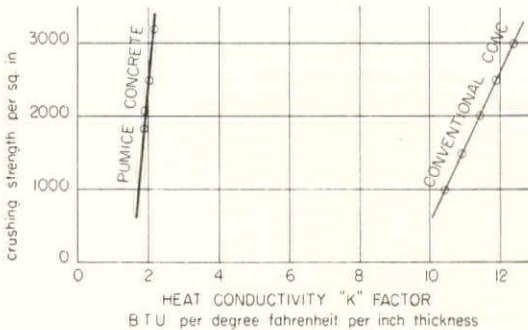
The Navy Department, War Department and many private builders, particularly in the west, have used pumice aggregate both as an acoustic plaster and as a structural material. The Pentagon in Washington includes pumice in its acoustic plaster. A \$9 million research laboratory at the Naval Ordnance Test Station, Inyokern, Calif., utilizes pumice as aggregate throughout the project. At the same naval base, 110 houses have been similarly constructed. Standard blocks and cast-in-place or pre-cast concrete may be made with pumice aggregate.

As with all light-weight aggregates, economies in building are realized. Re-design of the new Southern California Telephone & Telegraph Building in Los Angeles to pumice concrete resulted in a net saving of \$18,000. According to F. Sommer Schmidt, consulting mining engineer, "the total cost of the (Telephone) building is \$1.6 million. The conventional aggregate cost \$38,920, or 2.4 per cent of the total cost; pumice concrete cost \$59,720, or 3.7 per cent of total cost: the difference is \$20,800, or 1.3 per cent of total cost.

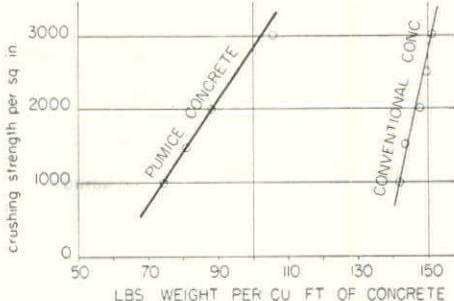
MIXES BASED ON DESIRED STRENGTH



COMPARISON OF HEAT INSULATING QUALITIES



WEIGHT-STRENGTH RATIOS COMPARED



Light-weight aggregates cut costs

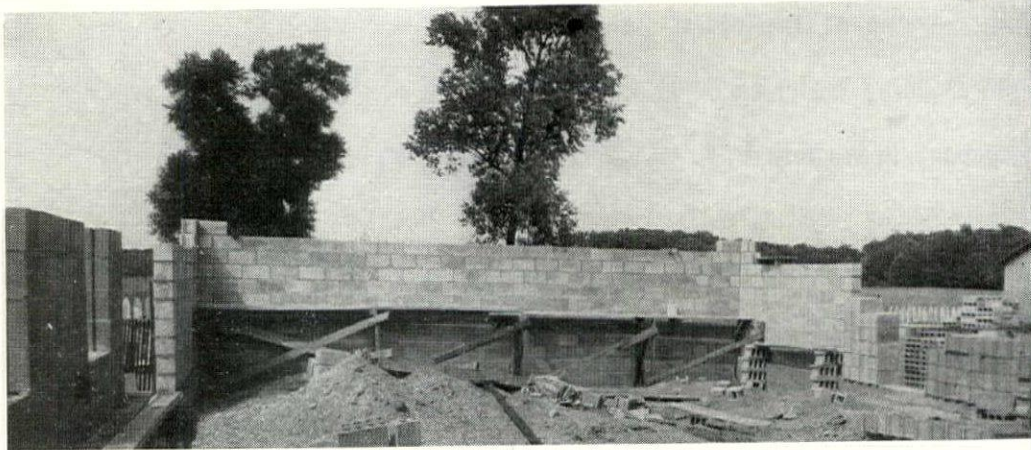
However, due to the lightweight of pumice aggregate, 300 tons of steel were saved at \$130 a ton, or \$39,000." In addition to this saving, the pumice concrete provides the building with all the heat and sound insulation values of pumice and affords less liability to earthquake damage.

History of pumice as a building material is a curious one. It is recorded in Gibbon's "History of the Decline and Fall of the Roman Empire," . . . "pumice-stone that floats on water, or bricks from the Isle of Rhodes, five times less ponderous than the ordinary sort," were used in building the Mosque of St. Sophia in Constantinople. Other historians record its use in the Coliseum and the Pantheon.

The art of using pumice was lost for about 1,500 years and was not rediscovered until 1883 when it made its appearance in many German Rhenish cities. Not until the 1930's did pumice begin to appear as a concrete aggregate in this country—in California. Prior to the war, pumice was imported from the Islands of Lipari, off the coast of Sicily, and used for abrasives, soap fillers and detergents. When the war cut off our Italian supply, it was discovered that there were pumice deposits in California, Colorado, Idaho, New Mexico, Oregon, Utah and other states. Very fine pumice, known as pumicite, was blown to great heights and carried as far east as Kansas, Nebraska and Iowa. Deposits in the latter state are of interest primarily because they form the eastern limits of useful pumicite deposits in the Great Plains states. As recently as 1932, the U. S. Department of Commerce made barely passing reference to pumice as an aggregate. Indications are that 1948 pumice production for aggregates was 20 times the production for abrasives, compared with a pre-war ratio of 1 to 1. This tremendous growth and the concurrent growth in the use of such materials as Haydite, slag, vermiculite, etc., shows clearly the industry's increasing respect for light-weight aggregates.

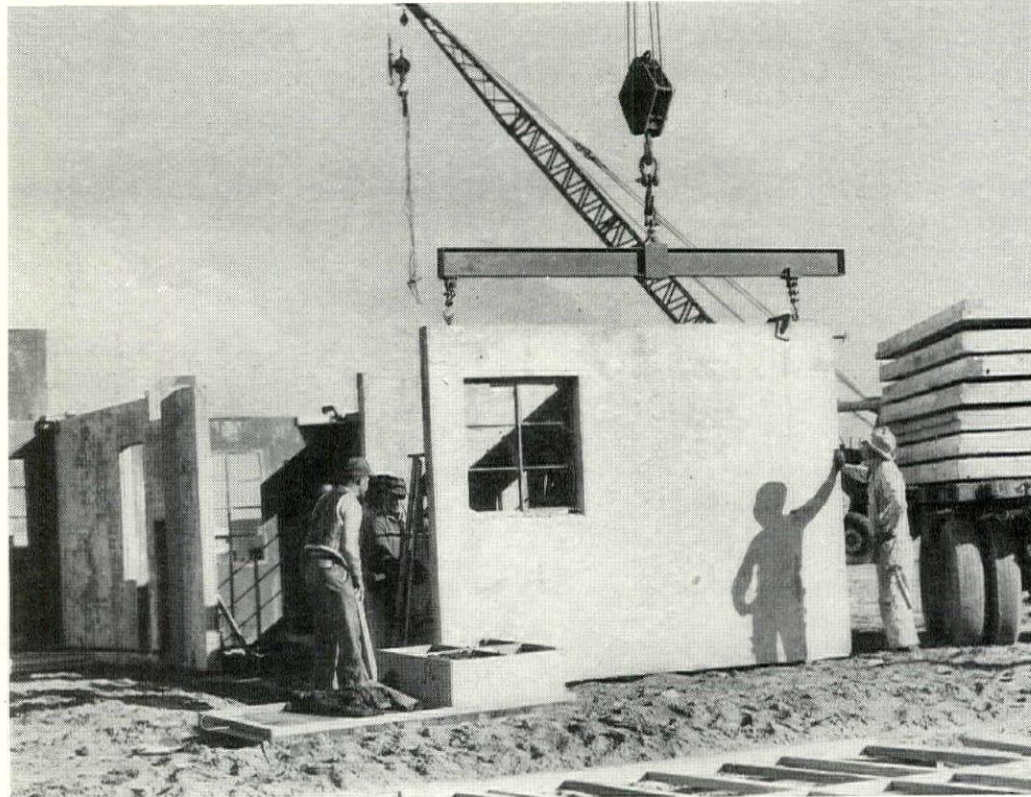
COMPARISON OF LIGHT-WEIGHT AGGREGATES

Type of aggregate	Aggregate weight per cubic foot pounds	Weight per cubic foot of concrete using aggregate pounds
Gravel	120	150
Sand	90-100	150
Crushed Stone	100	145
Crushed Bank Slag	80	100-130
Haydite	40-60	100-120
Foamed Slag	40-60	90-100
Cinders	40-50 (plus sand)	110-115
Pumice	30-60	60-90
Diatomite	28-40	55-70
Perlite	6-16	40-65
Vermiculite	6-10	25-50

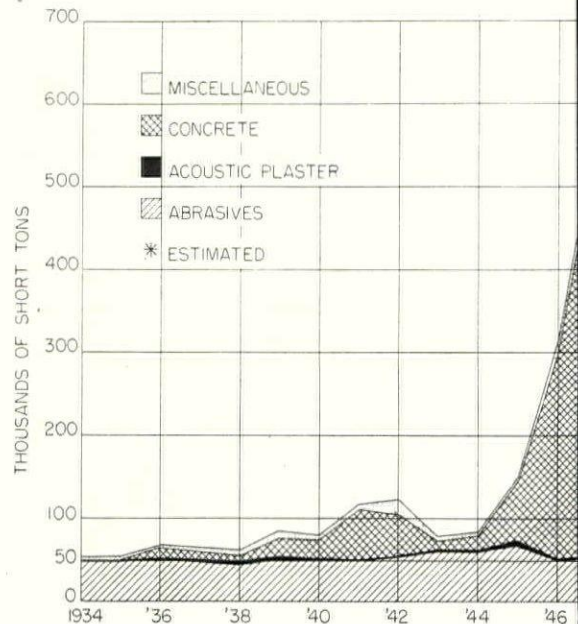


Wall requires less mortar when larger 25 lb. pumice block, covering 128 sq. in., is substituted for 23 lb. conventional block covering only 48 sq. in. Cost of hauling also is cut.

Official U. S. Navy Photogr



Truck can carry twice as many slabs of pre-cast concrete when light-weight aggregate is used. Slabs may be nailed, sawed like wood.



Early estimates for 1948 indicate a whopping 3,000 per cent increase in pumice aggregate production for period from 1944.



When it's a heavy duty job— You're right with Ro-Way

A long life of smooth, easy, trouble-free operation.* That's what you want in overhead type doors for Commercial or Industrial applications.

That's what you *get* when you specify *Ro-Way*.

As an example of the careful engineering of every Ro-Way Door to the requirements of the job—here is how we build all Ro-Ways of 200 sq. ft. area or more. We use heavy duty 3" wide track, 2 $\frac{3}{4}$ " ball bearing track rollers with double-thick tread, and spring hook-up of two or four power-metered springs. U-Bar stiffeners or U-Bar trusses add extra strength to sections. Extra heavy bottom rails, meeting rails, end stiles and muntin bars mean extra ruggedness for long life.



Complete fabrication in Ro-Way's own plant means Ro-Way uniformity, Ro-Way quality, Ro-Way dependability *through and through*.

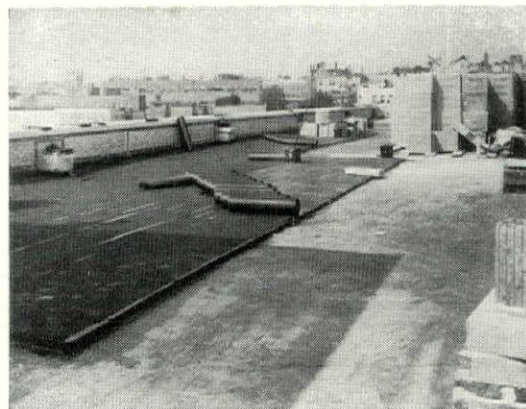
That's why you're always *Right with Ro-Way*. For Commercial, Industrial or Residential applications, specify Ro-Way Overhead Type Doors—and get what you want, every time.



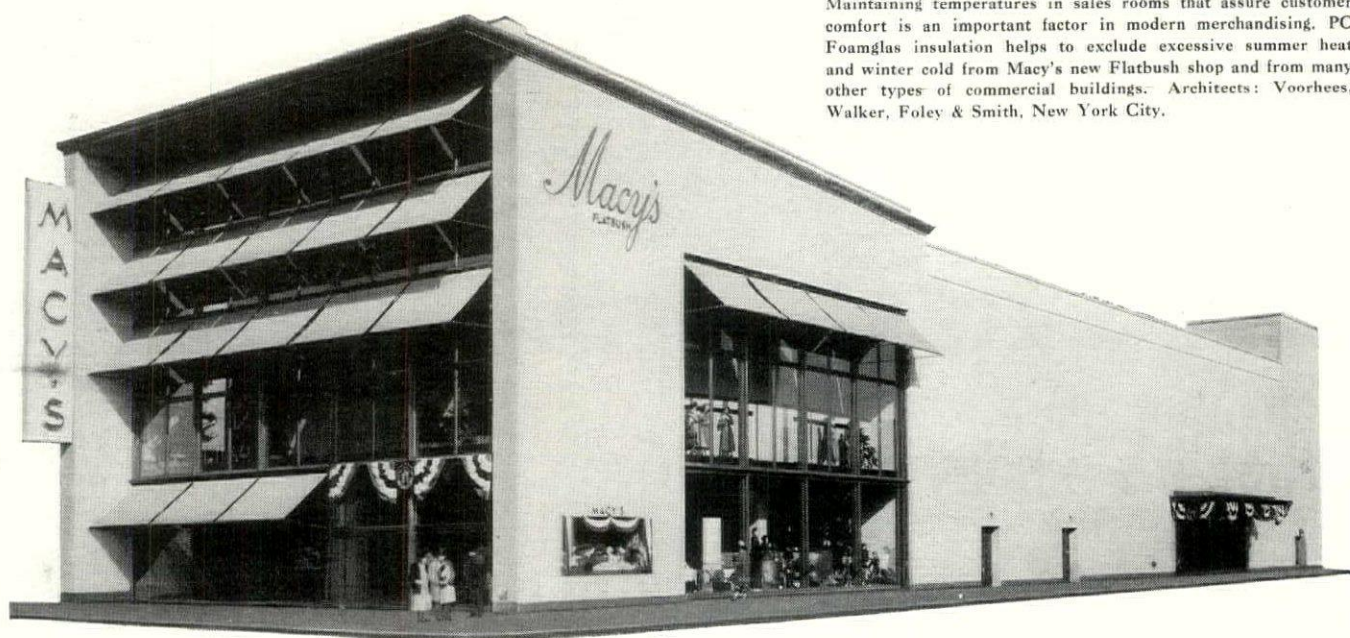
There's a RoWay for every Doorway!

ROWE MANUFACTURING COMPANY • 948 Holton Street, Galesburg, Illinois, U. S. A.

For Macy's Flatbush Shop—
permanent
roof insulation



Maintaining temperatures in sales rooms that assure customer comfort is an important factor in modern merchandising. PC Foamglas insulation helps to exclude excessive summer heat and winter cold from Macy's new Flatbush shop and from many other types of commercial buildings. Architects: Voorhees, Walker, Foley & Smith, New York City.



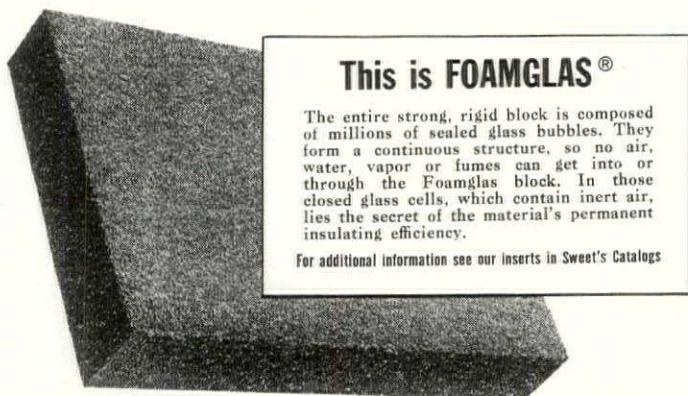
• When you face the problem of recommending the most efficient and economical roof insulation to your clients, you can solve it successfully by specifying PC Foamglas.

This cellular glass material possesses excellent insulating properties. Being true glass, it is also fire-

proof, vaporproof and verminproof. That is why—on many prominent buildings all over the country, PC Foamglas insulation has set new records for long, trouble-free service.

You can recommend PC Foamglas for the most exacting insulating jobs, with full confidence in its satisfactory performance. In roofs, walls and floors of all sorts of buildings, PC Foamglas—installed according to our recommendations and specifications—has retained its original insulating efficiency *permanently*.

Make sure that your information on PC Foamglas is current and complete. Send the convenient coupon for our latest booklets and folders.



This is FOAMGLAS®

The entire strong, rigid block is composed of millions of sealed glass bubbles. They form a continuous structure, so no air, water, vapor or fumes can get into or through the Foamglas block. In those closed glass cells, which contain inert air, lies the secret of the material's permanent insulating efficiency.

For additional information see our inserts in Sweet's Catalogs



FOAMGLAS INSULATION

Pittsburgh Corning Corporation
 Dept. B-39, 307 Fourth Ave.
 Pittsburgh 22, Pa.

Please send me without obligation your
 FREE booklet on the use of PC Foamglas
 insulation for:

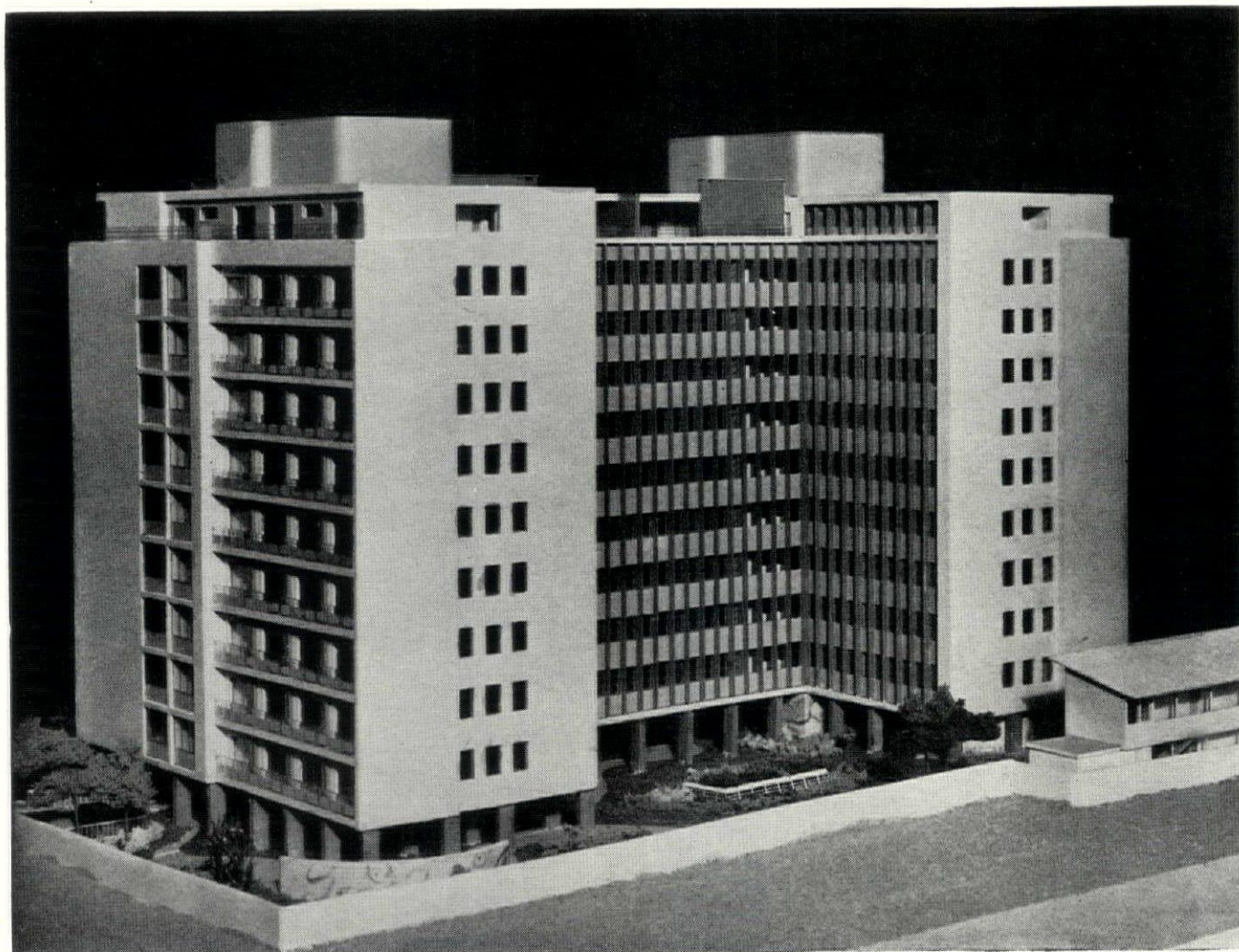
Roofs _____ Walls _____ Floors _____

Name _____

Address _____

City _____ State _____

... when you insulate with FOAMGLAS... you insulate for good!



Model of a modern apartment house, the property of Prudencia Capitalizacão, being erected in Sao Paulo, Brazil, in which Silbraz joints made with Walseal Valves and Fittings have been specified.

This building is truly MODERN

**... because
the pipe joints
are Silbraz®**

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

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

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



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

WALWORTH

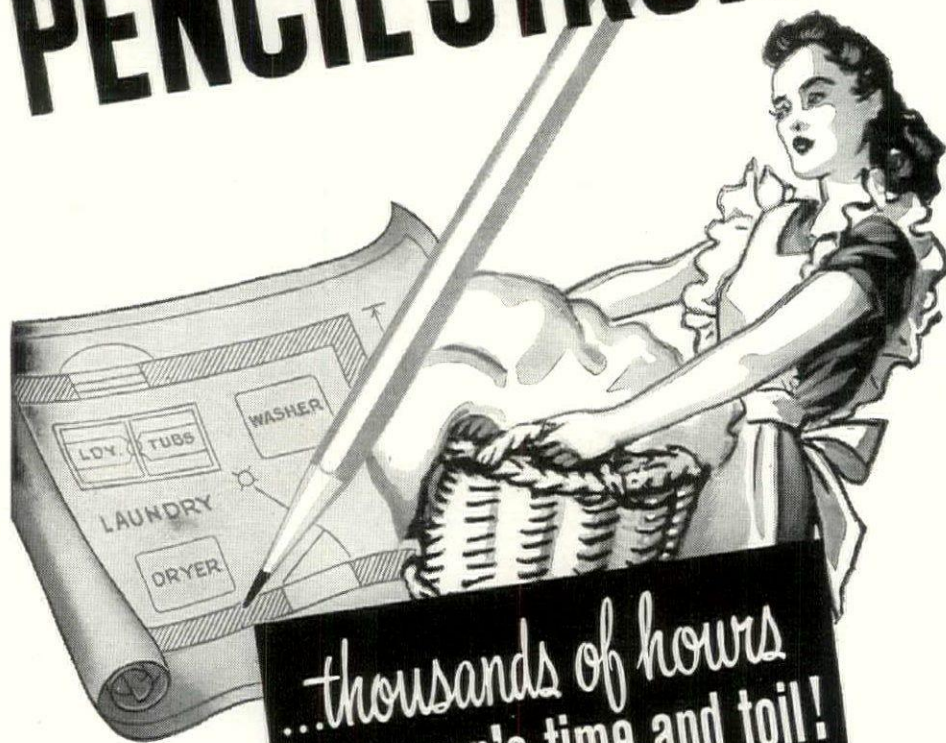
valves and fittings

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DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD

SAVED by a PENCIL STROKE!



...thousands of hours
of women's time and toil!

6 square feet of
laundry room space



Lugging heavy laundry baskets out to a backyard clothesline—women worrying themselves sick over bad wash-day weather—frustrated by sooty, dirt-laden air—that's the toughest remaining task of home laundering!

That's why women everywhere want the permanent washday relief of a Hamilton Automatic Clothes Dryer. Today's desires become tomorrow's demands. They'll bless you for your thoughtfulness in providing space in your plans for the Hamilton they're bound to buy eventually!

Just think—one stroke of your all-powerful pencil and your good deed's done... well, maybe a dozen strokes... anyway, it's no great problem. Just 6 square feet in a sensible spot, near the gas line or 220-volt current outlet. (You'll gain ten times that because you needn't provide for basement clotheslines!)

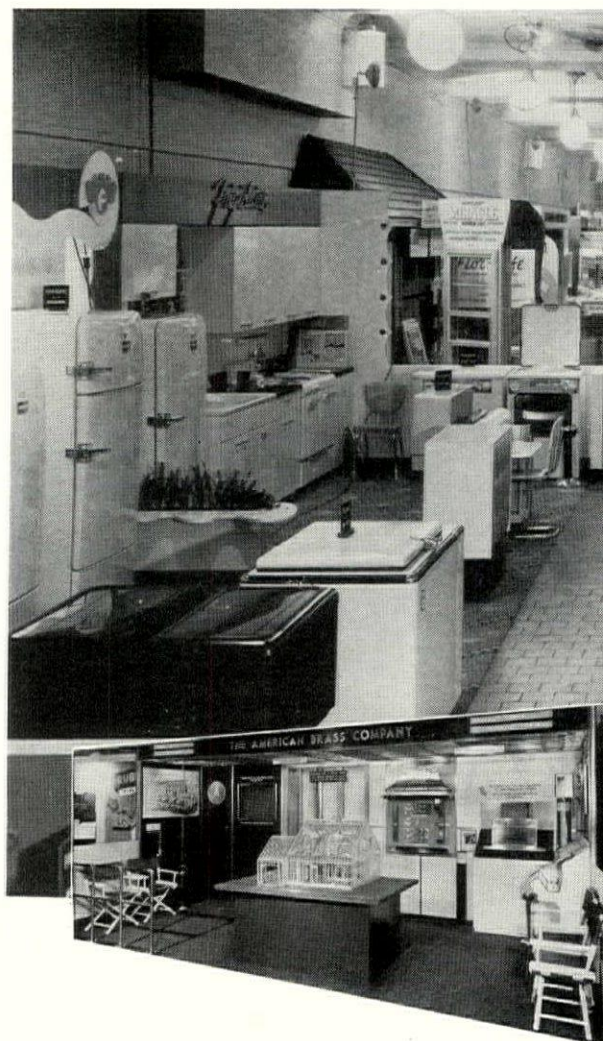
ELECTRIC AND GAS MODELS
finished in high-lustre white baked enamel. Width 31",
depth 27½", height 39", weight 268 pounds.

In Canada the Hamilton Dryer is known as the Coffield-Hamilton Automatic Clothes Dryer, and is distributed by the Coffield Washer Company, Hamilton, Ontario.

Hamilton
AUTOMATIC
CLOTHES DRYER

**HAMILTON
MANUFACTURING
COMPANY**
Two Rivers, Wis.

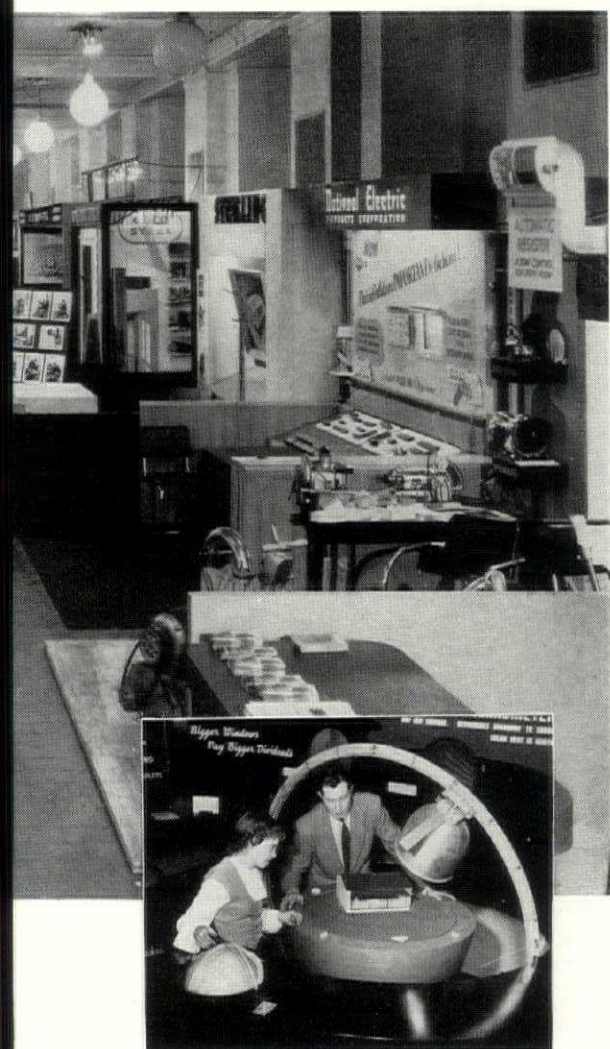
WORLD'S LARGEST MANUFACTURER OF
EQUIPMENT FOR THE PROFESSIONS



NEW PRODUCTS unveiled fortnight ago the Home Builders' Chicago Exposition ran the gamut from termite shields to six-room houses

Assembled in the exposition hall of Chicago's Hotel Stevens last month was the biggest array of materials and equipment the National Association of Home Builders ever saw, besides some inspired displays—and American Brass Company booth would walk off with any prize from this point of view—many exhibitors had give-aways and some offered something to do. Stran Steel gave builders a chance to keep their hammer hand in trim by inviting them to drive a nail into a piece of steel framing. (One FORUM editor got the top prize by taking longer than anyone else—57 seconds.) Libbey Owens-Ford Glass Co. had moved the Solarometer from their laboratory to the show. This ingenious device permits architects and builders to determine the angle of the sun in any part of the world at any time of day, thus quickly giving them proper roof overhang data for auxiliary solar heating. Even the wag who asked about orientation at the North Pole failed to stump the machine.

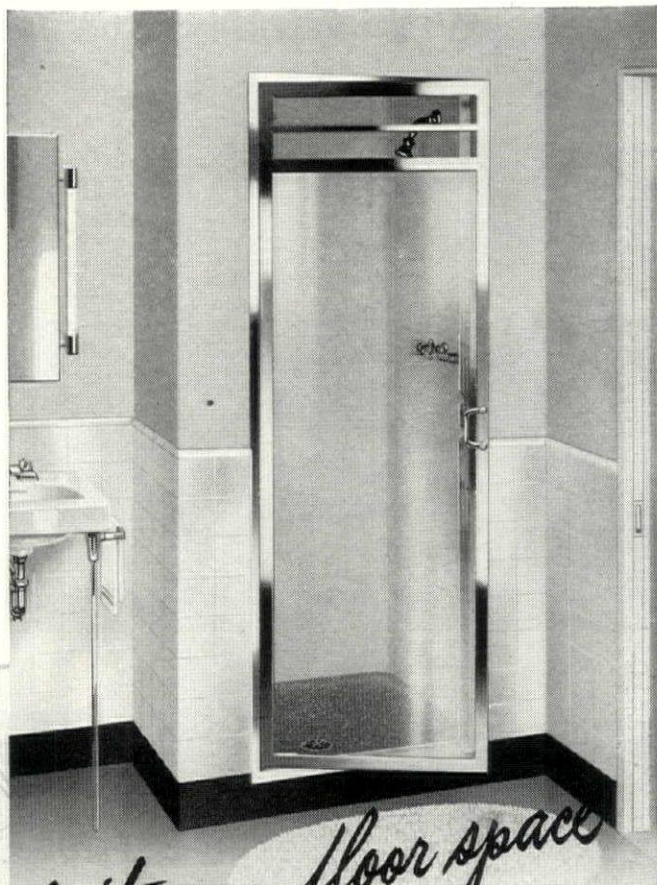
Gaping builders lingered long at a fixture display where a bathrobe-clad model sat looking for all the world as though she were about to step inside a shower bath; she did not. Pryne & Co. used soap bubbles in its booth to show how its new Blo-Fan sucks up smoke and odors while at the same time blowing fresh air into a room. Transparent plastic shells encasing dishwashers and food waste disposals showed the mechanical interiors of these marvels while



eration. Hot Point's dishwasher not only washes and rinses dishes twice but sprays them four times and then dries them electrically, all at the setting of a dial; thus, today's husband need not miss the after-dinner television show. Science has come to the aid of the housewife. The new Hamilton clothes dryer is equipped with ultra-violet rays which not only kill bacteria but create ozone to make clothes smell fresh and clean.

Actually there was little in the show that was brand new. The sad fact that manufacturers must design for remodeling as well as for new houses mitigates against novelty. There is a new note, though. Many manufacturers have tried to cut their prices and product for the minimum market; many devised clever labor-saving methods of installation. As possible as it seems, heating systems were smaller, more compact than ever, indicating that builders were gradually breaking down those local building codes that ban basements in houses. Plumbing and appliance manufacturers were aware of space economy, too, and tried to help the builder get more out of today's minimum cubage. Leading the field in truly inspired design, some hardware, door and window manufacturers showed that the trend is toward design simplicity and honesty.

Many of the products exhibited this year have already been reviewed in the FORUM. Those that follow are some of the products that were actually introduced at the home builder's exposition.



When bathroom floor space is at a premium...

The FIAT BUILT-IN *Cadet* Model 19-B solves the problem easily because when completely recessed it takes up no bathroom floor space at all.

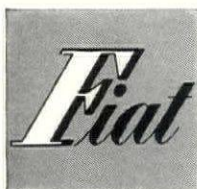
Not only is the Built-In Cadet a champion shower for remodeling where bathrooms are created out of the small space afforded by closets and odd corners, but in new construction it presents stimulating possibilities in bathroom layouts and design particularly interesting to the architect and builder.

The cabinet can be completely recessed or partly set out to line up with lavatory or other fixtures as illustrated. The exclusive Fiat escutcheon type door frame conceals the joint between wall and cabinet stiles providing a clean cut appearance that gives a new look to bathrooms.

In addition, the Built-In Cadet incorporates some of the newest improvements in shower cabinet construction such as the elimination of all exposed screw heads and loose joining seams that collect dirt. The smooth, clean, interior is a distinct advance in shower cabinet construction that owner users will appreciate.

The Zephyr glass door is recommended for Built-In Cadet installations because it adds so much to the appearance and utility of the shower at so little added cost. Owners often refer to the Built-In Cadet as the "glass shower" because the glass door is the only part exposed in the bathroom.

Size 36" x 36" x 80", receptor precast terrazzo with cast-in drain. Walls, bonderized, galvanized steel, finished with white baked-on synthetic enamel. Zephyr or Dolphin glass door, or shower curtain can be installed on the Built-In Cadet.



Fiat Metal Manufacturing Company

1203 Roscoe St., Chicago 13, Illinois

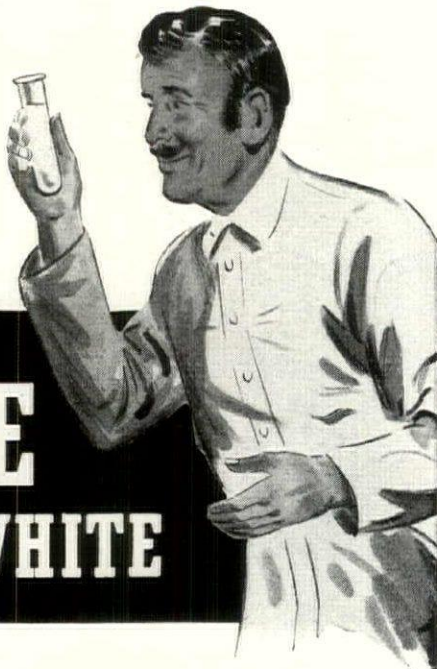
Long Island City 1, New York

Los Angeles 33, California

IN CANADA—Fiat showers are made by Porcelain and Metal Products, Ltd., Orillia, Ontario

No One Has
Ever Improved

The WHITE of MEDUSA WHITE



STUCCO



TERRAZZO



T. M. Reg. in U. S.
Pat. Off.

Over forty-two years ago, a Medusa scientist created the first white Portland cement. Since then, many have tried but *no one has been able to improve on the whiteness, or the quality of Medusa White.* Medusa White has proved itself thousands and thousands of times in all types of construction under all climatic conditions. Medusa White has always given complete satisfaction whether used white or tinted. *There is no whiter white, no finer white than Medusa White!*

Where there are moisture conditions, Medusa Waterproofed White is recommended. This is regular Medusa White with waterproofing ground in at the mill. This waterproofing material is in concrete, mortar, or stucco *all the way through* and repels all moisture at the surface.

For construction that retains its beauty indefinitely, specify Medusa White. For the full story about this remarkable cement, mail the coupon below.

"FIFTY-SEVEN YEARS OF CONCRETE PROGRESS"

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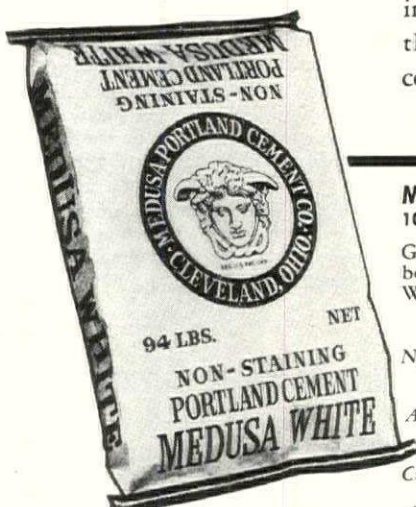
Gentlemen: Please send me a copy of the free booklets, "A Guide To Finer Stucco" and "Medusa White Portland Cement."

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



COMPLETE TWO AND THREE BEDROOM HOUSES are signed to sell for approximately \$6,000 including lot.

Complete two- and three-bedroom Thrift Homes were offered at National Homes Corp.'s booth. The smaller of these prefabricated single-story, frame structures contains a 12 x 10 living room, kitchen-dinette, utility room, two-bedrooms and bath in a 28 x 24 ft. building. The \$6,000 price includes \$600 lot; the three bedroom house retails for slightly more. The factory-fabricated, insulated walls have washable up-board interior surfaces. Ceilings also are insulated, doors and windows weatherstripped. Concrete slab floors are furnished. Other equipment in the Thrift Home includes all electrical wiring and outlets, bathroom and kitchen plumbing, oil space heater, automatic water heater, built-in kitchen cabinets. This new house is supplied, erected and serviced through National Homes dealers in 11 states. Erection requires about a week. All houses are eligible for FHA financing. Down payment is \$300; monthly payments range from \$35 to \$50. Factory production rate is 24 to 36 homes a day.

Manufacturer: National Homes Corp., Lafayette, Ind.

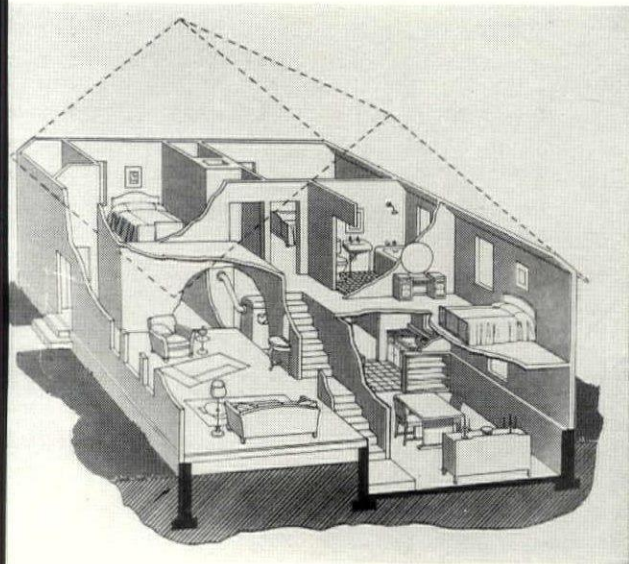
PACKAGED SMALL HOUSES for volume builders are easily erected, low-priced, semi-complete.

Of considerable interest to builders of pre-cut houses was Crawford's Tru-Economy houses. These packaged four- and five-room frame structures, intended primarily for volume economy housing, are supplied with roofing, paint, flashing and heating plant, but without mechanical equipment such as plumbing and wiring. Actually the Tru-Economy House consists of wall panels, partitions, ceiling panels, roof and gable sections, pre-cut floor framing, etc., for quick, easy erection. Optional items such as finish floor, closet doors, built-in furniture, etc., are also available. Exterior walls are fabricated with standard framing, reflective insulation, pre-coated siding and interior wallboard. Interior partitions and ceiling panels are supplied complete with wallboard and reflective insulation where required. The manufacturer reports erection costs at \$4,500 to \$5,250 for a two-bedroom model, \$5,200 to \$6,300 for a three-bedroom model (both exclusive of land). Numerous elevations are possible and houses are eligible for FHA financing. In addition to Tru-Economy houses, Crawford Corp. offers planning, counseling and financing services to builders, landowners and investors. Manufacturer: Crawford Corp., Box 989, Baton Rouge, La.

TRI-LEVEL HOUSE in panelized and pre-cut form designed for the low cost market.

Lumber Fabricators Inc., a well-known manufacturer of complete framing packages, introduced a panelized and pre-cut version of Walter B. DeGree's Tri-Level house (FORUM, Sept. '41). By adapting the Tri-Level copyrighted plan of room arrangement to mass production techniques, the company promises to supply a 7-room skeleton which, when finished will sell for under \$9,000. Within its 26 x 30 ft., the new unit includes three bedrooms and bath on an upper level, living room on grade level and dining room, kitchen and recreation utility room under the bedrooms. Only a 3½ ft. excavation is required to provide the large recreation-utility space, with seven steps up or down reach either level from grade. Other Tri-Level design features: 1,093 sq. ft. net floor area, isolation of sleeping and dining areas from living area, large closets and storage facilities, Cape Cod appearance. To its 4

Authorized dealers in 37 states, Lumber Fabricators Inc. will supply Tri-Level's panelized and pre-cut framing members for all materials for a completely roughed-in house. Also if



desired, it will supply a complete package of such optional items as running and standing trim, windows, doors, siding, hardwood flooring, etc. The manufacturer maintains erection simple and can be completed in 75 to 95 man hours. The factory at Ft. Payne, Ala. is geared to manufacture from 75 to 100 homes per day. Delivery takes approximately 30 days.
Manufacturer: Lumber Fabricators Inc., 728 Fisher Bldg., Detroit, Mich.

LOW WALL UTILITY CORE furnishes complete kitchen and bathroom for small homes.

At booth No. 190 Home Builders enjoyed their first glimpse of a brand new Ingersoll Utility Unit, a small but complete kitchen-bathroom combination. This new Panel Unit comprises complete kitchen and bathroom equipment, on either side of a low, 10 in. wide core. The core itself houses soil and waste stacks which are completely assembled and ready



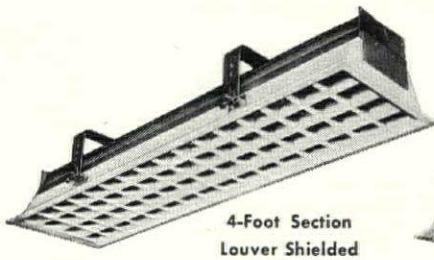
for easy connection with underground stub lines. All fixtures and fittings for both bath and kitchen are supplied, and any one of eight new Ingersoll expandable kitchens (four right hand and four left hand models) can be specified for the kitchen section. The new space saving, efficient Panel Utility Unit is designed primarily for use in low cost homes, with or without basements, and for installation in multi-story apartment buildings. The core can be employed, as well, in new or remodeled homes, summer cottages, tourist cabins, etc. It claims to meet most local plumbing codes, but for locations where special requirements prevail, optional materials for traps, plugs, waste lines, etc. can be supplied.
Manufacturer: Ingersoll Utility Unit Division, Borg-Warner Corp., 321 Plymouth Court, Chicago 4, Ill.

TERMITE CONTROL SYSTEM for new house construction gives maximum protection at minimum cost.

This year W. B. Hill and his display of busily working termites heralded a new termite control (Continued on page 136)

INVESTIGATE

these 6 advantages of Sylvania Fluorescent Troffers



4-Foot Section
Louver Shielded



4-Foot Section
Albalite Glass Shielded

Here are six of the many reasons why you should send for the complete story on Sylvania Electric's line of shallow fluorescent troffers.

Reduced Installation Cost — These fixtures are supplied completely wired, ready for hanging. Their simplified hanging assembly reduces on-the-job labor costs.

Reduced Maintenance Costs — The louvers or the Albalite glass shields are hinged to the reflector, permitting fast, easy cleaning and relamping.

Maintained Light Reflection — High initial reflection efficiency (86%) is maintained over the life of the unit because the reflector is surfaced with Sylvania's exclusive Miracoat—a hard-baked plastic finish that does not discolor and is highly resistant to cracking.

Shallow Construction — Only 8 5/8" is required between the suspended

and the structural ceilings. Can be used with all standard ceiling materials.

Adaptability After Installation — Because one basic chassis is used, a louvered installation can be quickly and inexpensively changed to a glass-shield installation, (or vice versa) if such a change is desired at a later date.

Complete Packages of Light — All units are delivered complete with Sylvania Lamps and Starters at no extra cost. The units are available in 4' or 8' lengths. Either length can be supplied to accommodate one, two, or three 40-watt lamps—and for installation with metal louvers, Albalite glass shields, or unshielded. Send coupon now for file-sized technical data.

SYLVANIA ELECTRIC

FLUORESCENT LAMPS, FIXTURES, WIRING DEVICES; ELECTRIC LIGHT BULBS; PHOTOLAMPS; RADIO TUBES; CATHODE RAY TUBES; ELECTRONIC DEVICES

*Mail
Coupon
Today!*

Sylvania Electric Products Inc.
 Advertising Department, L-7003
 500 Fifth Ave., New York 18, N. Y.

Gentlemen: Send full details on new Sylvania shallow troffered fixtures — Engineering Bulletin O-68.

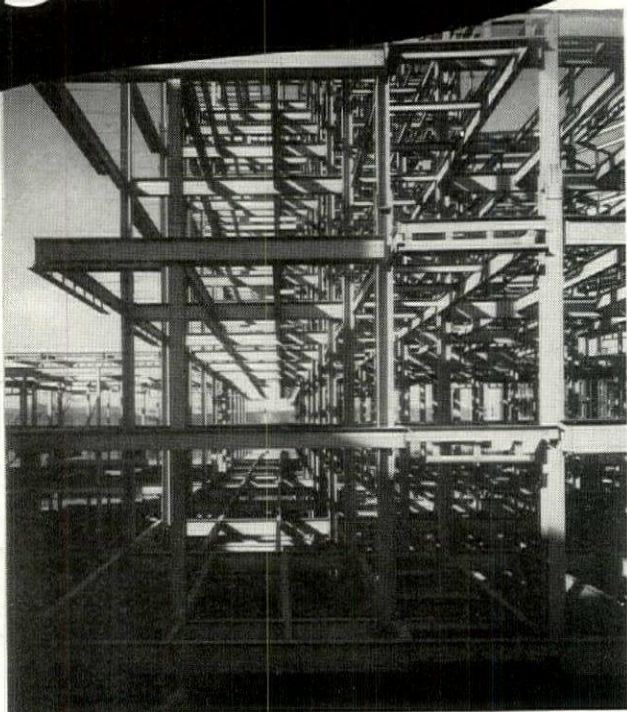
Name _____
 Address _____
 City _____ Zone _____
 State _____

Stop Hidden RUST

with

RUST-OLEUM

Tough, elastic, enduring—Rust-Oleum defies rust-producing conditions years longer—protects the structural strength of steel.



Industry-proved Coating Rustproofs Metal Against Moisture Damage in Sealed Spaces

For structural protection, specify the use of Rust-Oleum on all iron and steel — particularly in inaccessible areas where condensation causes rust. Rust-Oleum positively stops rust and adds years of life to structural members, pipes, sheet metal, etc. which are difficult or impossible to reach in normal maintenance.

Indoors or out — Rust-Oleum seals metal with a tough, pliable, destruction-proof coating. Originally developed to resist the highly corrosive effects of salt water and salt air, under tough sea-faring conditions, Rust-Oleum gives lasting protection where ordinary materials fail. It's *your* best answer to all rust problems.

We will gladly offer specific recommendations on Rust-Oleum application and uses, if you will give us full information as to technical requirements. See the complete Rust-Oleum catalog in Sweet's, or write for a copy.



PERSONAL—Do you have a rust problem? We'll be glad to send a free sample for a test application on your car or at home. Be sure to state color preference.

RUST-OLEUM CORPORATION

2409 Oakton Street

Evanston, Illinois

system for low cost housing. Through a change in the operation and installation of the Hill Termite Control patented pip sprinkler system, the company is offering maximum protection at an approximate cost of \$56 for a 2,000 sq. ft. house. The Hill System involves a permanent installation of slotted pipe in all inaccessible areas, such as those beneath porches, stoops and steps, and poisoning of the soil in these areas before covering. Permanent piping makes it possible to treat all hidden areas annually with a powerful toxic chemical. All debris removed from dirt filled areas as part of the service. Installation of the new system will be made nationally by established termite control operators.

Manufacturer: Hill Termite Control Systems, Messick Building, Madison at Second, Memphis 3, Tenn.

DOUBLE-HUNG METAL WINDOW is designed especially to cut costs for the operative builder.

Supplied complete with wood frame and half screen, a new Rusco double-hung metal sash was presented at the show. The unit is designed especially for the operative builder to cut material and installation costs. Sash is supplied with a baked enamel finish over bonderized galvanized steel. Only the bottom half of the sash moves up and down but both upper and lower panes are removable so they are easy to wash. Half screen, also removable, is Lumite. Frame is of edge grain fir and may be nailed to the studs and header pieces. Outside trim is included with the unit. On the inside, the window is designed that simple molding may be utilized in place of conventional trim and window sill, thus further cutting installation cost. Retail prices range from \$19.94 for the 1 ft. 8 in. x 3 ft. 2 in. sash to \$31.58 for the 3 ft. 10 in. x 4 ft. 6 in. sash; 12 sizes are available.

Distributor: Nova Sales Corp., Trenton 3, N. J.

HEATING SYSTEM employs new method for hot air distribution, comes in a complete package.

Key to producing a low-cost heating system, General Electric engineers feel, is to save installation expense. Air-Wall, which made its debut in Chicago, promises to save 50 per cent. Packaged, complete except for tin snips, the new system is designed especially for the operative builder who is doing small houses. Included in the package are a G. E. furnace (gas or oil), plenum and return air chambers, enough stove pipe and return air ducts for a 5- or 6-room house, elbows, registers and grille. No skilled labor is required for installation. Cost cutting secret is the employment of ordinary 4 in. stovepipe combined with high-velocity air distribution. Special register forces warm air directly upward in a fan-like pattern, blanketing cold, outside walls with warm air. Inside walls and floors are said to be heated by radiation from the blanketed walls. Heat is so specifically directed that one may sit within 6 in. of the register without feeling any air movement. Furnaces are compact, come in five sizes with Btu per hour output ratings from 48,000 to 168,000. All units filter and humidify the air.

Manufacturer: General Electric Co., 5 Lawrence Ave., Bloomfield, N. J.

AUTOMATIC OIL-FIRED WINTER AIR CONDITIONER for small homes can be installed in a minimum space.

Winterglo, American-Standard's new completely automatic factory-assembled oil-fired winter air conditioner also drew attention. To meet the heating needs of small homes and ind

idually heated apartments, this high-boy type unit burns any grade of domestic oil and fits in a minimum space such as a closet, alcove or kitchen corner. It features a durable steel heating element and a stainless steel combustion chamber, plus a blower unit of double inlet type, with an exceptionally quiet motor. This motor incorporates an overload protection and is equipped with an adjustable pulley that permits the lower speed to be set to suit the installation. Filter and filter frame can be attached to either side of the unit, according to the owner's preference, or a bottom filter frame will be supplied if desired. To ease installation the unit is factory-assembled and pre-wired. For simple adjustment all controls are mounted on the front of the two-tone blue jacket. The new Winterglo is available in two sizes with a bonnet output of 85,000 and 105,000 Btu per hr.

Manufacturer: American Radiator-Standard Sanitary Corp., P. O. Box 1226, Pittsburgh 30, Pa.

SMALL GAS-FIRED WINTER AIR CONDITIONER is designed particularly for basementless homes.

Visitors to the L. J. Mueller Furnace Co.'s display admired another new, small, winter air conditioning furnace. A compact, flexible, low-priced unit, this Series 110 model is suited for closet, kitchen and utility room installation in basementless homes. Its white baked enamel finish harmonizes in appearance with the stove, refrigerator and washing machine

when installation is made in either of these rooms. Design of the new conditioner includes filter racks at the bottom so cold air can be drawn in at the floor. Side filter racks, however, are also available for bringing cold air in from either side. The blower, of multi-blade centrifugal type, is mounted on rubber directly underneath a heavy welded steel heat exchanger. Burner is a cast iron, drilled-port type with a single-port air shutter. The new furnace is A.G.A. approved for installation with natural,

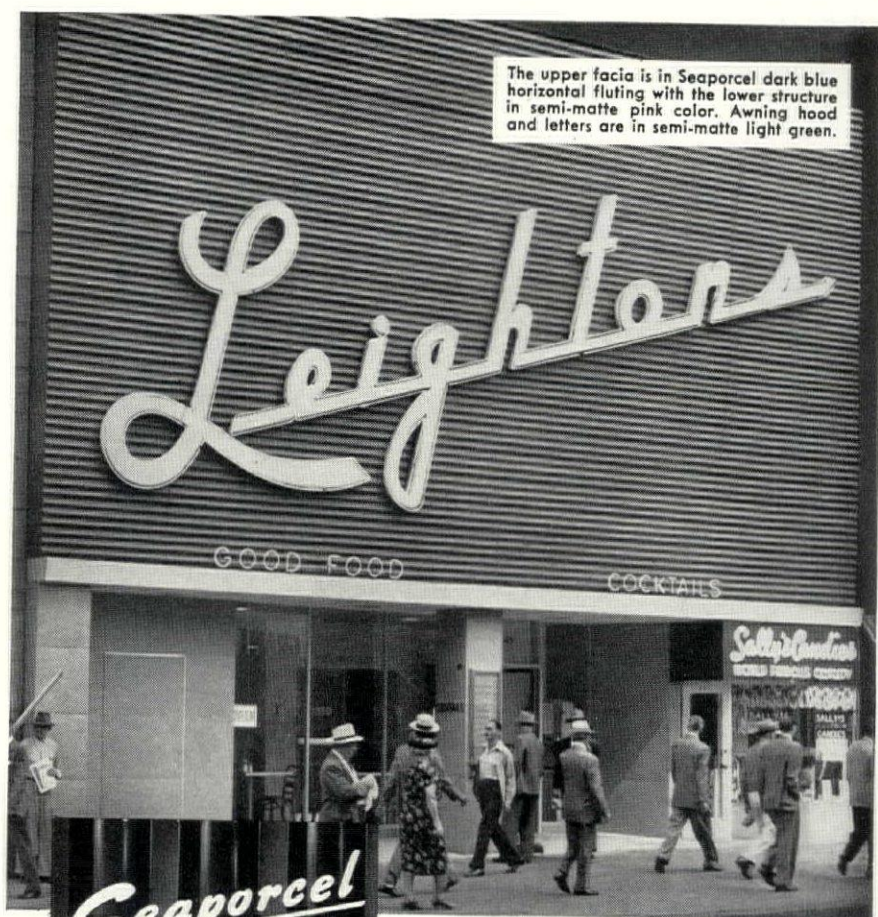
fixed, manufactured, and L.P. gas and is available in two sizes: 60,000 and 80,000 Btu input rating.

Manufacturer: L. J. Mueller Furnace Co., 2005 W. Oklahoma Ave., Milwaukee, Wis.

GAS-FIRED WINTER AIR CONDITIONER provides economical heating comfort, is adaptable to radiant panel heating.

Surface Combustion Corp.'s improved Janitrol FEC winter air conditioner was also an attraction in the heating department. Featuring a new design for high performance, easy maintenance, streamlined appearance and particularly C.A.C. (continuous air circulation) operation, the gas-fired unit reportedly maintains temperature differentials between floor and ceiling within 1°. When adjusted to the conditions of a specific job, the C.A.C. feature provides continuous circulation of slow moving air to assure steady warmth. Other new features of Model FEC include a cast iron heat exchanger which is said to provide faster heat transfer in a small space, twin air flow ventilating louvers that direct air over all controls to assure cool operation, improved ribbon type burners and a new type humidifier. Available in six sizes, ranging from 60,000 Btu/hr. input rating to 180,000 Btu, the Janitrol FEC Series is particularly well suited to panel heating systems. Manufacturer: Surface Combustion Corp., 2375 Door St., Toledo, Ohio.

(Continued on page 138)



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 build-

ing 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

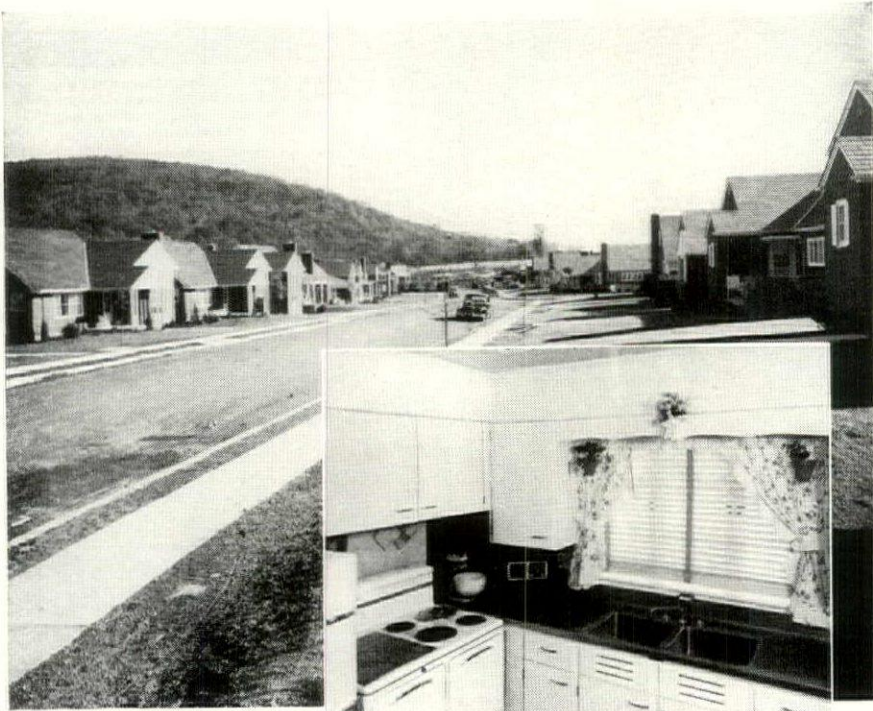
Represented by Douglas McFarland & Co., 1491 Canal St., Long Beach, Cal.



*Reg. U.S. Pat. Off.

Seaporcel

Member Porcelain Enamel Institute, Inc.



Berkshire Greens, Inc., Penn-
side and Reading, Pennsylv-
ania. 207 Houses. Architect,
Mr. A. Mayer. Builder and
Owner, Byron W. Whitman.
Kitchen Maid Kitchens by
Merritt Lumber Yards, Inc.



STAND-OUT *Cabinet Value*

FOR ALL TYPES OF DWELLINGS

The outstanding value of Kitchen Maid Cabinets is emphasized by their frequent selection for private housing developments. Architects and builders everywhere are recognizing the many important advantages of factory finished hardwood cabinets, soundly constructed and pleasingly styled. Buyers appreciate too, the warmth and friendliness that only Wood Cabinets provide.



Inserts for bread, sugar, flour, etc.,
add to utility of aluminum drawers.



Ventilated, bright metal, sliding
towel drier, one of many accessories.

DISTINCTIVE FEATURES

In addition to these basic advantages, Kitchen Maid offers many distinctive features: modern Flo-Line styling, composite construction, quiet, non-chipping aluminum drawers, resinite doors with cushioned action, solid, permanent shelves, many work-saving accessories.

Your Kitchen Maid representative will be glad to work with you on any kitchen problem. Call him soon. In the meantime write for valuable planning guide "Kitchen Hints", free to architects and builders.

KITCHEN MAID
FIRST AND BEST IN
KITCHENS

THE KITCHEN MAID CORPORATION
493 Snowden Street, Andrews, Ind.

Please send new booklet containing 10 practical kitchens with floor plans and details. I am an ☐ Architect ☐ Builder ☐ Dealer.

Name _____
Street _____
City _____ State _____

WALL SWITCH CONTROL is a feature of new plug-in str

Floor and table lamps may be turned on or off from a wall switch thanks to the newest Plug-in Strip presented at the show by National Electric Products Corp. The multi-outlet assembly may be mounted on the baseboard or used as a chair rail molding. Three No. 12 AWG copper conductors are factory-wired into the strips and serve three-slot receptacle spaced at 18 in. centers along the assembly. Two of the three receptacle slots may be used where wall switch control is desirable while the third slot may be used for radio, or other equipment where switching at the appliance is preferred. Wall switch control is available every 18 in. with a minimum of switch-leg wiring. Complicated behind-the-wall wiring and trailing extension cords are minimized in the new U/L approved system.

Manufacturer: National Electric Products Corp., Chamber Commerce Bldg., Pittsburgh 19, Pa.

NEWLY DESIGNED WASH BASIN also functions as dressing table and linen cabinet.



Briggs Mfg. Co. introduced a new plumbing fixture: a combination dressing table, vanity and wash basin with convenient storage drawers beneath. This unit, known as the Vette and supplied in a number of pastel colors, features top drawers with compartmentalized, removable trays for cosmetics or shaving articles.

a locking medicine drawer with sloping shelf compartment and a sliding tray and space for linen storage.

Manufacturer: Briggs Mfg. Co., 301 Miller St., Detroit, Mich.

COLOR WHEEL makes color harmony easy for the layman

To help architect, builders and the housewife select a harmonious color scheme for the home, Pratt & Lambert, paint makers, introduced a new selector device called a Color Calibrator. Measuring approximately 4 ft. high x 3 ft. wide, this instrument scientifically selects and harmonizes combines as many as six different hues at the same time



to achieve a complete color scheme for any room or home. The device consists of 12 pie-shaped segments representing the major color families and seven circular bands presenting three tints and four shades of each of the colors. In the center is the pointing mechanism, six adjustable pointers that move only to angles which indicate harmonious color combinations no matter whether for a two- or six-color plan.

Designed by Sterling B. McDonald, the new Calibrator is available at retail paint outlets which carry P. & L. products.

Manufacturer: Pratt & Lambert, Inc., 75 Tonawanda Buffalo 7, N. Y.

In addition to this NHAB Exposition report our regular monthly new product will be found on p. 140.

Mesker Steel Windows



COMMUNITY HIGH SCHOOL
CARBONDALE, ILL.

Architect:

Charles W. Nichols & Associates, Chicago, Ill.

Contractor:

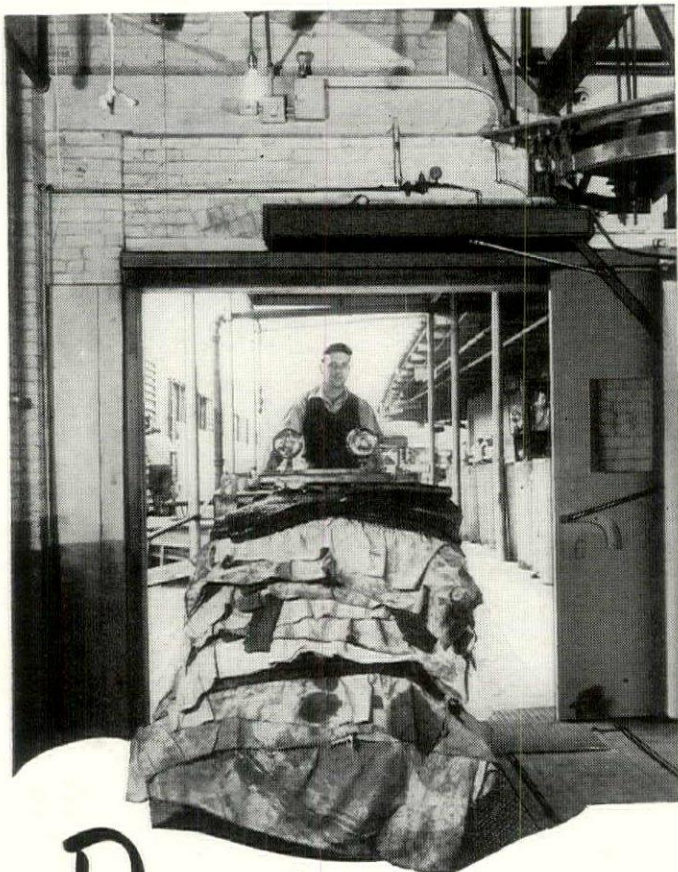
Bauer Bros. Const. & Supply Co., Belleville, Ill.



Ever notice how some products lend themselves particularly to monumental buildings? This is understandable in the case of Mesker Windows. More than just "adaptable" to such projects, Mesker Intermediate and Architectural Projected Windows have been *designed and engineered for them specifically*. Next time, work with and specify "Mesker" Windows. You'll be more than pleased with the finished job.

MESKER INTERMEDIATE AND ARCHITECTURAL PROJECTED WINDOWS

These popular steel windows have been installed in some of the country's leading schools, banks, factory offices, stores and public buildings. Members 1 $\frac{3}{4}$ " deep are extra heavy, extra strong. Available with and without hopper ventilators in a wide range of heights and widths. See the Mesker Catalog in Sweet's, or write for detailed data sheets.



Doors THAT SAVE DOLLARS!

Stanley Door Controls written into the plans pay for themselves times over in almost any type industrial, commercial or institutional building you design.

Actuated by a photo-electric "eye", Magic Doors open instantly and automatically on approach, stay open till the passage is clear, then close quickly and silently.

Magic Doors speed up materials handling—help increase production in mills and factories. Magic Doors make appreciable savings on heating and air conditioning costs. Magic Doors eliminate unpleasant crowding around entrances—improve service and build profitable good will in hotels, stores, restaurants and office buildings you design.

Stanley Door Controls, "Magic Doors", operate either swinging or sliding doors, or a combination of the two, and can be designed to suit practically any requirements of space or location. If you have not already done so, it will pay to investigate their full possibilities now. Mail this coupon for complete information today!

STANLEY The Magic Door

Reg. U.S. Pat. Off.

HARDWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING

The Stanley Works, Magic Door Division, 229 Lake St., New Britain, Conn.
Please send me full information on Stanley Magic Doors.

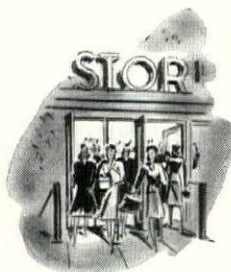
Name

Firm

Street

City State

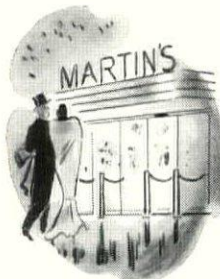
☐ Check if you would like a representative to call.



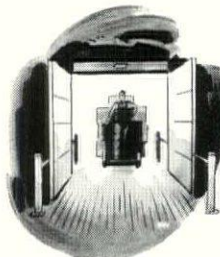
Bank, Store or Office Building



Hospital and Institution



Hotel or Restaurant



Industrial Plant Communicating Doors

CERAMO ASBESTOS CEMENT SIDING returns to the Philip Carey line of building products.

Ceramo Asbestos Cement Siding, which has been unavailable since its production was curtailed in 1942 by the lack of necessary raw materials, has again returned to the Philip Carey line. And the manufacturer reports that the siding is now being produced in improved form. Supplied in the standard 12 x 24 in. shingle size, it has a ceramic coated surface fused onto a rotproof, wearproof, fire-safe base of Portland cement and asbestos fibers. The density of the material prevents the infiltration of moisture and dirt. Ceramo is white in color with a wood grain texture; is available in wave line, straight line and the butt patterns.

Manufacturer: The Philip Carey Mfg. Co., Lockland, Cincinnati 15, Ohio.

RESINATED HARDBOARD is suitable for dry wall construction, flooring, paneling, sheathing and cabinet work.

After two years of field testing on the West Coast, Chapco Board, a resin impregnated hardboard, is being introduced east of the Rockies. A hard but not brittle material, its toughness and flexural strength plus an attractive, smooth light wheat-color that requires no finish. If desired, however, it can be easily painted or stained. The manufacturer maintains that Chapco Board has shown less warpage and contraction-expansion qualities than comparable boards and that it works easily. It may be sawed, planed, routed, drilled, nailed or glued. The new board is supplied in 4 x 8 ft. panels, in 1/4 in. and 3/16 in. thicknesses. Its uses include: dry wall construction, flooring, sheathing, paneling, cabinet work or applications wherever plywood, wallboards and other hardboards are suitable.

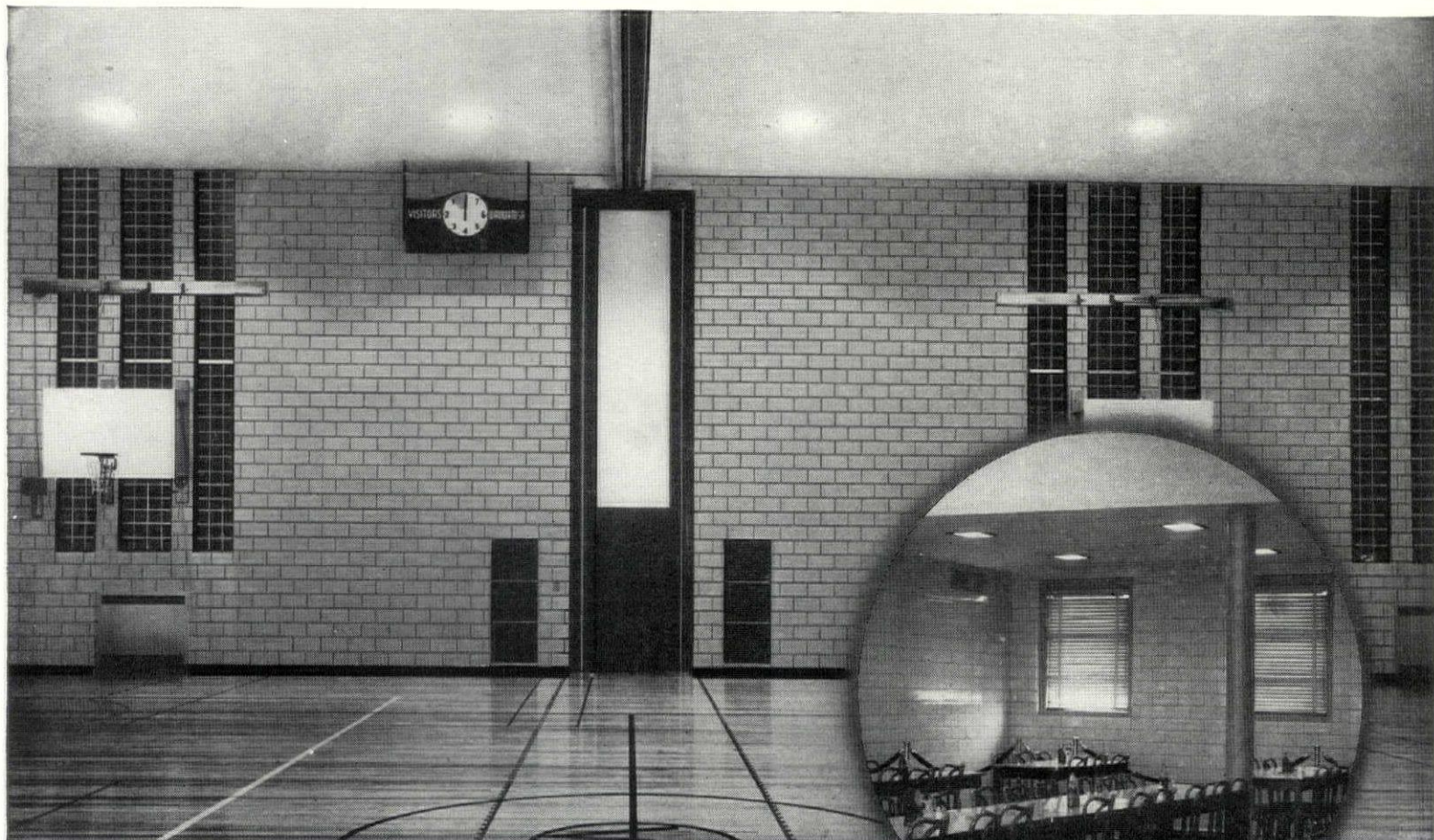
Manufacturer: Chapman Mfg. Co., Corvallis, Ore.

HARDBOARD WITH EMBOSSED SURFACE takes a variety of finishes, offers semi-structural advantages.

Leatherwood, a recent addition to the Masonite line, is a 1/8 inch thick tempered hardboard with an embossed leather-grain surface. The simulated leather face takes paint, enamel and lacquer well and adds an attractive finish to the hardboard's many other advantages: strength, durability, moisture-resistance, density and hardness. Leatherwood comes in 4 x 6 ft., 4 x 8 ft. and 4 x 12 ft. panels. These bend around curves and can be quickly installed over existing walls or in new construction over solid backing. Leatherwood will not crack, chip, peel or scuff. It can be used for wainscots, wall coverings, store fixtures, counter tops, etc. (Continued on page 141)

"Cheer-leader" in school interiors...

bright, clean walls of Facing tile



Glazed facing tile

Glazed facing tile

Here are interiors worth cheering about.

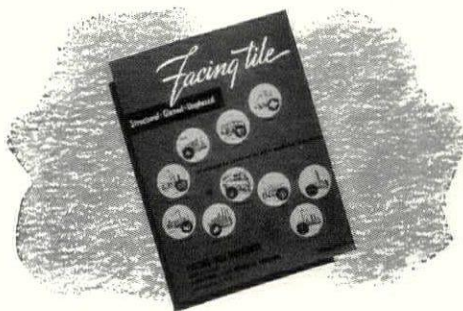
Colorful, light-reflecting walls of Facing Tile make any school a lighter, brighter, more pleasant place—for study and for play.

With Facing Tile you can design modern, better lighted classrooms that convert easily to cheerful clubrooms. You can plan school cafeterias that can be cleaned so quickly and easily they can be used as study halls during off hours. You can build gymnasiums that double as auditoriums and still stand up under years of rough treatment and heavy traffic.

What makes this "cheer-leader" so versatile in schools?

The fact that it's a wall *and* finish *in one material* is one good reason. Its great strength, modular sizes and fire safety are others. Structural Clay Facing Tile has a hard, impervious finish, too, one that will *never* crack, scratch or decay, that washes down *clean* with soap and water or hosing. And you can get it in many colors, both glazed and unglazed.

See Sweet's, contact any Institute member or write us, Desk AF-3, for complete information about Facing Tile.



SEND FOR 1949 FACING TILE CATALOG, 49-C.

Just write us on your letterhead and you'll receive, without charge, the 1949 Facing Tile catalog. It contains latest specifications and descriptive data in complete detail. Also pictures and information on many Facing Tile Installations.

FACING TILE INSTITUTE

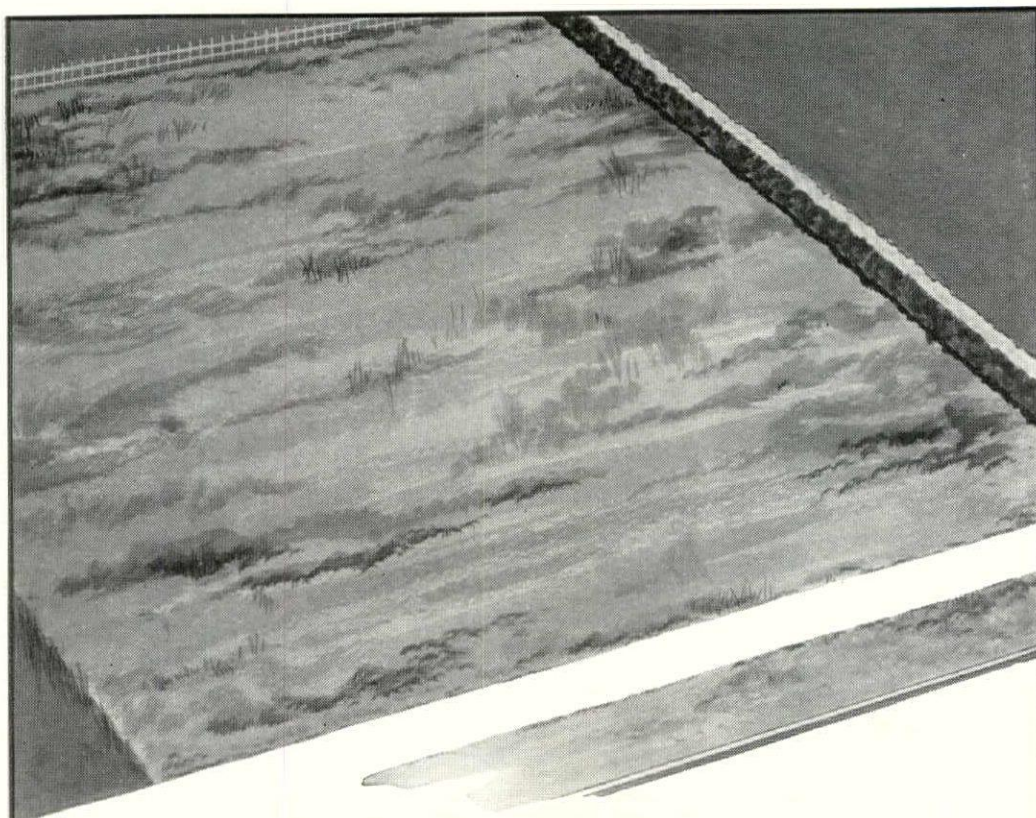
1756 K Street, N. W., Washington 6, D. C.

INSTITUTE MEMBERS Belden Brick Company, Canton, Ohio ★ Continental Clay Products Co., Kittanning, Pennsylvania ★ Charleston Clay Products Co., Charleston 22, West Virginia ★ Hanley Company, New York 17, N. Y. ★ Hydraulic Press Brick Co., Indianapolis, Indiana ★ Mapleton Clay Products Co., Canton, Ohio ★ Metropolitan Paving Brick Co., Canton, Ohio ★ National Fireproofing Corporation, Pittsburgh 12, Pa. ★ Stark Brick Co., Canton, Ohio ★ West Virginia Brick Company, Charleston, West Virginia

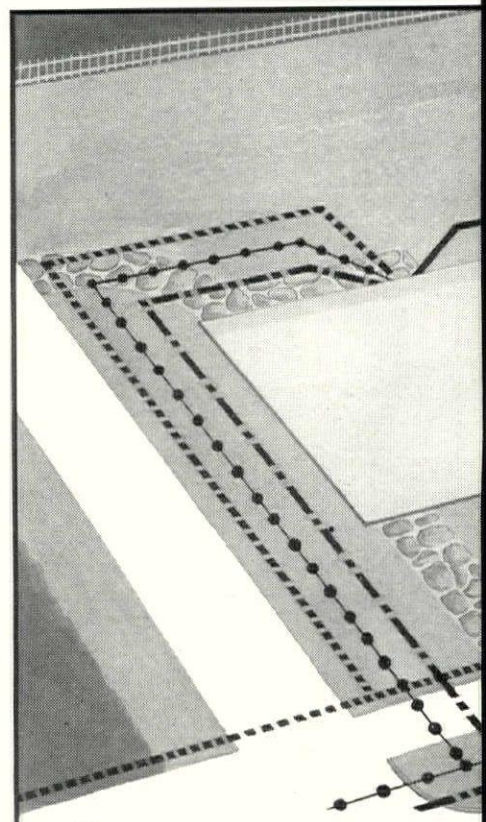
THE *LUSTRON* HOME

REG. U. S. PAT. OFF.

What makes a



1. This is a vacant lot, unimproved. Its price depends on the desirability of the neighborhood, on the type of community in which it is located, on its size and topography, on the price of similar vacant lots in the community, and on what the purchaser is willing to pay for it.



2. This is the same lot, with improvements: walk, sanitary and storm sewers, water and gas mains, telephone and electric lines, lawn.

Lustron, pioneer in mass production of homes, now takes a forward step in mass pricing for mass merchandising of homes—establishing a price policy that separates house package and erection costs from land and land improvement costs.

The basic principle of the Lustron idea is the production of high-quality houses for a greater number of American families at the lowest possible price.

It is Lustron's intention that buyers of the Lustron Home shall benefit not only from mass-production techniques employed in our factory, but also from cost-

saving methods employed on the site by Lustron builder-dealers.

Site Costs May Vary

Naturally, there will be variations in costs, and, therefore, in the total selling prices of Lustron Homes built on various sites. A wide variety of building lots will be used, differing in frontage and depth, in

topography and in orientation, as well as in location within the community.

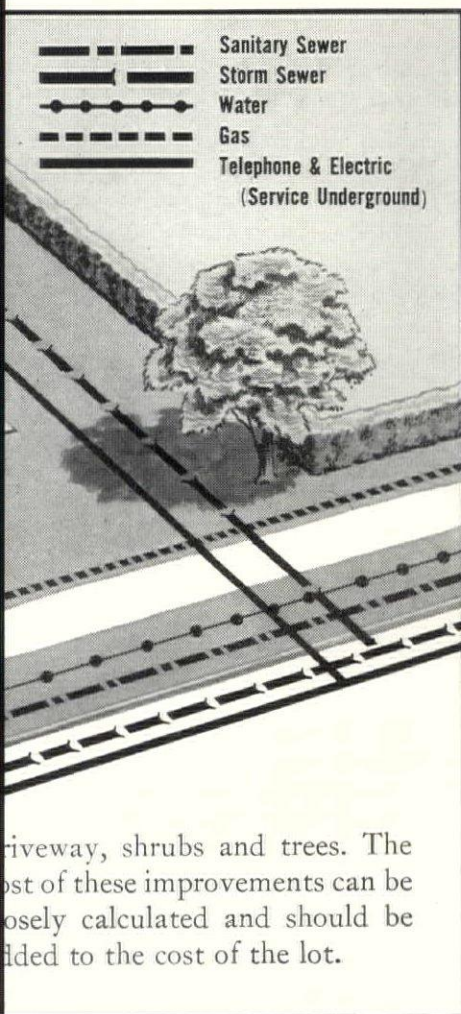
However, Lustron and Lustron builder-dealers have determined together that the Lustron Home will carry a high price tag because of exorbitant profits, on land, inefficient construction practices, or the inclusion of unwanted accessories.

House Price

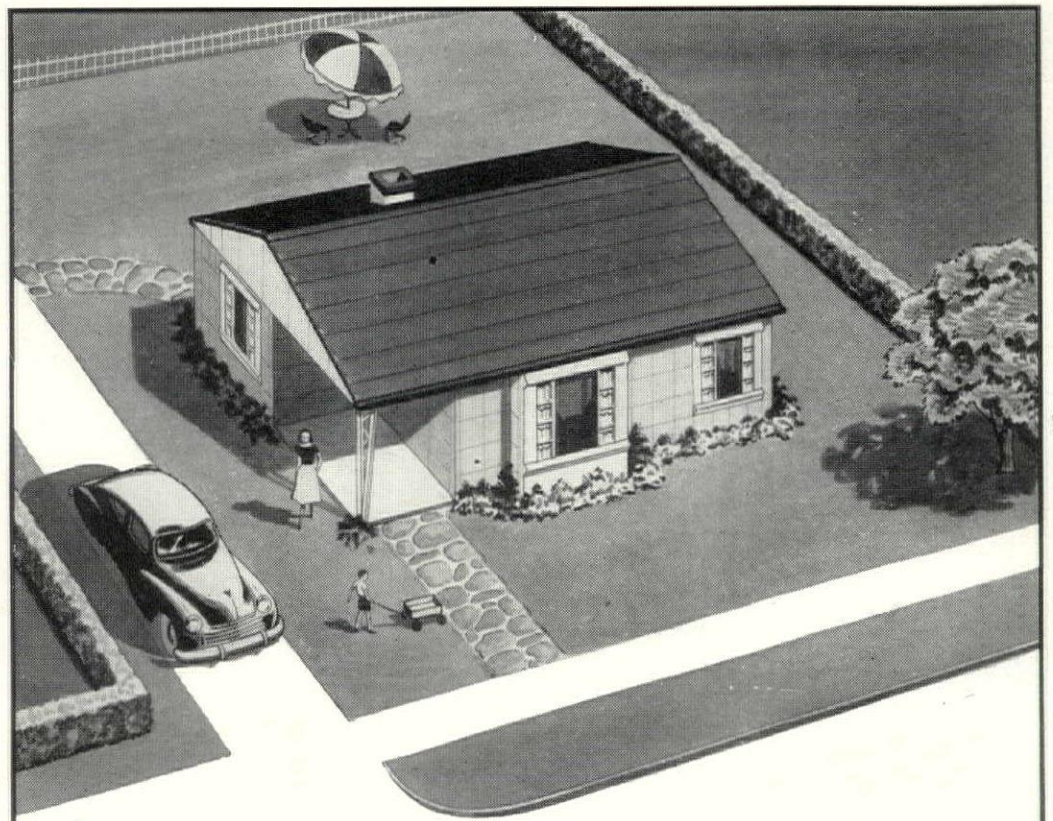
Each purchaser of a Lustron Home will know, in advance, by means of quoted prices:

1. the cost of the house manufactured by Lustron and erected by the Lustron builder-dealer;

'house price'?



driveway, shrubs and trees. The cost of these improvements can be closely calculated and should be added to the cost of the lot.



3. This is the same lot, with a Lustron Home erected on it. This house, in any given community, will carry a definite price tag, delivered and erected. Buyer and mortgagee will know the exact price of the house and its exact relationship to the total investment in house and lot.

2. the additional cost of land and land improvements.

This forward step in the evolution of house pricing is a great advantage to the prospective buyer—and to the lending institution that will participate in the financing of the purchase.

Prices and Quality Controlled

This means greater control of quality and price—both in materials and labor—because house costs can be calculated with accuracy, quoted as a fixed price, and kept at that price.

This means that the cost of a finished house—which is 80 to 90 per cent of the home

buyer's investment in house and lot—can be known in advance as the full cost of a standard item of definite, recognized value.

Principle of Common Sense

This new principle of house merchandising is in keeping with the Lustron concept of housing as a great new mass-production industry.

The pricing of house without land is a bold idea, challenging the status quo in selling improved real estate.

But it is basic common sense to enable buyer and lender to know exactly what a house costs, what you get for your money,

what the exact relationship is between the value of the house itself and the value of the site it rests on.

Lustron, the leader in mass production of homes, is confident that this new principle will be welcomed by buyers and progressive lending institutions alike. **O.L.C.**

THE **LUSTRON** HOME

LUSTRON CORPORATION
Box 2023K, Columbus 16, Ohio



fronts, furniture, etc. and retails for approximately 15 cents a sq. ft. In certain localities, factory finished Leatherwood is available in a wide range of attractive color combinations. *Manufacturer:* Masonite Corp., 111 West Washington St., Chicago, Ill.

LIGHT-WEIGHT ACOUSTICAL TILE combines high sound absorbing properties and good thermal insulation value.

About April 1 Owens-Corning Fiberglas Corp. will introduce a new light-weight, incombustible, perforated acoustical tile with high sound absorption and good thermal insulation value. Composed of compressed glass fibers, this tile weighs .7 lbs. per sq. ft. and can be cemented to a solid backing or mechanically mounted on wood or metal furring strips or on suspended ceilings. The new tile's average noise reduction coefficient for

adhesive application is .65, or .75 for mechanical application. Its absorption coefficient with adhesive application is .76 at 512 cycles, .99 at 1,024 cycles. With mechanical mounting figure is .98 at 512 cycles; .83 at 1,024 cycles. Unaffected by humidity conditions, the tile can be cut with a knife, and white, sealed surface can be easily repainted when necessary. The new acoustical unit comes in 12 x 12 in. and 12 x 24 in. sizes, in 3/4 in. thickness, and has a 3/32 in. bevel on all four edges. The 12 x 24 in. tile has a cross groove to simulate 12 x 12 in. tile. This size is designed for mechanical suspended ceiling applications and will also be available with kerfed and splined-grooved edges.

Manufacturer: Owens-Corning Fiberglas Corp., Nichols Bldg., Toledo, Ohio.

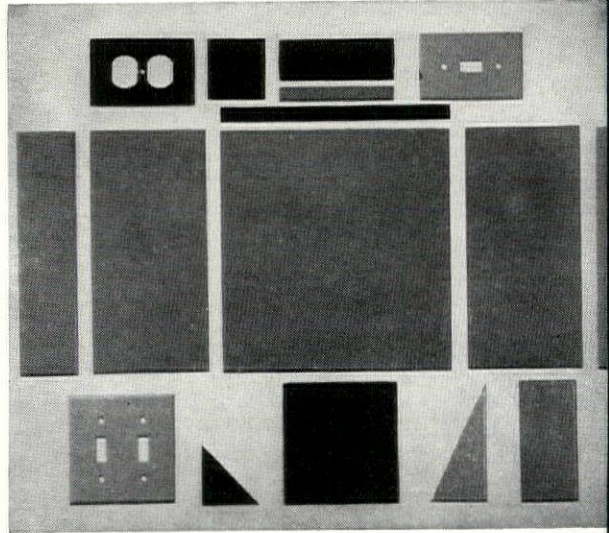
MEDIUM GAUGE RUBBER FLOOR TILE, 3/32 in. thick provides residential rubber tile floors at lower cost.

Seeking a larger market for their floor tile, the Danbury Rubber Co. has introduced a new less expensive, high quality medium gauge rubber floor tile, 3/32 in. thick. Designed primarily for residential use where traffic is relatively light compared to that in commercial, institutional and other types of public buildings, the new thickness is being produced in 6 in. and 9 in. squares and in one "standard" and "superior" colors. The standard color, black and white, costs 5 to 5 1/2 cents less per sq. ft. than standard colors in 1/8 in. gauge tile. The superior colors, white Paisley, green white, royal blue and ruby white, cost 6 to 6 1/2 cents less per sq. ft. than superior colors in 1/8 in. thickness.

Manufacturer: Danbury Rubber Co., Inc., Danbury, Conn.

COLORFUL ALUMINUM WALL TILE is adaptable and durable.

Made from sturdy aircraft aluminum and finished in color permanently baked-on enamel, Hastings Alumitile has numerous residential, commercial and industrial applications. Lightweight, easy application, variety of shapes and sizes and 14 pleasing, permanent colors make it a suitable wall covering for kitchens and bathrooms in homes, restaurant walls, shop



fronts, shop interiors, etc. According to the manufacturer, color control is one of the outstanding features of the new tile. Before the units are stamped out, the bonderized aluminum is sprayed with a special Sherwin-Williams enamel and baked in infra-red ovens. This produces the finish that reports will not crack until the metal itself is torn. Another feature of the tile is easy installation. (Continued on page 145)



GREATER CONVENIENCE
Plus
LOWER MAINTENANCE

*The Original Inside Screens
That ROLL UP AND DOWN*

**Pella
ROLSCREENS**

FIT ALL TYPES and MAKES OF WINDOWS

ROLSCREENS provide freedom from screen troubles! Once in place, always in place. No putting up — no taking down! No painting! No seasonal repairs! No storage space required. By minimizing window screen maintenance, ROLSCREENS pay for themselves over the years. The exterior beauty of windows is preserved by ROLSCREENS because they are made of neutral colored AluminA wire cloth and installed on the inside. ROLSCREENS cost no more than good quality flat-frame screens. When annual maintenance and labor costs are considered, ROLSCREENS actually cost less than ordinary screens.

10-YEAR GUARANTEE assures that clients will be satisfied with ROLSCREEN performance.

ROLSCREEN DETAILS IN HANDY FILE PACK for installing on all types and most makes of windows. Ready for tracing right onto your plans.



MAIL COUPON

ROLSCREEN COMPANY,
Dept. A-19, Pella, Iowa.

Without obligation, please send FREE new file of ROLSCREEN details and specifications in A.I.A. folder.

Name _____
Firm Name _____
Address _____
City & Zone _____ State _____

Made by makers of
FAMOUS PELLA VENETIAN BLINDS and CASEMENT UNITS

For Your Next Job Specify...

WELDWOOD FIRE DOORS

the *ONLY* wood-faced fire doors
that bear this label!

**ONLY WELDWOOD FIRE
DOORS GIVE YOU
THESE 8 UNIQUE ADVANTAGES**

1. Increased Safety

The *only* wood-faced fire door which bears the Underwriters' label. All Weldwood Fire Doors are approved for class B openings.

2. Beauty

Because of their beautiful wood faces, Weldwood Fire Doors harmonize perfectly with any decorative scheme.

3. Durability

The Underwriters' Laboratories tested a Weldwood Fire Door for durability by mechanically opening and closing it 200,000 times. At the end of the test, the door was unaffected and still opened and closed perfectly.

4. Dimensional Stability

Weldwood Fire Doors are so dimensionally stable that we guarantee them against sticking in summer or rattling in winter due to any dimensional changes in the door.

5. Light Weight

At last... a real fire door that is *not* heavy or unwieldy. A standard 3 x 7 door weighs approximately 80 lbs.

6. Vermin and Decay Proof

The mineral composition core used in Weldwood Fire Doors is permanently resistant to fungus, decay, and termites.

7. High Insulating Qualities

Another noteworthy characteristic of the core is its high insulating value over a wide range of temperatures. It is efficient against temperatures from freezing up to that of superheated steam.

8. Moderate Cost

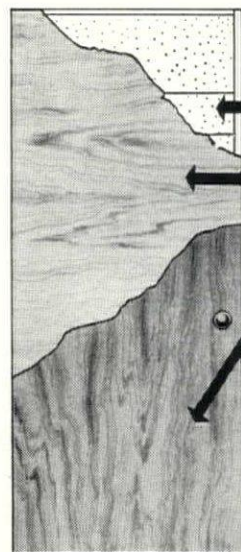
Investigate these doors for use on your next job. You will be pleasantly surprised at the low initial cost, and the minimum of maintenance required.



NOW... plan on permanent fire protection *plus* the rich beauty of real wood! Here at last is an absolutely fire-safe door that is also a decorator's delight.

Thanks to the handsome hardwood facing that distinguishes this unique Weldwood Door, you can plan on bringing extra beauty to every room. Yes, these beautiful new Weldwood Doors help you to carry your decorative theme throughout the building... while giving you lasting fireproof construction!

Write today for complete information. You'll also want full details about the new *Weldwood Flush Veneer Door* for use where absolute fire protection is not required.



EDGE BANDING
Of fireproofed hardwood matches the faces.

MINERAL CORE
Strong, light fireproof material. Great dimensional stability.

CROSS BANDING
Of 1-16" veneer is bonded to mineral core.

FACE VENEER
Is birch. Other decorative woods available on special order.

SIZES AND THICKNESSES:
Made in stock sizes, up to and including 3' x 7'; 1 3/4" thick.

**MAIL
COUPON
FOR
DETAILS**



United States Plywood Corporation (Dept. 429)
55 West 44th Street, New York 18, N. Y.

Please send literature giving complete details of new Weldwood Fire Doors and matching Weldwood Flush Veneer Doors.

NAME _____

COMPANY _____

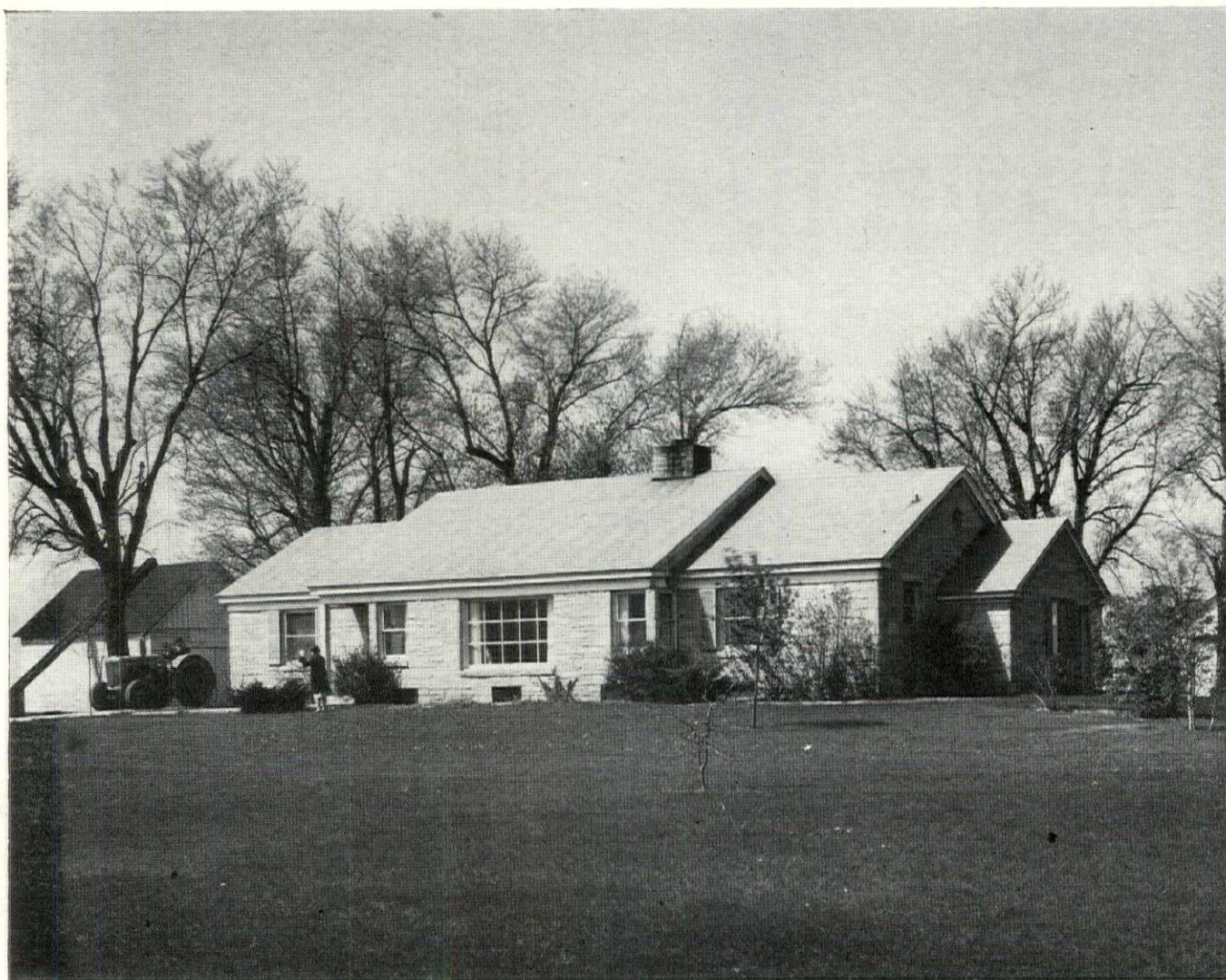
ADDRESS _____

UNITED STATES PLYWOOD CORPORATION

55 West 44th Street, New York 18, N. Y.

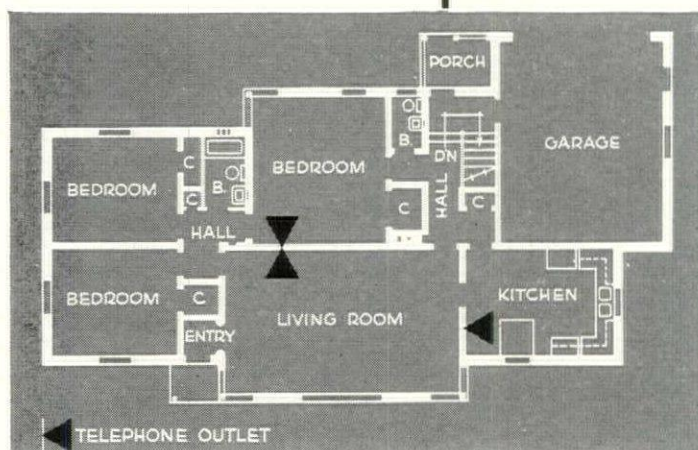
Distributing units in Baltimore, Boston, Brooklyn, Buffalo, Chicago, Cincinnati, Cleveland, Detroit, Fresno, High Point, Los Angeles, Milwaukee, Newark, New York, Oakland, Philadelphia, Pittsburgh, Portland, Ore., Richmond, Rochester, San Francisco, Seattle. Also

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.



Arthur F. Moratz, Architect, Bloomington, Ill.

"SOUND" PLANNING CALLS FOR BUILT-IN TELEPHONE RACEWAYS



It's easy to build a "Telephone Planned" home. That means concealed telephone wires, and preplanned, conveniently located telephone outlets.

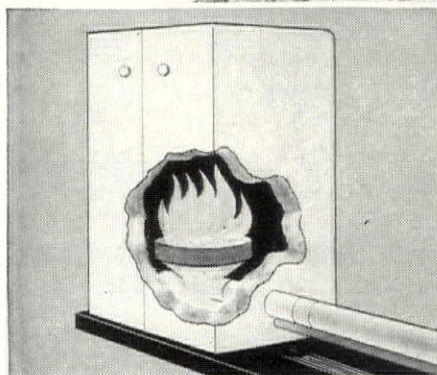
Telephone raceways will do the job. Just a few short lengths of pipe or tubing, installed during construction, will carry telephone wires inside the walls to the outlets.

For homes of any size, your Bell Telephone Company will be glad to help you plan modern telephone arrangements. Just call your Telephone Business Office and ask for "Architects and Builders Service."

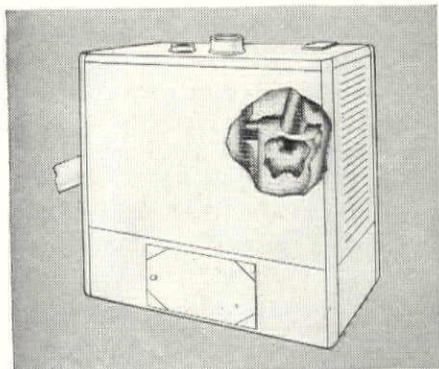


BELL TELEPHONE SYSTEM

**Must buyers of your
houses pinch pennies
for food and
WASTE DOLLARS
FOR FUEL**



Automatic Anthracite Stokers—Installed in an existing boiler or furnace and in new houses, automatic hard coal stokers deliver *plenty* of heat quickly . . . save up to 52% on fuel bills . . . eliminate fuel worries.



The Revolutionary Anthratube—The Anthratube saves on fuel bills . . . its proved efficiency is over 80%. This scientifically engineered boiler-burner unit, with "Whirling Heat" and other revolutionary features, produces quicker response and superior performance than units using other types of fuel.

**Automatic Anthracite Heat offers
savings up to 52% on annual fuel bills**

• Here's how you can be a real friend to your clients . . . and build good will plus future business for yourself.

Just ask a few clients if they would rather burn money or Anthracite . . . it's as simple as that.

Then tell your clients how they can offset today's high living costs with completely automatic Anthracite equipment.

You'll find that most people will welcome the chance to save \$100 to

\$200 every year . . . particularly when they learn they can have all the comfort and convenience of completely automatic heat. Moreover you can assure them they will have *plenty* of heat . . . because there's plenty of hard coal now, and for years to come.

• • •

Get complete information about modern coal stokers, and data on the revolutionary new Anthratube, by writing to Anthracite Institute *now*.



ANTHRACITE INSTITUTE

101 Park Avenue

New York 17, New York

Alumitile can be applied over any smooth surface with a special white mastic which seals the walls against water and moisture. Cost of Alumitile units which include tiles for interior and exterior use, matching switch plates and receptacles in addition to regular accessories, is reported to be considerably less than that of conventional tile.

Manufacturer: Metal Tile Products, Inc., Hastings, Mich.

STITCHLESS, QUILTED PLASTIC MATERIAL is usable as decorative upholstery or wall covering.

This stitchless, quilted plastic upholstery and wall covering material offers, in addition to an attractive, heavily padded appearance, the many advantages of Vinylite sheeting: wide color range, washability, resistance to stains, abrasion, alcohol, grease and dirt. It also can be easily tacked, sewed, cut and

sealed in a similar manner to other Vinylite plastic material. Actually the new material is an electronically heat-sealed sandwich composed of a Vinylite plastic sheet, a layer of fire-resistant filler material and a backing of Vinylite film. The front surface can be either plain or embossed and the stitchless quilted design can be produced in diamond, square or ribbed patterns. Sealtuft comes in 30 yd. rolls in 48 and 54 in. widths. Average retail price is about \$5 per yd. Where added acoustical and thermal insulation is desired, the new material can be made with a filler of glass fibers.

Manufacturer: Jason Corp., Hoboken, N. J.

ONE COAT PAINT for walls and woodwork gives appearance and washability of baked enamel.

Kem-Glo, Sherwin-Williams' newest paint, provides walls and woodwork with a plastic-smooth, scrubbable finish in a single coat. Particularly recommended for kitchens and bathrooms as well as for all other woodwork in the house, it comes in nine pastel colors plus white, and is said to give the appearance and washability of a baked enamel finish. Kem-Glo is supplied ready for use and may be applied by brush or roller coater. Reportedly, one coat covers most previously painted surfaces, with two coats finishing new wood or bare plaster. No wall primers, sealers or enamel undercoaters are necessary. Drying takes only three to four hours and because the first coat may be painted over in four to five hours, redecoration of a room can be completed in one day. Dirt, grease and grime do not penetrate the Kem-Glo finish and even boiling water does not mar its surface. The new paint is to be available this spring throughout the U. S. in gallon and quart containers. According to the manufacturer, 1 gal. will cover the walls and woodwork of an average size kitchen; 2 qts. a good size bathroom; 1 qt. the woodwork of an average size living room. Kem-Glo will retail at \$7.98 per gal.; \$2.39 per qt.

Manufacturer: The Sherwin-Williams Co., 101 Prospect Ave., N.W., Cleveland, Ohio.

SOILPROOF WALL COVERING is hung like ordinary wallpaper, is washable, durable and long lasting.

Glendura Soilproof Wall Covering has the soft, warm finish of regular wallpaper with the added advantage that stains such as oil, ink, fats, etc. can be readily removed. Finger smudges, pencil streaks, grease or ink can be washed off with soap and water or removed with Clorox, Spic & Span, or cleaning fluids, etc. Glendura achieves its soilproof characteristics, according to the manufacturer's report, through complete resin saturation of all color particles used in the printing. The resin creates, in effect, a coat that eliminates porosity or which closes all the openings through which soot might enter. In addition to its soilproof feature, Glendura is also light resistant, mildew proof and impervious to fungus mold stains. The new covering comes in 17 designs, each available in several color combinations and is hung exactly like ordinary wall paper. Retail prices for 7 yd. single roll range from \$2.50 to \$5 per roll.

Manufacturer: Imperial Paper & Color Corp., Glens Falls, N. Y.

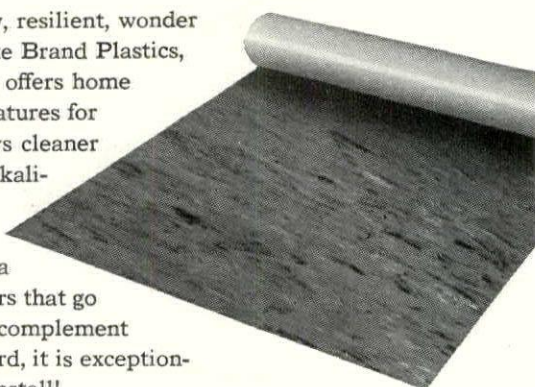
DECORATIVE PLASTIC DISPLAY MATERIAL molds to curves and irregular surfaces.

Gem-Plaque, Gustave Rubner's new display material, consists of a molded plastic sheet of 140 baguette diamond shape glued over a colorful metal

(Continued on page 15)

The floor news of a lifetime!

Beautiful FLOR-EVER, the new, resilient, wonder floor covering made of Vinylite Brand Plastics, is the only floor covering that offers home builders such revolutionary features for more wear and less care! Stays cleaner longer—it's spot-, stain- and alkali-resistant, grease- and water-proof. Quiet and resilient to the step, FLOR-EVER comes in a galaxy of clearer, brighter colors that go right through to the backing—complement all decors. Available by the yard, it is exceptionally easy and inexpensive to install!



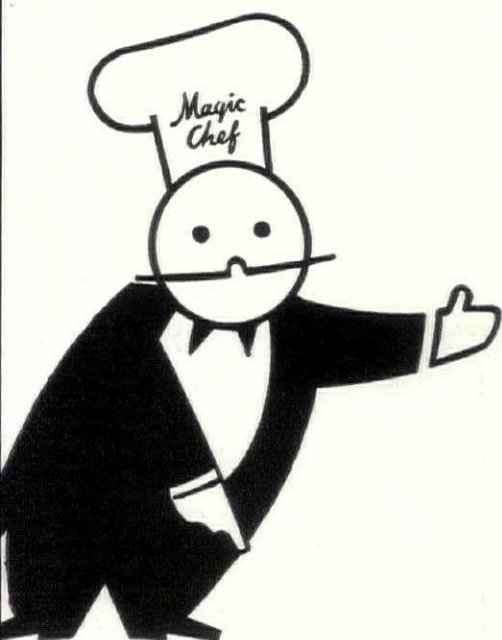
★ FLOR-EVER is being nationally advertised in Better Homes and Gardens, American Home, House Beautiful, House and Garden, McCall's AND Good Housekeeping. Why not capitalize on FLOR-EVER's advantages in the homes you are building!



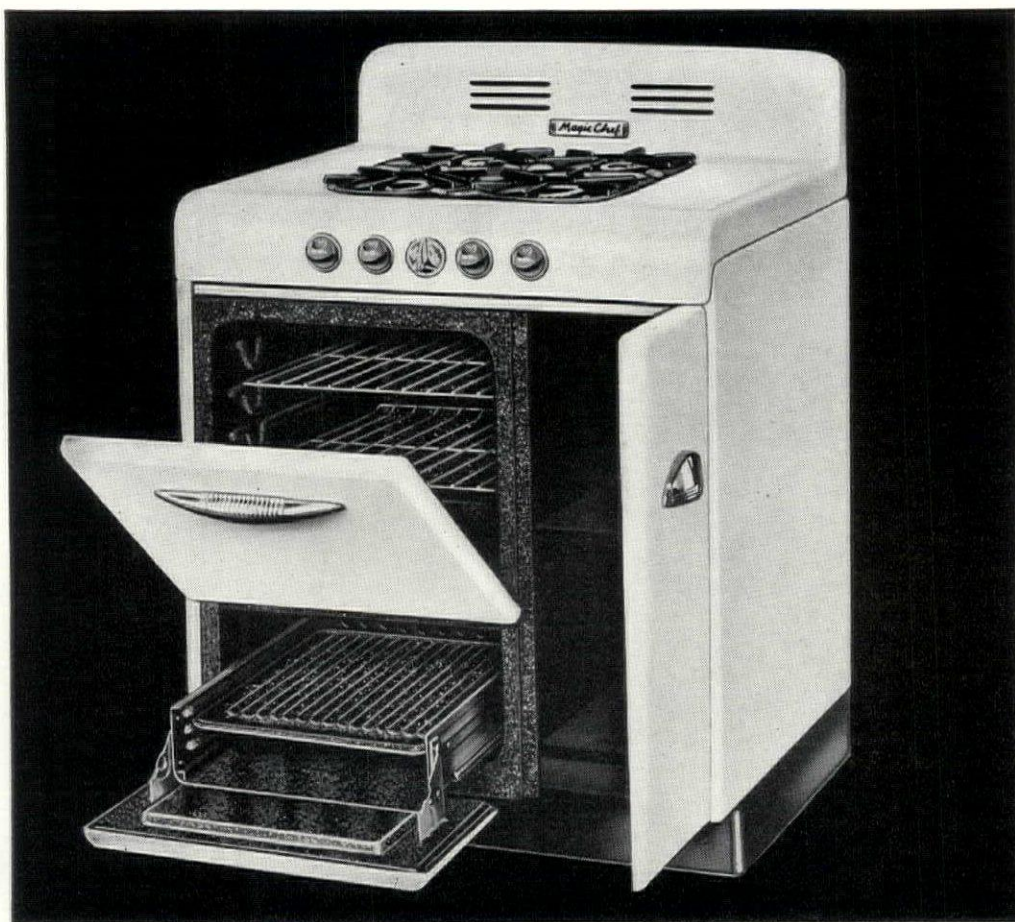
DELAWARE FLOOR PRODUCTS, INC., WILMINGTON 99, DELAWARE

New York Showrooms: 295 Fifth Avenue

Also manufacturers of "Wall-Ever" Vinylite Plastic Wall Covering and "Duralin" Enamel Floor Covering.



HERE'S A SPECIALLY-PRICED
Magic Chef
 GAS RANGE



30" Wide—Series 600

FOR LIMITED SPACE, LIMITED BUDGETS



36" wide—Series 700



39" wide—Series 2400 and 1300



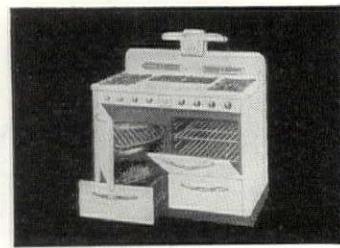
36" wide—Series 1200



62" wide—Series 1000



20" wide—Series 500



43" wide—Series 400 and 460

OTHER Products: Combination, coal and wood ranges, oil stoves and heaters, oil furnaces.

Architects and builders have been asking for a range 30 inches wide. Here it is! Its smart styling will add to the appearance of any apartment or small home kitchen. The 600 Series Magic Chef range is low priced, yet it has a full-size oven and broiler, 4 fast Magic Chef top burners, and most of the features of deluxe Magic Chef models. Magic Chef ranges have the advantages of quality and appearance *plus* these *helpful* selling factors:

- 1 More women cook on Magic Chef than on any other range.
- 2 Surveys show more women plan to buy Magic Chef than any other gas range.
- 3 Magic Chef is the most widely advertised gas range in America.
- 4 Magic Chef is the easiest range to sell.

• *For Finest Homes...*

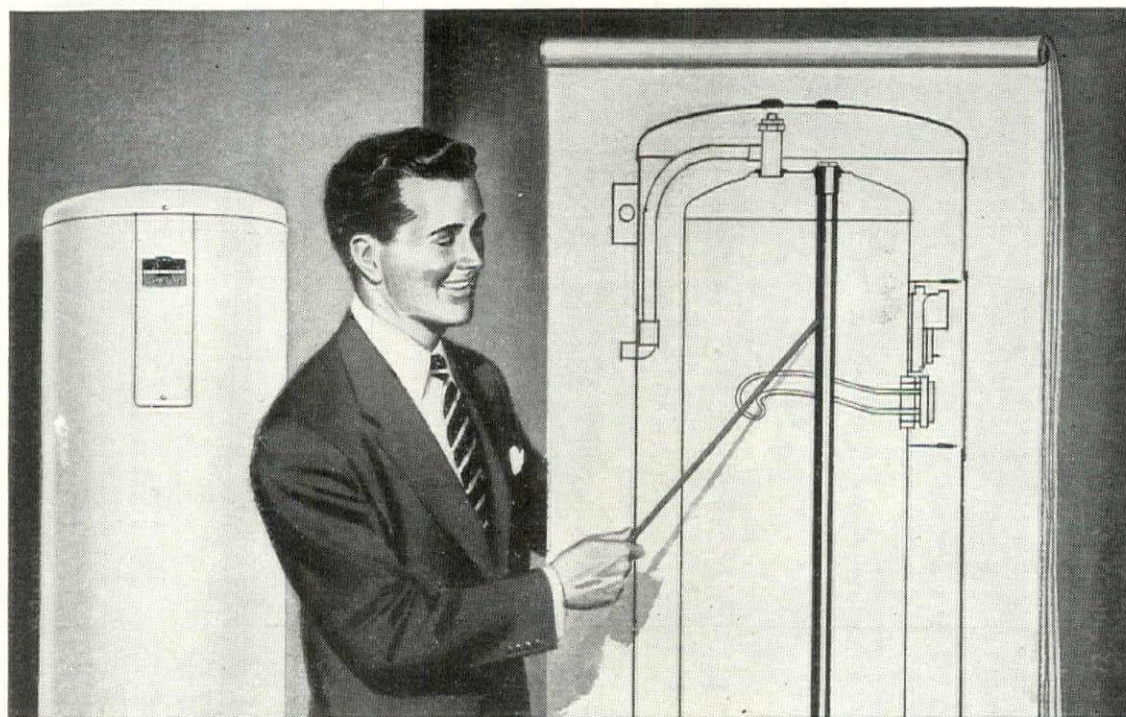
The complete Magic Chef line includes ranges for large homes. For example, the 62-inch Series 1000 has six top burners, two large ovens, high-level broiler and a 23" x 24" griddle. Styled in satin-finish stainless steel.

• *Hotels and Restaurants, too!*

America's best 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

A M E R I C A N S T O V E C O M P A N Y • S T . L O U I S



Why New Frigidaire Electric Water Heaters Last Years Longer

A wonder-Working Magnesium Rod built into the tank literally adds years to the life of Frigidaire Electric Water Heaters. In both hard and soft water areas, this rod attracts corrosive elements to itself—effectively checks pitting, rust and “red water.”

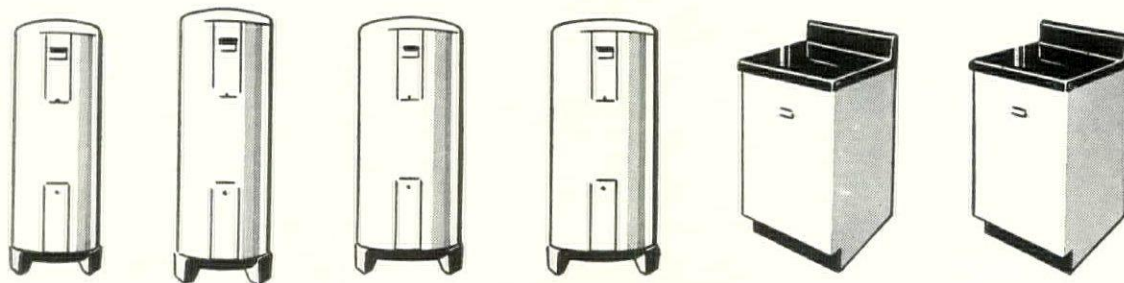
10-Year Protection Plan backs each Frigidaire Water Heater. Any parts proving defective during first year replaced without cost. If tank fails during first 5 years, new heater furnished (labor included first year only.) If tank fails during second 5 years, new heater furnished at special price.

Many Other Important Features—Frigidaire’s

exclusive Radiantube Heating Unit, for instance. It’s sickle-shaped to shed scale and sheathed in copper—lasts far longer than ordinary units. And it can’t waste current or heat because every square inch of heating surface is in direct contact with the water. Other features include: glass wool insulation, hot water trap, drain faucet, cold water baffle, and accurate thermostat.

Specify Frigidaire For Lasting Satisfaction. All over the country, more and more builders and architects are specifying Frigidaire Water Heaters and other Frigidaire equipment. They know Frigidaire makes any home more attractive to tenants and buyers.

Complete Range of Sizes—30 to 80 Gal. Upright or Table-Top Models



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 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., with Meter-Miser mechanism. Others up to 26.5 cu. ft. size.

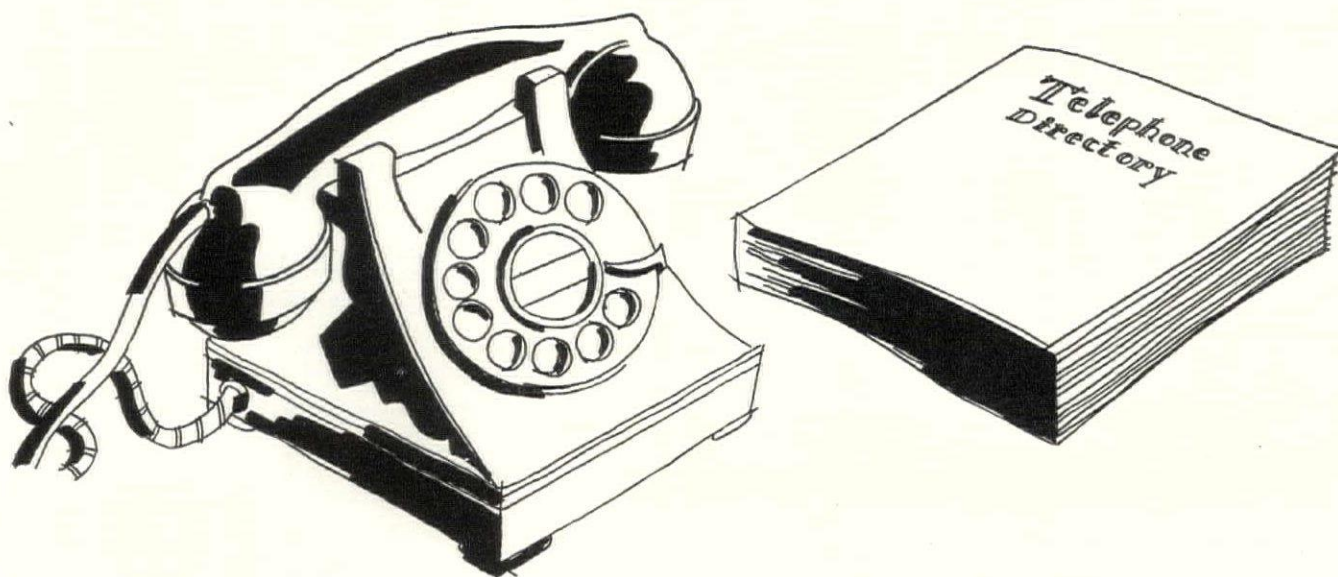
- ☐ Electric Dehumidifier
- ☐ Air Conditioners
- ☐ Water Coolers
- ☐ Commercial Refrigeration

Name.....

Firm Name.....

Street & No.....

City.....State.....



This is all the equipment you need to solve your toughest carpet problems



JUST AT THE other end of your telephone is one of Bigelow's 25 Carpet Counsel Offices.

Awaiting your call are men who can start wheels turning to give you the most complete service in

the business.

Here's how the Bigelow Carpet Counsel works:

1. Sizing up your problem. The Bigelow representative gets complete information as to the type of installation, carpet yardage required, color and design desired, time factor, etc.

2. Experts work out a solution. Men with years of experience in contract carpeting help you choose the grade, weave, color and design most suitable to your needs.

3. Your order gets personal supervision. After you approve the recommendations, specifications are drawn up and manufacturing orders placed. Bigelow's Contract Sales Service Department checks on the status of your order at regular intervals, and your Bigelow representative reports to you.

4. Your satisfaction is assured. Your Bigelow representative will check installation details. Upon completion of the work, he will make sure that your Bigelow Carpet installation is satisfactory to you in every way.

Bring your carpet problems to Bigelow's Carpet Counsel! Used for more than ten years by America's leading architects, store and hotel owners, purchasing agents. Find *your* Bigelow Office listed below.

Atlanta Walnut 2417
Baltimore Plaza 1600
Boston Hubbard 2-0133
Buffalo Cleveland 8420
Chicago Mohawk 4-4500
Cincinnati Dunbar 1697
Cleveland Cherry 2650
Columbus Adams 1163

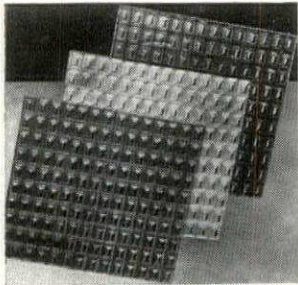
Dallas Central 5293
Denver Cherry 8319
Detroit Woodworth 1-4723
Hartford Hartford 7-3205
Indianapolis Riley 5345
Kansas City Grand 8576
Los Angeles Trinity 3771
Memphis Memphis 5-1361
Milwaukee Broadway 2-0123

Minneapolis Main 2377
New York Murray Hill 4-0100
Philadelphia Walnut 2-0700
Pittsburgh Grant 2233
St. Louis Main 1835
Salt Lake City Salt Lake City 4-4566
San Francisco Yukon 6-3900
Seattle Seneca 5995

BIGELOW Rugs and Carpets

Beauty you can see ... quality you can trust ... since 1825

foil backing. The three dimensional clear plastic facing material has reflective qualities while the backing provides



color in any one of 12 jewel-like tones. According to the manufacturer, the new material is fire-resistant and shatter-proof, and has insulation and sound absorbing qualities. Full sheets, measuring 10 by 10½ in., come with a small invisible tacking hole in each corner for installation; additional

holes can be easily made with a small hand drill. Gem-Plaque can also be cut with a thin blade hand or circular saw. For applying to curves and irregular surfaces, the pliable metal backing sheet is mounted in place

first. The plastic plaque is then softened in hot water and tacked onto the metal surface. In addition to full sheets, Gem-Plaque comes in strips of one, two, three and four rows baguette designs.

Manufacturer: Gustave Rubner Inc., 5925 Broadway, New York 63, N. Y.

PLAQUES, SIGNS AND ARCHITECTURAL METAL WORK are again available from the Birmingham Guild Ltd.

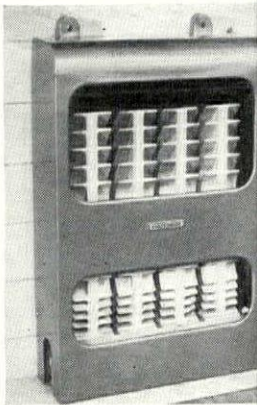
Absent from the U. S. since its wartime departure in 1941, the Birmingham Guild has again returned to design and make various types of architectural metal work for the American market. Working in cast bronze, cast lead, stainless steel, wrought iron and vitreous enamel, it can execute from plans such items as memorial tablets, name plates, signs, fascia letters and architectural metal work in approximately two months. Either raised, incised or incised and enamel filled letters can be supplied in historical styles including Roman, Old English, German and English Block and also in original designs. Vitreous enamel work, such as lettering, crests, etc., can be carried out in black and white and ten colors. The colors are permanent and the bronze is stainproof.

U. S. Representative: Fred. L. Stuart, Room 1111, 33 West 42nd St., New York 18, N. Y.



EXPLOSION-PROOF ELECTRIC HEATER IS U/L approved for use in hazardous locations.

Electromode's new all-electric Explosion-Proof Heater designed to heat hazardous locations safely and efficiently at reasonable cost. U/L approved for Class 1, Group 1 Hazardous Locations, it can be used in atmospheres containing gasoline, petroleum, naphtha, acetone, benzol, etc., or in places where flammable gases, mixtures, or other substances are manufactured, used, handled or stored in other than their original containers. The new heater incorporates a patented cast aluminum, natural convection, safety grid. Its heating element consists of a nickel chromium resistor wire, insulated and sheathed in a seamless metal tubing, which is embedded in a one-piece finned aluminum casting. This completely seals the element, eliminating fire, shock and burn hazards. The aluminum grid remains at a low operating temperature but has a high thermal conductivity and reportedly is 100 per cent efficient. According to the manufacturer, the new heater may be used to provide complete auxiliary heat and if desired, may be thermostatically controlled through a contactor. Installation is also reported to be simple. The heaters are available in three models with ratings of 2,000, 4,000 and 6,000 w. and are priced from approximately \$160 to \$460.



Manufacturer: Electromode Corp., 45 Crouch St., Rochester 3, N. Y. (Continued on page 1)

beautiful
BLONDE WOOD FINISHES

10 ATTRACTIVE MODERN TINTS FOR THE CONTROL OF NATURAL WOOD COLOR



FOR COMMERCIAL OR RESIDENTIAL INTERIORS

With O'Brien's Pen-Chrome "Blonde" Wood Finishes you can make full use of the natural beauty of wood—without being at the mercy of the exact color of the wood used.

Ten modern blonde tints give you the COLOR CONTROL essential for harmony with painted walls and other decorations. Pen-Chrome seals, waterproofs, dries to a soft lustrous finish. See your O'Brien dealer or write The O'Brien Corporation, South Bend 21, Indiana, today for sample panel or color card.

10 TINTS • Maple • Sandalwood • Bleached Mahogany • Driftwood • Platinum • Blonde • Light Oak • Dark Oak • American Walnut • Mahogany

BY THE MAKERS OF FAMOUS

ACTUAL WOOD SAMPLE—showing color effects produced by 10 Pen-Chrome tints on birch panel, 2½" x 20½". Free to architects and decorators. Write on letterhead.



The NEW Truscon Series 46 DOUBLE-HUNG WINDOWS (Spring-balanced)

trim, smart, streamlined

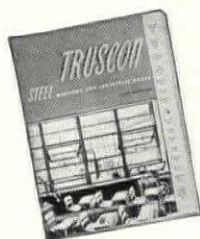


strong, sturdy, economical

Architects like its structural strength and architectural correctness . . . contractors like its ease of installation . . . owners like its streamlined beauty and low maintenance cost. Everyone likes its all-round *economy!*

The new Truscon Series 46 Double-Hung Steel Window is recommended for use on any project except when fire windows are specified and a counterweighted window is essential. Use of a spring balance in this new Truscon window eliminates the necessity of large weight boxes, and avoids the cost of field labor required to install cast iron counterweights and place the sash in accurate balance after glazing.

The spring balances are housed in the head member and the stainless steel suspension tapes are wholly concealed with the sash either open or closed. Positive weathering is provided by flexible spring-bronze strips attached to the sash at head, meeting rails, sill and jambs. Bonderized. Baked-on paint. Lever-type lift handles. Muntins as desired. Screens, storm sash and window cleaner anchors available.



New Literature. Send for new catalog complete with installation details and specifications on Truscon Steel Windows for every type of residential, commercial, industrial and institutional use.

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STEEL COMPANY

YOUNGSTOWN 1, OHIO

Subsidiary of Republic Steel Corporation

Manufacturers of a Complete Line of Steel Windows and Mechanical Operators • Steel Joists • Metal Lath • Steeldeck Roofs • Reinforcing Steel • Industrial and Hangar Steel Doors • Bank Vault Reinforcing • Radio Towers • Bridge Floors.

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New Booklet to help
you sell
more (and better)

SCHOOL LIGHTING

16 pages of
facts and photos

**FREE . . . all the
copies you need**

Here's a real selling tool . . . an easy-to-understand booklet that points out the need for better school lighting—then *shows what steps can be taken to get a school lighting program started.*

Put this booklet to work for you. Send it to educators, parents, PTA members—all the many hard-to-reach people who must support a school lighting program. *Not fixture advertising!* This is an understandable, objective case history of a planned school lighting program that will help overcome that "What can we do about it" public indifference. Let it help you **SELL** school lighting . . . the need for it . . . how to get it.

159

IT'S EASY TO SEE WHEN IT'S

DAY-BRITE
Lighting

Day-Brite fluorescent fixtures are engineered for every seeing task. Distributed nationally by leading electrical suppliers.



*It
happened
in
Denver's
Schools
... it can
happen
in yours*

Authoritative because it's an actual account of how the citizens of Denver, Colorado, completely relighted their Public School buildings.

Fact-filled—step-by-step through the Denver story—answers such questions as:

- ☐ What's a good way to get started?
- ☐ Who can help?
- ☐ What is the best lighting layout?
- ☐ How does color of paint affect lighting?
- ☐ What about new wiring?
- ☐ What about maintenance?
- ... and many, many others.

**... as many copies as you need . . . courtesy
of Day-Brite! Clip and mail coupon—TODAY!**

To: DAY-BRITE LIGHTING

5471 Bulwer Avenue, St. Louis 7, Missouri

In Canada: Amalgamated Electric Corp., Ltd., Toronto, 6, Ont.

Please send me, free and postage prepaid, _____ copies of your new booklet, "It Happened in Denver's Schools." I understand there's no obligation.

Name (Please Print) _____

Address _____

City _____

State _____

Its *Simplicity*

The Delany Flush Valve has only 6 moving parts, the simplest assembly of any flush valve and the quickest and easiest to repair.

is your assurance
of efficiency



**RENEWABILITY
PLUS
ACCESSIBILITY**
the lowest cost
maintenance



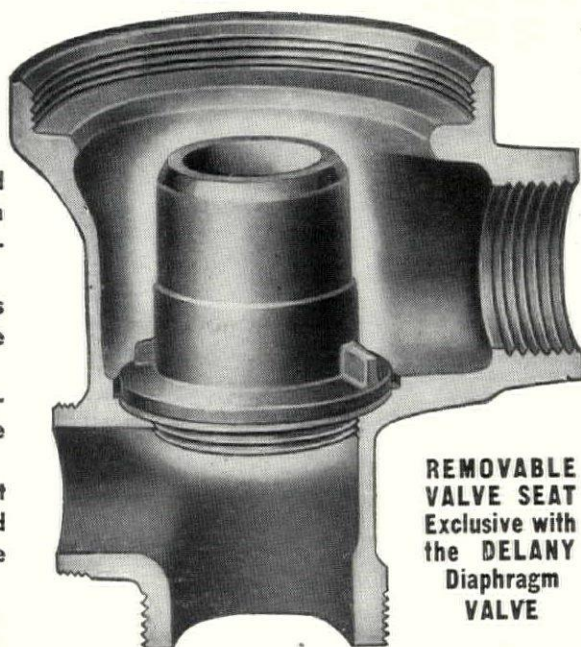
The **RENEWABLE DELANY** Main Valve Seat, (illustrated right) combined with all the other renewable minimum number of parts (illustrated above) insures lowest possible replacement costs.

The **ACCESSIBILITY** when repairs are necessary, insures quick replacements of all parts, thus reduces maintenance man hours to the absolute minimum.

The vital factor, when these quick and easy replacements are completed — the initial efficiency of the **DELANY VALVE** is **INSTANTLY REGAINED**.

Definitely, these features are indisputable proof, that the **DELANY VALVE** is truly a lifetime installation, and not assumed to be, by inference or association with the permanent fixtures it services.

Available thru all leading supply houses.

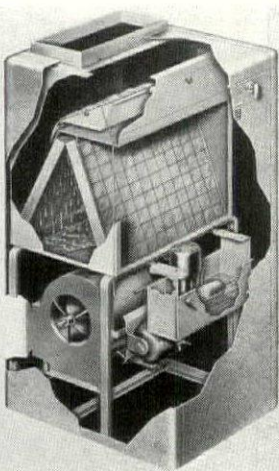


**REMOVABLE
VALVE SEAT**
Exclusive with
the **DELANY**
Diaphragm
VALVE

SINCE 1879
Coyne & Delany Co.
BROOKLYN N.Y.
FLUSH VALVES · VACUUM BREAKERS · PLUMBING SPECIALTIES

IN CANADA: THE JAMES ROBERTSON COMPANY, LIMITED • MONTREAL • TORONTO • ST. JOHN, N. B.

BUILDING REPORTER



AIR TREATING UNIT operates in conjunction with heating system to clean, freshen and humidify air in the home.

A self-contained, air treating unit for the home, the TEG Conditioner can be used with either warm air, steam or hot water heating systems to clean, freshen and humidify the air. The new unit vaporizes triethylene glycol, an airborne-bacteria killing vapor, into the air stream. In operation a $\frac{1}{4}$ h.p. motor driven blower draws air through the unit over a permanent glass fiber filter-cell which is saturated and flushed continuously by liquid Tegelene. This liquid is circulated by a small sump pump. Dirt particles are removed from the air by contact with the Tegelene and the filter's glass fibers and are continuously washed away by the flushing action of the purifying liquid. As air passes over the saturated filter-cell it is not only cleaned, but it also picks up an infinitesimally

small amount of the bacteria killing triethylene glycol vapor and is humidified by the water in the Tegelene. From the filter-cell, air passes through a fiber glass eliminator mat to remove any particles of entrained Tegelene and then through the blower into a duct system or directly into the home. An automatic float valve located in the sump tank admits water to the sump as needed, to maintain a fixed proportion of water and Tegelene. This concentration of Tegelene-water solution produces a definite relative humidity in the contact air, so automatically maintaining a fixed concentration, relative humidity of air in contact with the Tegelene is automatically controlled. In summer the Tegelene may be drained from the sump and replaced with water so the unit can operate as a cooling device. The conditioner measures $56\frac{1}{4}$ in. high, 26 in. wide, 35 in. deep.

Manufacturer: National Air Conditioning Inc., Johnstown, Pa.

for HIGH quality LOW cost floors—



Years of research by Uvalde Rock Asphalt Company lie behind this beautiful, durable, high-quality tile. The result is a resilient tile that is *very* resistant to denting and marring... a wide range of *fine* colors that won't fade or wear... a flooring that is *highly* resistant to grease, alkali, alcohol and mild acid solutions. Azphlex is *ideal* for use over concrete slab as well as wood sub-floors.

Architect's rendering above shows the type of floor for which the new Azphlex Asphalt Tile is so well suited. Its high quality and superiority have been proved in many similar installations.

See our catalog in Sweet's Architectural for complete information, colors, and specifications... ask your Azphlex-Azrock dealer to show you samples.

UVALDE ROCK ASPHALT CO.

Makers of AZROCK and AZPHLEX Asphalt Tile

FROST BANK BLDG.

SAN ANTONIO, TEXAS



TABLE TOP REFRIGERATOR has a 5 cu. ft. capacity.

Measuring only 27 in. wide, $24\frac{1}{2}$ in. deep and $34\frac{1}{2}$ or 36 in. high, the new Glasco table top refrigerator provides a 5 cu. ft. capacity plus 648 sq. in. of kitchen work area. Without legs or a separate top, it stands only $34\frac{1}{2}$ in. Yet with legs or standard $1\frac{1}{2}$ in. linoleum, Formica or stainless steel top it has the standard kitchen appliance height of 36 in. In addition, it fits flush with standard cabinets. Glasco features welded steel construction, glass fiber insulation and adjustable gliders at the base for easy leveling. It also contains a Tecumseh hermetic unit, two large ice trays plus space for frozen food, $7\frac{1}{2}$ sq. ft. of shelf area and a six position cold control. Glasco retails for approximately \$199.95.

Manufacturer: Glascock Bros. Mfg. Co., Muncie, Ind.

National Sales Office: J. H. Rasmussen & Co., 1454 Merchandise Mart, Chicago, Ill.

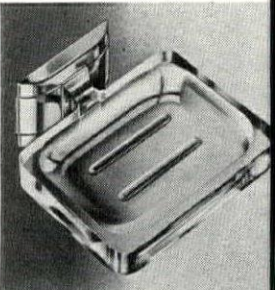


BATHROOM ACCESSORY LINE boasts modern design in chrome and plastic construction.

Hall-Mack's new Crystalchrome line of modern bathroom accessories comprises, as the name implies, fixtures made of polished chrome and brilliant crystal. Included are both surface and recessed type fixtures and such units as towel bars; shelves; soap, tumbler and toothbrush holders. The wall base portion of each surface type fixture is forged from solid brass and chrome plated. The projecting crystal portion is made from clear, brilliant, unbreakable acrylic. Crystalchrome recessed accessories, including tumbler, soap and paper holders and combination soap and grab units, are also chrome plated on solid brass and have crystal trim. Like the surface fixtures, they are made for regular screw installation and for setting in cement.

Manufacturer: Hall-Mack Co., 1344 W. Washington Blvd., Los Angeles, Calif.

(Technical Literature, page 16)



Here's Why It Pays To Specify

Pittsburgh Steeltex Lath For Plaster

You get low maintenance and high fire protection in your buildings with Pittsburgh Steeltex Lath for Plaster. This combination of galvanized welded wire mesh and absorbent backing makes possible positive embedment of the wire mesh and provides maximum *reinforcement* and protection against plaster cracks. Also this reinforcement has earned high fire ratings for

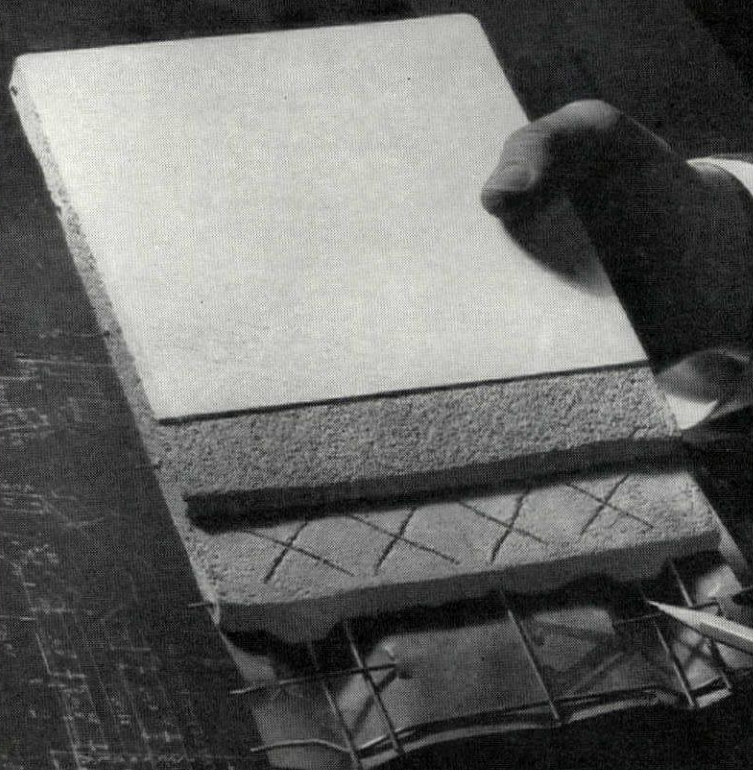
Steeltex including Underwriters' Laboratories, Inc. test R-2258.

In addition Steeltex provides a rigid troweling surface which speeds its application and saves plaster. For better plaster construction see our catalog in Sweet's or write for your copy of our Catalog D.S. 130 to Dept. AF, Pittsburgh Steel Products Company, Grant Building, Pittsburgh 30, Pennsylvania.

PITTSBURGH STEEL PRODUCTS COMPANY

A Subsidiary of Pittsburgh Steel Company

Pittsburgh, Pa.



Comfort should be

Hundreds of homes have been built around Servel **ALL-YEAR** Air Conditioning

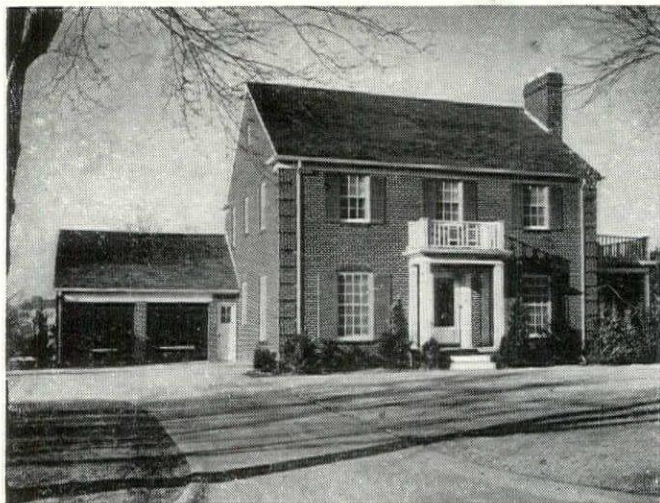
When you plan new homes around Servel *All-Year* Air Conditioning, you not only provide your clients or buyers with a heating and cooling plant; you give them *comfort*. For, with a Servel unit, the home owner can control his indoor climate the year round . . . at the flick of a finger.

In summer, the Servel *All-Year* Air Conditioner refrigerates the air, removes sticky, wilting humidity. In winter, this same unit floods the home with warmth, adds just the right amount of moisture for comfort. In between seasons, Servel circulates air without drafts or "layers" of hot and cold air. Year round, Servel filters out dust, dirt, and irritating pollen. And

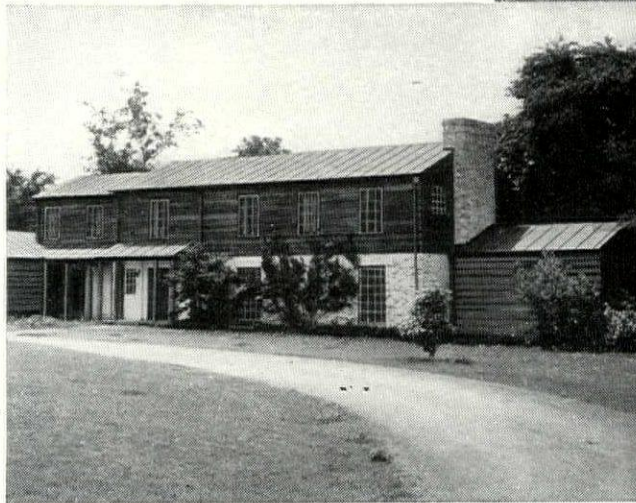
no effort or extra work is required on the part of the home owner. He simply dials the desired climate and flips a switch for cooling or heating.

Planning your clients' homes around Servel *All-Year* Air Conditioning gives you the opportunity for many innovations in design. You can effect construction economies, too, which will materially reduce the net cost of the conditioner. Once installed, Servel is economical to operate. Every unit is backed by a 5-year factory warranty against defective parts.

Get the facts on Servel *All-Year* Air Conditioning from your local Gas Company or Servel dealer. Or write direct to Servel, Inc., 4903 Morton Ave., Evansville 20, Indiana.



OKLAHOMA. "Our entire family praises our Servel *All-Year* Air Conditioning unit, and we are always proud to have visitors come in," writes Mr. G. W. Athey of 1106 W. York Street, Enid.



LOUISIANA. "We are very much satisfied with our investment in a Servel *All-Year* Air Conditioner," states Clay W. Beckne of 5 Newcomb Boulevard, New Orleans.

put in the plans



A large, detailed illustration of a hand placing a Servel air conditioner unit onto a blueprint. The unit is a tall, rectangular, light-colored model with vertical ribbing and a dark control panel on the right side. The blueprint shows architectural drawings of a house, including a floor plan and a cross-section. The Servel logo is visible on the front of the unit.



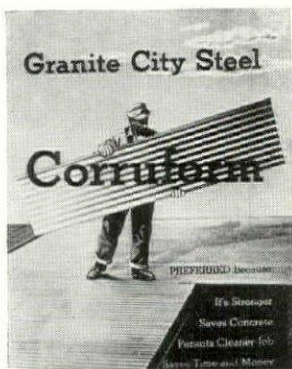
A black and white photograph of a two-story house with a gabled roof and several windows. Each window is covered with a dark, decorative awning. The house is surrounded by trees and shrubs.

Servel
all-year
AIR CONDITIONER

AS. "We keep our home cool all summer and warm all winter with Servel All-Year Air Conditioning," comments Mr. Nelson Engener, 7700 Mockingbird Lane, Dallas.

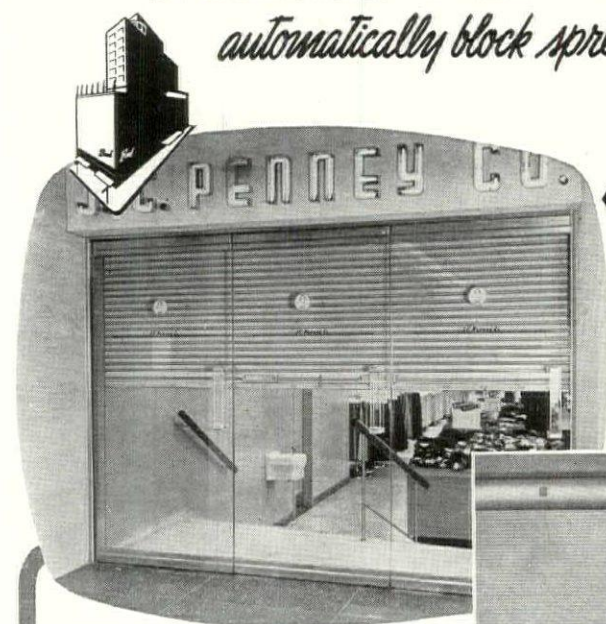
CORRUGATED STEEL FORMS. Corruform. Granite City Steel Co., Granite City, Ill. 4 pp. 8 pp. 8½ x 11 in.

Corruform panels which serve as a permanent base and form in concrete floor and roof slab construction are featured in these two booklets. The first pamphlet briefly outlines the advantages of the corrugated steel sheets and their fastening devices: strength, concrete savings, reduced mortar mess, time and money economies. In addition, it illustrates and describes Corruform's installation. The second publication, a technical work, presents in detail the advantages, properties and application of the high-strength, corrugated steel sheets. It also includes complete data on the various types of Corruform fasteners used for installation. This work is complete with test results and is fully illustrated with drawings, charts and tables.

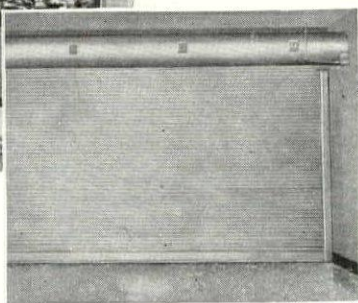


KINNEAR "AKBAR" ROLLING FIRE DOORS

automatically block spread of flames



These dependable, positive-action doors combine modern styling and fire protection at this entrance to Penney's in the smart, new Terrace Plaza Hotel Building in Cincinnati.



Outstanding structures here and abroad rely on Kinnear "Akbar" Rolling Fire Doors for automatic fire protection. These all-steel, fire-proof doors set up a "road block" against flame-spreading drafts. They coil overhead when not in use, but promptly seal off doorways, windows, and corridors at the threatening approach of fire. Positive closure is certain because Kinnear Rolling Fire Doors are pushed downward automatically by a strong auxiliary spring. They are controlled in downward speed by a special safety device, to avoid personal injury and to lessen floor impact. If raised after closure as an emergency exit, the doors are closed again automatically by the counterbalance spring.

Lack of fire-door protection has proved an important contributing factor to losses in major fires. Akbar Fire Doors are approved and labeled by Underwriters' Laboratories. In many cases these doors save enough in lower insurance rates to repay their cost in two or three years. Built to fit building openings of any size, they can be equipped for daily service use, with or without motor operation. When extra fire protection is not required, regular (non-labeled) Kinnear Rolling Doors are preferred for service use. Write for details.

THE KINNEAR MANUFACTURING COMPANY

KINNEAR
ROLLING DOORS

SAVING WAYS
IN
DOORWAYS

FACTORIES
1640-60 Fields Ave., Columbus, Ohio
1742 Yosemite Ave., San Francisco, Calif.
Offices and Agents in Principal Cities

INSULATION. Silvercote's Handbook of "U" Values. Silvercote Products, Inc. 161 East Erie St., Chicago, Ill. 108 pp. 8½ x 10½ in. Price \$1.

This new handbook lists 12,852 certified, FHA approved "U" values, or overall heat transmission coefficients, for various wall, floor and ceiling sections; many of them containing Silvercote surfaces. In addition, it describes six insulation materials faced on one or both sides with Silvercote heat reflective surfaces. A feature of the time-saving, reference manual is that it provides calculated summer "U" values as well as winter "U" values for any set of building conditions. Heretofore, most published "U" values have considered heat transfer entirely in terms of winter temperature conditions, a related to fuel savings. The new handbook, however, includes summer "U" values as well, because of the reflective insulation's efficiency in checking the flow of heat downward. The FHA approved calculations cover virtually all types of standard construction, plus a wide range of building materials and various combinations of reflective and conductive materials. The 238 wall, floor and ceiling sections illustrate the proper position of insulation to obtain the stated "U" values. Silvercote is offering the booklet free to qualified architects, engineers and builders. Charge to others is \$1.

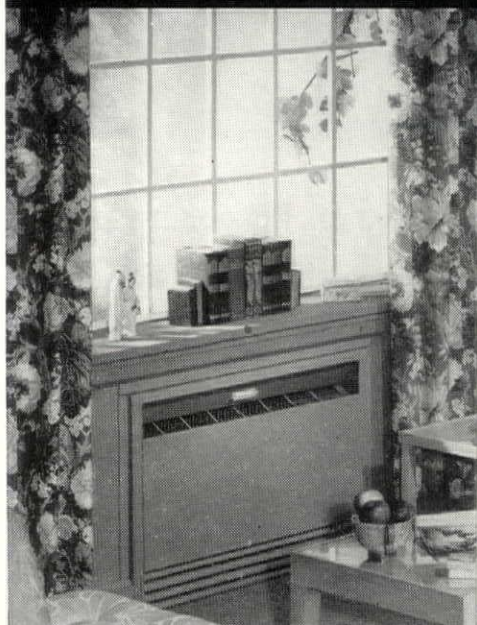
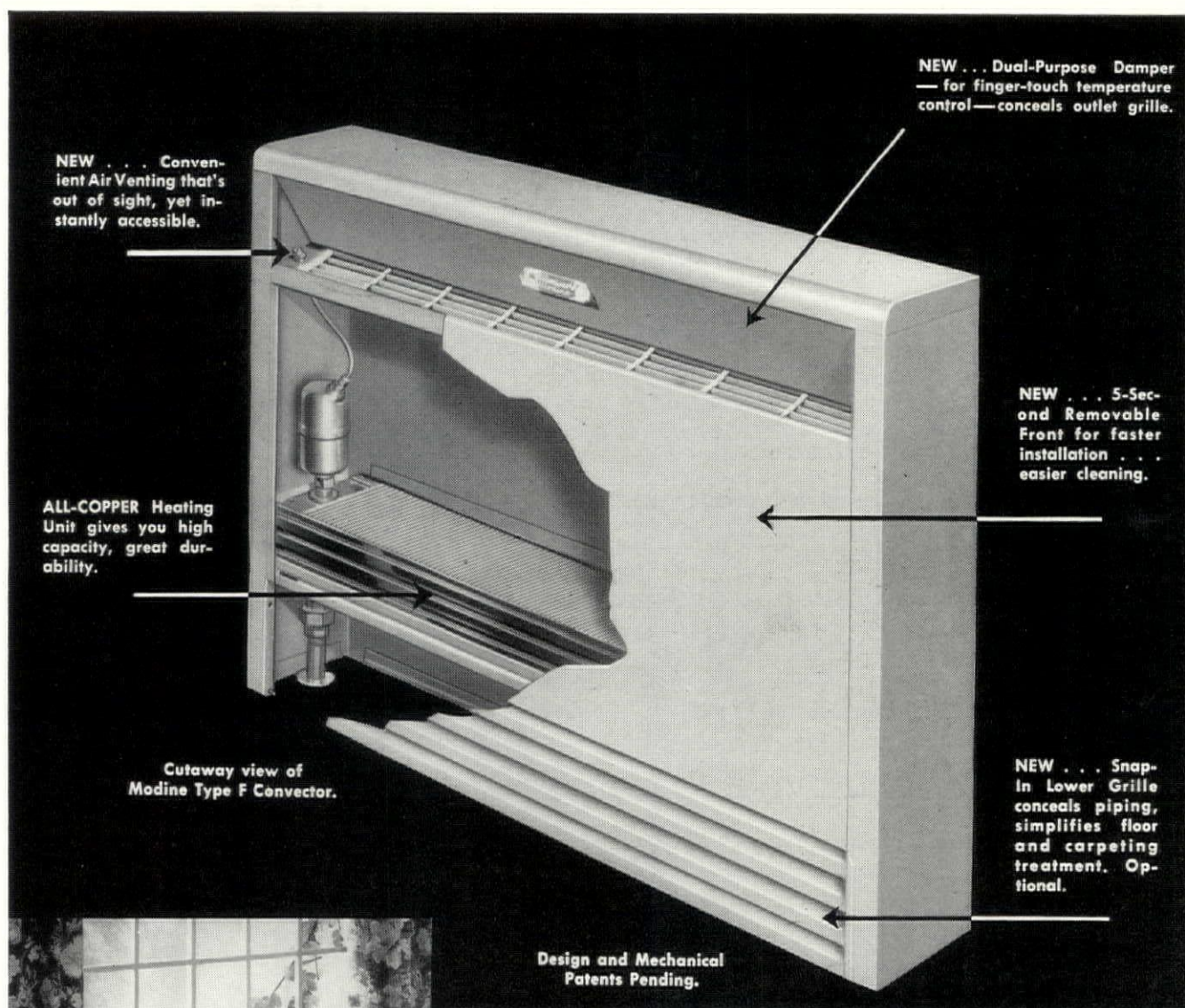
LUMBER. Douglas Fir of the Western Pine Region. Directory of Membership, Western Pine Association. Western Pine Association, 510 Yeon Bldg., Portland, Ore. 52 pp. 16 pp. 8½ x 11 in.

The third in a series of species books, this reference manual includes data on the properties, uses and grades of Douglas Fir of the Western Pine region. Well illustrated, the introduction discusses the supply, characteristics, advantages, workability, etc., of Douglas Fir. Following pages feature its adaptability in residential and commercial construction. In the section on grading, full page pictures illustrate typical pieces of each grade while text describes the example and gives a general outline of the grading rules. Indexed, the book also carries a listing of standard manufactured sizes and an alphabetical catalogue of uses of Douglas Fir with recommended grades. Dated Jan. 1, 1949, *The Directory of Membership* lists 303 sawmills, their locations, sales office addresses and a percentage breakdown of their productions by species. With 47 more mills than were included in the June '48 directory, the work also includes a list of products and specialties manufactured and handled by each.

METAL PARTITIONS. Mills Metal Partitions, Catalogue No. 49-0. The Mills Co., 965 Wayside Road, Cleveland, Ohio. 44 pp. 8½ x 11 in.

Mills complete line of metal partitions and accessories are described, illustrated and detailed in this well organized booklet. After a discussion of the partition's advantages—mobility, appearance, wirability, economy, adaptability and sound control—each of the four partition types are treated separately. The section dealing with the Flush Pilaster partition not only includes construction features and erection data but also incorporates information on wall linings, railings and numerous accessories supplied in matching Flush Pilaster design. This section and those devoted to the Executive, Semi-flush and Commercial types of partitions are complete with construction details and specifications. Mills industrial toilet enclosures; doors, top fillers, steel ceilings, wickets, etc., receive attention in closing pages. (Continued on page 164)

NEW Features meet **REAL** Beauty in the *NEW Modine* CONVECTOR



Functionally styled, the new Modine Type F Convector (shown fully recessed) adds beauty to rooms, eliminates recessing problems common to conventional convectors. It's ideal for free-standing installations, too.

EXCLUSIVE New Features Simplify Installation Increase Operating Convenience . . . Add to Appearance

Biggest news in convector radiation history — that's the new Modine Convector. Its entirely-new installation, control and maintenance features make it the *better* way to heat the modern apartment, new home, school, office or hospital. Choose from four types, many sizes, for one- and two-pipe steam and hot water systems. For the full story, call your Modine Representative. He's listed in the "Where-to-Buy-it" section of your phone book. Or write direct. Modine Manufacturing Company, 1507 Dekoven Avenue, Racine, Wisconsin.

Send for New Modine Convector Catalog Today!
Special 1-Pipe Steam Convector Bulletin Also Available.

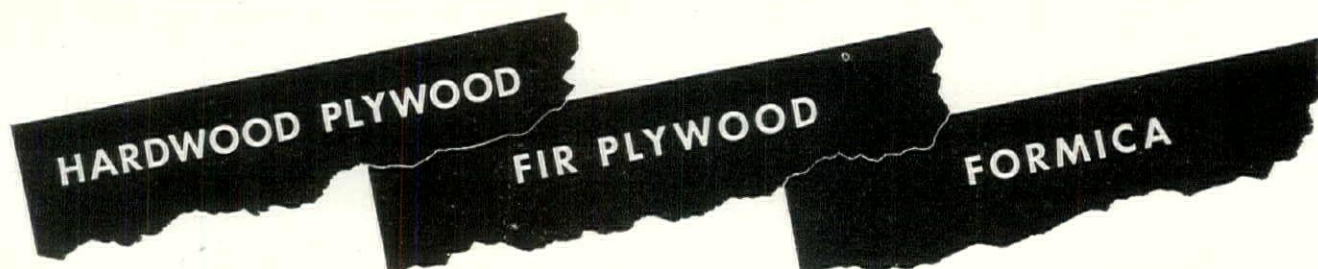


Modine CONVECTORS

R-1015-r

Roddiscraft

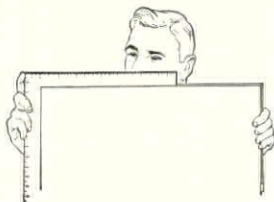
Symbol of Quality for over 50 Years



Belt sanded to
satin smoothness



Edges clean
as a whistle



Corners . . .
precision true

The knowledge and experience gained through more than fifty years of working with wood is built into Roddiscraft plywood. You can see the difference in faces, edges, corners—it's a quality product.

You know Roddiscraft knows your needs when

you deal with our warehouses. They are service-centers equipped and stocked to meet the needs of customers in each area.

This combination of quality products and service keyed to your needs is a Roddiscraft tradition.

Fir Plywood

Available in both interior and exterior grades. Complete warehouse stocks in standard sizes and thicknesses.

Roddiscraft Hardwood Plywood

Lumber and veneer core — available in a variety of domestic and foreign woods. Standard sizes and thicknesses available for immediate delivery from warehouse stocks.

Formica sheet stock available in a wide variety of colors and patterns.

NATIONWIDE Roddiscraft WAREHOUSE SERVICE

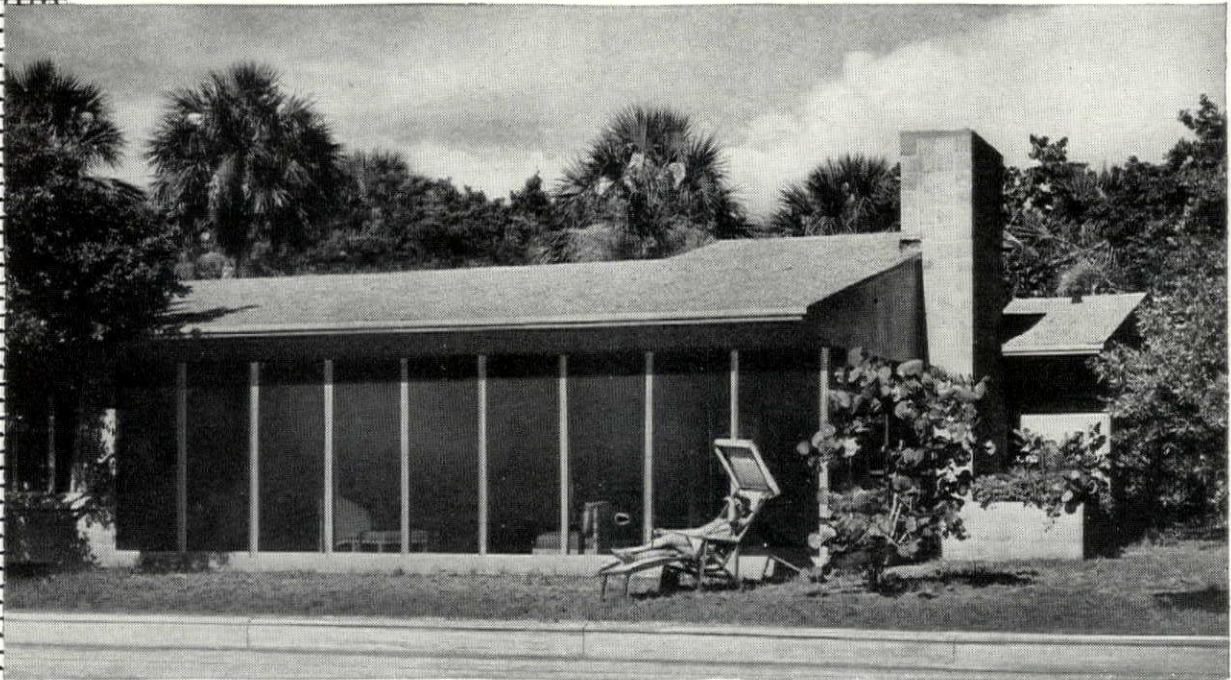
Cambridge 39, Mass. . . 229 Vassar St.
Chicago 8, Ill. . . 1440 W. Cermak Rd.
Cincinnati 2, Ohio . . 457 E. Sixth St.
Dallas 10, Texas . . . 2800 Medill St.
Detroit 14, Mich. . . 11855 E. Jefferson St.
Kansas City 3, Kan. . . 35-53 Southwest Blvd.
L. I. City, N. Y. . . Review & Greenpoint Ave.
Los Angeles 11, Calif. . . 2860 E. 54th St.

Louisville 10, Ky. . . 1201-5 S. 15th St.
Marshfield, Wis. . . 115 S. Palmetto St.
Milwaukee 8, Wis. . . 4601 W. State St.
New York 55, N. Y. . . 920 E. 149th St.
Port Newark 5, N. J. . . 103 Marsh St.
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San Antonio, Texas . . 727 N. Cherry St.
San Francisco 24, Cal. . 345 Williams Ave.

DEALERS IN ALL PRINCIPAL CITIES

Roddiscraft
Roddis Plywood Corporation
Formerly Roddis Lumber & Veneer Co.
MARSHFIELD, WISCONSIN

Why Florida Architect Chose LUMITE



“Our experience shows nothing else stands up like this plastic screening.”

RALPH TWITCHELL
RUDOLPH & TWITCHELL
Sarasota, Florida

SPECIFICATIONS

EFFECTS OF ACIDS, ALKALIS AND SOLVENTS
—Essentially none.

NON-INFLAMMABLE—Will not support flame.
... is self-extinguishing. Melting point, 340°F.

WATER ABSORPTION—Immersion 24 hours, less than 0.1%.

TENSILE STRENGTH, ULTIMATE (of filament)
—Up to 40,000 lbs. per sq. in.

IMPACT STRENGTH—Greater than conventional type screening.

INSTALLATION. Cut with ordinary scissors. Fold cut edges under 1/2". Tack or staple the screening smoothly and evenly every 1 1/2". Being elastic Lumite will automatically draw itself into a snug, firm fit. For correct methods of machine framing, consult Lumite engineers.

Like thousands of other architects in localities where screening is subjected to severe climatic conditions, Mr. Twitchell has found that LUMITE provides the happy answer to screening problems.

Here is a screening that has absolute immunity to rust, rot, or corrosion. Neither high humidity, salt spray nor acid smoke has any effect on this amazing new plastic material. It cannot support mildew or fungus.

Because LUMITE is rustproof and corrosion-proof it cannot stain paint under windows . . . it need not be painted to prevent rusting.

LUMITE has greater impact strength than conventional screen material . . . it will never sag nor bulge, when properly framed. Punch it. It gives then regains its original shape.

LUMITE saves your clients money—costs little more than the cheapest screen and less than any other quality screening—only 11½-12¢ per square foot—retail.

Sold through hardware, lumber and building supply dealers and screen manufacturers.

For further information, consult
Sweet's File or write Dept. AF-2.

LUMITE DIVISION
Chicopee Manufacturing Corporation
47 Worth Street, New York 13, N. Y.

*Registered Trade-mark

LUMITE

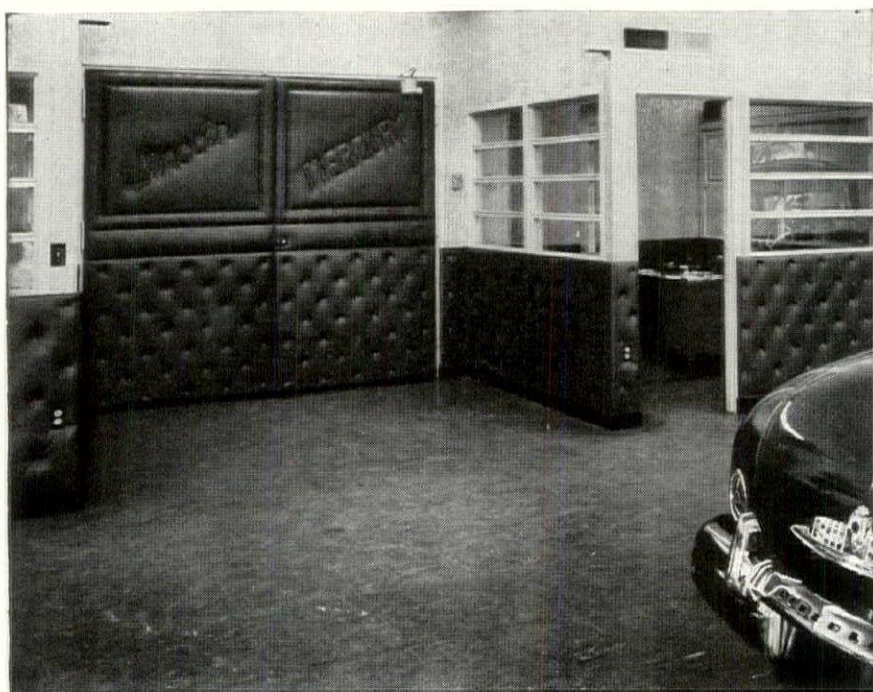
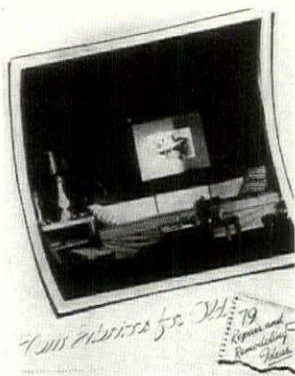
woven of saran



TECHNICAL LITERATURE

WALL PANELS. New Interiors For Old. The Upson Co., Lockport, N. Y. 32 pp. 8½ x 11 in. Price 25 cents.

How Upson Quality Panels transform dingy rooms into colorful, livable areas are well illustrated in this attractive, four-color brochure. Drawings and color photographs present 79 ideas for remodeling the various rooms of a house while text explains how the panels are applied directly over cracked and broken walls and ceilings to achieve the new appearance. Other sections are devoted to descriptions of how the panels can be used to construct storage walls, clothes closets, etc.; and illustrations of the various types of Upson panels, paneling designs and moldings available. Suggestions on color combinations and hints on how to go about remodeling are offered in the closing pages along with brief data on how the job may be financed.



Kalistron dado and doors of Lincoln-Mercury showroom, Harry Newman Motor Sales, Detroit, Mich. Dark red Kalistron in tufted effect; walls in Avodire Flexwood, Installation by The Nichols Co., Detroit, Mich.

NOW! Walls that don't show wear

"Kalistron for long wear and glowing beauty"—Yes, dados, doors and walls will always look clean, unmarred and beautiful when covered with remarkable new Kalistron because—

COLOR IS FUSED TO UNDERSIDE

Kalistron starts as a strong, transparent sheet of specially compounded Vinylite*. The color is fused to the underside by the exclusive Blanchardizing process so that wear cannot touch Kalistron's color! A protective, suede-like backing is added.

Thus, color is protected front and back . . . cannot show wear.

Kalistron is scuff-proof, scratch-proof, water-proof; can't chip, crack or peel; practically stain-proof, easy to clean—simply wipe with a damp cloth.

Kalistron "handles" beautifully. It fits well around corners, curves, edges. Any competent contractor can easily apply Kalistron—a special water-soluble adhesive will bond Kalistron permanently.

Wherever durability and beauty must go hand in hand, specify Kalistron—its guarded beauty wears on and on.

Kalistron

COLOR FUSED TO UNDERSIDE
PLASTIC COVERING MATERIAL

Distributed by:

UNITED STATES PLYWOOD CORP., 55 West 44th St., New York 18, N. Y.

*Registered Trade Mark

GOLF FACILITIES. A Handbook of Golf Club Organization, Construction, Management and Maintenance. National Golf Foundation, 407 S. Dearborn St., Chicago, Ill. 80 pp. 8½ x 11 in. Price \$2.

Containing a wealth of information for those interested in golf facilities, this manual answers many questions pertaining to the organization, construction, management and maintenance of a golf-club. The contents cover in detail the organizing and financing of a club, publicity, membership drive planning and building the course, the course budget, landscaping of the course and clubhouse, and course maintenance. In addition, the book fully discusses sand green construction, Bermuda grass maintenance, planning the golf clubhouse and the professional's shop, caddy management, model by-laws and service helps. Illustrations include numerous photographs with informative captions; design map for community center; green and approach contours; grading, drainage seeding and planting plans and green construction details.

ARCHITECTURAL ALUMINUM SHAPES. Catalogue No. 48. Alcoa Aluminum. J. G. Braun Co., 609 South Paulina St., Chicago, Ill. 34 pp. 8¾ x 10¾ in.

Catalogue No. 48 probably shows the largest variety of architectural aluminum shapes and miscellaneous aluminum tubing, pipe, castings, etc., stocked in any warehouse in the U. S. The designs illustrated include: bars, angles, channels, tubes, handrails, columns, balusters, baluster bars, railing panels, ornamental castings, moldings; storefront, glass, casement and door sections; and aluminum copings. Information on the length, weight and alloy of each is given in a numeric index.

ORNAMENTAL IRON. Art In Iron. Price List For Builders and Dealers. Artcraft Ornamental Iron Co., 724 E. Hudson St., Columbus, Ohio. 40 pp. 4 pp. 8½ x 11 in.

Art In Iron details and briefly describes ornamental iron products made by Artcraft. Numerous interior and exterior railings; porch columns and brackets; panels, balcony signs, markers, drapery rods, accessories etc., are featured. Outstanding jobs the company has executed are also illustrated with full page photographs. Price list for builders and dealers also gives shipping data.

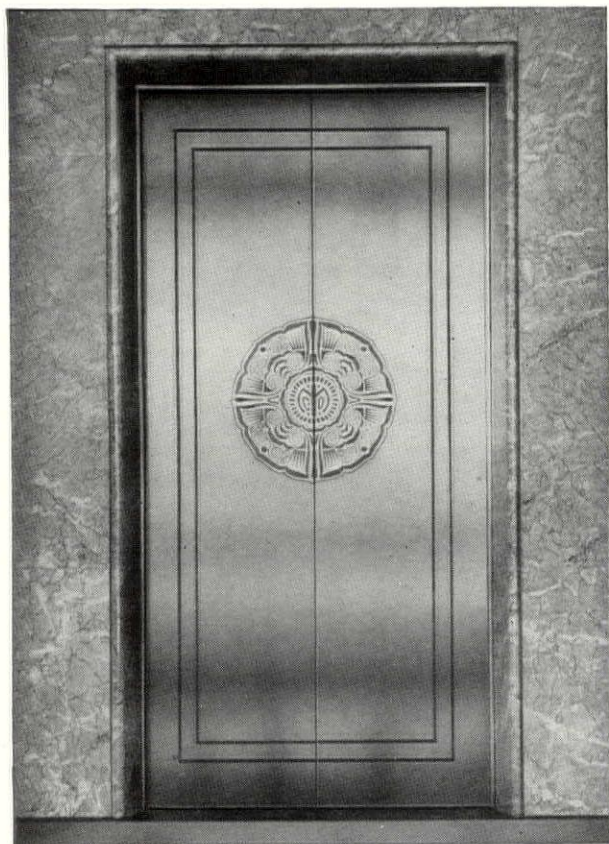
DOORS. Fenestra Metal Doors, Swing and Slide. Detroit Steel Products Co., 3111 Griffin St., Detroit 11, Mich. 16 pp. 8½ x 11 in.

In this catalogue are descriptions, installation instructions and specifications for the new Fenestra stock hollow metal entrance door and various other stock hollow metal swing and slide doors offered by the manufacturer. Frames, hardware and locks for the swinging doors are also illustrated and described.

RUBBER TILE. New Horizons in Floor Design. The Danbury Rubber Co., Inc., Danbury, Conn. 64 pp. 11 x 8½ in.

New Horizons in Floor Design features 54 different floor designs executed in Wavedge, Danbury Rubber Co.'s new specially cut rubber tile. It shows numerous border and field patterns, center pieces, repeat motives and special designs, emphasizing the fact that Wavedge offers the curve as a standard design element. A general description of Wavedge, with technical and installation data are found in the closing pages.

(Continued on page 168)



Quiet Elegance ...FOR THE CARRIAGE TRADE

.....

Dahlstrom first floor elevator entrances J. Magnin & Co., San Francisco, Cal
Timothy L. Pflueger, Architect.
Typical floor elevator entrances also by Dahlstrom

NO humdrum elevator design here! These etched bronze doors with bronze frames harmonize with all the refinement and beauty that grace I. Magnin's exclusive San Francisco store.

Dahlstrom elevator entrances are fashioned to suit a particular business and the motif of the building it serves. The entrance in a fashion center, for example, would not be appropriate in an office building, nor would a theatre design suffice for a college or a cathedral. All

Dahlstrom entrances are quality built for years of sturdy service and lasting beauty. For 43 years architects and building planners of stores, office buildings, apartments, auditoriums, theatres, etc. have looked to Dahlstrom to help them solve any and all elevator entrance problems. See your Dahlstrom representative before choosing elevator entrances.

.....

DAHLSTROM

METALLIC DOOR COMPANY, JAMESTOWN, N. Y.

Representatives in Forty Principal Cities

**Write for these
FREE BOOKLETS**



Four colorful folders on Dahlstrom Elevator Entrance Opening Types containing detail drawings, descriptions and specifications to help you plan new elevator entrances. Write for your set.

Air conditioning where water is a problem

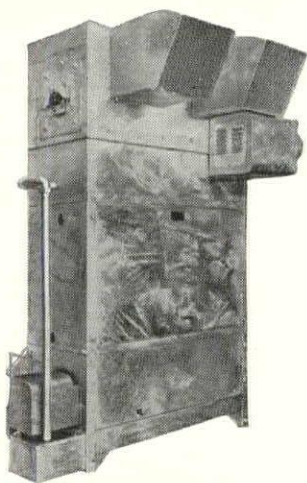
IN LOCALITIES where there are restrictions on use of water, an inadequate or uncertain supply, high water temperatures and rates, or inadequate disposal facilities, Carrier Evaporative Condensers open the way for efficient, economical air conditioning. Carrier-invented and Carrier-developed, they have proved themselves practical in a wide variety of air conditioning installations.

Used in place of water-cooled condensers, Carrier Evaporative Condensers effect material savings in operating costs. As compared to water-cooled condensers, they save up to 95% of the water required. They also use up to 15% less electrical power—and, because so much less water is pumped than in cooling towers, spray ponds or wells, they effect savings of from 75% to 90% in pumping costs. Scientifically engineered, sturdily built and treated against scale and corrosion, they provide a long life of dependable operation and high efficiency.

Ease of installation, too, is a feature of Carrier Evaporative Condensers. Only a small make-up water supply and waste are necessary. They may be located indoors or outdoors—and there's a complete range of sizes.

Carrier engineers have worked closely with architects and consulting engineers for many years. They welcome the chance to be of service to you. Carrier Corporation, Syracuse, New York.

CARRIER EVAPORATIVE CONDENSER



Carrier

AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING

The THORO System

... of ...

MASONRY PROTECTION

THE ORIGINAL PIONEER PRODUCTS FOR
SEALING AND SANITIZING CELLARS ON
THE INSIDE AGAINST WATER PRESSURE

WATERPLUG, THOROSEAL, QUICKSEAL, and allied materials comprise the nationally-known and favorably-accepted method of masonry surface protection.

Through the intervening 37 years, trials, tests and changes have been made, to reach perfection.

Today, we supply to the construction industry products of such merit and efficiency as have become generally recognized as being ideal for the function for which they were originally designed.

THOROSEAL, Masonry Wall Coating of high structural strength, to fill, seal, sanitize, confine and choke off alkali activity and keep water out of the wall, above and below grade, inside and outside masonry surfaces. Points B, 1, 2, 3, 4, 6 on accompanying chart.

QUICKSEAL, A finer, smoother finish coat which further adds to sealing of the surface and provides an extensive range of exquisite colors; Color Card No. 32. Points C, 1, 2, 3, 4 on accompanying chart.

WATERPLUG, Nonmetallic, nonshrink, hydraulic cement to prevent corrosion and water from entering at vital points. Points A-1, 2, 3 on accompanying chart.

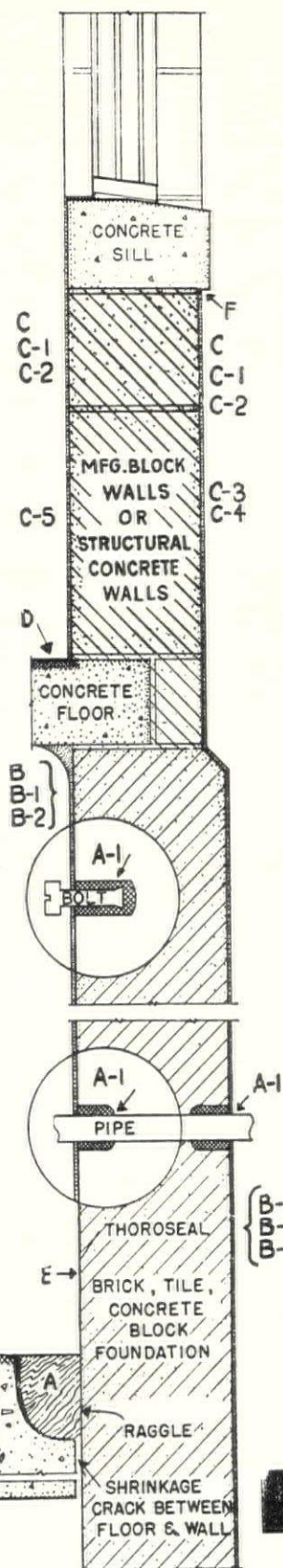
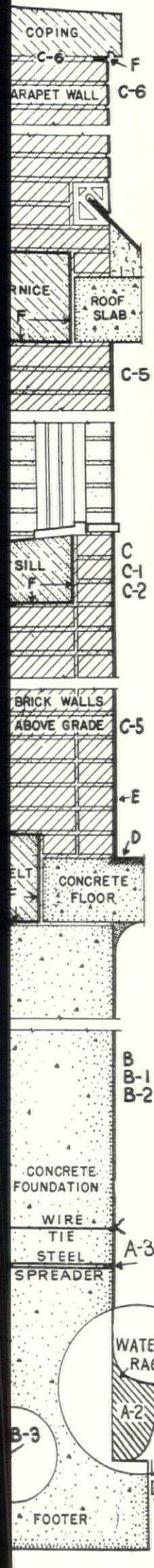
VABAR, A perfect plaster bond for interior surface of exterior walls to protect interior plaster and decorations. Point 5 on accompanying chart.

THOROSEALING masonry surfaces prevents corrosion, alkali activity, protects reinforcing rods, interior plaster, furnishings, machinery and all expensive equipment contained within the structure.

An enlarged copy of accompanying chart, with specifications covering each of the several applications and a copy of our 20-page pictorially described brochure, is available.

A card or letter will bring you this information for your files.

STANDARD DRY WALL PRODUCTS, INC.
BOX X NEW EAGLE, PENNA.



This Chart Available in full size, for your Office Files

Standard Dry Wall Products Inc.
BOX X, NEW EAGLE • PENNSYLVANIA

Write—
for our
brochure
No. 17-A

TECHNICAL LITERATURE

REQUESTS FOR LITERATURE

ADOBE HOME BUILDERS, P. O. Box 1421, Richmond, Calif.

ARNOLD C. AMUNDSEN, JR., 2107 Bonair Drive, Seattle 6, Wash.

GENERAL MILLS, INC., Att.: Plant Engineering Dept., 400 Second Ave., S. Minneapolis 1, Minn.

PIERRE BEAUVAIS, architectural student, 3518 Dorion, Montreal, Canada.

FRANK M. BURKE, designer, 360 Bolinas Road, Fairfax, Calif.

A. BURNS CADWALADER, designer-draftsman, 1525 Jay St., Redding, Calif.

HARLEY EARL CORP., product styling, design consultants, 9407 Chalmers Ave., Detroit 13, Mich.

HOWARD W. GEYER, architectural student, 211 8th St., Troy, N. Y.

HAROLD I. GULLAN, 2722 Pennsylvania Ave., Baltimore 17, Md.

R. D. JONES, architectural student, Sigma Nu House, Auburn, Ala.

HENRY C. KLØSTAD, JR., 1003 E. California St., El Paso, Tex.

JOSEPH R. KREMEN, architect, 4232 Kimball Ave., Chicago, Ill.

LATISTEEL, INC., manufacturers of factory fabricated buildings, 3272 E. Foothill Blvd., Pasadena 8, Calif.

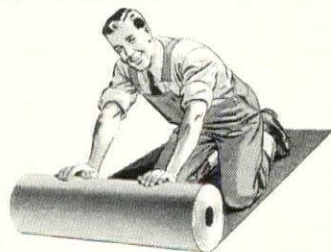
L. S. MACIEJESKI, architectural student, 21 Grosvenor St., Toronto, Ontario, Calif.

EDWARD KRISTIAN MAHLUM, architect, 1305 Republican St., Seattle 9, Wash.

A. C. MARCONI, engineer, 31 D Main St., Rutland, Vt.

JOHN E. MOOMAW, draftsman, 1028½ W. Market St., Greensboro, N. C.

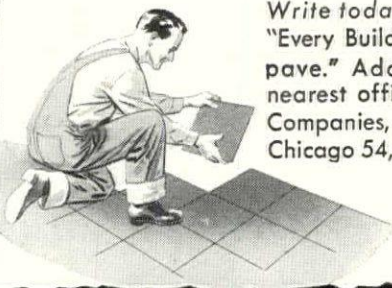
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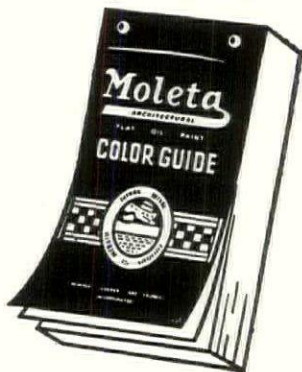


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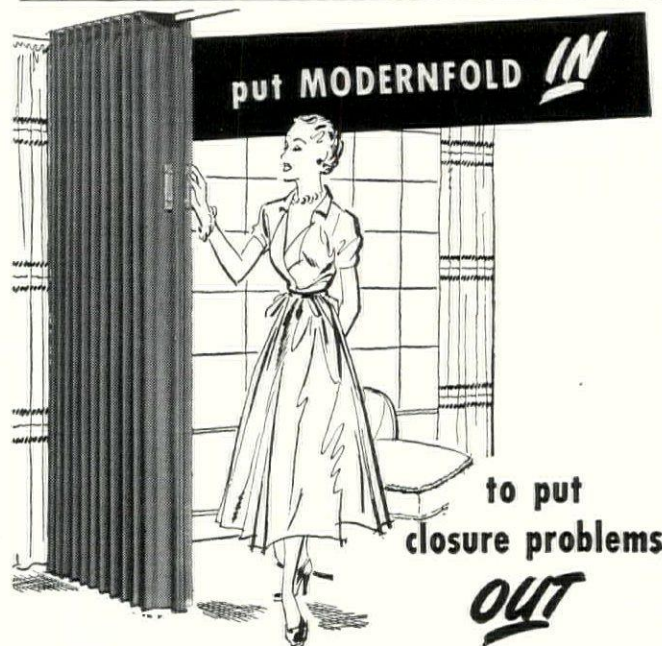


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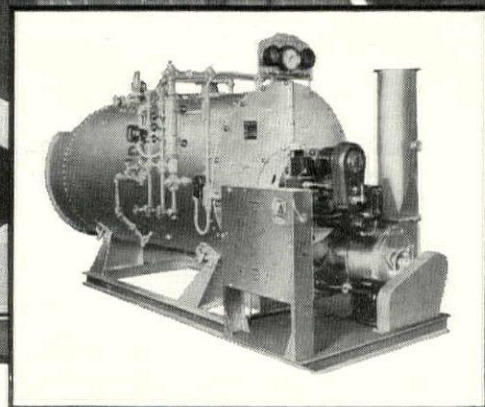
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1. Fully Automatic Operation—even with Bunker C or No. 6 oil and all types of commercial gas.
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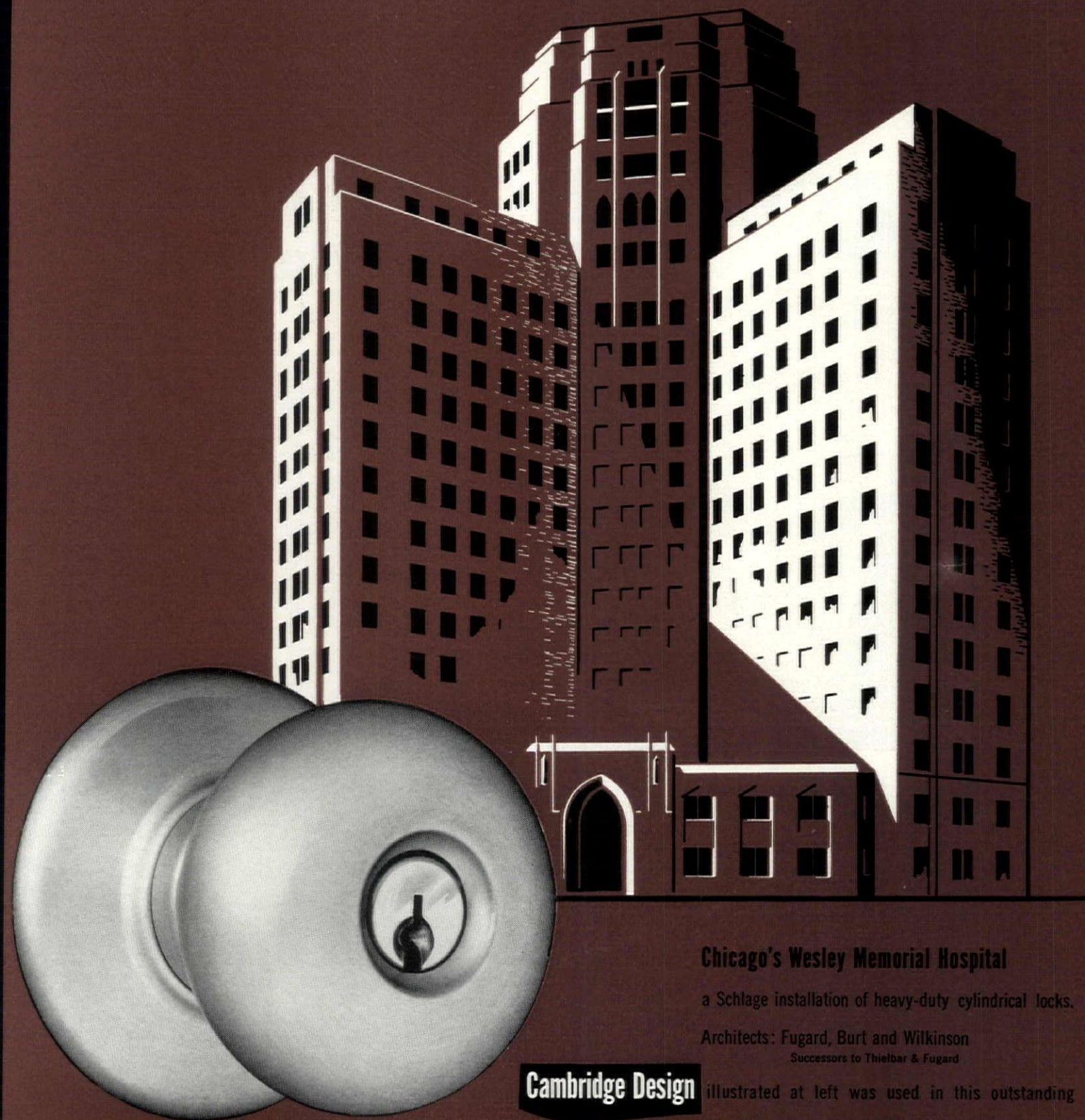
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Chicago's Wesley Memorial Hospital

a Schlage installation of heavy-duty cylindrical locks.

Architects: Fugard, Burt and Wilkinson
Successors to Thielbar & Fugard

Cambridge Design

illustrated at left was used in this outstanding hospital.

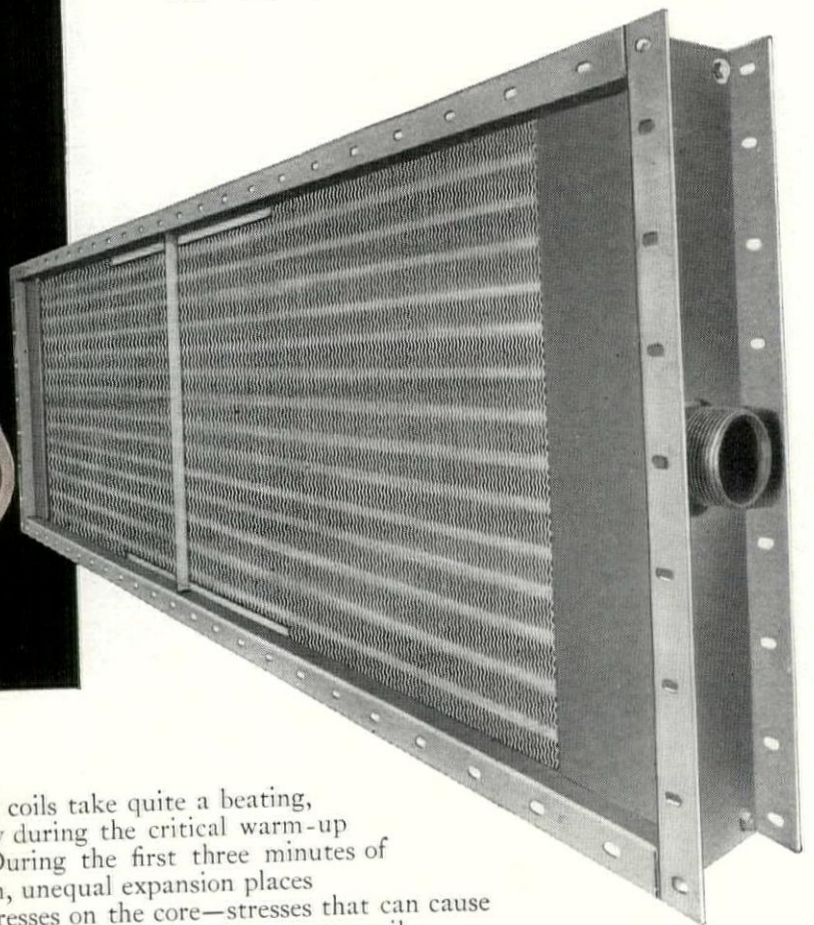
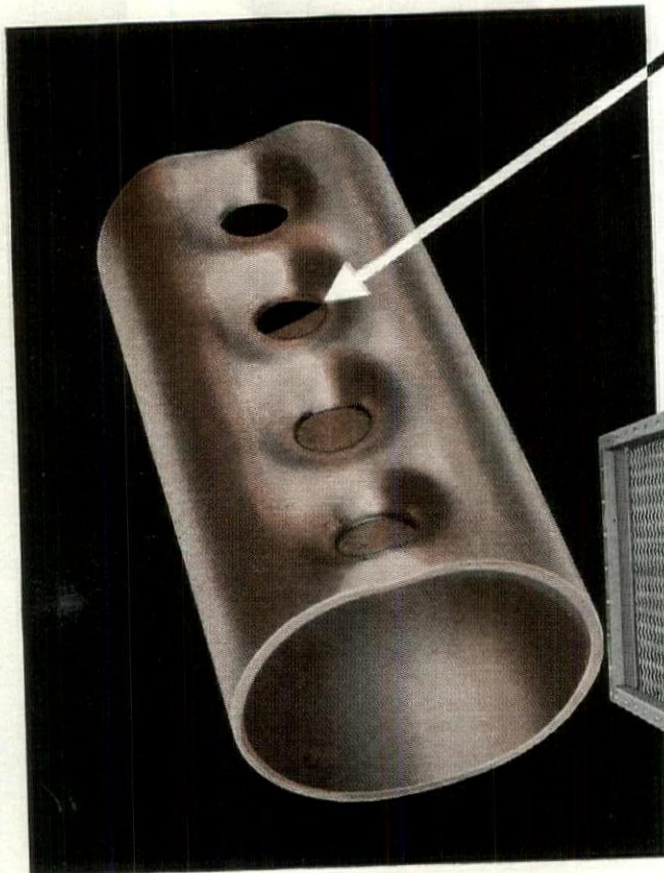
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Pardon the *intrusion*

...but it makes
a better coil!



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Intruded tube holes—
elliptical headers—two
reasons why McQuay
blast coils last longer.
Inherent flexibility of the
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semi-bellows effect of
the intruded tube holes
puts warm-up loads
where they belong—on
the header and not on
the core of the coil.

Blast coils take quite a beating, especially during the critical warm-up period. During the first three minutes of operation, unequal expansion places heavy stresses on the core—stresses that can cause eventual breakdown of the average coil.

McQuay blast coils are engineered to put the load on the heavy wall headers rather than on the thin wall tubes. McQuay headers in turn are designed to compensate for these stresses by flexing with the expanding or contracting core.

Flexible eliptube headers with intruded tube holes mean longer coil life despite operational rigors. Ripple-Fin construction with plate-type fins locked to tubes by hydraulic expansion means maximum heat transfer efficiency year after year. For all coil requirements and especially for high pressure applications it's good planning to specify McQuay. Representatives in principal cities, or write McQuay, Inc., 1609 Broadway Street N.E., Minneapolis 13, Minnesota.

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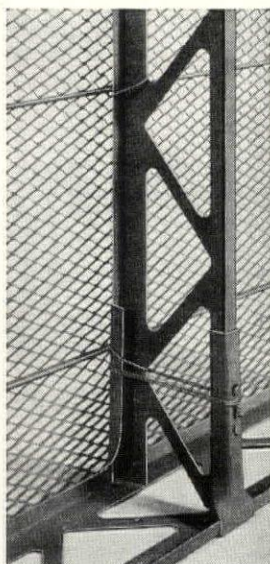
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Wheeling building materials help you do a good job better—give complete satisfaction year after year. For 59 years, the Wheeling Red Label has stood for matchless quality. Write for full details on the following products:



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For quick assembly into non-bearing hollow plastered steel stud and metal lath partitions, or free standing wall furring, from few unit parts.

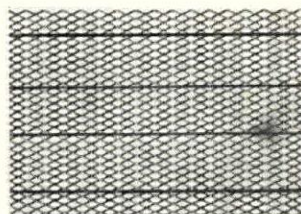


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Designed for fast, economical construction. Lengths up to 22'6" permit assembly over four supports... serve as continuous beams. Designed for fast, economical construction. Made with Cop-R-Loy Steel to resist rust, corrosion.

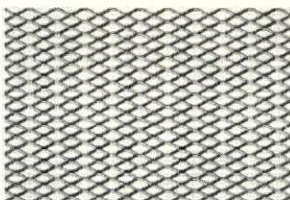
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It's stiff to the trowel, handles easier, faster, requires no stretching. Four sets of No. 11 rods welded through the mesh provide "stiff beam" reinforcement.



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For easy, fast installation, sheets are flat, perfectly straight with parallel sides. It's the stiffest lath of its type. Impervious to rust.



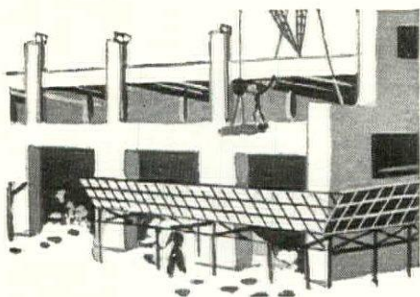
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Protects exposed plaster corners. Offers a rigid, straight line as a guide for workmen. Extremely adaptable for arch work.

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HOW FORTUNE SELLS

STRUCTURAL MATERIALS

It happened on page 118 in August, 1948. A manufacturer of facing tiles used a four-color page in FORTUNE, and in October inquiries were "still averaging 18-25 per day."

"Some of the companies who responded to the advertisement in FORTUNE were Gillette, Ford, Union Pacific Railroad, Dow Chemical, Illinois Society of Architects, Eastman Kodak, Burroughs Adding Machine, Shell Oil, Squibb & Sons, Republic Aircraft and Phillips Petroleum," the report reads. "And there were letters from architects and general contractors from all over the country, three libraries, and many from the advertiser's own dealers, each of whom forwarded requests from 15 to 20 people."

In addition, this advertiser reinforced its FORTUNE campaign with direct mailings of FORTUNE's merchandising folders, and is "tremendously pleased with the response from top management men."

WAREHOUSING SERVICE

It happened on page 160 in September, and on four other half-pages this year. A company advertising a field warehouse receipt service reported that it was "particularly impressed by the character of our inquiries which have opened up sales communication for us to a sizeable list of firms rated as triple A by Dun & Bradstreet."

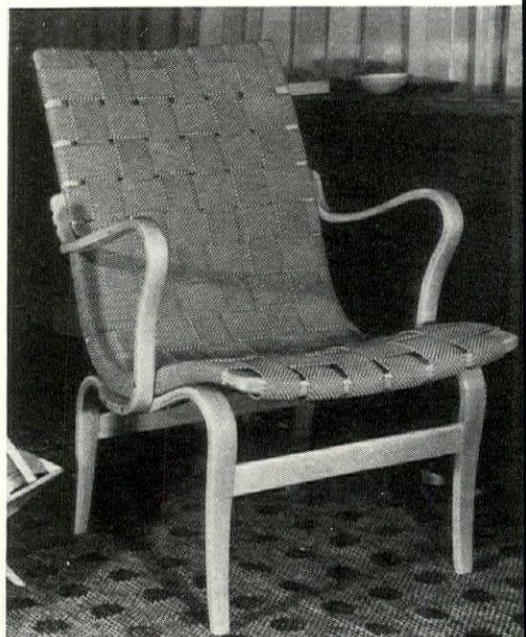
"Our experience with FORTUNE thus far gives us the impression that it delivers a message from the management of your advertisers to the buying executives of U. S. Industry in a direct and influential way."

It happens on every page, every month that advertisers in FORTUNE are "impressed by the quality" and "amazed by the quality" of the market they reach, and no wonder: a survey just completed reveals that 84.2% of FORTUNE's quarter-million subscribers are engaged in business and industry, over one-third of them in the management of concerns with annual sales volume of \$5 million or more.

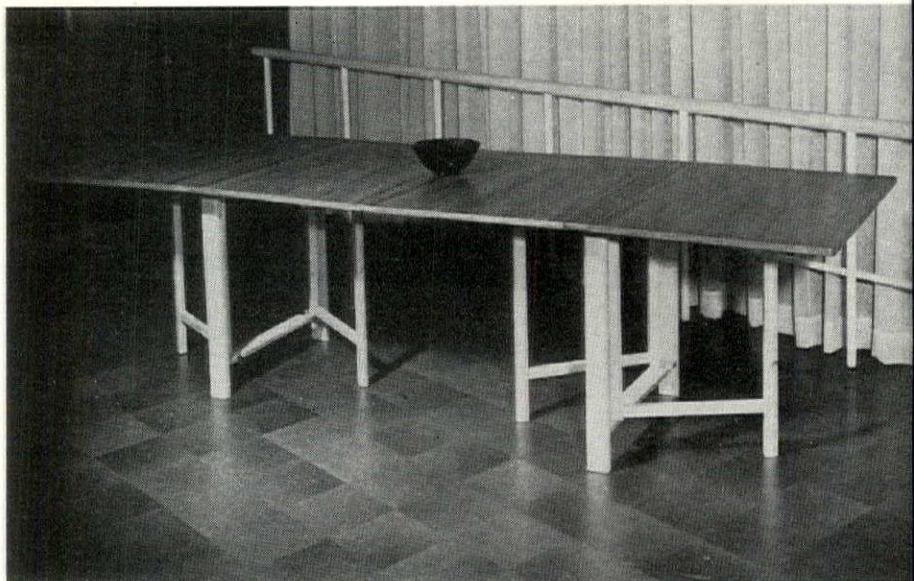
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The Magazine of Managerial Leadership

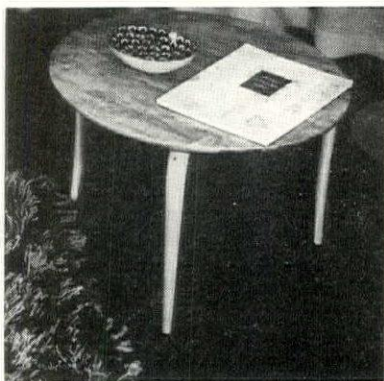
POSTWAR MATHSSON FURNITURE combines pre



Upright chair is \$44 without arms; with them (as at right), \$65. Dining table (below) 10½ ft. long, can shrink to 7½ in. side-table status (\$198).



Familiar Mathsson pieces, lounge chair (opposite page) and coffee table (below) are shown at Bonnier's with new bookcase and writing-table group.



Hank Clinton Studios

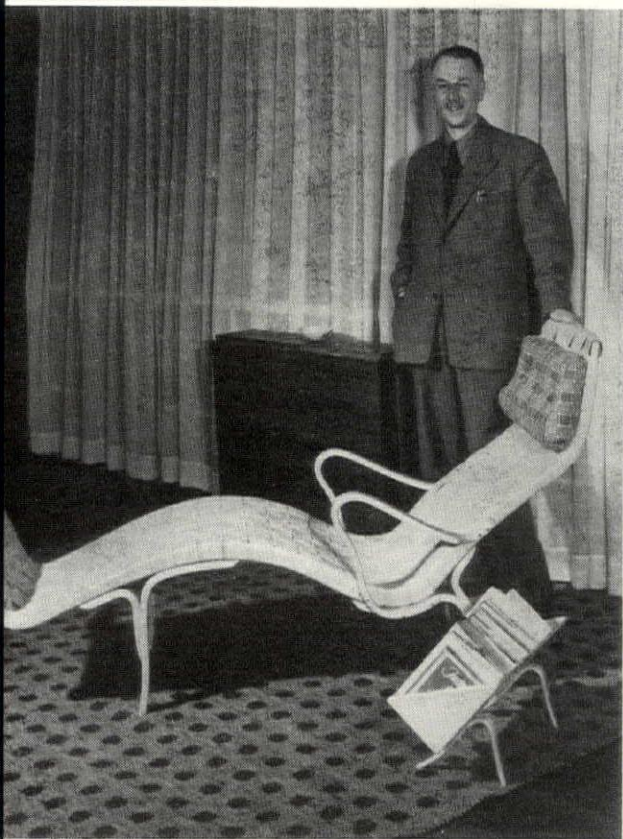


...with added comfort

...the first U. S. showing, since the war, of furniture by Karl Mathsson, Swedish designer, reveals him still refining the forms of his already famous plywood chairs and expandable tables. The new upright and lounge chairs are not only more delicately detailed than ever but are proof against the hazard of plywood's lightness—a tendency to tip over.

Basic materials of the Mathsson chair are a molded beechwood frame and webbing of a new paper compound, guaranteed not only washable but 75 per cent stronger than cotton. Plywood arms (on whose design Mathsson has experimented for five years) may be bought with the chair, or added later on. Upholstery pads covered with cotton, wool or superlatively luxurious lamb skin are also available for inter or interchangeable use on both types of chairs.

The most dramatic of Mathsson's tables is one only 7½ in.



...side in its everyday, abbreviated state, but which can be opened to dining size for 3, 6 or even 12 people. This miracle of space-saving is effected by use of double gate-legs plus an extra set of leaves which fold underneath in M-position. A full size dining table and several round coffee tables are also included in the group.

On a par with the expandable table for compact multi-purpose efficiency is a bookcase of simple pole-and-shelf construction that serves, too, as magazine rack and writing desk. Its floor-to-ceiling bracing insures firmness, while the simplicity of its members makes it adaptable for a great variety of uses and locations. Bonnier's in New York City, (see p. 107) is at present the only U. S. agent for the new Mathsson furniture which is available six weeks after order.—S. K.

(Continued on page 176)

Name Your Stain!

It won't mar the lasting beauty of
Varlar Stainproof Wall Covering



STAINS of all kinds wash right off beautiful stainproof Varlar, quickly and easily, with ordinary soap and water! Ink, food, hair tonic, cold cream, crayon, shoe polish...all the common "indelible" staining agents, plus many uncommon ones...wipe right off this remarkable new modern wall covering.

Stainproof Varlar brings architects a versatile new medium for wall decoration...suitable for use in any room or hallway, public or private, domestic or commercial. All 93 stunning styles...florals, plaids, weaves, pictorials, stripes and tiles...go up easily as wallpaper. Varlar allows new wall beauty, protection and cleanliness never before possible, cuts wall-maintenance costs every day of its long-life service.

Stainproof Varlar has no surface coating to crack or peel. No brittle plastic "skin" to chip or discolor. Varlar's rich new coloring and stain resistance go *clear through*, last for life!

Test Varlar yourself, **FREE!** Smear, splatter, write or even walk on your free test sample. Then quickly, easily wash it clean with ordinary soap and water. Watch it come up sparkling-fresh again and again! Mail the handy coupon for your free sample of beautiful stainproof Varlar.

Varlar resists fire, water, steam and vermin...is not affected by *hundreds* of agents which ruin ordinary wall coverings.



HOT GREASE
Can't stain Varlar!



LIPSTICK
Wipes right off!



MERCUROCHROME
Never stains Varlar!

Never Before Such Enduring Beauty

VARLAR

Stainproof Wall Covering

VARLAR, Inc.

DIVISION OF UNITED WALLPAPER CHICAGO

--- TEST A FREE SAMPLE OF AMAZING VARLAR! ---

VARLAR, INC., Dept. B-39
Merchandise Mart, Chicago 54, Illinois

I'll show you how to stain it! Send my
FREE sample of Varlar and I'll make my
own tests.

Name.....

Street.....

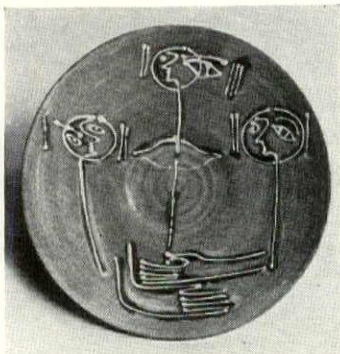
City.....Zone.....State.....



Ancient design and craft . . .
 . . . with modern overtones

REVIEWS

Colten Photos



THE ARTS OF LIVING

There is more possible use than ever in today's new home for new ceramics. Fireplaces and wall tiles may enrich the increasingly classic simplicity of house design; inset ceramic tiles add to the originality of home furnishings; and, last, but not least, modern ceramics for the table make eating and drinking more pleasant.

Following an ancient tradition in a modern way, T. S. Haile, a young English-American veteran, was one of the outstanding new ceramists. He was accidentally killed in Devonshire recently, and a memorial exhibit of his work is now under preparation in London. A U. S. commemorative show was also held at the Institute of Contemporary Art in Washington, D. C., for Haile had worked in this country before the war, teaching at University of Michigan, Alfred University, and a New York settlement house.

"In his pottery Haile demonstrated his belief in the principle that art is a way of thinking and acting, is a process of making, and is one's work to be done," said Robert Rich.

For Volume Hot-Water Demand

YOU CAN USE THESE EFFICIENT, LONG-LIFE UNITS IN A VARIETY OF APPLICATIONS

SMITHway-BURKAY

VOLUME-FLOW GAS WATER HEATERS

MODEL 617

MODEL 600

APPLICATIONS—all food-serving establishments, self-service laundries, small hotels, resorts, clubs, schools, dormitories, large homes, apartments, barber and beauty shops, stores, swimming pools, factories . . . everywhere there is volume demand for hot water.

SERVICES—a single SMITHway-BURKAY Model 600, operating as a two-temperature system, can supply ample quantities of 180° sterilizing water, or even hotter. At the same time, it can supply 140° general-purpose hot water. Model 617 is recommended for installations using only one water temperature, and where LP Gases are used.

ECONOMIES—dependability makes a SMITHway-BURKAY an economical long-term investment. Adjustments, if ever necessary, are quick and simple. Ease of maintenance cuts servicing to the minimum.

Let us give you ALL the advantages of this superior gas water heater. Send the coupon!

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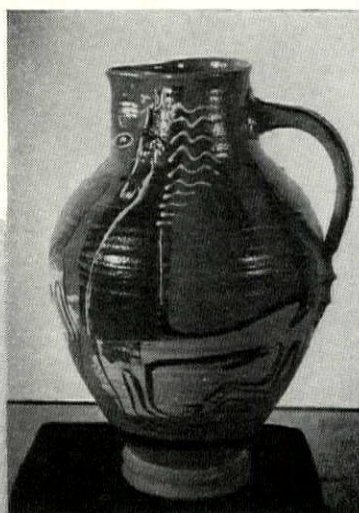
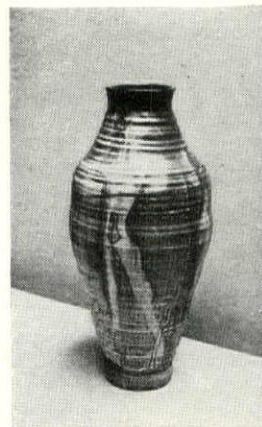
New York 17 • Atlanta 3 • Chicago 4 • Houston 2
 Seattle 1 • Los Angeles 14 • International Division: Milwaukee 1

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



A. O. Smith Corp., Dept. AF-349, Toledo 7, Ohio
 Send us all the facts on the SMITHway-BURKAY Volume-Flow Water Heater. No obligation.

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 Firm _____
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 City _____ State _____



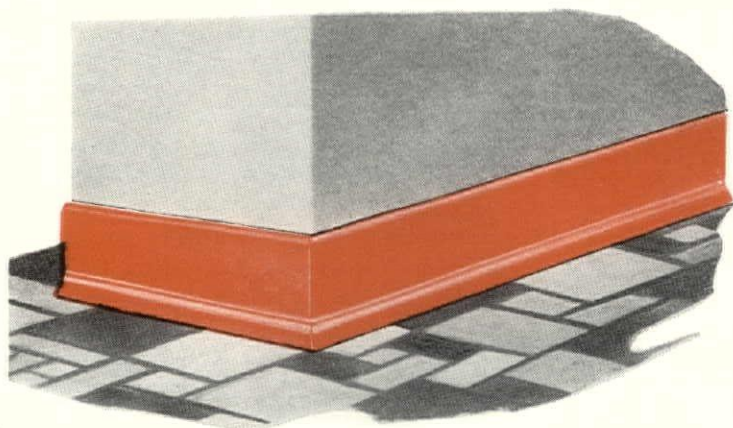
Slipware pitcher . . .
 . . . and stoneware jug

man of the Institute. "Obviously meeting art and function at their very foundations, by making for use while transcending it, Haile loved the challenge of working in these confining limitations because he also believed that the greatest in art could be the least. He worked with simple clay bodies, usually stoneware or slipware, and with simple feldspathic glazes, his colors being mostly iron and copper. If he wished to achieve special textures or effects in glaze and color, he controlled the temperature of his kiln. This is the method of the medieval potters, from whom Haile learned, and like whom Haile worked. To Americans conditioned to ceramic trivia—fish, gazelles and earrings—the work of Haile must hit them as a fresh wind. Here is a pottery that has not only perfection of form, and glazes controlled miraculously, but decorations like those on Etruscan and Greek pots. And always the simple statement: this is a dish, this is a bowl, this is a jug. Haile could throw stoneware to the absolute limit of its yield point and structural strength, achieving thereby a tension of the same essence as sculpture."—E.A.B.

(Continued on page 178)

New Beauty for New Houses!

a new kind of building material

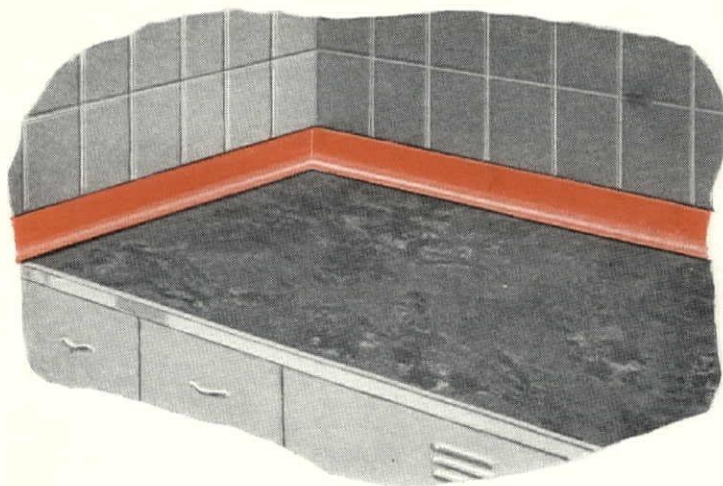


Sloane Quality Koroseal* Cove Base

For all base-board needs.
Easy to install, permanently
beautiful. Easy to clean.

Sloane Quality Koroseal* Cove Molding

a neat, practical seal where
wall meets counter top or
ceiling and on stair risers.



Here is a beautiful new plastic building material that provides finer results for every base-board and coving need—a "must" for any modern home.

Look what Koroseal—and Koroseal alone offers . . .

Absolute immunity to grease, acid, alkalis, moisture or temperature change. It will never rot, mildew or stain . . . has no pores to collect dirt or germs.

It is dent-proof . . . non-inflammable . . . virtually indestructible.

Installation is quicker and easier than wood base-board or molding . . . and no painting is required! And the material comes in a wide choice of fade-resistant, jewel-bright colors.

And wherever foot traffic is heavy . . . wherever matchless beauty and top quality are important, there is just nothing like Koroseal Tile—the longest wearing floor covering known . . . 18 colors—Crystal-tone and Marblitone designs.

Write for free samples and further information about this amazing new material.

*© B. F. Goodrich Co.

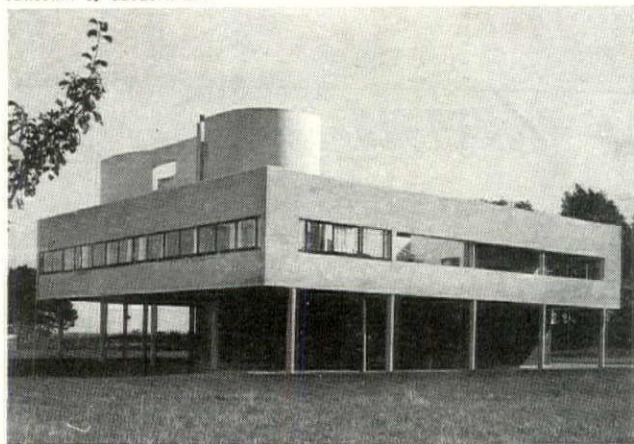
- **Jewel Colors**
- **Never Needs Painting**
- **Lasts a Lifetime**

SLOANE-BLABON CORPORATION

DEPT. AF2, 295 FIFTH AVENUE, NEW YORK 16, N. Y.



Museum of Modern Art



The Savoye House by Le Corbusier is severely geometric — a rectangle raised above the ground.

NOW *the modern style is* VIKON METAL TILE



Home owners and builders alike, are discovering that Vikon Metal Tile offers undreamed of, lasting smartness for walls and ceilings wherever tiles are appropriate. This is true tile beauty at very modest cost, and Vikon tiles are so light in weight that no extra wall strengthening is needed. These are individual tiles made of steel or

aluminum, with a face of durable, baked-on synthetic enamel in a choice of 27 fade-resistant colors. Simple as can be to maintain. An occasional coat of Vikon Cream Wax keeps them gleaming bright. Write today for full information regarding the wonders of Vikon Metal Tiles. Send the coupon below for "How to Install" booklet.

See our catalog in Sweet's Files

VIKON TILE
BEAUTY • ECONOMY **COLOR FUSED ON METAL** DURABILITY

- 27 fade-resistant decorator colors and stainless steel
- will not warp, crack or craze
- resists heat and household chemicals
- fire-resistant, waterproof, seals out insects

VIKON TILE CORPORATION Dept. 1A
Washington, New Jersey

Please send me, without obligation or cost, a full-color brochure and "How to Install" booklet

NAME (Please Print) _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

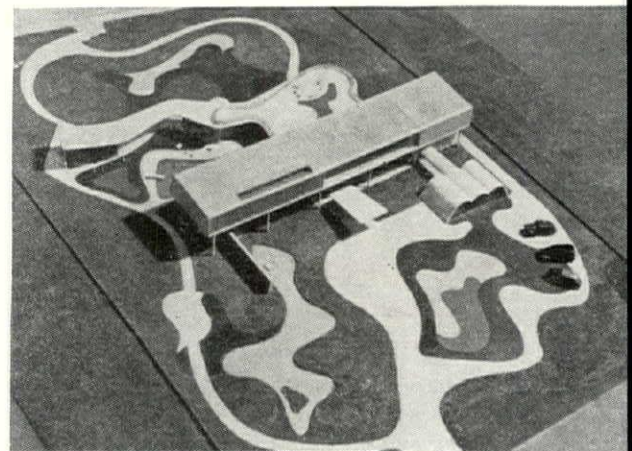
TWENTY YEARS IN ARCHITECTURE—

From LeCorbusier's rectangle to Niemeyer's free form

The new exhibit at New York's Museum of Modern Art records one of the dramatic architectural phenomena of recent years—the luxuriant flowering of a Swiss architect's designs and theories in the tropical atmosphere of Brazil. "From LeCorbusier to Niemeyer: Savoye House, 1929—Tremaine House, 1949" points out the likeness and difference between the work of the master and his best-known disciple.

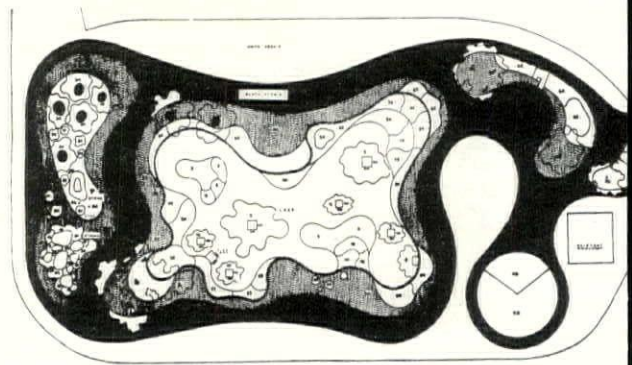
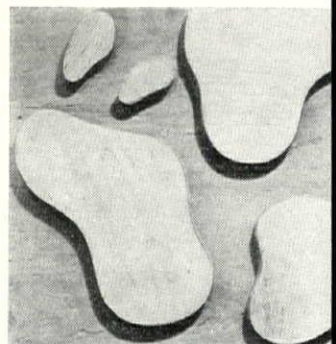
The similarities are unmistakable. Even in the most recent Niemeyer house, now being built in California (and thus bringing a third continent into the sphere of influence) the cut-under, pillared first floor and emphasis on geometric forms—LeCorbusier trade-marks—are clearly visible. The difference between the work of the two architects is traced in this exhibit to the influence of varying trends in art. LeCorbusier's formal restraint is closely allied with his early study of cubist painting, while Niemeyer and his co-worker, Landscape Architect Burle-Marx, express the more recent "free forms of sculpture."—S. K. *(Continued on page 18)*

From: *Art Towards Architecture* by Henry-Russell Hitchcock



Collection Museum of Modern Art

Wooden bas-relief by Hans Arp (right) is sculptural godfather of Burle-Marx's swirling garden forms, shown in diagram (below) and as they will surround the Tremaine house (above).



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3 BOOKS • FREE.



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The three books pictured are available upon request. They give you factual information about this newest and finest Honeywell control system, in addition to zone and individual room control systems for domestic applications.

Send for your copies today and learn all about Honeywell's newest control systems and why you'll want to use and specify them for all their many applications.

Electronic Moduflow is the Answer

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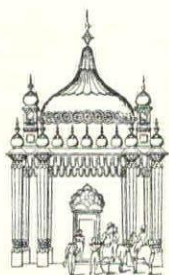
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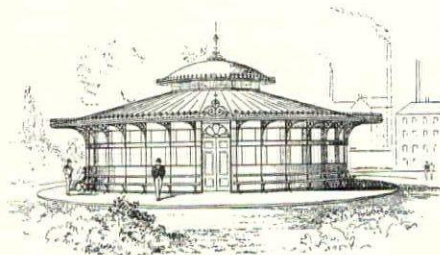
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73 BRANCHES FROM COAST TO COAST WITH SUBSIDIARY COMPANIES IN: TORONTO • LONDON • STOCKHOLM • AMSTERDAM • BRUSSELS • ZURICH • MEXICO CITY

REGENCY ARCHITECTURE

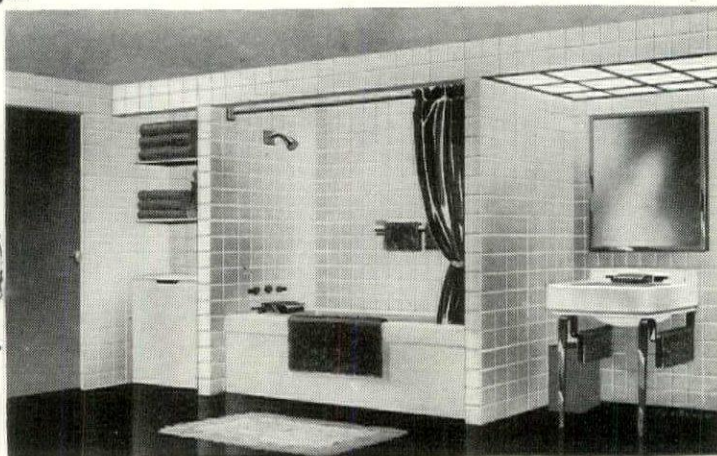
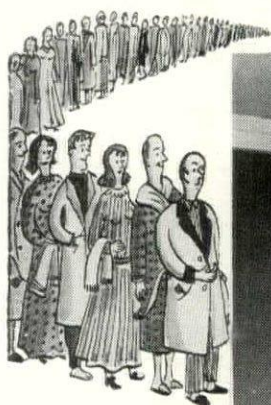


Victorian Architecture



AN INTRODUCTION TO REGENCY ARCHITECTURE by Paul Reilly. **AN INTRODUCTION TO VICTORIAN ARCHITECTURE** by Hugh Casson. Pellegrini & Cudahy Inc., New York, N. Y. Each vol.: 96 pp. illus. \$2.50.

These two books, the first in a new series on English architecture, disarm criticism not only by their very real merit but by their unusual modesty. *The Introduction to Regency Architecture* presents itself as "a short essay," "an elementary survey"; *The Introduction to Victorian Architecture* as "a few stones . . . from a vast quarry." Each matches its 48 pages of text with another 48 of photographs—a very satisfactory equation.



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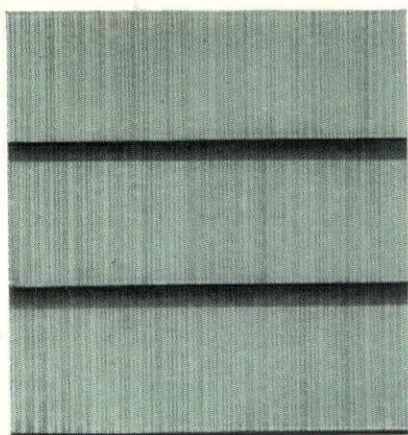
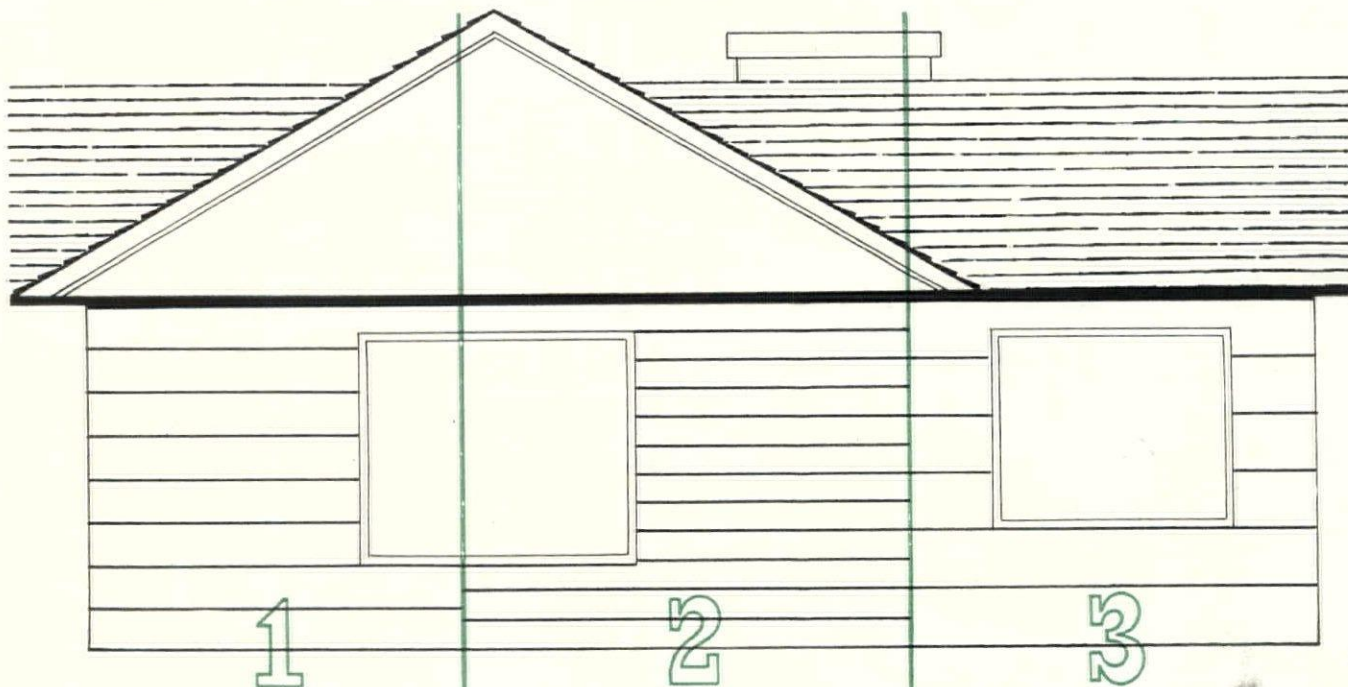


American readers are not so likely as English ones to remember that "Regency" refers to the early decades of the 19th Century when George IV, as crown prince and king, was spending money lavishly on pleasure palaces—and when architects began, for the first time in generations, to handle the classic orders with anything but awe. It was a time when royal favor could still be synonymous with eminent domain, and a smiling-on architect (like John Nash) could clear at one stroke the space for a handsome plaza or square. It saw the sudden popularity of the terrace or formal row house, an innovation which "grouped in uniform composition a number of individual living units. It was the last period of the old order—an era when rebellion limited itself (with the exception of the Indianesque royal pavilion at Brighton) to a bronze door hood or a bow window. Paul Reilly's study concentrates on the domestic architecture, perhaps (although he omits to say so) because this group exhibited Regency's most distinctive features.

The Victorian era, following immediately after the Regency, lasted a long 50 years of violent change and contrast (1830-1880). Author Hugh Casson describes the political scene: "The first crack had appeared in the traditional rule of the aristocracy, and through it peered, stern, pebble-eyed and unwinking, the middle classes." The amalgam of religious, industrial and personal prejudices that made up the average Victorian had far-reaching effects on his ideas of construction. The Gothic revival was in full swing and "if the English architect was not his castle, it was no fault of his or of his architect." He "expected every building, like every painting to tell a story, and preferably to point a moral as well . . . Embedded in his rich dark interior, surrounded by his family, his servants, and his possessions," he reigned a master—"like a earwig in the heart of a great crimson dahlia."

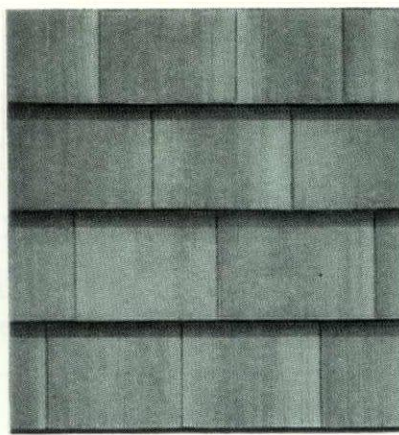
(Continued on page 184)

ADAPT THE EXPOSURE TO THE DESIGN WITH STAINED SHINGLES AND SHAKES



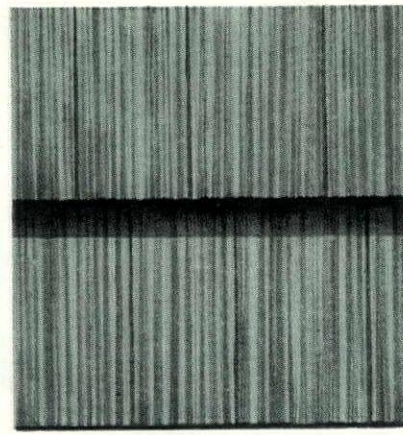
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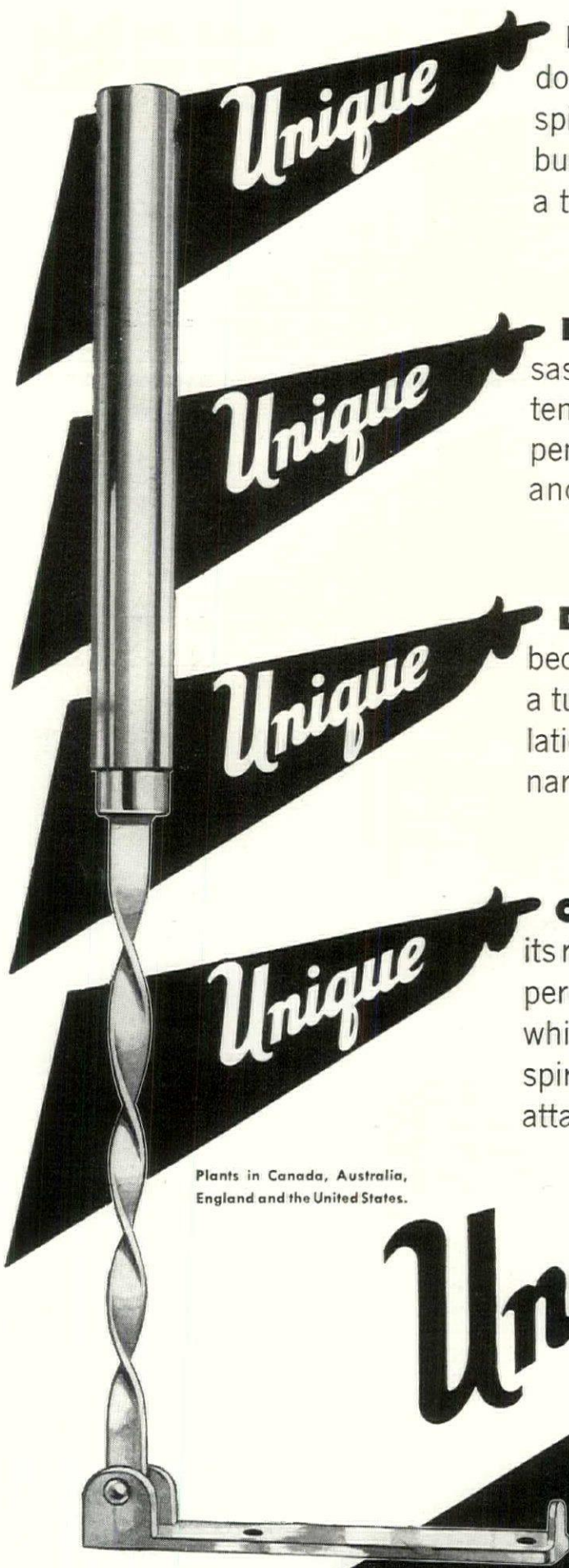
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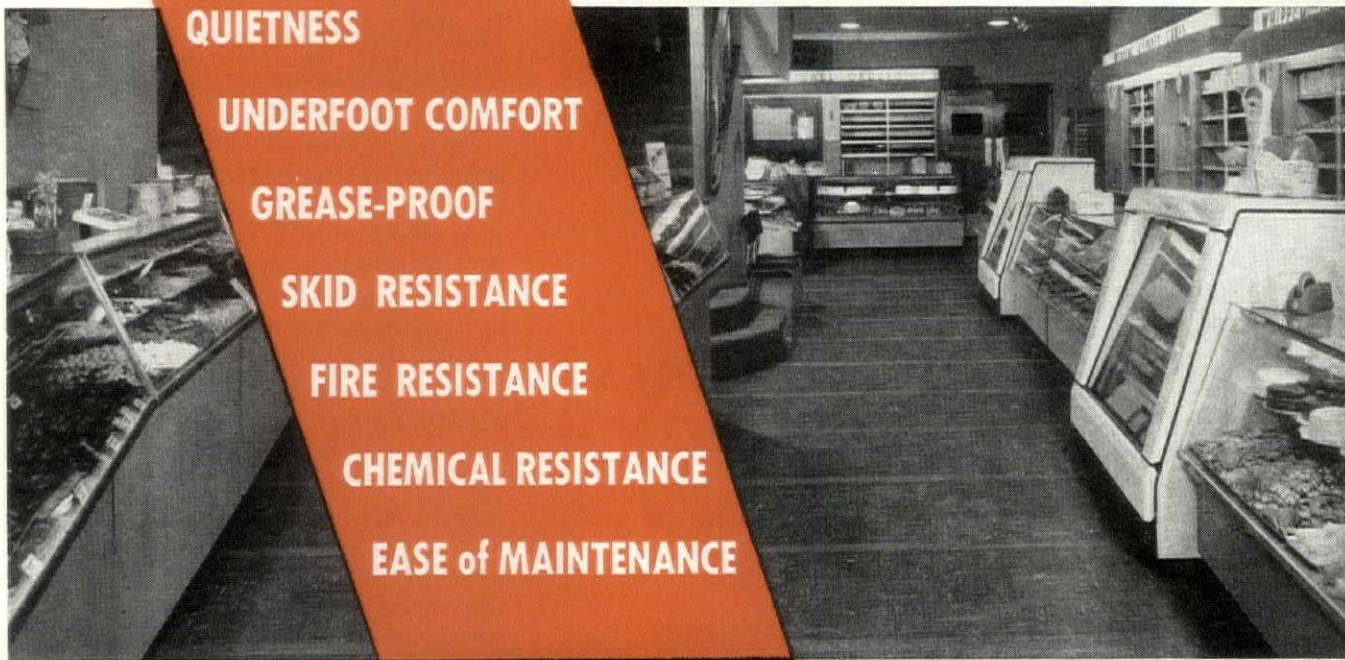
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**THE VINYL PLASTIC FLOOR TILE
THAT POSSESSES ALL THE BASIC
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A survey made by a leading architectural magazine showed that architects almost universally included the above characteristics as essential in the ideal floor tile.

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We'll be pleased to send you without cost this complete story about Plastile. Address: Plastile Flooring Division, The U. S. Stoneware Co., Akron 9, O.

IT IS not too difficult to find a floor tiling with any one or two of the properties architects have declared ideal for smooth surface floor coverings.

But only Plastile, the new vinyl-plastic floor tile, combines *all* of these basic qualities in one better floor tile.

Plastile is a different type of floor tile. It consists of a layer of tough, flexible, long-wearing Tygon vinyl plastic, inseparably laminated to quiet, resilient, resin-impregnated cork.

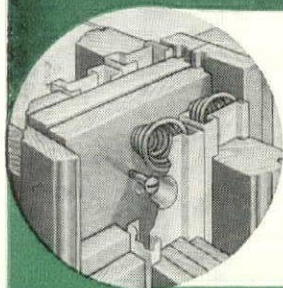
The Tygon top surface provides unmatched durability and wear, permits a range of colors only vinyl plastics can offer, is unaffected by oils or chemicals, is fire-resistant and slip-resistant. The resin-impregnated cork base is as comfortable to walk on as a rug cushion, stills the noisy clackety-clack of heels to a whisper.

Yes, here is a combination of qualities found in no other floor tile . . . a combination of qualities that make Plastile the preferred choice of those who want the best.

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U. S. STONEWARE
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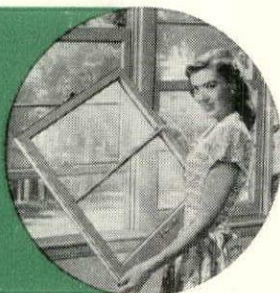


1. It is the Wood-and-Metal Window

Never sticks, never rattles. In opening or closing, wood slides against metal. Spring pressure acts as a cushion, compensating for swelling or shrinking due to weather conditions.

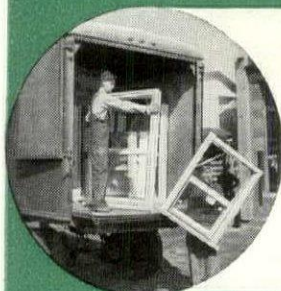
2. It is REMOVABLE . . . To Wash Both Sides INDOORS!

Move lower sash up, upper sash down, press each window to the left, and REMOVE. The whole operation takes only a few seconds.



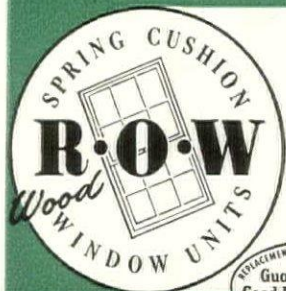
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R-O-W Windows can be shipped to your construction job as pre-fit, weather-stripped units. One of 47 R-O-W manufacturer-distributors is near you. This insures prompt delivery, efficient service, and low freight costs.



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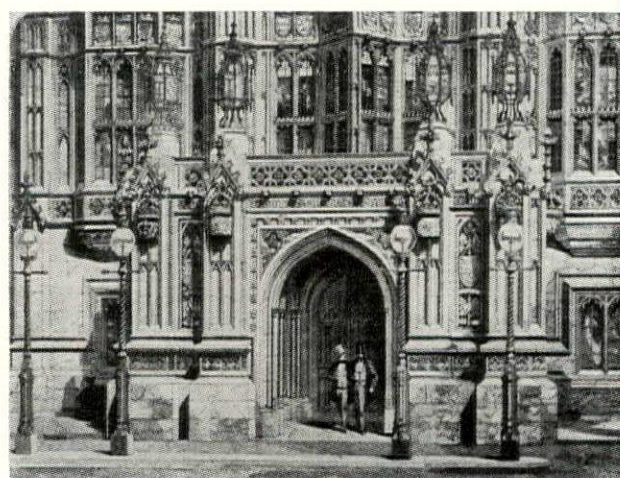
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5. R-O-W Means: Removable Opens Easily Weatherstripped



For the name of the R-O-W manufacturer or distributor nearest you, write R-O-W Sales Company, Royal Oak, Michigan.



Against this hotbed of self-satisfaction, the outstanding architectural figures of the day stood as revolutionaries: Pugin burning himself out to break the long hold of classicism on government building; Ruskin trying to counteract the ugliness of contemporary building by forcing on it the rules of botany; William Morris playing an unsuccessful St. George to the art-destroying monster, the machine.

With a knack for the revealing phrase, Casson draws about these three men the lesser, more conventional architects of the day—from Alfred Waterhouse, the political favorite, "whose smile was said to be worth £10,000 a year" to shy, uncompromising William Butterfield, whose churches with "awkward vigor . . . reflected the rigid standards and unyielding faith of their creator." "Churches," adds Casson, "that have been compared unfavorably with pieces of linoleum." In the cross-section of a whole civilization, not even the underworld is neglected. The second-story man's reaction to contemporary architecture is recorded in the words of the crook who found the vogue for balconies "uncommon 'and'."

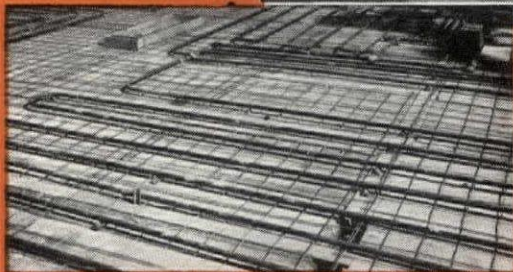
If the other books in the series (volumes on Georgian, Tudor and Modern are in preparation) live up to these first two, they will form a notable collection. While weightier books may pride themselves on mere thoroughness, a good introduction demands that rare critical combination—sympathy and a sharp eye.—S. K.

THE HOME OF MAN by Le Corbusier and Francois de Pierrefeu. Architectural Press, London, 156 pp. 10s. 6d.

This belated reprint (first published in France in 1941) is a collaboration by Le Corbusier and one of his former associates on postwar I periodicals (*Plan* and *Prelude*). The idea of a Le Corbusier collaboration sounds promising—a partner could be found knowing enough to mate the master's urban utopia with every day municipal expedients. Unfortunately, Francois de Pierrefeu is hardly the man to do this. He exhibits all of Le Corbusier's hop-skip-and-jump techniques in mundane matters of finance and the housing status quo, but he lacks any share of the Le Corbusier's brilliance at indicating (if not always assessing) structural possibilities. The only concrete suggestion in his 50 pages of text is to forbid land speculation as a deterrent to "inhuman building. Whatever validity this proposal has (and it is hardly an original one) his freely indulged gift for high-flown and contradictory theorizing is poor recommendation. A typical example of this latter failing: (p. 30) "A precise idea alone drawn from reality, can serve as a polar star." (p. 50) "To think in terms of reason only, petrifies the world."

(Continued on page 188)

Today's
Top
Home
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Feature!



B & G Hydro-Flo Radiant Panel Heating bathes the entire house in radiant, sunny warmth from pipe coils either installed in the floor (left) or embedded in the ceiling plaster (right). There's no evidence of the heating system anywhere.



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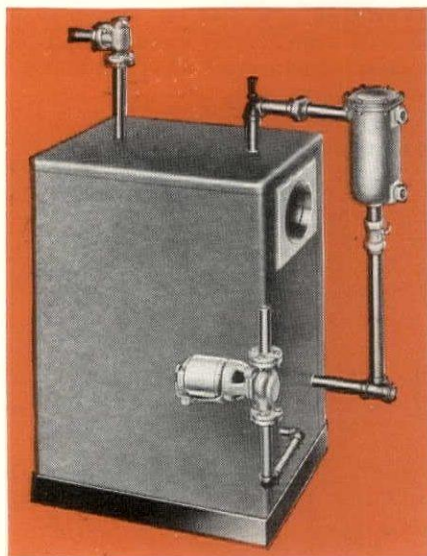
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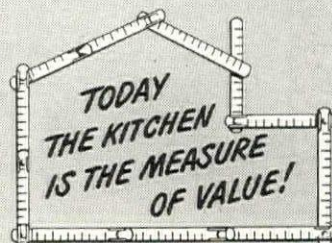
WHY NOT put these "star new home salesmen" to work making *extra* profits for you? See your Hotpoint distributor or dealer... or write to Hotpoint Inc. (A General Electric Affiliate) 5600 West Taylor Street, Chicago 44, Illinois.

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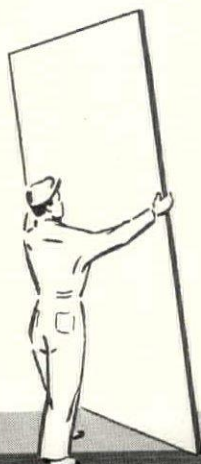
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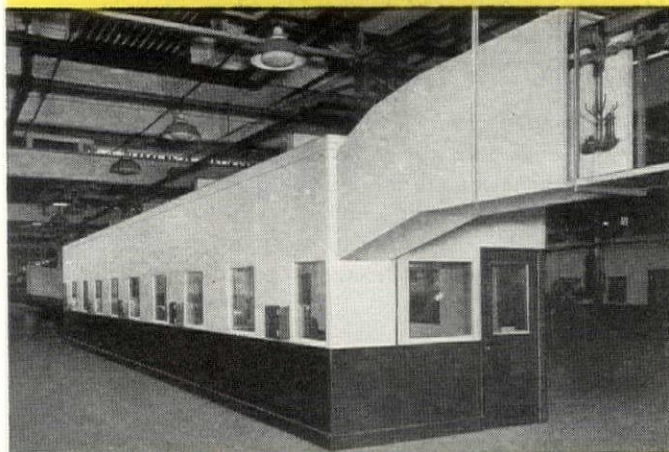


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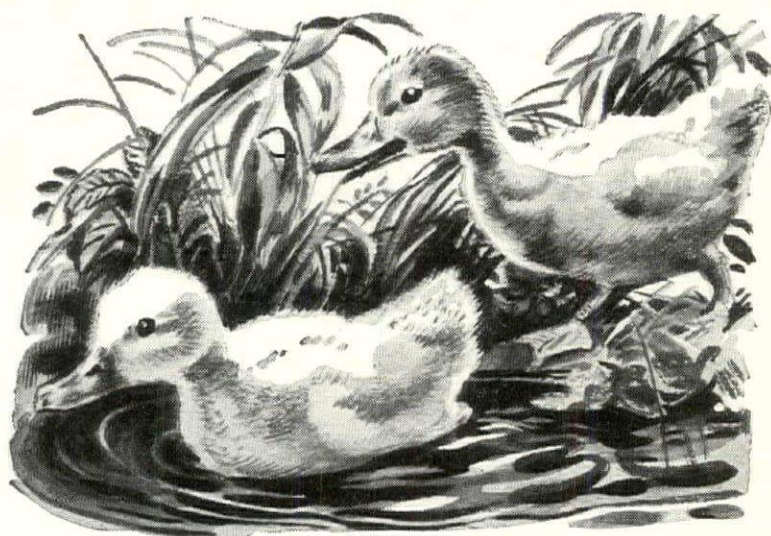


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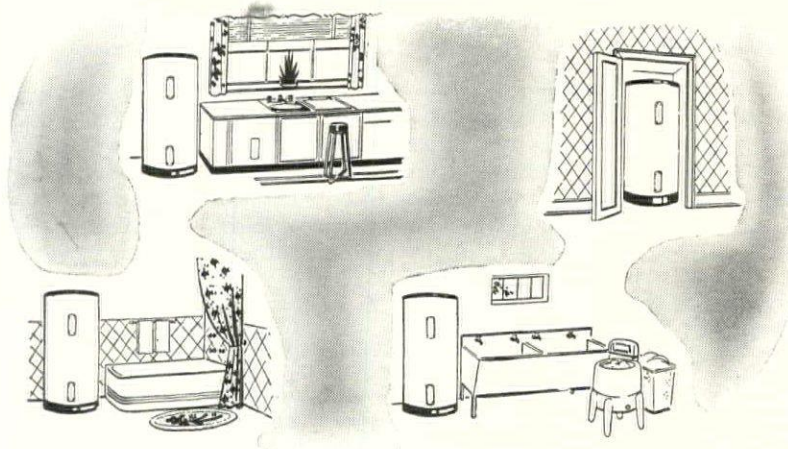
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Electric Water Heaters can save *you* money on construction costs. There's no flue or vent. Installation can be made anywhere—in the kitchen, in the bathroom, or the utility room—even in a closet. This keeps hot water lines short, cuts piping cost.

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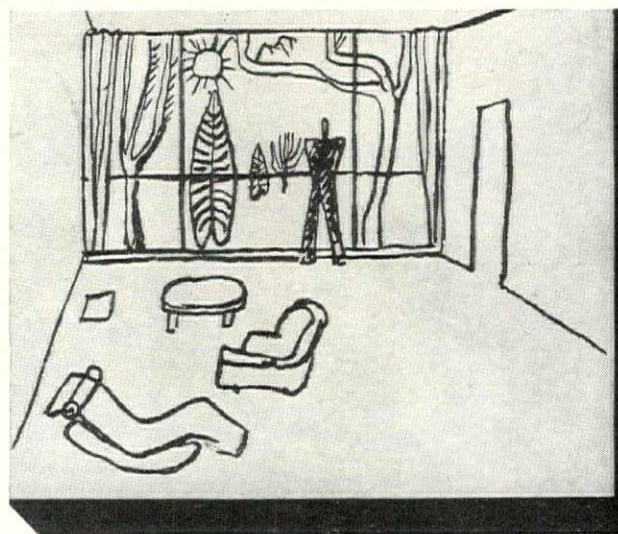
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**IT'S EASY TO
INSTALL an electric WATER
HEATER!**

... in a house wired for an Electric Range!

There is one happy feature of the collaboration, however. With someone else taking care of the text, Le Corbusier had felt himself free from the necessity to provide one. His two-thirds of the book is devoted to drawings, briefly captioned. It forms a compact a-to-z presentation of the Le Corbusier ideal world of "sun, space and verdure"—and is all the more impressive for being so unpretentious.—S. K.



THE STORY OF MODERN APPLIED ART by Rudolph Rosen-
thal and Helena L. Ratzka. Harper & Brothers, New York. 204
pp. Illus. \$5.

It was obviously high time for someone to chart the geography of the wide and increasingly important field of subsidiary modern arts—which takes in, among a thousand other things, the design of furniture, pottery, glassware, rugs (summed up in this book as "home furnishings which are not of a mechanical nature"). These occupy a middle ground between architecture and the solely decorative arts of painting and sculpture—and they are decisively influenced by both extremes.

Readers unfamiliar with the labyrinths of the "craft" sphere will find the impartial attitude of the authors a balanced introduction to the various and often contradictory trends found in the work of its practitioners. Rudolph Rosenthal and Helena Ratzka manage, too, the more difficult task of preserving the claim of their title—their account of a continent-wide trend in art is an absorbing narrative.

In almost every country architects supplied the initial impetus for this all-encompassing effort to improve everyday design. Beginning about 1841 with William Morris and Phillip Webb in England, passing north to Baillie-Scott and Mackintosh in Scotland (whose work bore fruit in Germany, Austria and Russia rather than in their own country), the reaction against senseless imitation in design spread throughout Europe. The Belgian architect, Henry Van de Velde, defined its now well-known aims—"to discover the essential forms of a house, table, chair, bed and other indispensable objects in use in our daily lives." He defined, too, its esthetic principle—"the beauty of an object lies in the purity with which its material is expressed."

The Story of Applied Art rounds out the picture of 19th Century design given in Siegfried Giedeon's *Mechanization Takes Command*. Together they present two sides of a development of mutual respect: while industry was learning the psychological and financial value of good design, artists were learning appreciation of the beauty that discipline and functions lent to the machine. (Continued on page 192)



YOU CAN'T **duck** THIS FACT!



You can't avoid the fact that home buyers want the most modern type of kitchen equipment—and that includes Electric Ranges. Proof is found in the actual sales figures. Another million American families switched to Electric Cooking last year. Conservative estimates indicate that the same thing will happen again this year.

To you, this means just one thing. To build houses that are modern today and will stay modern for years to come, you must include wiring for an Electric Range, leading to a range outlet in the kitchen. The time to do this economically and efficiently is during construction. An Electric Range, like electricity itself, is now a "must" in every modern house!

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*Follow
the trend...*

WIRE YOUR HOUSES
FOR ELECTRIC RANGES

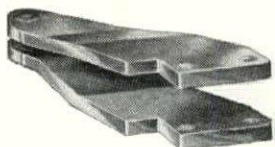


Another 1,000,000 American families switched to Electric Cooking last year

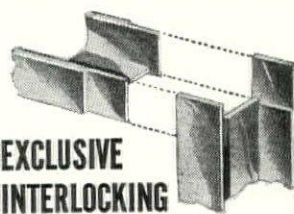
Here's what makes

TIMM

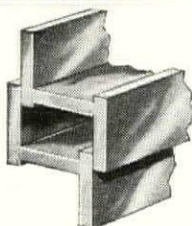
America's FINEST Aluminum Casements



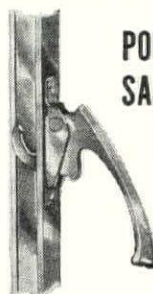
EXTENSION HINGES
Extra Heavy Aluminum
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INTERLOCKING
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Not welded



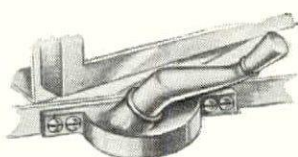
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Holds sash rigid when open

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- All Muntins Optional
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Here's an aluminum casement that is really built up to a standard, not down to a price. Timm Aluminum Casements have extra heavy, 5/32" extrusions for greater rigidity. Quality hardware throughout. Precision made. Because welding weakens aluminum alloy, all parts of Timm Aluminum Casements are mechanically joined—no welding is used. All muntins in Timm Aluminum Casements are optional. This exclusive Timm feature gives you custom built windows at production prices—plus complete freedom of design. Timm Aluminum Casements never need paint. Can't warp, rot, rust, shrink, swell or bow. Timm Aluminum Casements and Fixed Sash actually save money on an installed basis. No special handling required. Use Timm Aluminum Windows just once and chances are you will never specify any other brand of residential casements. Timm has a complete line of both Modular and Standard (Metal Window Institute) sizes.

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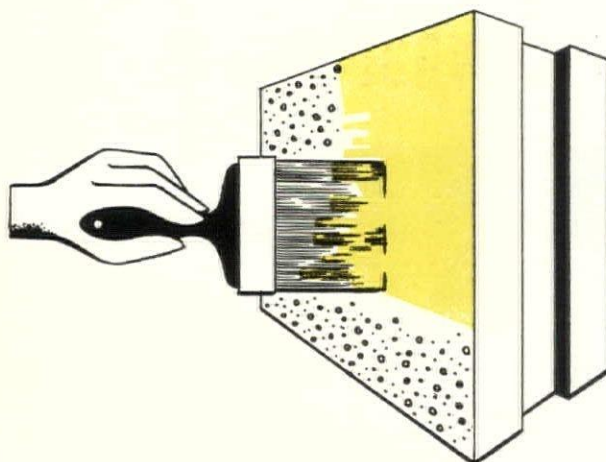
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YOU GET A BETTER FLOOR WITH

3 REASONS WHY... Hasko BLOCK FLOORING

- 1 TRIPLE TONGUE AND GROOVE JOINTS (Pat.)** tightly lock each block to others... insuring floor flatness.
- 2 CROSS-LAMINATED CONSTRUCTION** checks expansion, no buckling and warping... permits tighter joints to prevent mastic extrusion.
- 3 SMOOTH UNBROKEN OAK SURFACE** has no weakening cuts, dirt-catching cracks or separations.

Right! Three construction features that mean a permanently beautiful floor... a better floor... one that is easy to lay... safe to specify. These features are yours exclusively with Hasko block flooring. First, the triple locking tongue and groove — a patented Hasko feature. Notice how the lips of the groove are locked in to positively prevent raised or curled edges... how the tongue is tapered to give a wedge-tight fit which prevents mastic extrusion. This tight interlocking joint is possible due to advantage number two — cross-laminated construction — which practically eliminates expansion and contraction — buckling and warping. Hasko's third exclusive feature is the smooth, unbroken oak face. Permanently laminated plies cannot separate, and there are no crevices, separations, or cuts to weaken the floor, catch dirt, or admit damaging moisture. 12" x 12" blocks are laid speedily with minimum number of joints. In addition, Hasko blocks save installation time, cost and waste. Factory finished in light or dark oak.

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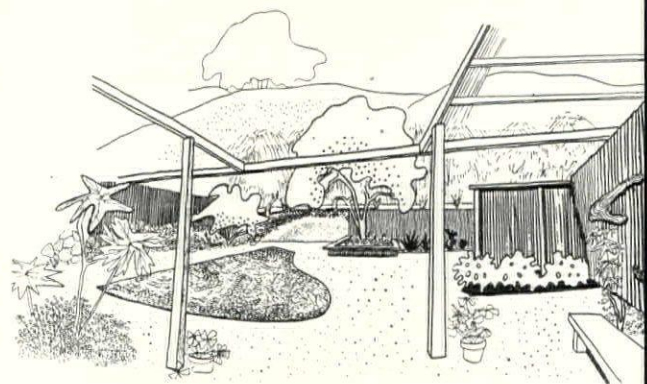
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Light is cast up the blind alleys of the movement—the *Art Nouveau* with its infatuation for flowing lines, the *Jugendstil*, the *modernistic*—all searching for novelty at any cost. Their more extravagant bypaths served only to bewilder large sections of an already-doubtful public. Certainly the new skyscraper bookcase had less grace and far less excuse than the old pagoda whatnot.

However, in attempting to cover such a complex field in the space of 208 pages, authors Rosenthal and Ratzka fall a prey to over-ambition. What starts off as a series of incisive descriptions finally degenerate into mere cataloguing. The 64-page section of illustrations cannot hope to keep pace with a text that covers a hundred years, 13 countries, several dozen arts and crafts and a multitude of designers. On a number of points, especially in the American section, the text is unforgivably vague (ex.—“presently one of the plays with modern decor became a season's hit and... new settings entered the large theater”). In spite of this and an unaccountable nostalgia for the Mission style in furniture, *The Story of Modern Applied Art* serves as a valuable who's who in its field.—S. K.

LANDSCAPE DESIGN, 1948. San Francisco Museum of Art. Van Ness at McAllister Sts., San Francisco, Calif. 41 pp. 9 x 11 1/2. Illus. \$2 (plus 10 cents postage).

“The problem of designing gardens has changed in the past few years. Building costs, as well as the changing attitudes toward a home, have broken the lines that formerly divided houses and gardens. More and more activities are being



forced into smaller and more rigid properties. The landscape architect no longer has a choice between a functional or esthetic approach. Like it or not, the functions of the house have spilled out into the garden and must be provided.” So Landscape Architect Thomas Church sums up the problems he has brilliantly solved in many garden designs. His constructive and assured approach is characteristic of a group of West Coast landscape designers whose work has become more and more influential during the last ten years.

This booklet, illustrating the work of the top 30 of their number, was brought out last December in conjunction with an exhibition of landscape design held in the San Francisco Museum. Most of the work has already been published in magazines, but assembled as it is here, it presents an even more impressive and eye-delighting achievement than the individual
(Continued on page 196)



to cap a monument
eternal or a
built-up roof:

aluminum

NOTHING better demonstrates the architectural versatility of aluminum than this contrast: the massive aluminum casting on top of the Washington Monument, substantially unchanged by more than a half century of weathering; and Reynolds .004" Embossed Aluminum, supplied in rolls and applied like felt to built-up roofs.

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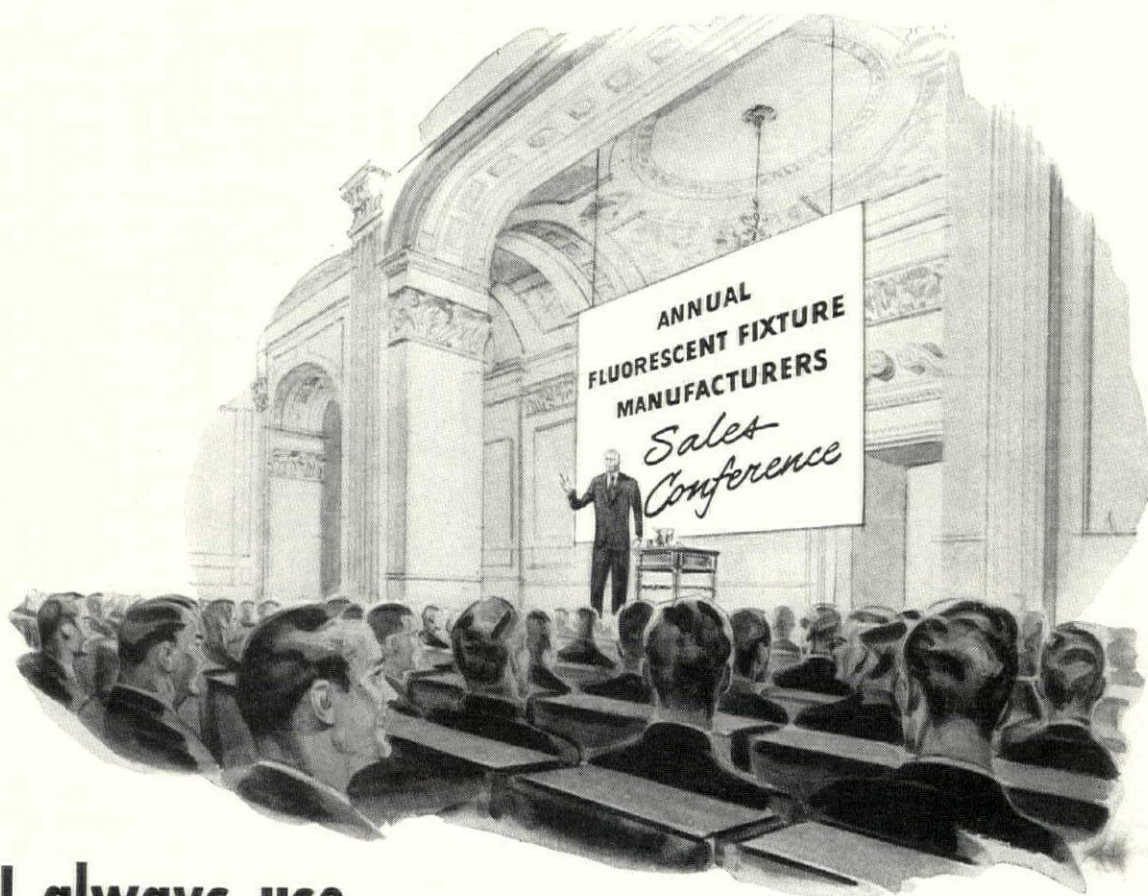
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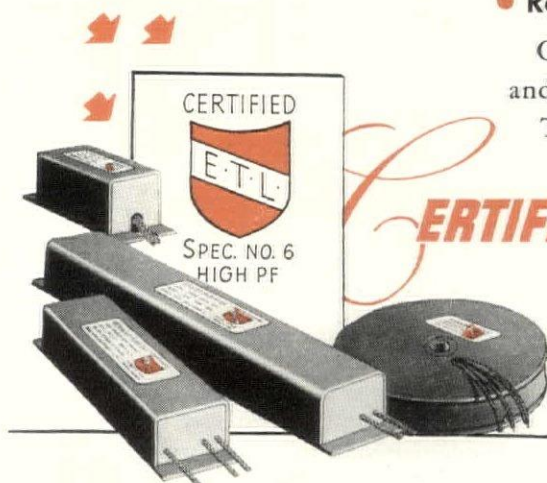
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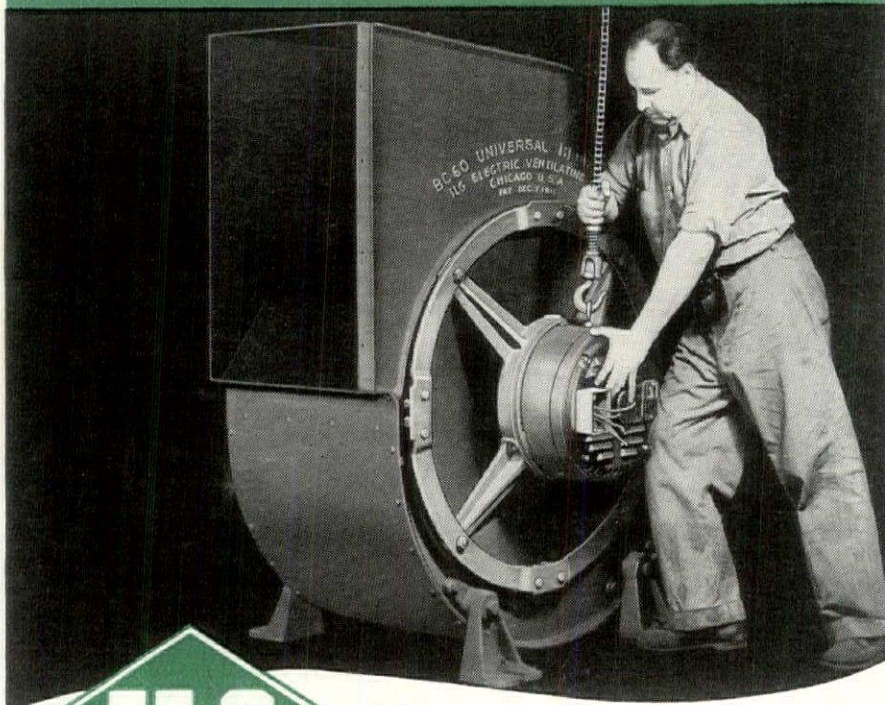
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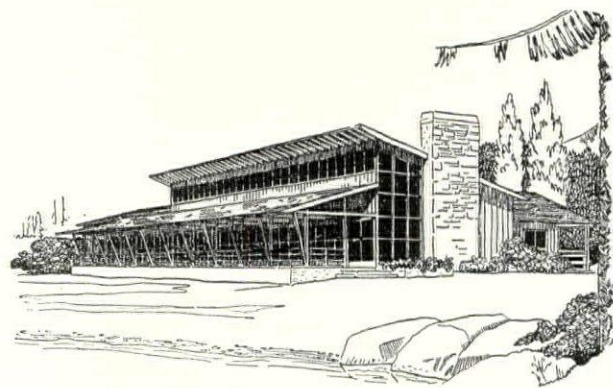


presentations. As well as photographs and plans, *Landscape Design, 1948* includes articles by such authorities in the field as Garret Eckbo, William Wilson Wurster, Stephen Pepper, Claire Falkenstein, Christopher Tunnard, Walter Doty and (the above-quoted) Thomas Church.—S. K.

CAMP SITE DEVELOPMENT by Julian Harris Salomon, published by the Girl Scouts of the U. S. of America, 155 E. 44th St., New York, 105 pp. \$4.

No building, apparently, is considered up to par in camping circles unless it looks like the birthplace of Abraham Lincoln. This attitude may seem like just clean fun, but since the majority of camp structures are intended as healthful havens for children, something should be done to bring them out of the dream-world level.

Camp Site Development is a piece of solid reporting of best current practice rather than a reform advocate—even so it is a step in the right direction. Author Julian Salomon, in his present capacity as consultant to the Girl Scouts of America and through former connections with Boy Scout groups and the National Park services, has kept a constant check on new plans all over the country. The basic demands of proper siting and coordination of camp buildings, the special demands of such auxiliary services as dining halls, kitchens, recreation halls, waste disposal and docks—to say nothing of water supply, roads and electric lines—make it clear that there's far more to camping than a log cabin. Since a large amount of camp building is scheduled to proceed as soon as costs permit, his book provides timely warning to all interested in the field.



From a design point of view, the plans and sketches of various camp experts range (with one exception) from offensive to just plain awful. Most discouraging of all is the fact that the one dramatic design in the book—a dining hall by Albert Kahn Associates—has been held up so far by worried sponsors. Its provision for the admittance of light, air and a splendid view overlooking a lake is somehow regarded as suspiciously modern!—S. K.

1948 STORE MODERNIZATION. Clinics and Forums, published by Store Modernization Show Inc., 40 E. 49th St., New York City, 181 pp. Photo-offset. \$5.

There is more of a cracker-barrel than a round-table atmosphere about this collection of talks and discussions held during last year's Store Modernization Show. No effort has been made to fill in breaks of continuity, and most of the speeches have that talky quality which shows up as diffuseness on the printed page.

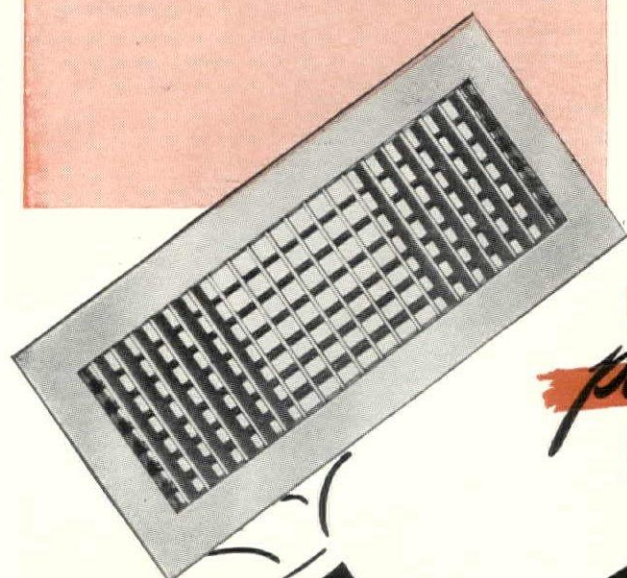
(Continued on page 20)

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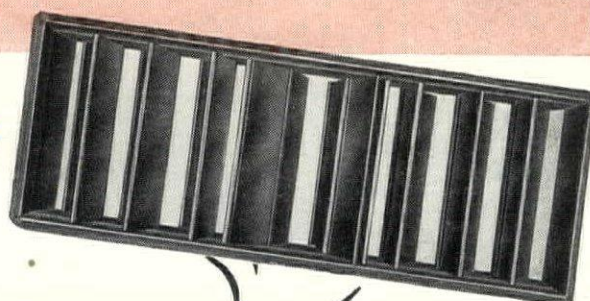


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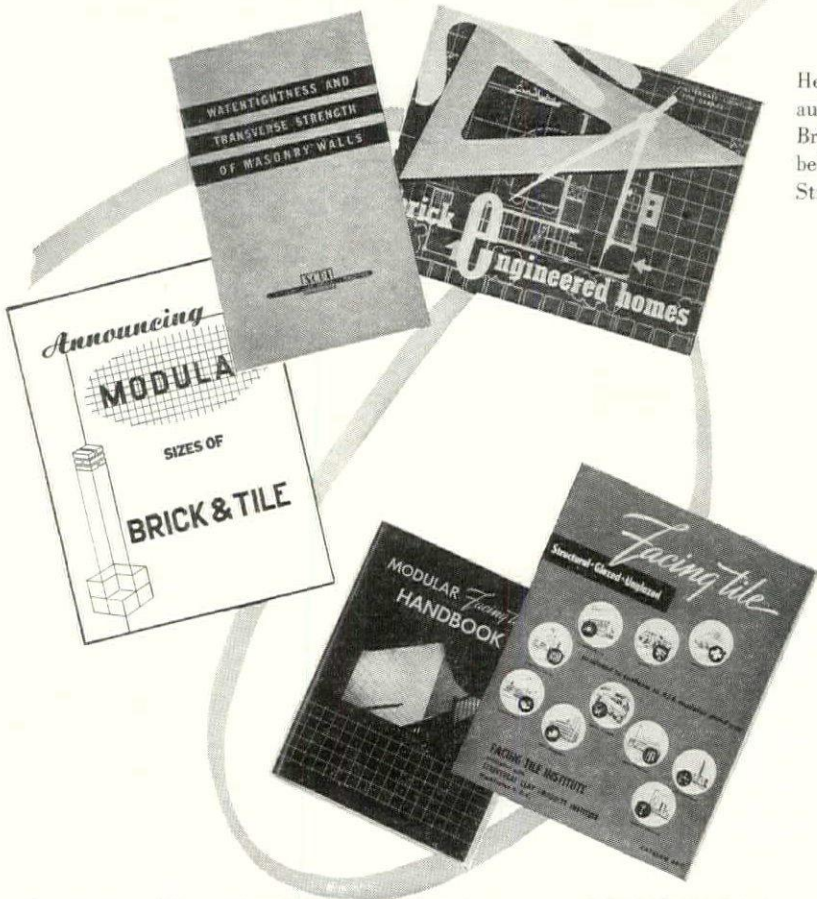
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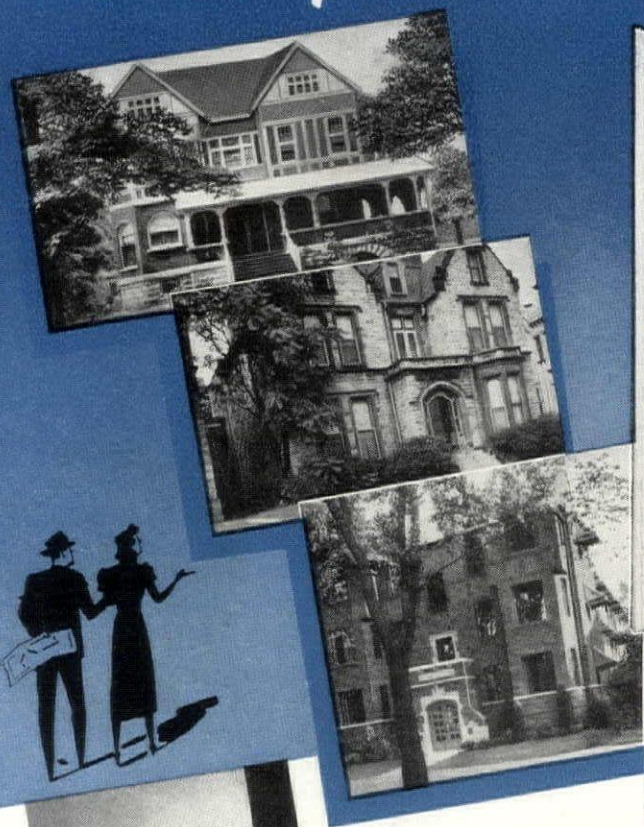
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Patented Ventilation—Air enters ventilation ducts, rises through specially constructed flues, removing heat and cooking odors into vent.

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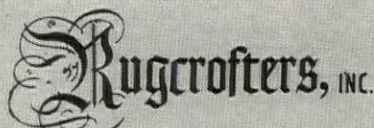
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In addition—to give all the bad points first—its pages of close, small type and foggy half-tone illustrations constitute a definite eye-hazard.

However, to the architect, builder, banker, store-owner or manager—to anyone with an interest in the problems of store design—it is bound to prove a valuable grab-bag of helpful hints. One early speaker struck what proves to be the keynote: "More stores in the future and many at present are deeply concerned not as to whether the layout looks pretty (a lot of us have lot of different ideas as to what is pretty) but whether the layout actually will reduce the costs of doing business, help to sell more efficiently or sell more goods."

The five sections in the book (corresponding to the five sessions held at the show) consider: layout and traffic, lighting and color, display and fixturing, store fronts, and planning and budgeting. A panel of five to seven experts—designers, technical men and business executives—prepared talks on their special aspects of each subject. After this store owners and furnishers from all over the country, were free to ask questions—and did. These questions and the answers given to them form a valuable part of the collection.

If anyone needs to know the best lighting combination to make a diamond sparkle, the respective selling ability of the sleeve-out versus the front-out method of hanging dresses on a rack, or the rule-of-thumb percentage of assets which may be wisely invested in equipment—this book should be on his shelf. It's a hometown supplement to the excellent standard books already on the market (in the last few months, Morris Ketchum's *Shops and Stores*; and Louis Parnes' *Planning Stores that Pay*—FORUM, November '48 and February '49).—S. K.

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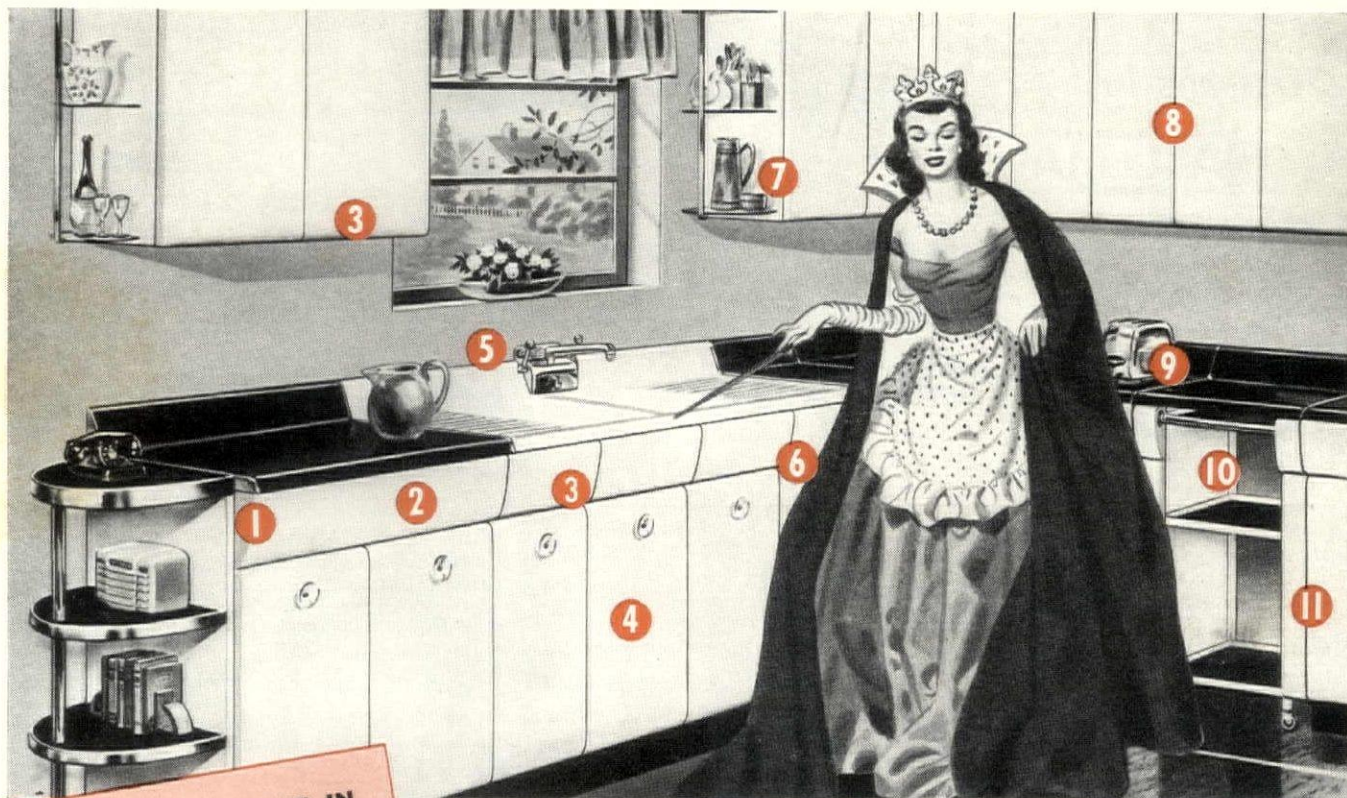
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- 5 Finger-tip lever-type faucets—on or off with flick of finger.
- 6 Concealed cutting board, divided cutlery drawer.
- 7 All corners rounded—can't scratch or tear clothing.
- 8 Double-Action spring hinges hold doors fully open or closed.
- 9 Waterproof, dirtproof, flush-sealed counter tops.
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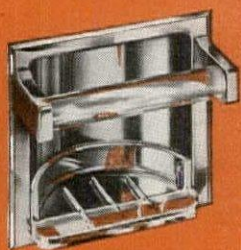


No. 170
PAPER HOLDER

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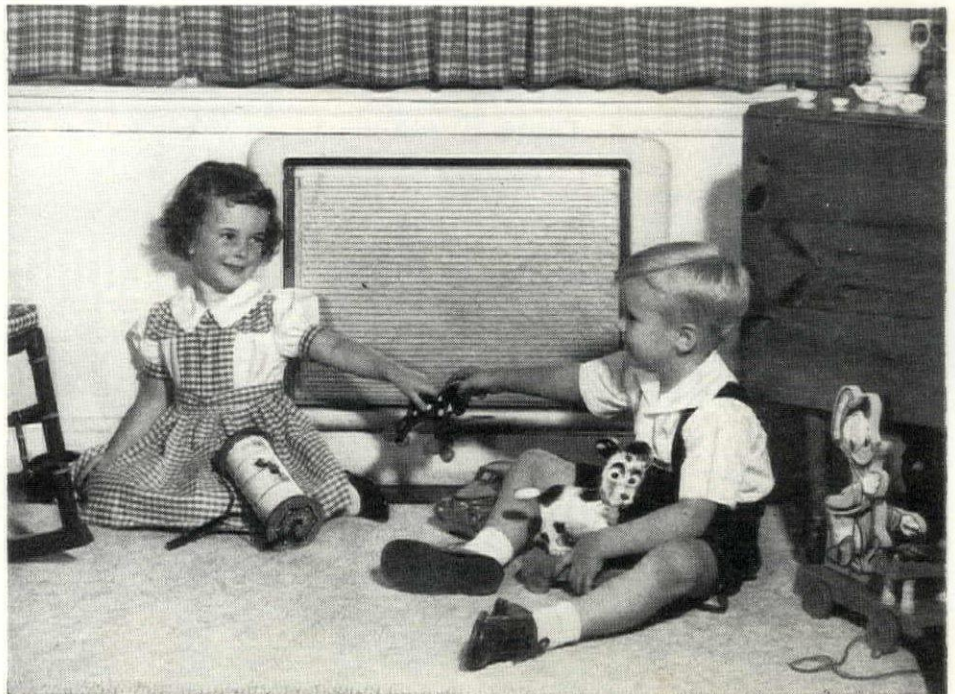
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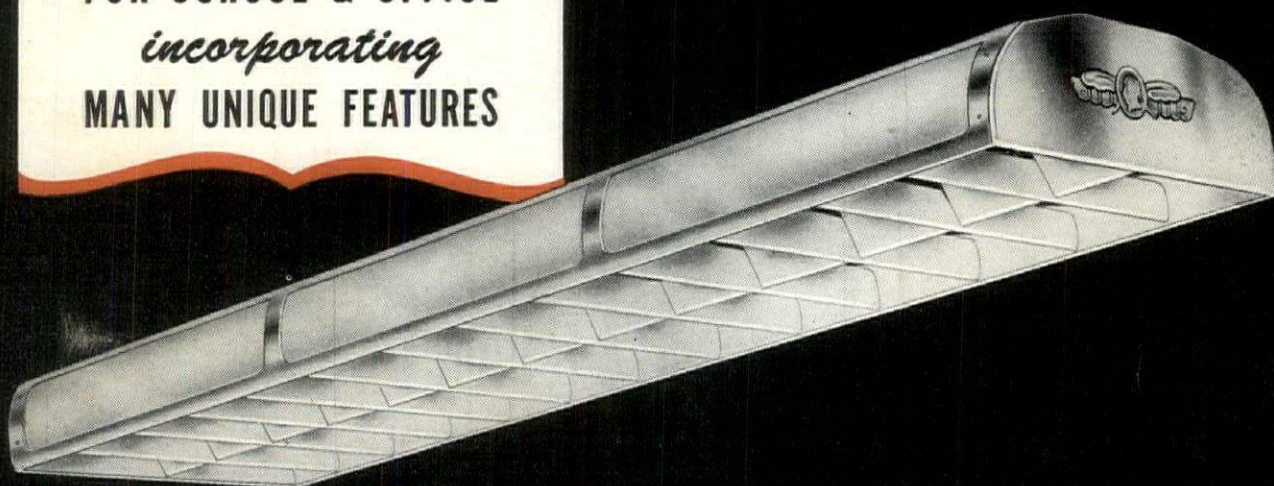
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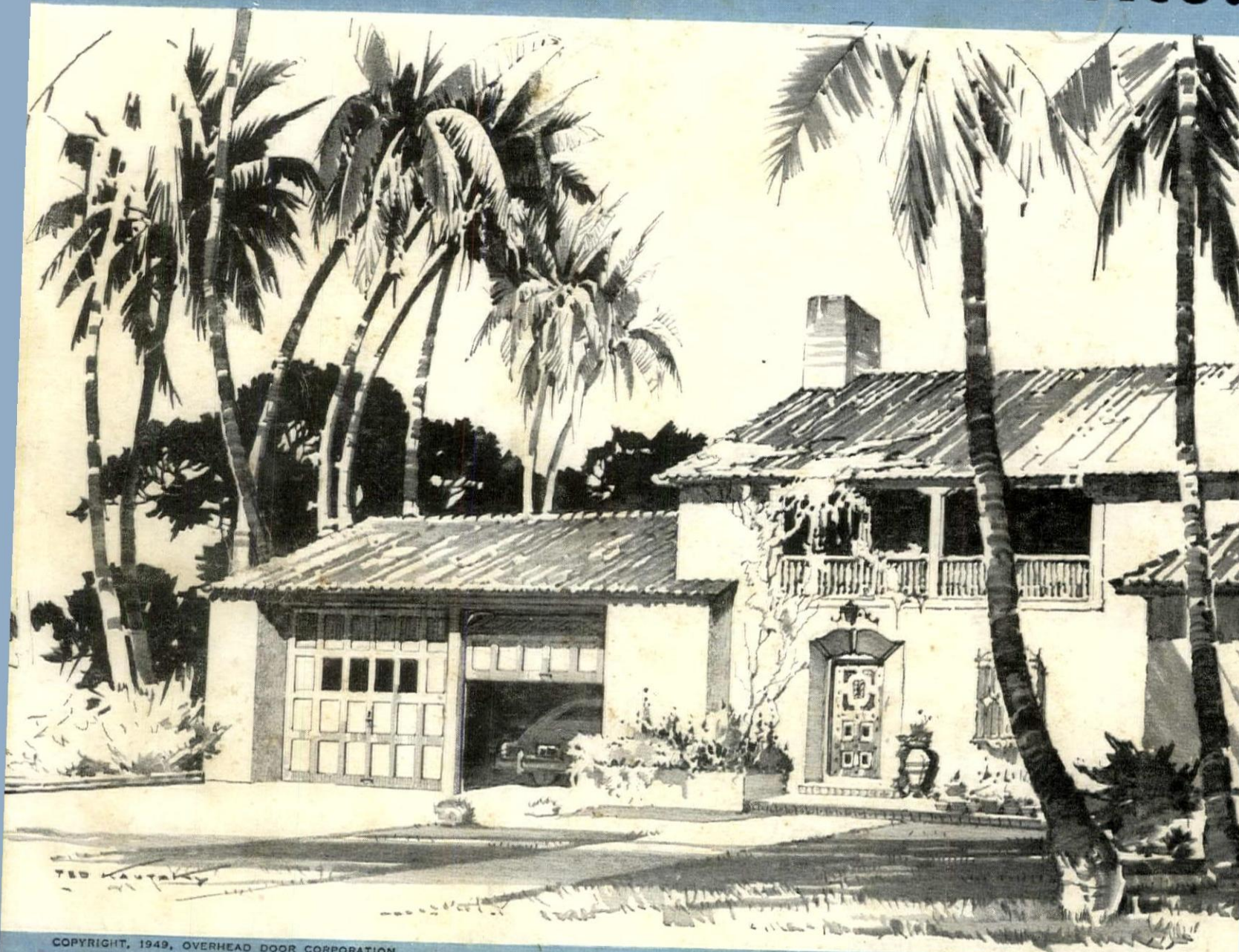
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