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The Architectural

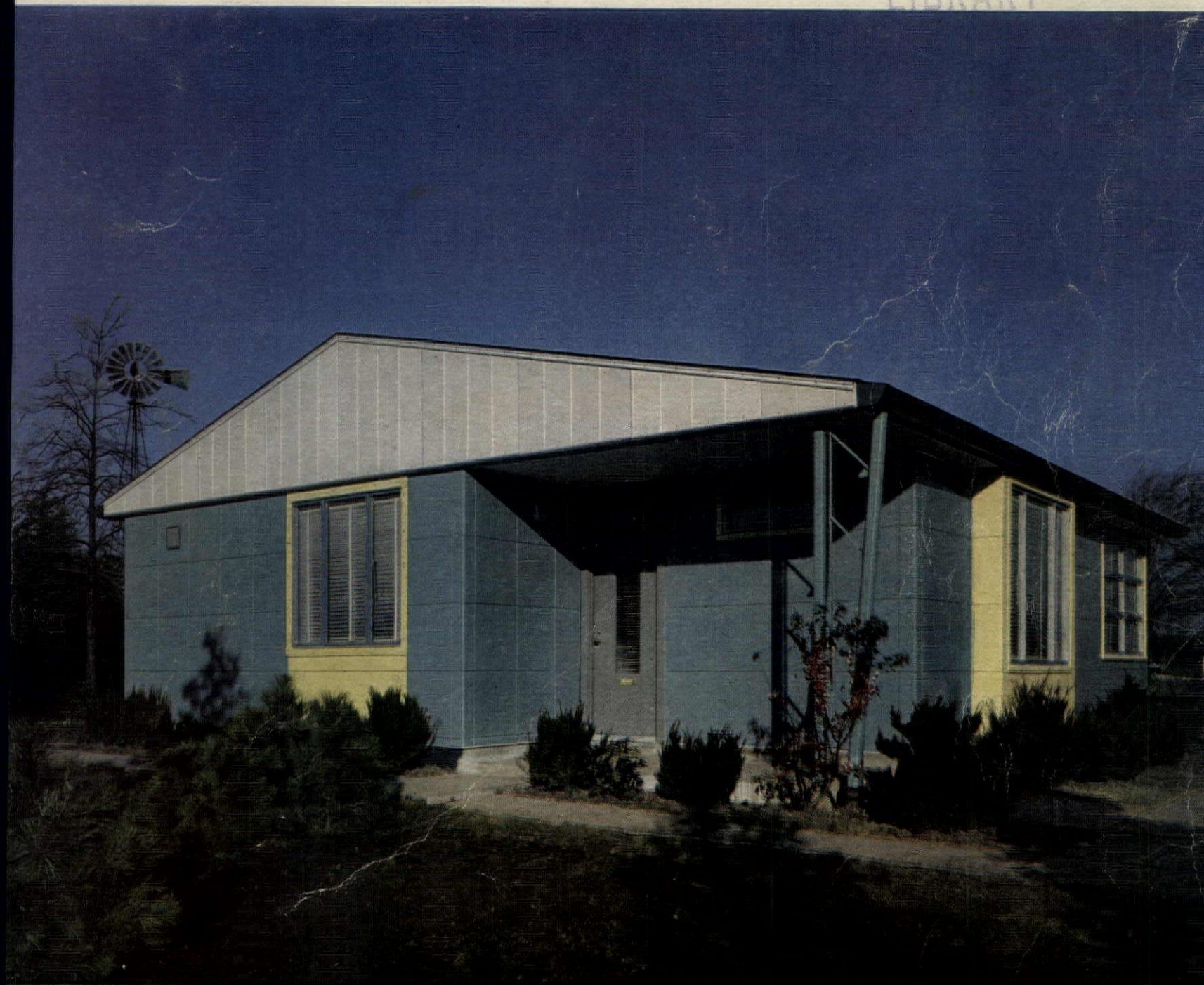
FORUM

Magazine of Building

UNIVERSITY OF HAWAII

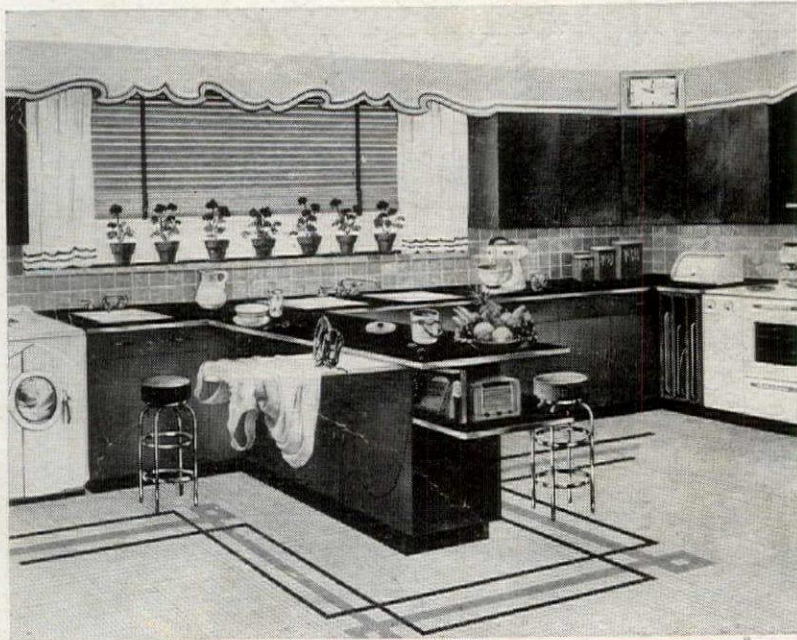
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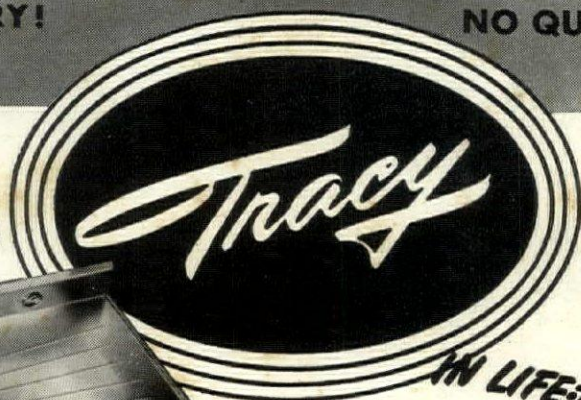
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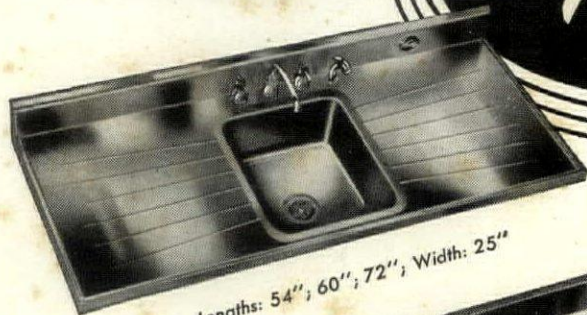
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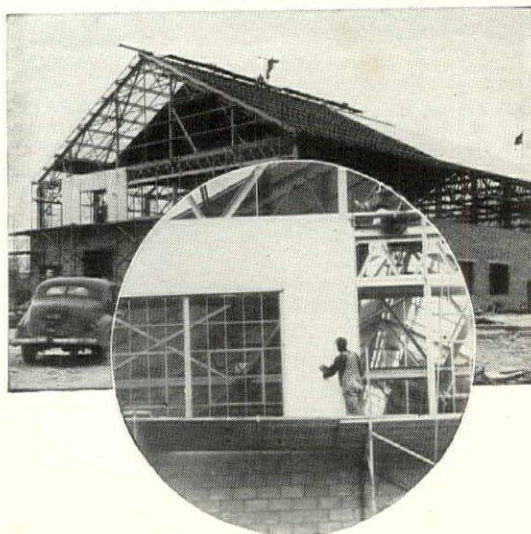
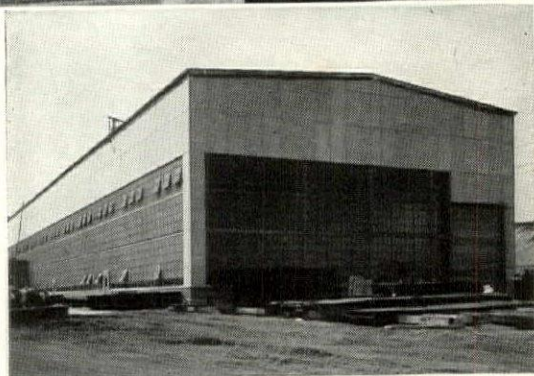
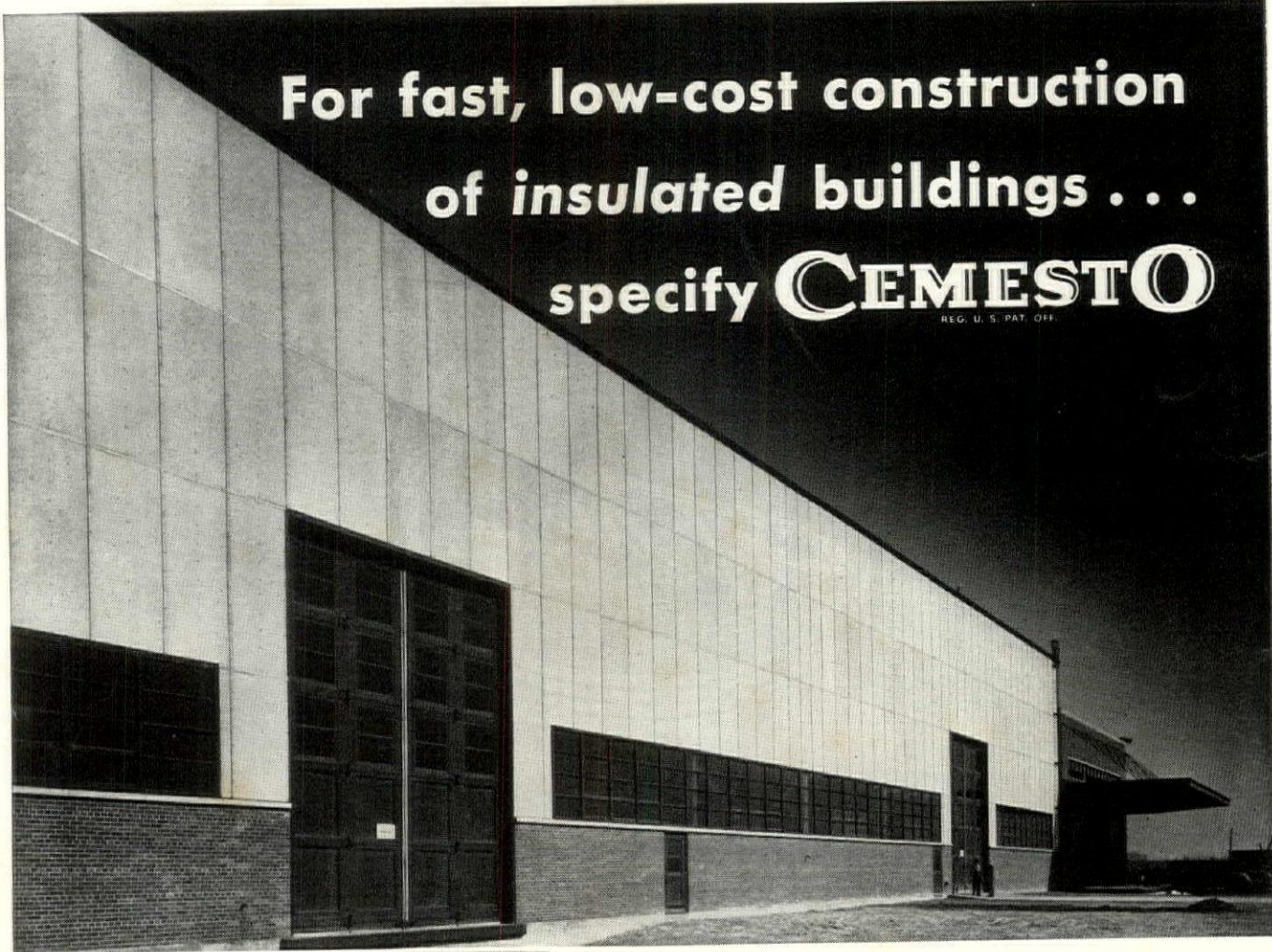
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The Architectural **FORUM**

MAGAZINE OF BUILDING

JUNE 1947

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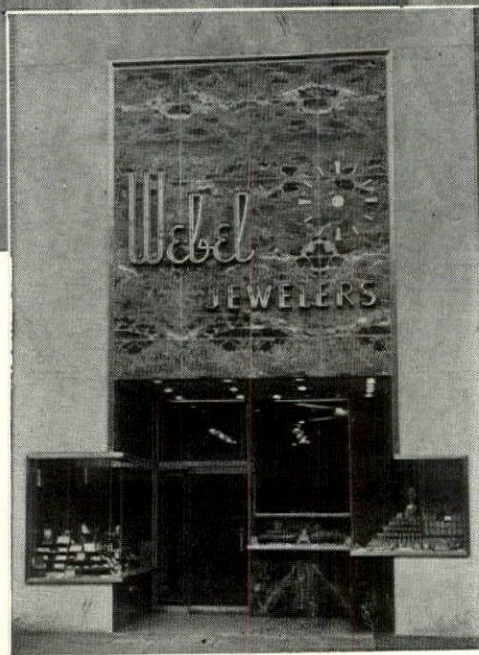
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Cover photo: (Lustron House) Hedrich-Blessing Studio

"Profits up...workers' morale and



MODERN INSIDE as well as out, the attractive jewelry store of Mr. Henry Webel at Ridgewood, Long Island, offers customers the year-round comfort of Servel All-Year Gas Air Conditioning.

CUSTOMERS find this attractive shop a welcome refuge from summer heat and winter cold, thanks to the comfortable indoor climate provided through every season by Servel All-Year Gas Air Conditioning.

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Yes, you can specify Servel *All-Year* Gas Air Conditioning for your clients' stores, offices, laboratories and other commercial buildings with complete confidence that this equipment will more than justify its cost.

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"I've been more than satisfied with the clean, comfortable indoor climate the Servel Conditioner has provided the year round in my jewelry store. The Servel unit has proved efficient, economical, and simple to operate. Best of all, it has increased my summer busi-

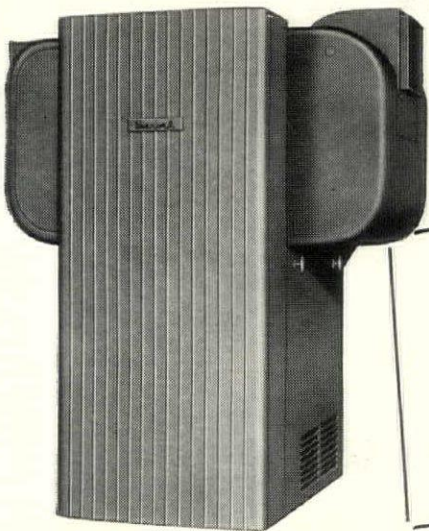
ness—and hence my profits—to the point where the Conditioner will have actually paid for itself in a very few years!"

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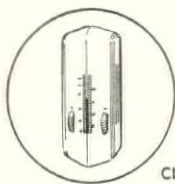
2 CONVECTION HEATING

To this — Modine Convectors add *convection heating*. Hot water or steam, circulating through copper heating unit, draws floor-line air into bottom of convactor where it's warmed, rises, and is then gently circulated through the room.

RESULT: Blended, combination heating for modern living comfort — that's what Modine Convactor Radiation offers today's moderate cost homes and apartments! In addition, you get *individual* room control that responds almost instantaneously to sensitive automatic controls — plus gentle, continuous air circulation without the use of moving parts that wear out. Yes, think of the dependable heating comfort, distinctive charm, space-saving, and long service life of Modine Convactor radiation for your heating needs. Look for Modine's nearby representative in the "Where To Buy It" section of your phone book. Write for descriptive literature. MODINE MANUFACTURING COMPANY, 1773 Racine Street, Racine, Wisconsin.



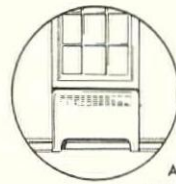
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**IF YOUR DOCK
LOOKS LIKE THIS
YOU'RE WASTING
MONEY!**

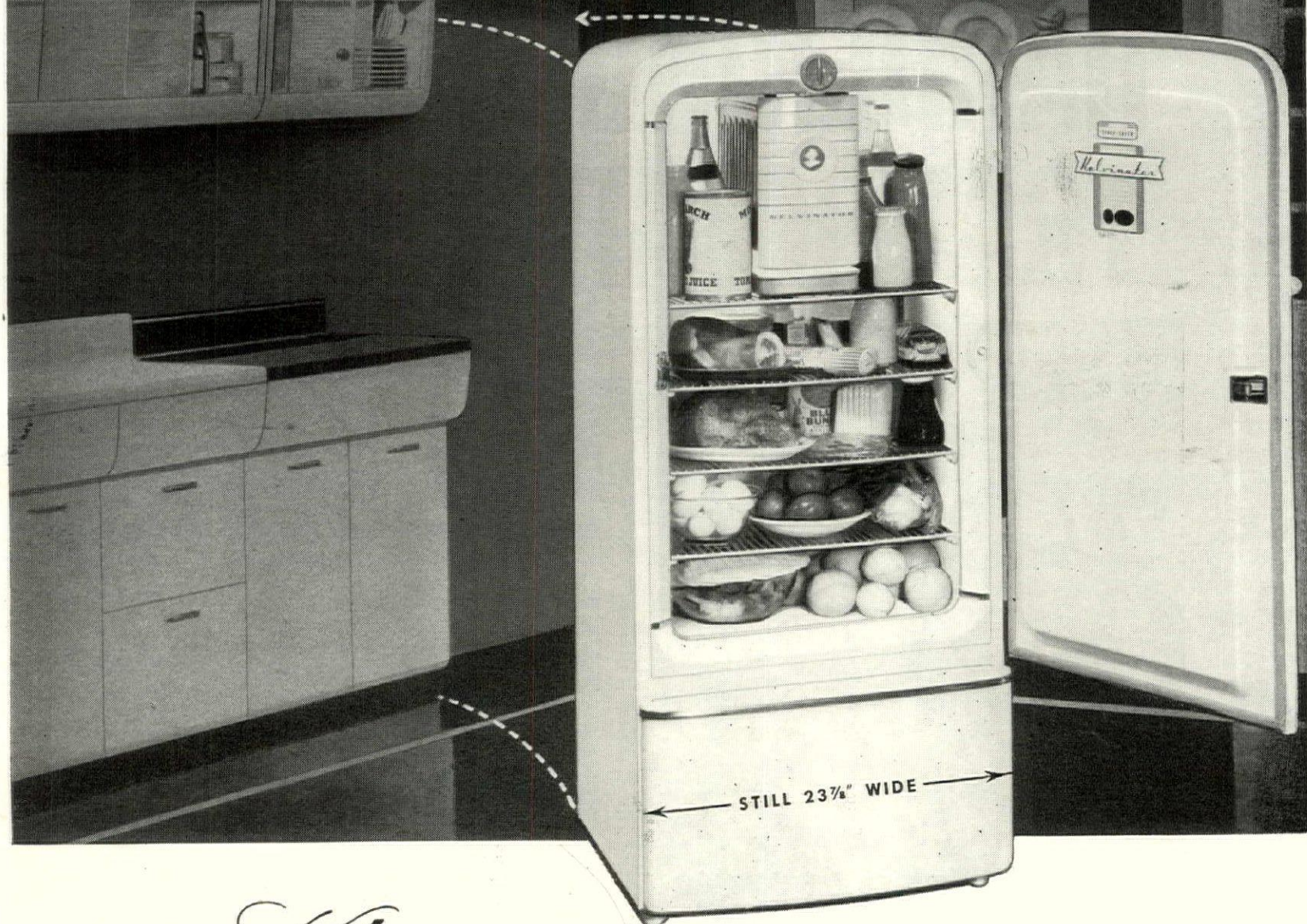
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and unloading space
consumes time...wastes
money...ties-up traffic!**

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Holds 50% more . . . takes no extra floor space!

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And just look at these up-to-the-minute features—5

full-width shelves with *more space between shelves* . . . extra room for tall bottles and bulky foods . . . a big High Speed Freezer for frozen foods. And the "Space-Saver" stars Kelvinator quality throughout—from its snowy-white Permalux finish to the Polar-sphere—the matchless cold maker with the unsurpassed trouble-free record.

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NEWS

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BUILDING MONTH. "What a curious feeling!" said Alice. "I must be shutting up like a telescope!" Building felt a little like Alice. So did the rest of the U. S. Like Alice, nobody was quite sure which was more uncomfortable—inflation or deflation. And nobody knew just which bottle to take for either. As Housing Expediter Frank Creedon returned empty-handed from his swing around the country to seek voluntary price cuts from lumber producers, it was clear that the government's push for a little voluntary deflation in building had collapsed, like the rest of the Administration's campaign for voluntary price cuts.

The lumbermen were in a particularly vulnerable position. Lumber had led the climb of building material prices: it was up 75 per cent since V-J day, in the four months ending last February it had jumped 47 per cent. What had happened could also be described plainly in dollars: a house which required \$1,000 worth of lumber in 1939 now means a \$2,828 lumber expenditure.

But the lumbermen said a cool no to Creedon's talk about voluntary price-cutting agreements. Lumber prices were coming down anyway, they said; the Administration was simply trying to grab the credit. A few Seattle lumber retailers last month announced 5-10 per cent price cuts, but this was just small change. Up and down the West Coast, the trade agreed that a price slide in lumber is just ahead. Dealers had not stocked beyond immediate spring requirements; they were expecting a 20 per cent drop in lumber prices within 30 to 60 days.

If lumber prices drop, other building costs may fall gently in ratio—or so Building men devoutly hoped. They wanted just a steady dose of deflation; they shuddered at the prospect of emptying the whole bottle.

The best news of the month was that a small dose now seems imminent. But the news came, not in the headlines or in the official price indexes, but quietly in the conversations of building men. The big contractors had detected a slight tremor in yesterday's firm prices. Most said that building costs had reached their peak a few months ago (FORUM, March, '47), while current quotations showed they were already on their way down. A cost drop of 20 per cent from peak, most contractors agreed, would be enough to bring building's market out of hiding.

Big building customers, the contractors said, knew there would be no speedy return to prewar building cost levels; they were simply waiting for price stability. Even Housing Expediter Creedon, although he was as anxious as anybody else for a little, therapeutic deflation, told the Massachusetts Building Congress that it is not reasonable to expect a big drop in building costs. Said he: "The trend of building costs has always been upward. It is true that certain material prices may come down when the supply increases, but prices have historically held a plateau about 50 per cent higher than at the beginning of a war for nearly a decade after a war . . . Waiting for prewar costs is going to be—in my opinion—a long, long wait."

Although Building's market had for the last 10 months been reflecting hesitancy at climbing costs, it was in nothing like a condition of paralysis. April housebuilding starts amounted to 63,000 units, compared with 48,800 in March, and only 3,000 less

than the April starts last year. Another optimistic mirror: applications for FHA mortgage insurance reached an all-time high in April, amounting to 39,180. Public works construction was up over last year, commercial building was down. Industrial construction had also dropped from the 1946 pace (biggest peacetime industrial building year on record), but the drop was much less than had been expected.

May brought some impressive starts in the vital rental housing area. One week after the *New York Times* said \$100 million worth of multi-family construction was being shelved in the New York area due to high costs, Gross-Morton announced a 3,800 garden apartment development in Queens, with rents ranging from \$66 to \$96. In Los Angeles, the Prudential Insurance Co. acquired a site for a 1,400 unit development. Seattle saw a construction start on a 544-apartment development covering a 27-acre site, backed by Nettleton-Baldwin, housebuilders who got big during the war.

WASHINGTON

OPEN DOOR

Building controls are on the skids.

If moderate price drops beckon appealingly to building's market, all signs were that the door would soon be open wide. Gradual easement of the federal ban on nonresidential construction will begin in mid-June. The space restriction on houses was last month lifted from 1,500 to 2,000 sq. ft. If the Wolcott decontrol bill, already cheered on its way by the House, passes the Senate, even these remaining restrictions will be wiped out. The American Legion had changed its mind on endorsing a minimum program of continued building controls, and last month gave the Wolcott bill ringing support.

Housing Expediter Creedon still insisted that some control of nonresidential construction had to be maintained for the time being. But he seemed ready to modify it in one of these ways: (1) lift the ceiling to \$65 or \$70 million a week; or (2) increase the limit on a selective basis by giving special consideration to public utility applications such as schools, hospitals, churches, etc. Since the Housing Expediter's office faces a 10 per cent personal cut, lack of facilities for handling applications on a selective basis will probably dictate a non-selective boost. Approvals are now running about three for every rejection, and a hopeful sign for building's outlook is that appli-

cations are currently coming in at a greater number than ever. Since the control program started in March 1946, approvals have totaled \$3,426,081,000 and represent about 60 per cent of the applications filed.

Materials, Housing Expediter Creedon agreed, were in generally good supply. Only a few items—soil and pressure pipe, gypsum lath and board, hardwood flooring—were still somewhat short.

CHANGE IN THE WEATHER?

Housers call for Democratic public housing bill as 1948 banner.

Up and down the U. S., housing need was bringing the premonitory rumble of a coming storm. But Congress was curiously deaf to what many thought might eventually mean a sharp change in the political weather. There would be no public housing legislation this year.

Senator Taft said he was thinking of sending the T-E-W bill (S. 866) back to committee for "further study." He thought it might be possible to work out a further compromise on its contested points. But public housing proponents thought it was time for the end of compromise.

Said New York's ex-Mayor LaGuardia: "I warn you that chaos will set in in this country unless we start to provide homes." Even the opposition conceded that it could not forever resist the demand of 15 million underhoused Americans. Realtors' spokesman Herbert U. Nelson told Congress: "These things have a way of coming true. The housing group is backed by powerful labor groups, powerful social groups of all kinds."

The plain fact was that public housing is no farther away than a change in political power. And the Republican sit-down on the housing crisis might well bring about the change. What was happening in state legislatures was the tip-off. Everywhere veterans' groups were pressing for state and municipal funds for permanent housebuilding. In Pennsylvania the vets were even considering swapping a state bonus for cut-rate prices on city-built houses. In California they were seeking a big state fund for buying building materials, to be allotted to local housing authorities for construction. In Wisconsin seven bills providing large state financial aids for permanent housing for veterans were on the docket. With the exception of a few liberals like Senator Charles Tobey, Republican opposition to this legislative epidemic was uniform. Would the Democrats be able to exploit it in the big show of 1948?

Last month an influential housing spokesman called the Democrats to housing battle. Said Charles Abrams in the *Nation*: "The Democratic Senators who sponsored the Taft legislation on housing and education should withdraw their names at once and offer measures that truly reflect the people's needs. They must no longer support rump reform bills, whittled down to win the Ohio Senator's sponsorship." Hoped veteran houser Abrams: "Lack of confidence in

the housing program of Great Britain's Conservative Party helped to bring about its unexpected overthrow in the wake of its military victory. The same issue, properly presented to the American people, may turn the political tide in America."

GET THE GOVERNMENT OUT

Only cash buyers are wanted for government's war houses.

Like most Congressmen, the House Banking Committee is mighty anxious to get the government out of the housing business, in spite of signs that some people think it should stay (see above). Committee members have been complaining that they can't get frank answers from the federal housers about how things are going. The whole job of liquidating the government's war housing ventures, the committee said, is hopelessly confused. Finally they decided that the best thing to do would be to take the sale of permanent projects (166,509 units) out of the hands of the Federal Public Housing Administration and give it to the Federal Works Agency.

Last month it was a safe bet that a bill proposing this and also requiring cash-on-the-line for purchase of the projects would be approved by the House. But it was far from certain that the Senate, whose predominately big-city members lean toward a more social policy in disposing of war housing, would agree.

Cash transactions would mean that local housing authorities probably could not afford to buy the war projects for conversion to low-rent housing. If the local authorities are required to buy for cash and at market value, use of the properties for low-rent housing would require subsidies beyond the means of most local governments. Private investors and cooperative ownership associations would, however, be assisted in raising financing for purchase of the war projects by the bill's provision for FHA mortgage insurance. FHA would handle such mortgages under Title VI, approve 90 per cent loans and a 25-year amortization period. The House bill also clarifies the buyers' preference list in this order: 1) veteran occupants; 2) veterans, not occupants; 3) non-veteran occupants.

RESEARCH BUST

No more money for building studies.

Briskly pruning the government's budget, the House snipped away a healthy growth of building research. This means that contracts made by the government with a dozen universities are in danger of cancellation. Since the contracts cover such studies as modular coordination of building materials, an engineered house, new product development, etc., Building's loss is likely to be great. There is small chance that the Senate will restore the funds which the Commerce Department needs to continue the building research activities of its Office of Technical Services. The House ruled that there is actually no legislative authority for Commerce to spend money this way.

VANISHING CAPITAL

RFC loans dry up because private money won't back factory house.

When he set up the Veterans' Emergency Housing Program, Wilson Wyatt thought that the factory-builders could produce 600,000 houses this year. By last month it was depressingly clear that not more than 100,000 factory-built houses would appear on vacant lots before the year's end.

Like the rest of housebuilding, factory-built housing was slowing down. But the biggest reason was not high materials and labor costs. It was lack of production financing. Although the government stood ready to underwrite market risk and provide 80 per cent of the production capital needed, few of the factory-builders could raise the remaining 20 per cent.

Andrew Higgins had indignantly withdrawn his application for a government loan. The government's terms, he steamed, were "impossible and outrageous."

RFC was scanning the would-be borrowers with a glacial banking eye. What made the prefabers boil was RFC's refusal to permit them to count their investment in tools, equipment, other development costs as part of the 20 per cent private capital required. On its part, the private money market was uneasily eyeing what it calls the "end of an expansion period." It was no time to float financing for a new product.

Needy producers might take what comfort they could from two small hints of help ahead: 1) the Wolcott building decontrol bill as passed by the House called for an FHA-insurance umbrella for prefabricated production loans (but FHA was already clucking worriedly at the prospect); 2) insiders said government housers were hard at work brewing yet another scheme, still under wraps, for helping out prefabers.

Of the \$12,500,000 RFC loans so far approved (contingent upon 20 per cent equity money), only \$1,681,253 had actually been disbursed. The record:

	Loans Approved	Disburse- ments
Anchorage Homes	\$700,000	\$558,000
*Fairport Materials	1,100,000	None
Continental Basic	100,000	20,951
Elliott System	37,750	37,750
*Fox Metals Corp.	635,000	93,100
General Bronze	2,000,000	None
*General Homes	225,000	150,000
*General Houses	450,000	Withdrawn
*General Panel	1,500,000	34,973
Green Ready-Built	135,000	None
Higgins	9,000,000	Withdrawn
*Homeola	350,000	None
Interlocking Walls	69,000	None
*Knox Corp.	1,000,000	531,000
*Laminated Wood	130,000	110,000
*Lustron	12,500,000	None
*Metal Homes	190,000	145,000
Newark Industries	175,000	None
*Pilgrim Homes	200,000	None
*Presco Corp.	100,000	None
Smith Hendricks	650,000	Withdrawn
Texas Housing	2,000,000	Withdrawn
Tri-State Homes	125,000	None

* Holds government guaranteed market contract.

ONE MORE SPRINGTIME FOR A. I. A.

Spring rain fell with the continuity of a leaky tap outside the Pantlind Hotel in Grand Rapids, Mich. Inside, the American Institute of Architects seemed to be un- easily approaching some kind of spring- time of its own; in the old dry professional grass, the younger architects were begin- ning to shoot up. A.I.A. could count 6,817 members as compared with 2,934 before the war, and more than 10 per cent of them had arrived in Grand Rapids.

Curiously unclouded by the prevailing hesitancy of Building's market, the con- vention had a happy, well-fed air. It seemed to have no doubt that it faced the biggest building decade in the nation's history, but was much more occupied with its familiar organizational routines than with its expanding professional horizon. The American Society of Planning Offi- cials, which met in Cincinnati, also re- flected an unshaken confidence in an almost complete renewal of the nation's physical plant over the next ten years, but more concern about whether the de- velopment would be guided by planning insight.

In both groups it was the young men who put the case for architectural and planning leadership with the most urgency. Said young Boston architect Carl Koch: "There is no real understanding in Amer- ica of the horror which the next ten years of uncontrolled development will bring." At the ASPO session, young New York planner Henry Cohen expressed the vet- eran's impatience, with an impelling poi- gnancy seldom encountered in convention eloquence.

According to Cohen, the young planners think that what their elders have done is pitifully inadequate on every front—theory, research, practice, education. With Man- hattan being rebuilt to a higher density, Cohen said, "planners stand by and feebly whisper from the sidelines, 'Moses, let my people go' . . . Young people tend to see things in a different light. Many of us have seen more in the last decade than people twice our age have seen in their whole lives. We will not let the Methusa- lahs silence us. We still have a chance to make something of our lives. And believe me, we are going to try."

Non-member Koch precipitated the live- liest A.I.A. discussion, marked by *Architectural Record* editor Douglas Haskell's explosion: "People who walk down the middle of the road are an obstruction to modern traffic!" (Said gilt-edged New York architect Ralph Walker: "Do you mean me?") Koch told the A.I.A. that it might look at its own post-World War I record for inspiration, when members and honorary associates like Clarence Stein and Edith Wood were at the forefront of the public housing movement. Today,

(Continued on page 15)

Photos: Kenneth Welch, Grand Rapids Press



DINNER GROUP includes (l. to r.) Mrs. Raymond Ashton, Mrs. Kenneth Welch, President-elect Doug- las Orr, Edward Kemper, executive A.I.A. secretary.



BEHIND THE MIKE Grand Rapids' Mayor George W. Welsh. Talking to him: Ladislav Segoe, Robert Alexander.



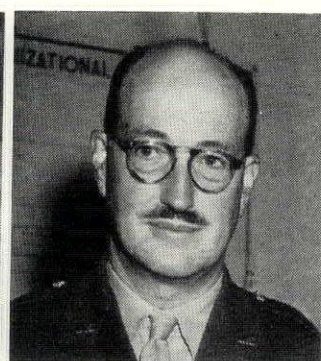
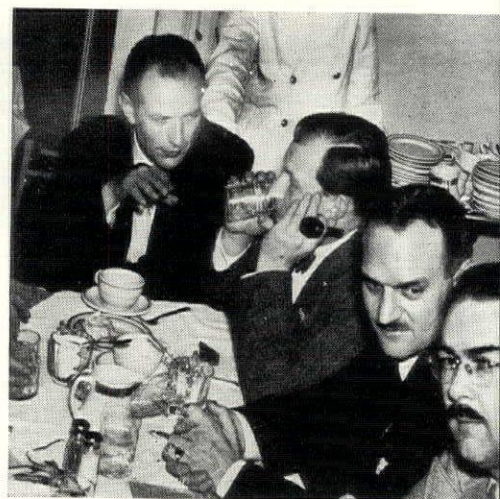
A.I.A. GOLD MEDAL for 1946 was presented to Elie Saarinen by President James Edmunds. The crafts- manship medal went to Dorothy Wright Liebes for outstanding contribution in textile design, and the fine arts medal to Samuel Chamberlain for distinguished achievement in etching. Advanced to fellowship were: Arthur W. Archer, Wells I. Bennett, William J. Bain, John W. Brooks, Howard L. Cheney, George G. Elmslie, Carl A. Erikson, Charles E. Firestone, Alvin E. Harley, Jean Hebrard, Arthur K. Hyde, William E. Kapp, James H. Mitchell, Frederick A. Muhlenberg, Richard J. Neutra, Charles F. Owsley, Warren C. Perry, Herbert J. Powell, Walter T. Rolfe, Paul Weigel.



NOT ALL THE BEST SPEECHES were on the platform. Sample: Paul Gerhardt, Jr., Branson Gamber, Louis Justement.



Edgar Williams, Edmund Purves, Ralph Walker and (below) Robert Alex- ander, Eero Saarinen, Hervey Clark, L. Morgan Yost.



UNITED NATIONS: Headquarters plans are beginning to jell. Design board has related Secretariat, Council chamber

The world's first real try at cooperative international effort produced some spectacular results last month. The United Nations 10-man board of design, steered by unpretentious, equable Wallace K. Harrison, had meshed its distinguished talents, repressed any prima donna urges, argued furiously and agreed rapidly. In four months, it had turned out a scheme which provided with admirable precision for the highly intricate requirements of an assembly of 70 nations (estimated as the maximum UN membership over the next decade or so). The solution relates the large amount of separated meeting space required for UN's complex organizational structure, with a continuous regard for an easy traffic flow and a clear-cut allocation of facilities.

Board chief Harrison had made it clear that there might be modifications of the present scheme as further studies of internal functioning develop. But the architects were in unanimous and enthusiastic agreement on 1) location of basic buildings on the site; 2) shape of the basic building elements; 3) schematic plans for relating the principal meeting rooms and handling the requirements of the three groups (delegates, press, public) who will use them.

The plan detailed here is the working basis of a report to be distributed to all member nations before July 1, and will come up for a final OK at the next regular session of the General Assembly when it convenes at Flushing Meadows next September. At that time, UN like the rest of Building's customers, will have to face some

worries about where to raise the money. (Cost of the main structures has been estimated at about \$80 million; UN's annual income at present is only \$27 million). Construction of the first buildings could be finished by spring, 1949, Harrison said.

New York City said happily that it would spend \$15 million for a nice front door: formal parks, a tree-lined promenade at the main (47th Street) entrance, a traffic tunnel to bury First Avenue trucks. The Headquarters Planning Commission will be able to supervise construction from office space in the N. Y. Housing Authority Building just finished on the southwest corner of the site, which UN will buy.

The board debated right up to the last minute a notion with which everybody was intrigued: handling the Council-conference-room complex on one level. This would have permitted each group—delegates, press, public—to circulate freely around the meeting rooms on its own floor, but was abandoned as promising too much long-distance walking. As it is, the three main buildings will be tremendously spacious, covering 231,000 sq. ft. (about two blocks.)

It had been generally agreed almost from the beginning that the main public entrance would be from 47th Street, that there would be a plaza (where the symbolists will get their only chance in this functional group) in front of the General Assembly, that the 45-story Secretariat building would be located near the 42nd Street boundary, that the building for delegations and special agencies would be located on the opposite or north end. As

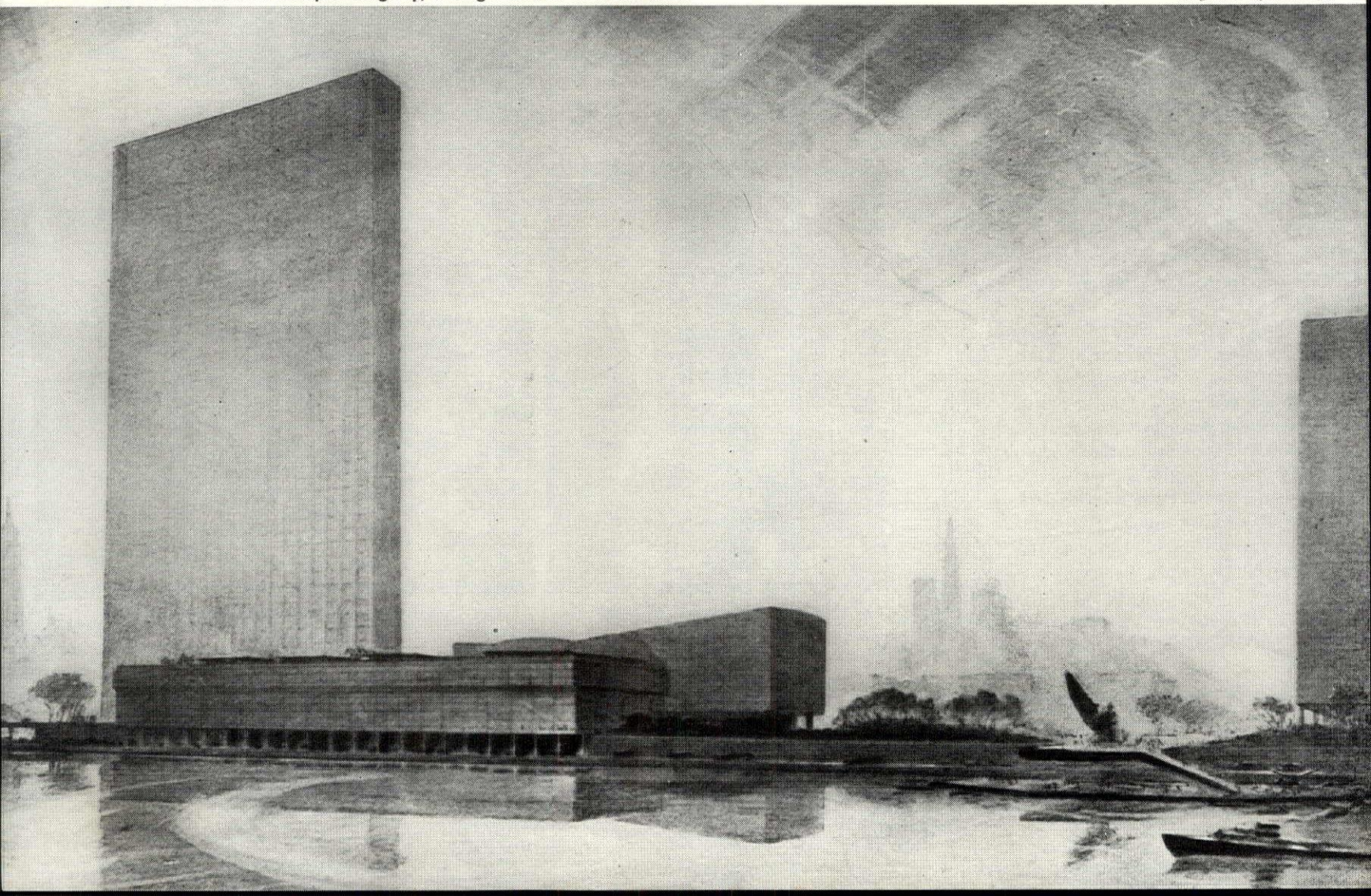
these locations work out, there is a rather surprising open vista, extending straight across the river, from the main approach; fortunately, this view is above the Pepsi-Cola sign dominating the Queens side.

From the main plaza, UN visitors will enter a two-story lobby under the General Assembly chamber. They can proceed by a network of elevators, escalators, ramps and stairways to a General Assembly session, a Security, Trusteeship or Economic & Social Council meeting, or to the conference rooms. The five conference rooms (one doubles as a theater) are provided so that five of the six standing committees of the General Assembly can meet simultaneously if necessary. A smaller plaza, off 42nd Street, gives access to the delegates' lobby. Parking for about 2,000 cars will be located under the ground level (the riverward slope of the site adds room).

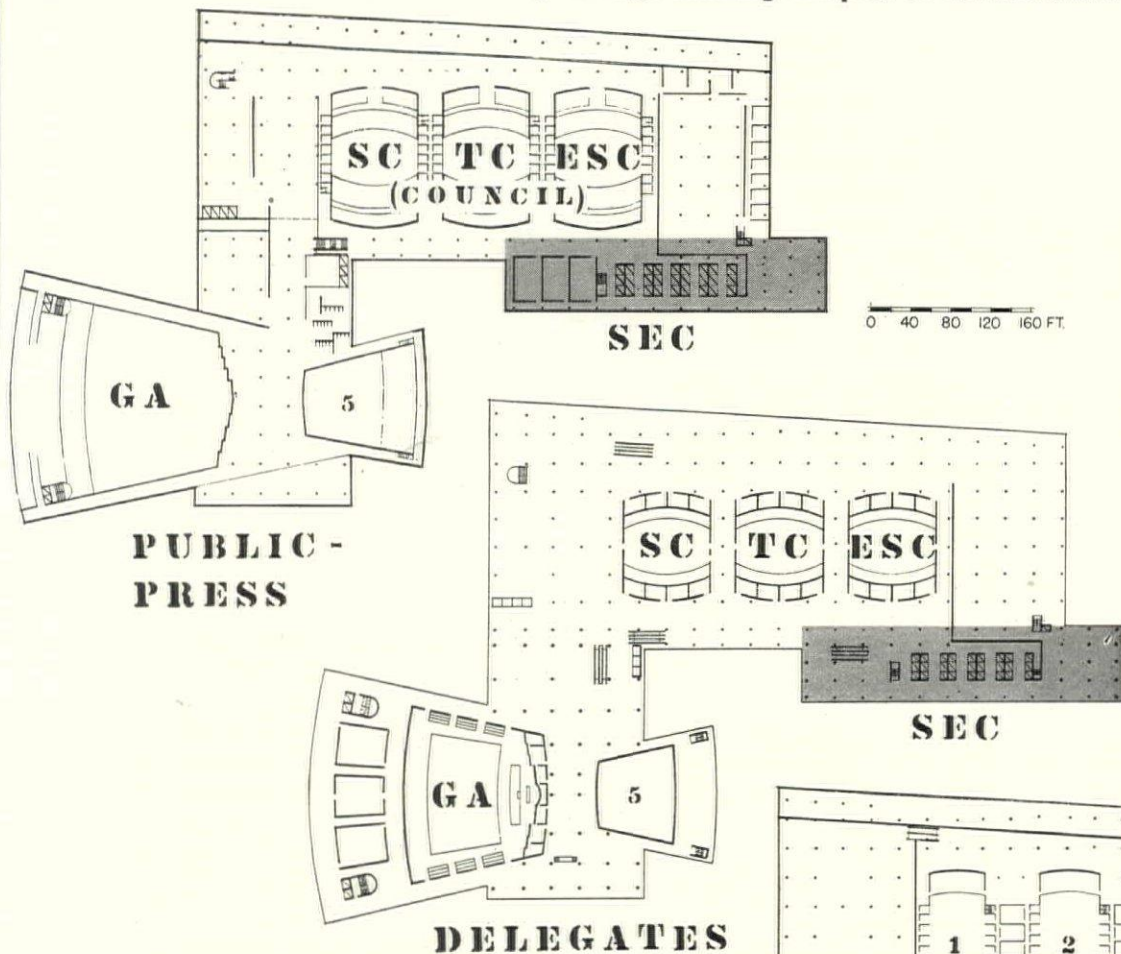
As the A.I.A. shouted even louder for a competition for one of the main building elements, as New York's architectural old guard chorused the expected lamentations ("diabolical . . . like a freight car stood on end . . ."), the design board had detailed no facade nor would soon do so. It was immersed in problems of acoustics, complete air conditioning (the Secretariat's north-south orientation presents special problems), mechanical circulation of documents and library books, provisions for visual presentation and television (many UN reports are screened for members as well as printed). Still unsettled is a design board argument on whether sun blinds will be inside or outside.

View of United Nations headquarters group, looking southwest from East River.

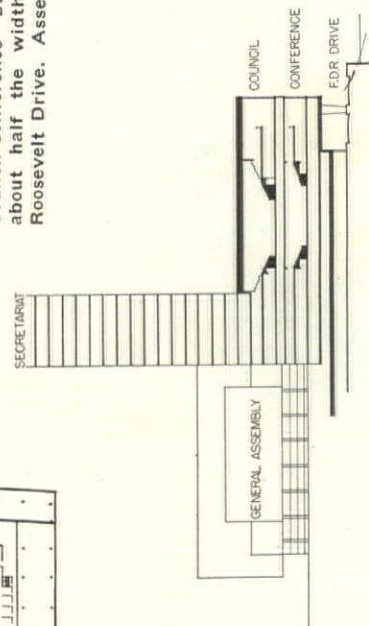
Hugh Ferris, Delineator



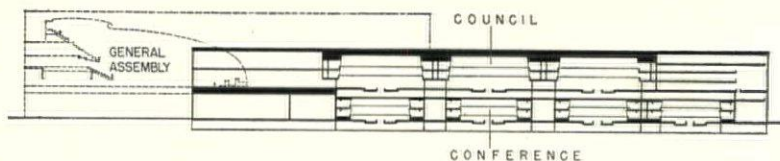
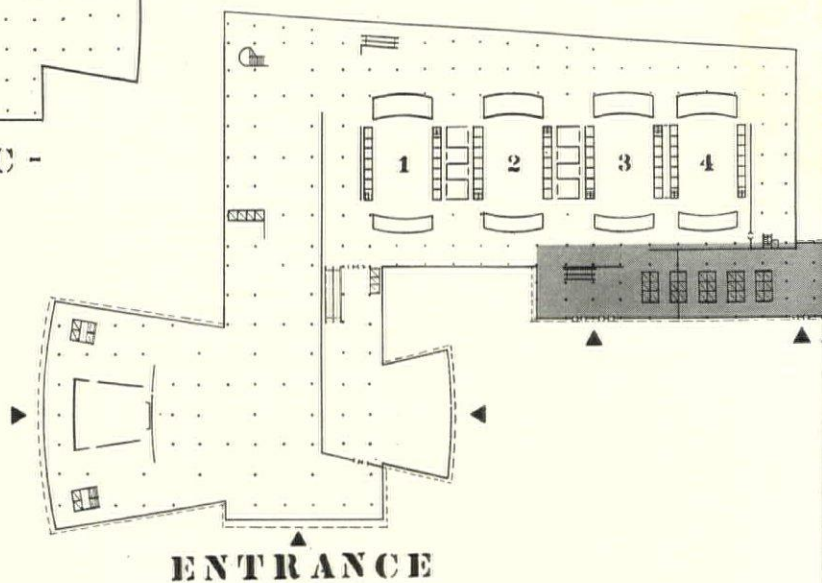
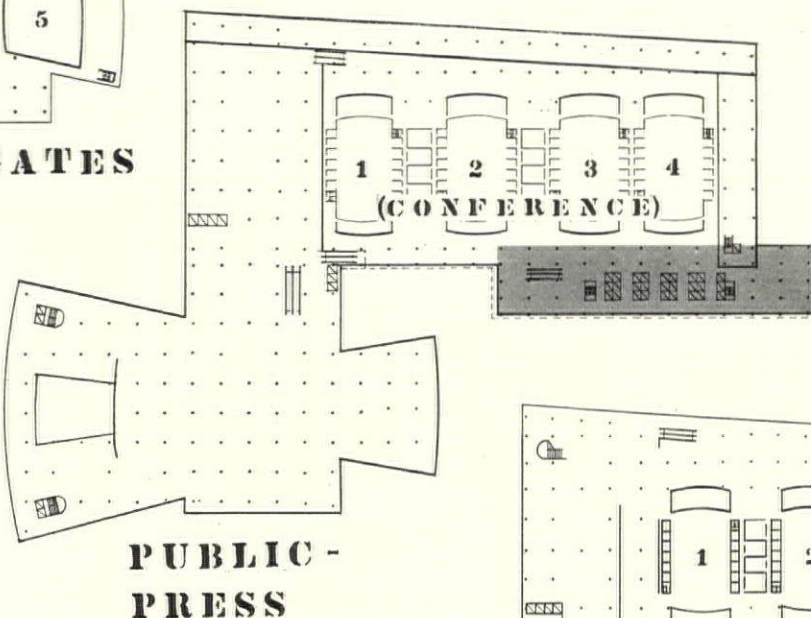
Conference rooms, and General Assembly as huge building complex at south end of site.



SECTION shows how Council and conference meeting rooms run through two levels. A service floor is sandwiched in the middle. The Council-conference building projects over about half the width of the Franklin D. Roosevelt Drive. Assembly seats 3,000.



GENERAL ASSEMBLY structure and Council-conference building are handled as an L-shaped unit. Alternate floors are set aside for delegates and for public-press use. Each group has direct access to its own floors from its own lobby. Public-press entrance lobby is at the front of the General Assembly building, the delegates lobby at the rear. On all floors of the Council-conference structure, the side overlooking the river has been kept open for circulation and view.



GA: General Assembly
 SC: Security Council
 TC: Trusteeship Council
 ESC: Economic and Social Council
 SEC: Secretariat
 1, 2, 3, 4, 5: Conference rooms

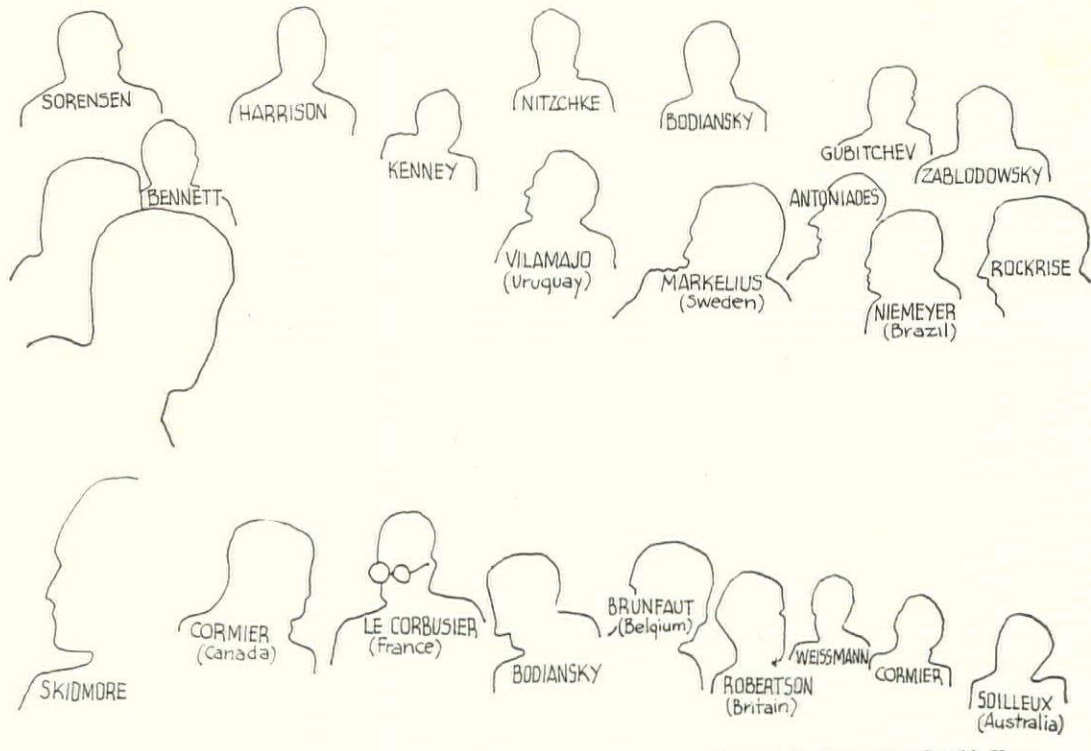
REMARKABLY OPEN SITE results from non-formal disposition of main buildings, and this effect is accentuated by open vista from the main approach (47th Street). Public plaza in front of Assembly will be only place for symbolic gesture.



Franc Scherschel—Life

UN planners at work

The design board worked *en charette* to meet the deadline it had set for itself, and in this familiar, electric atmosphere the final scheme (one of about 50 that had been prepared in detail) fell spontaneously into place. Surrounded by the clay models of abandoned schemes and acres of drawings, the board met in some hastily partitioned space in Rockefeller Center's RKO Building. The architects wandered casually in and out, sometimes sketching at their own drafting boards, sometimes pondering the room-length bulletin board, every now and then collecting for big meetings like the one above. Design board members are identified by countries in line drawing. Special consultants shown are: Jon Antoniades, Greece; Vladimir Bodiansky, France; Matthew Nowicki, Poland; Ernest Weismann, Yugoslavia. Consultants Josef Havlicek, Czechoslovakia and Peter Noskov, Russia were not present when pictures were taken. Others shown are UN personnel.



Photos: Life Scherschel; Graphic House



(Continued from page 11)

Koch said, the Institute is "acting like any other private pressure group." It had contributed no leadership in forming national policy, had opposed industrialized housing, had done nothing to aid the fight for the T-E-W housing bill.

Possibly influenced by Koch's challenge, the convention passed a resolution approving the T-E-W bill. The vote was, however, close and discussion showed that the substantial minority, led by the Chicago delegation, feared that the bill somehow involved an attack on democratic American institutions. (Said Chicago architect Jerrold Loeb: "Don't take my fellow delegates too seriously; they've been influenced by a well-known newspaper.")

The large number of young architects on hand also accounted for the convention's decision on the roster—it is preparing for the government's use in awarding public works design contracts. The roster will simply name qualified members, not list dollar volume of work done by each, as proposed by the old guard.

LABOR

LABOR'S STAKE

Will climbing building costs mean unemployment and depression?

In New York, the AFL said, 15,000 building tradesmen were out of work. Reason: building starts were falling off because of customer resistance to high building prices. But the AFL Building Trades Council gave notice that it was seeking wage boosts.

Everywhere the story was the same. In Detroit, 10,000 houses and nearly every other building job came to a halt as 17,000 building tradesmen struck for hourly increases ranging from 22½ to 42½ cents. Denver settled a month-long strike by agreeing to hourly increases averaging 17½ cents, figured it would mean a 5-10 per cent rise in house costs. Several AFL unions halted commercial building in Philadelphia, while all construction in the area faced a shut-down when 6,000 mill workers went on strike in the Pennsylvania cement belt. In Kansas City, Mo., commercial construction had been paralyzed since April 1, and negotiations were at a standstill.

Last month building labor got some plain talk from an old friend of labor. Said ex-Mayor Fiorello LaGuardia in his *PM* column: "It is simply impossible for any prudent investor to risk construction at present costs . . . Labor should take the initiative. It has more at stake than any one else."

"The thing to do is to start right here in New York; other cities will follow. Agree on a 40-hour week; accept the \$100 a week wage; remove artificial restrictions and feather-bedding rules; take advantage of all improvement in the art and the use of prefabricated material and equipment; demonstrate a willingness to do a good day's work for a good day's wages."

DESIGN

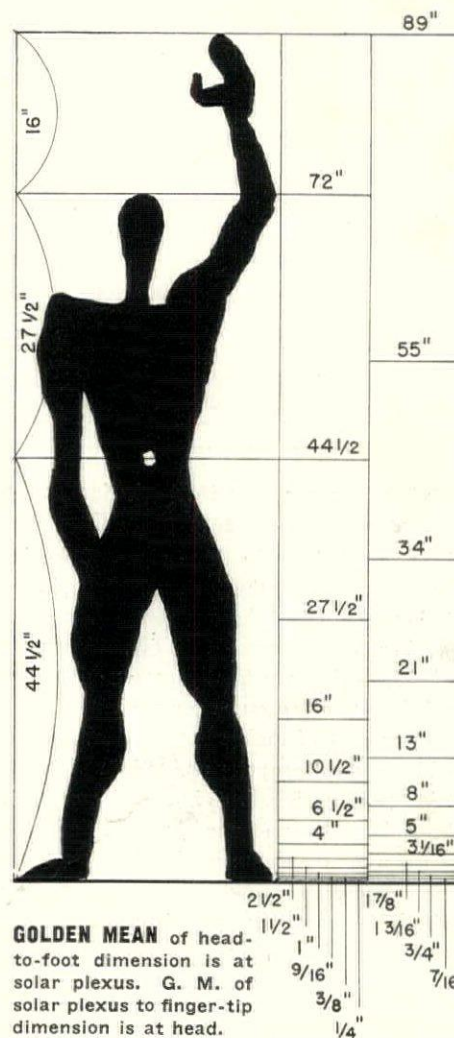
EVERYBODY'S HARMONY

LeCorbusier thinks his scale would eliminate bad proportions.

Of all the United Nations design board, LeCorbusier has attracted the most lavish attention from the U. S. press. Although this has not been an unmixed joy (a *New Yorker* profile is said to have convinced Corbusier, unfamiliar with the magazine's casual scalpel, that it is a mistake to talk to the press at all), it has at least assisted the architect in launching some cherished projects: publication of the book he wrote in 1936 (*When the Cathedrals Were White*) and production of a tape measure embodying his Modulor studies.

The Modulor tape measure, more properly described as a scale, sums up the 20 years of work Corbusier has done on how to apply the Golden Mean generally in building and in the design of items ranging from ships to kitchen sinks—or practically anything to which the designer assigns dimensions. LeCorbusier did not, as many of the newspapers assumed, invent the Golden Mean, but he has developed a system which (1) provides a constant base related to the human figure (six feet, or what he thinks is the average height of Western man) and (2) makes it possible for any designer to use the harmonious proportions derivative from the Golden Mean relationship without making his own calculations.

What the seven basic tones of Bach's scale are to the music of the Western world, LeCorbusier hopes Modulor will be to building. Just as the Bach scale provides an infinite variety of harmonic tonal combinations, so the Modulor scale provides an infinite variety of harmonic spatial proportions. The Modulor scale, as it is being prepared for production by designer Stamo Papadaki, has 33 major steps or intervals, in two series (see cut). These steps are marked off on a 7½ ft. tape (about where a 6 ft. man could reach), but they could, of course, be continued in a theoretically infinite series. Each four steps on the scale are in "extreme and mean ratio," which is the mathematical description of the Golden Mean. Each step is subdivided in the same relationship. Corbusier thinks these lines would automatically lead the designer to harmonious proportions, and that they could even



lead the housewife to an harmonious decision on how to hang her pictures.

The Modulor scale could be used as a uniform measure as well as a guide to proportions and would thus end the world's awkward division between the metric and the foot systems. People being what they are about a new idea, Corbusier thinks it isn't wise to emphasize this aspect of the scale. If, however, architects eventually get around to writing specifications as M1 x M2 instead of, say, 3 ft. x 5 ft., Corbusier will not be at all surprised.

The scale will be manufactured as a colorful, pocket-size rolled tape, by Charles Hardy, Inc., a New York sales engineering firm. The firm, whose president met Corbusier in Paris, is also merchandising Durisol, a light-weight, fire-resistant building material made from wood-shavings according to a Swiss-owned formula. The Hardy people say that Modulor proportions are used in a model house now being

(Continued on page 16)



PROGRESSIVE ARCHITECTURE AWARDS for 1946 went to Gordon Drake, Los Angeles, for his own house; Kenneth N. Lind, Los Angeles, for a modular system of house construction; E. H. and M. K. Hunter, Hanover, for a small retail shop in Quechee, Vermont; Ernest J. Kump, San Francisco, for the White Oaks Elementary School, San Carlos (FORUM, May '47).

built in Maryland to show off Durisol, but are careful to explain that the Durisol panels themselves are being produced in sizes to fit in with conventional U. S. building practice.

Corbusier is using Modulor in a big housing project now being built in Marseilles and is trying earnestly to convince his UN colleagues to use it in determining the proportions of the headquarter's buildings.

BUILDING MONEY

LET'S TALK IT OVER

Realtors see new threat in insurance company investments in building.

Last month brought three signs of the increasing bulk of the insurance companies in housebuilding's future:

► After a three-year-long fight, Pennsylvania's legislature finally passed bills permitting state insurance companies to invest 10 per cent of their assets in construction of investment property and to join with out-of-state insurance firms in such investment.

► Prudential announced a \$15 million, 1,400-unit development in Los Angeles' Baldwin Hills neighborhood (buying the site from housebuilder Paul Trousdale, who retains adjoining acreage, *FORUM*, May '47) and a \$5 million apartment center on the site of the Schwab mansion on New York's Riverside Drive.

► The National Association of Real Estate Boards saw a new threat to the "small property owner" in these "great national money pools" and lifted a practiced voice to oppose the most active present investors in urgently needed rental housebuilding.

Although the insurance companies were not, like a large part of housebuilding, paralyzed by climbing costs, they made it

plain that they could not perform miracles. Big Pennsylvania companies said realistically that, unless construction costs drop, housing built under the new law cannot be low-rent housing. Metropolitan Life, building in New York under the state Urban Redevelopment Law, asked permission to raise the basic average rent in Stuyvesant Town from \$14 to \$17 per room and to boost Riverton rates from \$12.50 to \$14.

The Pennsylvania legislation turned the spigot for a flow of up to 3.7 billion building dollars. But few of them will trickle into this year's building drought. The big state insurance companies figured it would take at least a year to select sites, prepare plans and specifications, gauge investment return against construction costs.

To the Philadelphia Real Estate Board and Home Builders Association, all this was a prospect mighty unpleasing. They fought to the end to limit insurance company investment to slum clearance housing. The insurance companies, they charged, were not really interested in housebuilding, anyway. They merely wanted a chance to build profit-fat commercial properties for long-term leasing. And whatever they did would freeze out the real estate broker, rent collector and manager.

Although the local fight had been lost, realtors' national spokesman promptly stepped forward to try to stem the rising tide of insurance building operations. NAREB's Herbert Nelson thought he saw how little realtors could talk back to the insurance giants. Said Nelson: "Realtors go to insurance companies for mortgage funds, and insurance companies go to realtors for outlets for their money. The relationship is one of mutual advantage. Why shouldn't we talk it over with the insurance companies?"



HOUSING'S ALMOST-FORGOTTEN MAN

As a 340-page report made by the Navy for the Interior Department documented the well-known slum conditions of company-owned mine housing, operators and U.M.W. disagreed on what was typical. The Bituminous Coal Institute was able to point with pride to the industry's model town, 240-house Sunnydale, built during the war high in Utah's Rocky Mountains. Sunnyvale (right) boasts modern bathrooms, built-in kitchen equipment, utility rooms. Houses rent for \$30-\$40. Company circularizes tenants on upkeep.



CITIES

UNDERGROUND FUTURE

It would be cheaper to wipe out cities than to decentralize them.

New York engineer Guy B. Panero got a job that sounded like the beginning of a nightmare. The War Department asked him to start figuring out how to put industrial plants underground.

Army engineers had already located several hundred million sq. ft. of "useable underground sites" in mines. (Caves were no longer being considered, the Army said—they were too damp and remote.) Now the job was to develop possible plans for installing key plants (sample: production of guided missiles) in these subterranean locations.

While the U. S. shudderingly tried to ignore the vista that opened down the mine shaft, a matter-of-fact report described some of the things that might be ahead. The Social Science Research Council had asked sociologist Ansley Coale to look for some preliminary answers to a terrible question: "How can we reduce our vulnerability to atomic bombs?"

Coale's commonsense answers to a question that rocked the very foundations of sense did nothing to diminish the nightmare quality of the future. They merely gave the nightmare awful clarity by outlining it in construction and planning terms. The report covered three ways to reduce plant and personnel vulnerability to an atomic explosion: 1) protective construction (the U. S. Air Force study of Hiroshima and Nagasaki had found that reinforced concrete structures stood up in a 2,000 ft. radius around the explosion point, but interior damage was great); 2) deep underground construction; 3) decentralization of cities and of industry.

But neither underground construction nor decentralization could be widely carried out, Coale said, without "revolutionary interference by the government in individual choices, a revolution for which popular support can hardly be envisaged." Only small steps in this direction could be made within the U. S. definition of government: relocation of industry might be stimulated by special tax schedules or other subsidy; federal housing might be located to decrease population density.

If international control of the atom bomb breaks down, will cities decentralize or be wiped out? Coale thinks this question has a dollar-and-cents answer. Six hundred Hiroshima-type bombs dropped on U. S. cities would kill between 14-17 million people, injure another 14 million. But it is quicker and cheaper to produce atomic bombs than to decentralize cities. To break down the 200 largest U. S. cities to 1,000 would cost \$250 billion. To produce 10,000 atom bombs and carriers would cost an enemy, Coale says, only 8 per cent of this.

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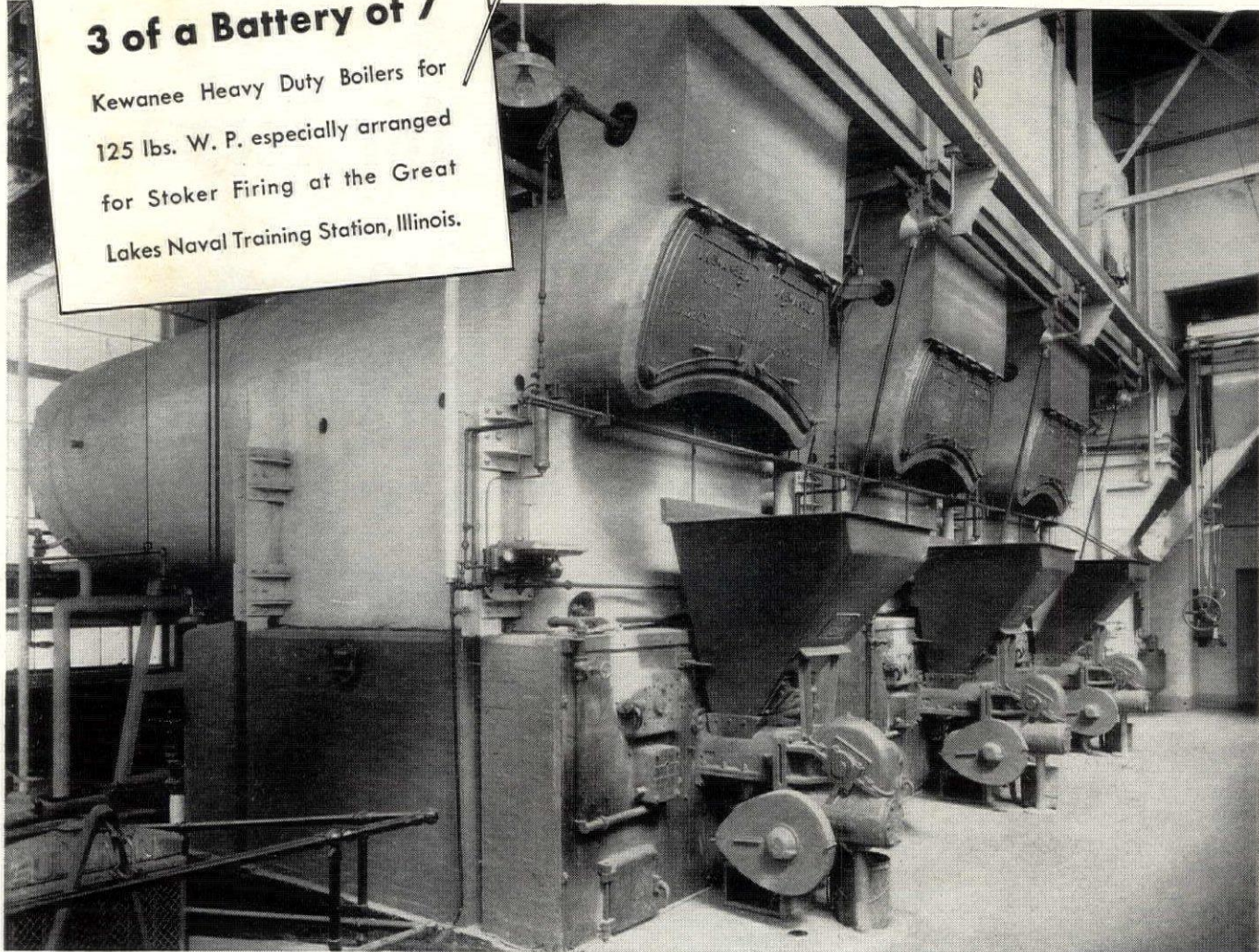
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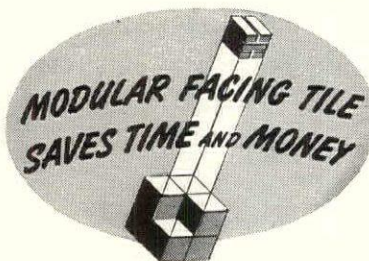
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When you show the job to clients, you can say: "These outside walls give you *double* for the money—two things for the price of one—sheathing PLUS insulation."

Double-duty Insulite provides bracing strength considerably superior to wood sheathing horizontally applied. Its insulation value over wood is common knowledge. Specify double-duty Insulite sheathing.

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

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MINNESOTA & ONTARIO
COMPANY

Five things to remember

WHEN YOU PLAN AIR CONDITIONING FOR A RETAIL STORE



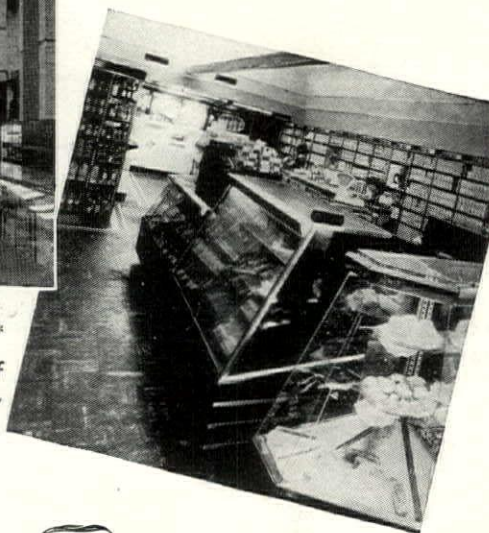
1. COOLING*

Not too cold nor too warm—cool comfort even on hottest days.



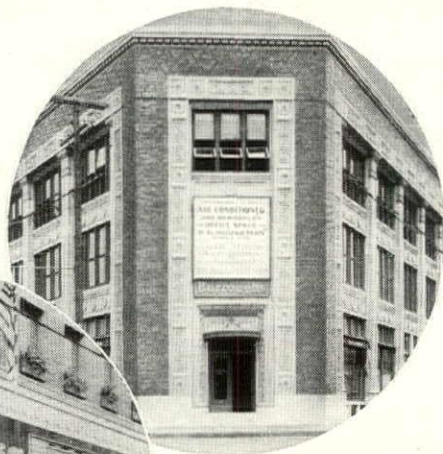
2. DEHUMIDIFICATION*

Wrings mugginess out of the air. Proper humidity level all year round.



3. CIRCULATION

Air is gently circulated for uniform coolness throughout the conditioned area.



4. FILTRATION

Dust and dirt are removed by large, efficient filters.



5. VENTILATION

Maintains fresh atmosphere by introducing plenty of outdoor air.



Customer comfort, high employee morale, and low cleaning costs are money-in-the-pocket items for your retail store clients. That's why it's a good idea to specify an air conditioning system that will bring him these benefits.

Better Air Conditioning—the General Electric kind—means much more than just cooling. It dehumidifies, circulates, filters and ventilates the air, too.* All five features are

needed to assure complete client satisfaction.

Work out the design and layout for retail store air conditioning with your General Electric distributor or contractor. He'll have many helpful suggestions.

For summary specifications see Sweet's Architectural File, Section 29A-6. General Electric Company, Air Conditioning Dept., Section 7136, Bloomfield, New Jersey.

* In winter, Better Air Conditioning includes controlled heating and humidification.

GENERAL  ELECTRIC
Better Air Conditioning



Fourth of a series: The Crane Sunnycrest Kitchen

your homes deserve a *Kitchen like this*

Picture Mrs. Home Buyer when she steps into this cheery Sunnycrest Kitchen. There'll be a sparkle in her eye to match the gleam of the smart Crane sink.

But there's more than eye-appeal here! There's step-saving convenience in every inch . . . plenty of storage space, too. And look at the Sunnycrest Sink with its finger-tip *Dial-ese* controls, its extra deep basin, its spacious double drainboards, its lustrous, acid-resisting vitreous enamel surface.

In bathrooms as in kitchens, the broad Crane line covers every taste and every building budget. Again in heating, Crane meets every need, hot water, steam or warm air, burning coal, coke, oil, or gas.

You will find a condensed catalog of the Crane line in the 1947 Sweet's Builders' File or a copy of this catalog will be sent on request. For further information on product or delivery date, call your Crane Branch.



Approx. Size: 10' 10" x 10' 9"

At left is the floor plan of the kitchen shown. Of course, the Crane Sunnycrest Sink fits smaller kitchens, too, as suggested in the two layouts on the right.



Approx. Size: 6' 6" x 9'



Approx. Size: 7' 8" x 8' 3"

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Phantom Window Washers . . . State Department Aesthetics . . . Porcelain Skin . . . Oaken Oaths . . . Freedom of Design on Fifth Avenue . . . Le Corbusier and Jeanneret . . . Report from the Russians . . . Kaiser Homes.

WINGED WINDOW WASHERS

Forum:

Two of the Works in Progress—"Office Building on Park Avenue" and "Office Building in Portland," illustrated in the April FORUM, leave me panting in trepidation and suspense. How are the new and proud owners going to wash the outside of their windows?

The Park Avenue owner might conceivably find a daring gymnast to leap from the operable sash over to the far mullion of the fixed sash, a mere 4 ft. 10 in., snap on his safety belt, clean the fixed sash, unhook and leap back (I would not want the job); but how does the Portland owner do the trick with a solid facade of fixed sash?

Does he hire the Phantom or does he equip the window-cleaners with helicopters?

ALFRED D. REID, Architect
Pittsburgh, Pa.

Neither. Windows of the Portland structure will be cleaned quite unromantically by means of a light painter scaffold traveling on the edge of the roof parapet—Ed.

ART AND CENSORSHIP

Forum:

Your magazine devotes itself wholeheartedly and well to building, and of necessity must cover a tremendous amount of ground in that field alone. Sometimes, however, it is concerned with art. For art is on the fringe of building, and what is happening in art today may have its repercussions in architecture tomorrow.

For that reason I am writing you about the recent storm in art circles over the U. S. State Department's cancellation in mid-tour of two excellent traveling art exhibits sent by them to South America and Europe (see FORUM review of November 1946, p. 148). This censorship may very likely be a portent of reaction, not only in official quarters but in the minds of private citizens as well. Such official action against modern art was even more recently followed by private censorship—when a private sculpture society banned one of its members' pieces, already accepted by a jury of the society, on reactionary grounds. The sculpture was by Mitzi Solomon, it was named "The Lovers" (which title may have bothered elderly minds), and it had previously been exhibited at the dignified and conservative Whitney Museum, a branch of our even more staid and stolid Metropolitan Museum (which displayed the State Department's above-mentioned show before can-

cellation.) If the Metropolitan and Whitney are tainted with "red," who isn't?

The inexcusable banning of Solomon's sculpture on moral grounds was relatively simple. The State Department's action is far more complex. Budgetary cuts were given as the cause of the action; but deeper reasons colored the decision to cancel these excellent traveling exhibitions. Despite favorable notices not only in reliable New York papers but in Latin America and Europe, a segment of the press attacked the exhibits as "rooted in alien cultures" (as though our civilization had no such roots?). We can only hope that reactionary fear in official circles—fear of "modern" art based on ignorance and failure to try to understand the new and vital—was not among the causes. And we also hope that such fear does not permeate building and architectural groups. Paintings and sculpture are part of architecture, and censorship in the one field vitally concerns the other.

JANE SMITH
New York

SKIN DEEP

Forum:

We deeply regret that the FORUM did not state that the "skin covering" used on the Union Fern Store in the April issue is Zourite porcelain enamel on aluminum as manufactured by the Kawneer Company of Niles, Michigan. This product was designed by our firm in collaboration with the engineering staff of the Kawneer Company as part of their product development program.

KETCHUM, GINA & SHARP, Architects
New York, N. Y.

OAKEN OPPORTUNITY

Forum:

In connection with the "pre-atomic Oak" which Sanders (St. Albans) Ltd. are hawking in your country, I hope FORUM will not miss this rare opportunity to have its own offices redesigned in imitation of the "exquisite Tufa Rock Conservatory." Come on, FORUM, don't let this chance slide.

And talking of sliding, my subscription will probably do just that if FORUM can't find something better to publish in the space taken up by two letters and a photograph all about oak halls, cedar fringes and the Duke of Marlborough.

As for your caption "The British Mind at Work," I humbly suggest that this is not a typical example.

Not wishing to be adversely critical only, I wish to commend you on the continued high standard of illustrative matter in each number. The "House in Dover" by Architect Noyes seems to me to be one of the best small house plans I have seen (FORUM, March '47).

J. M. TAYLOR
London, England

FORUM prefers its terra cotta walls and frosted glass partitions for the moment, thinks them more appropriate for its 50th floor perch than suggested imitations—Ed.

FREEDOM OF DESIGN

We print here some of the first reactions received to the Publisher's Letter in the May issue, which, after chiding the quasi-classical execution of the new Best & Co. store on Fifth Avenue, reported a rumor that the Fifth Avenue Association is considering setting up a Board of Experts to pass on architecture, and stated in part: ". . . we have no wish to see our present freedom of design reduced. The U. S.—and if not the whole U. S., certainly New York City—is a melting pot. Its architecture lacks continuity and orderliness, to be sure. But it does not lack virility, for which we maintain Vignola is no substitute . . . Where censorship rules, the commonplace is never far behind. It is not a matter of good appointments or bad appointments to such a board. Distinguished men serve with devotion and without compensation but never to the public's long-run gain . . . It is only when such individuals cease to act as individuals but lean into the wind as an official group to pass upon or reject the works of their neighbors that violence is done. Then anonymity and mediocrity rule."

Forum:

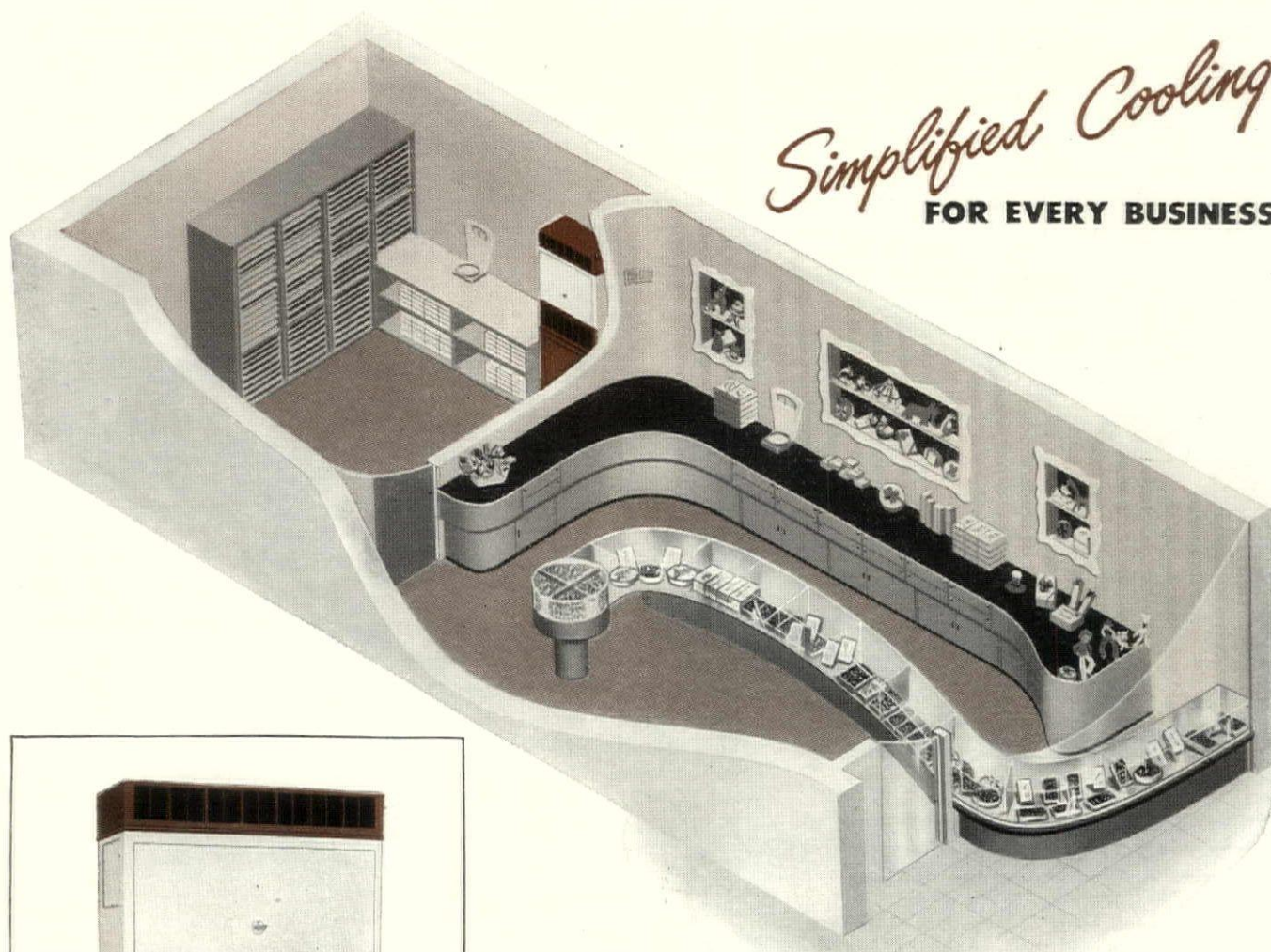
All power to you! Censorship of any kind is a sort of pretentiousness designed to hide weakness, fear and senility—certainly not the attributes of spirit of the "greatest shopping thoroughfare of the world."

ANTONIN RAYMOND, Architect
New York, N. Y.

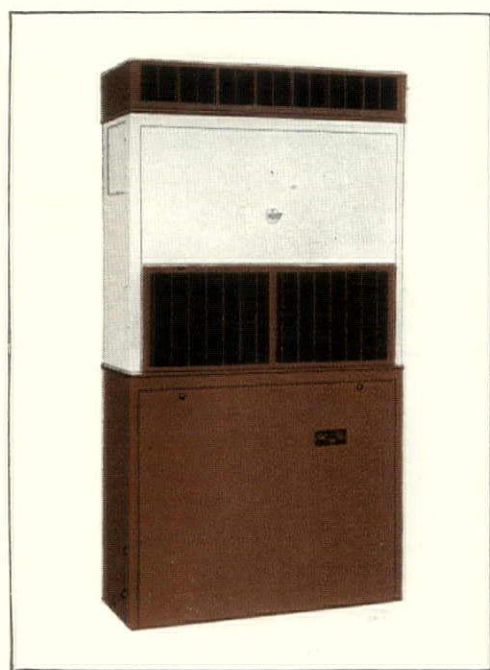
Forum:

Re your editorial: I would say it is too mild in its attitude toward the case in point. Regulation and control have never produced a great architecture. Complete regimentation in Germany produced one type of mediocrity. The regimentation of design and technical control of the FHA produced another type of mediocrity in architecture. Any American architect, any architect, re-

(Continued on page 24)



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How To Air Condition A Candy Store . . . Economically

AIR CONDITIONING does double duty in candy stores . . . protects candy from hot weather spoilage and discoloration . . . also keeps customers comfortably cool. The fresh, tempting appearance of the candy results in extra sales.

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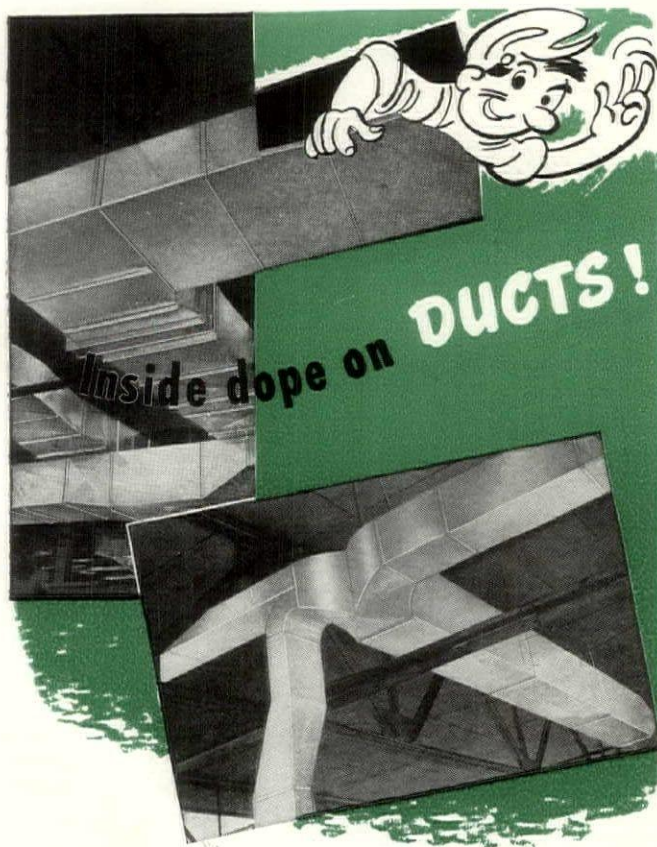
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INSTALLED cost of ducts made of Reynolds Aluminum makes them definitely competitive with those of conventional materials. And the operating problems resulting from rust, heat loss and noise are solved by the same inherent qualities of Reynolds Aluminum that make for easier fabrication and installation.

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Reynolds Aluminum is available NOW in coils or flat sheet. For complete information, contact your nearest Reynolds sales office, jobber or write Reynolds Metals Company, Aluminum Division, 2528 South Third St., Louisville 1, Kentucky. Approximately 100 jobbers, located throughout the country, are now selling Reynolds Aluminum for duct work.

STRUCTURAL ANGLES . . . Consult Reynolds on all sizes of aluminum structural angles for duct work supports. Strong, light . . . ideal for commercial and industrial installations.

IF YOU SEE RUST
YOU KNOW IT'S
NOT ALUMINUM



REYNOLDS
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sents the authority of committees that pass in judgment upon his work. It is as if the public lacked confidence in the qualifications of practicing architects everywhere.

There comes a time in the life of a street or a community or a region when it becomes self-satisfied and smug and resents intruders. It devises ways of preventing them from coming within its borders; one way is to set up a committee to judge the value of change. At this point, if you investigate carefully, you are apt to find worms eating the rafters and decay setting in. It is the beginning, and the confession of senility. Vigor and youth fades. Conservatism sets in. Death is not far away.

Perhaps Fifth Avenue is interested in writing its own obituary.

GEORGE FRED KECK, Architect
Chicago, Ill.

Forum:

One of the inherent difficulties in the way of good design is the atomized ownership of real estate frontages. It is awfully hard to get inspired design on a street which consists of eight units, each 25 ft. wide, all reflecting different architects and owners. Confronted with this condition, I am satisfied that your plea for independence in design is the least of any of the evils inherently faced. On the other hand, if there were larger units of ownership, we might conceivably have more Rockefeller Centers.

ALBERT MAYER, Architect
New York, N. Y.

Forum:

You have left open important matters concerning coordination of individual actions and planning on a larger scale. Censorship or "protection" is certainly not the right way to achieve unity. Not negative rules and regimentation but positive planning and suggestions are going to help win it.

MARCEL BREUER, Architect
New York, N. Y.

Forum:

It seems to me the basis of your question is one of the profound forces back of all civilization—that of order or no order, of control or no control, of direction or no direction, etc. The whole idea bubbles over with such immense ramifications that I am literally swept off my feet. But we quickly come to the observation that in this U.S.A., which is still a pretty good joint, we have a lot of room for a lot of ideas, which includes such things as Art Commissions and a Fifth Avenue Association of super-duper art experts to pass upon the variety of the

(Continued on page 26)

47 Years of Heating System Management at Notre Dame

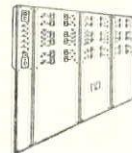
A great university is, among other things, big business, receiving and disbursing large sums, maintaining and operating a large physical and mechanical plant. Consistent, competent management of the physical plant, such as is revealed by the record of heating system management at Notre Dame, is essential to success.

The first proposal for a Webster Vacuum System of Steam Heating at the University of Notre Dame was dated June 27, 1899—the installation, containing 16,913 sq. ft. of radiation, was completed in 1900.

This great heating system now totals 320,000 sq. ft. of radiation—twenty times the original size.

Currently, a Webster Moderator Control System is being installed, designed to (a) balance distribution so that all radiators may be partially heated in mild weather, (b) apply automatic control-by-the-weather to the entire installation, (c) centralize all manual control to 38 zones at a single operating station.

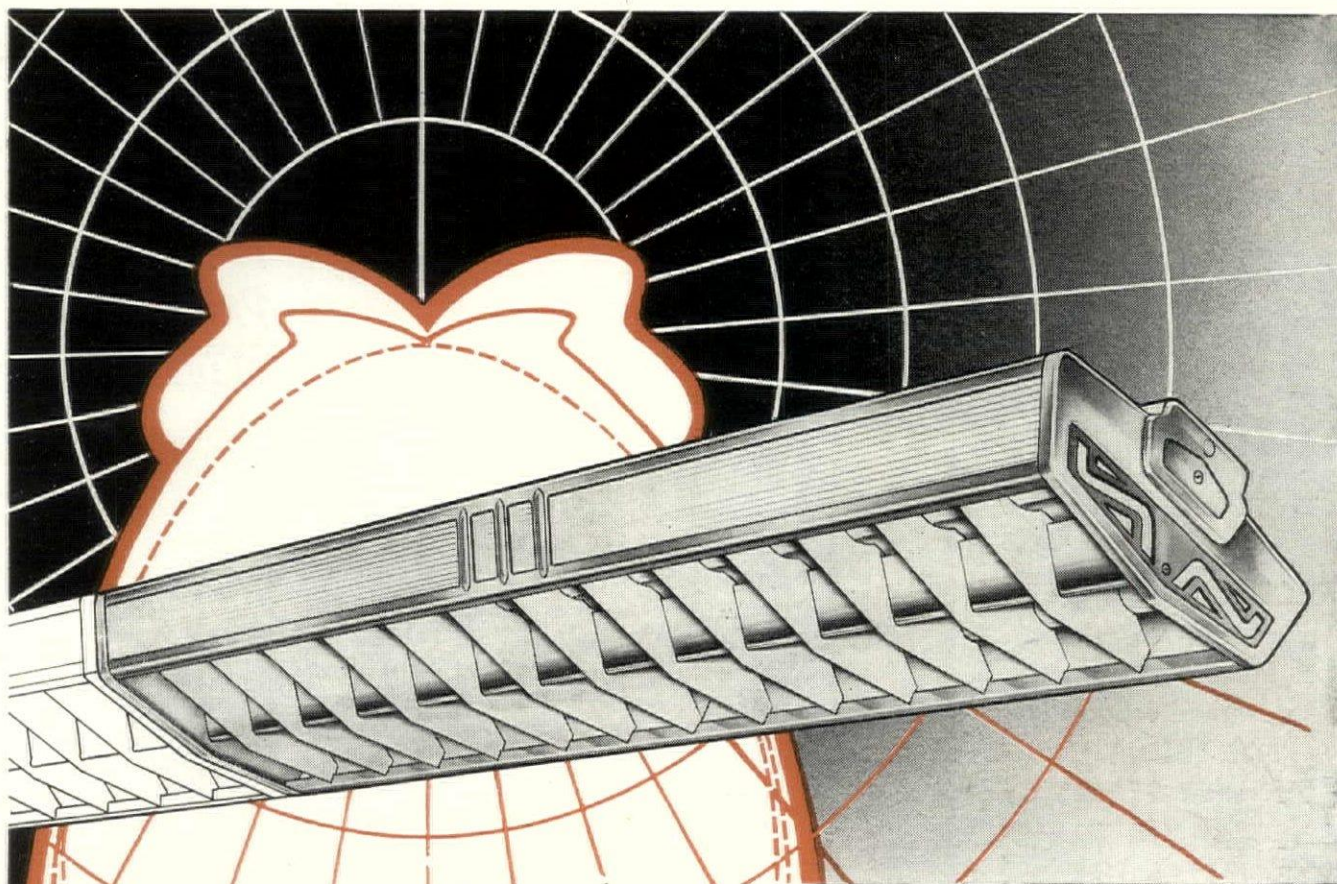
How well these results are accomplished must be the subject of a later report. In the meantime, our experience is available to help you in your heating system management problems.



Special 38-zone Central Control Panel for Notre Dame Moderator System Installation.

WARREN WEBSTER & CO., Camden, N. J.
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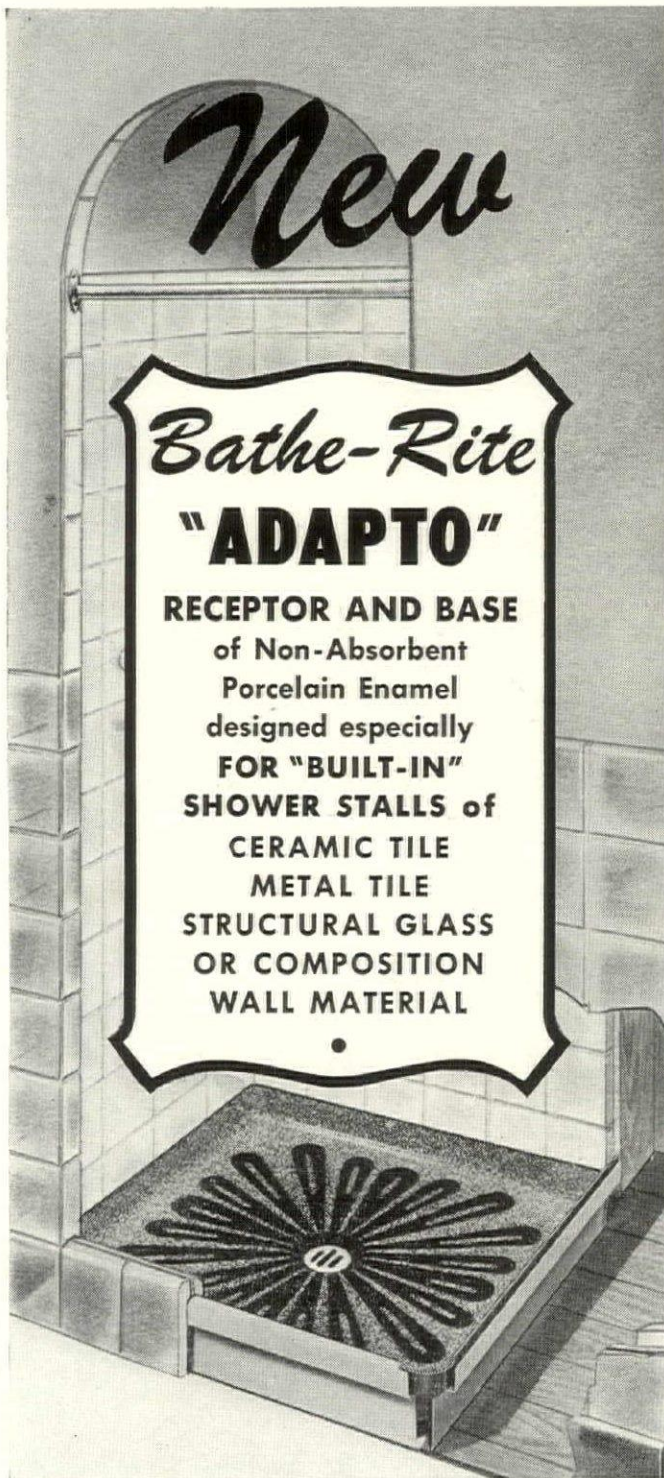
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LETTERS



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works that might be recommended for Fifth Avenue.

My feeling is that if Fifth Avenue wants an Association, let them have it. I am not sure it will improve its architecture. I am not sure the architecture of Fifth Avenue wouldn't be better if there had been some control. After all, Fifth Avenue is no model yet, or was not until Radio Center, its principal jewel, came into being and suggested a trend for future generations.

If Fifth Avenue does decide to set up a Board of Experts, I think it would be very interesting for Sixth Avenue to set up a Board of No Experts, which would represent the other attitude of "let them do what they want." After 25 years or 50 years of experience I am sure the same controversy would still be rearing its pretty little head.

There are one or two sentences which I challenge, although I know the spirit back of them. For example: "Distinguished men serve with devotion and without compensation but never to the public's long-run gain. Sooner or later every Art Commission comes to the belief that pretension is the symbol of civic virtue." I am not sure that it is never to the public's long-run gain that distinguished men often serve with devotion and without compensation. Nor am I certain that every Art Commission regards pretentiousness as desirable. As a member of the Art Commission in San Francisco it is easy to see opportunity for all sorts of abuse in the way of hatchet censorship. On the other hand, my feeling is that an Art Commission can render a real civic service by laying down a policy which points to a desirable direction. I think the value of a policy of some control is demonstrated in some of the Scandinavian countries and there are sprinklings of it throughout the history of art.

The "Art Commission" as developed in certain sections in Europe where it becomes a sort of an archaeological commission for the preservation of a given city such as San Gimignano in Italy (and Tasco in Mexico) is a valuable part of world culture. It is not to be confused, however, with the "purity league" type of functions of many so-called Art Commissions in a living city. . . .

ERNEST BORN, Architect
San Francisco, Calif.

Forum:

My reaction is that, while there is a certain amount of justification for the attitude that you have expressed, there are also strong factors against it. It seems to me that our country is full of products of the crimes committed in the name of freedom.

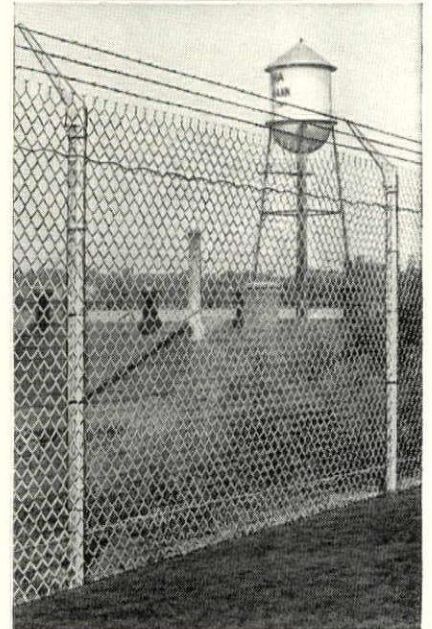
(Continued on page 30)

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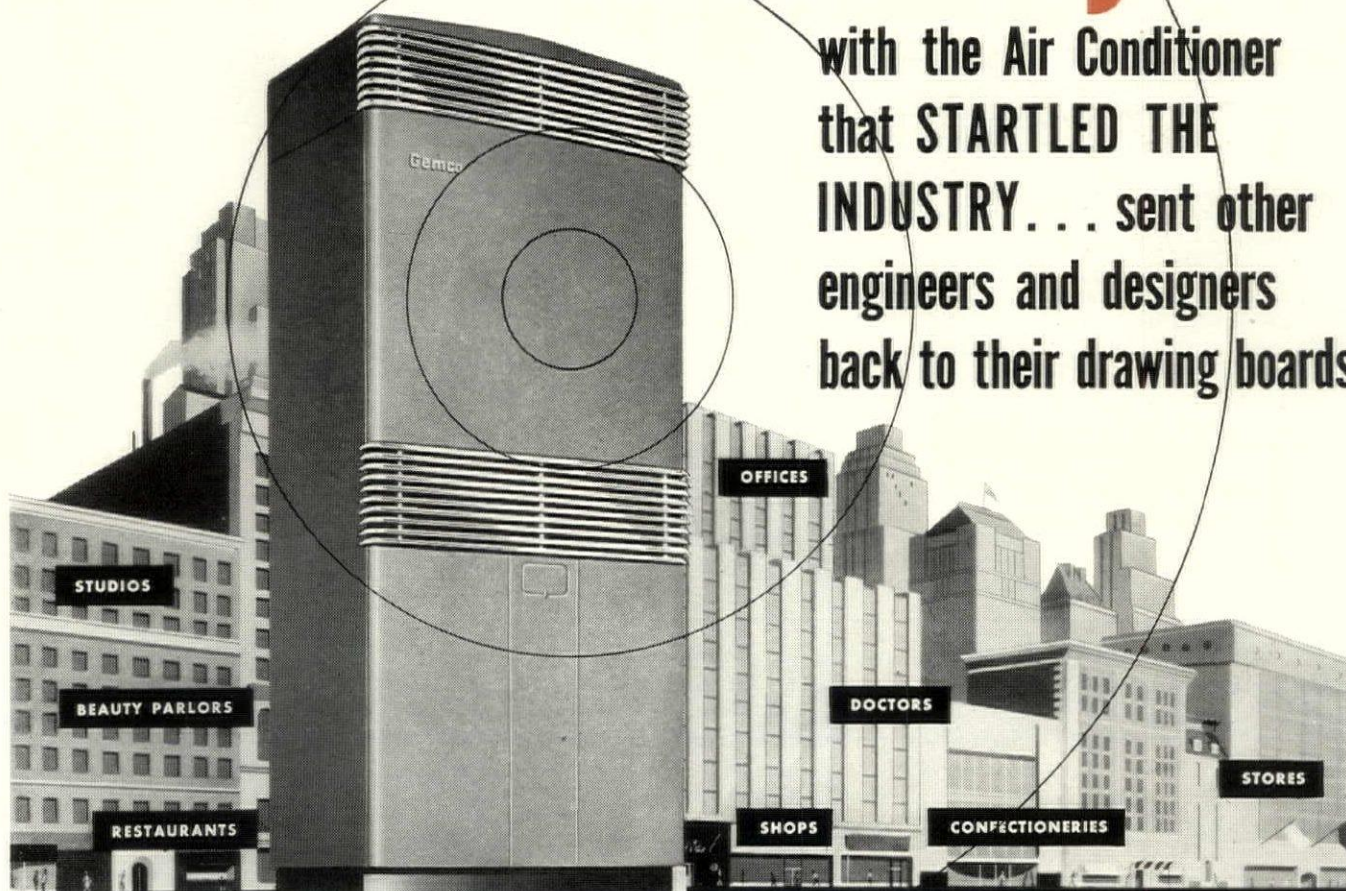
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If your clients act now...they may get air conditioning...
the Very Finest...for use this summer!

Gemco is ready

with the Air Conditioner
that STARTLED THE
INDUSTRY... sent other
engineers and designers
back to their drawing boards



The demand for air-conditioning equipment cannot possibly be filled this summer. Thousands who want it will swelter. But Gemco, with long experience in precision manufacturing, has now entered the air-conditioning field and is producing at a record rate.

Your client's chances of getting a Gemco are better... BUT THEY SHOULD HURRY! For this is the air conditioner which caused a sensation at the Air Conditioning Exposition... sent other engineers and designers rushing back to their drawing boards to try to match Gemco's exclusive features.

Less Water — Gemco saves up to 50% or more in water consumption compared with other units of similar size.

Less Wear — Gemco will get less wear in 1 year than other air conditioners are likely to in the first 5 minutes. Ask the Gemco dealer to explain this amazing fact.

No Vibration — Gemco's exclusive 2-stage compressor design eliminates vibration, the destructive enemy of any machine. Read about the 5-cent Test.

Less Installation — Gemco weighs about 400 pounds less than comparable models... and extra weight often necessitates floor reinforcements. Attaches to most existing water connections.

Business Needs Gemco Air Conditioning Because... It brings in more customers... makes them buy more... improves personnel efficiency... eliminates or minimizes summer slumps and stock losses.



TRY THE 5-CENT TEST—Balance a nickel on edge on a Gemco compressor. Start and stop the motor. The coin stands...no vibration! Try this on any other air conditioner. The coin topples...vibration! Vibration is the vicious enemy that runs up service costs and wears out machinery too soon. Visit the Gemco Dealer... make the 5-cent Vibration Test yourself. It takes only a couple of minutes.

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An important new build-in feature

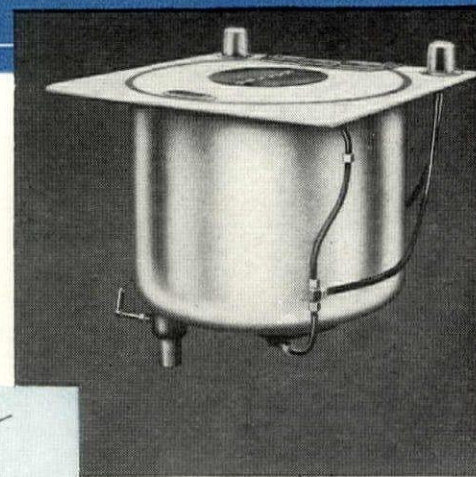


DE LUXE BUILD-IN: Height, top closed — 30 $\frac{3}{4}$ "; height, top open — 50 $\frac{1}{4}$ "; width — 21"; depth — 20".

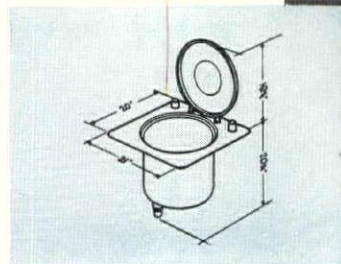
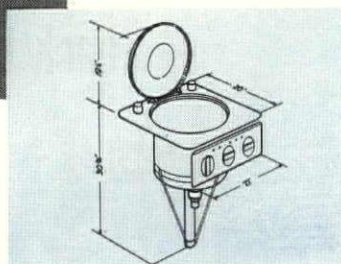
DELUXE and STANDARD BUILD-IN UNITS

(also available in free standing cabinets)

- Controls on Deluxe unit are mounted on a panel across front of machine, and this model includes a water-operated lift control which raises and lowers basket in wash bowl.
- Standard model controls are centered in operating knob at left rear corner of top.
- Heights given here are minimum overall dimensions of units only; installation may be at any height from floor.



STANDARD BUILD-IN: Height, top closed — 20 $\frac{1}{4}$ "; height, top open — 39 $\frac{3}{4}$ "; width — 21"; depth — 20".

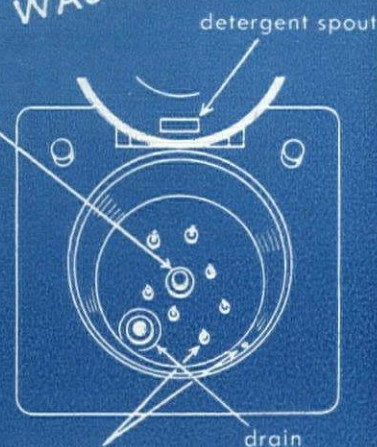


GENERAL SPECIFICATIONS

- All models of the Kaiser Dishwasher are constructed of light-weight aluminum, which is rustproof.
- Washing bowl is one-piece seamless aluminum which retains its satin-smooth surface for the life of the machine. There are no corners or cracks where food can collect. Bowl cleans itself.
- Exterior panels and cabinets are finished in baked white enamel. Fittings are chrome plated.
- Dishwasher is "plumbed in" with two connections—to hot water supply and to drain outlet. It uses approximately 2 gallons of hot water per minute during rinsing and washing operations.
- Perfect performance guaranteed on minimum 40 pounds water pressure. Jets in washing bowl are designed to increase actual water circulation several times.
- Table service for four persons is the normal load for all models—plates, cups, glasses, silverware, etc. Low-cost extra basket will double capacity.
- Siphon-breakers (complying with sanitation regulations) act automatically to prevent back-flow of dishwater. Deluxe models have two siphon-breakers (for wash mechanism and lift control); Standard models have one siphon-breaker.
- Average operating period includes approximately $\frac{1}{2}$ minute initial rinse... 3 minutes washing... $\frac{1}{2}$ minute final rinse... 3 minutes for drying. Drying is accomplished by spinning of basket due to momentum carried over from washing action.
- A liquid detergent, CHAT, is recommended for use in the Kaiser Dishwasher.

INTERIOR VIEW OF WASHING BOWL

Placement of jets is patterned to assure thorough washing and rinsing of all surfaces in basket, and also to whirl basket. Venturi action of jets when drain is closed recirculates water and detergent solution with approximately four times volume of primary water streams. Bearing assembly contains a double row of ball bearings sealed in oil bath, giving almost frictionless revolution of basket loaded with dishes.



7 bottom jets plus auxiliary side jet

NEWS about the Kaiser Dishwasher will be given the public by the largest, most consistent advertising campaign ever placed behind an appliance of this type. Big-space announcement ads are scheduled for publication in the Saturday Evening Post, in Good Housekeeping Magazine, in other leading publications. This strong advertising campaign will continue month after month. So prospects will know the product you're talking about when you specify the Kaiser Dishwasher in building plans, or include it as a thoughtful "extra" in work-saving kitchens.

and Builders of America

DISHWASHER

for the modern work-saver kitchen

The Kaiser Dishwasher is unique in simplicity of design . . . unique in operating efficiency. Developed by Kaiser engineers.

Made to precision standards.

It has no motor—no wires, switches, solenoids or gears. *It operates because of natural pressure in the kitchen hot water pipe.*

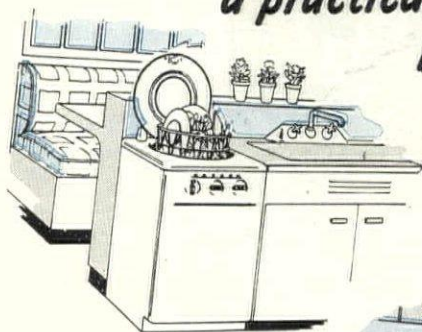
The Kaiser Dishwasher washes dishes cleaner than is possible by hand methods . . . then dries them without streaks. It “puts through” a table service for four persons in five minutes.

Installation of a Kaiser Dishwasher adds amazingly little to the purchase price of a home . . . and it is an “extra” appreciated by every family.

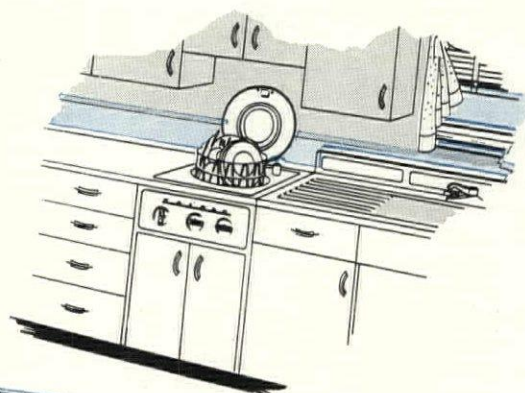
SURVEYS SHOW that a dishwasher is one of the modern work-saving appliances wanted by many families who plan to buy, build, or remodel homes. And the new Kaiser Dishwasher qualifies as an ideal build-in unit. It meets every requirement of adaptability to various architectural treatments . . . ease and economy of installation . . . efficient, trouble-free operation.

The Kaiser Dishwasher can be built into the work surface of any kitchen counter. It requires only two plumbing connections—to the hot water supply and to drain outlet. Available in both Deluxe and Standard models, it is suited to homes at all price levels.

FLEXIBLE IN INSTALLATION—
a practical “plus” in any building plan



Note these interesting treatments...



Kaiser Fleetwings Sales Corporation
General Sales Office
1924 Broadway, Oakland 12, Calif.

Please send me for my file A. I. A. Specifications Sheet on the Kaiser Dishwasher.
No obligation, of course.

Name and Title _____

Firm Name _____

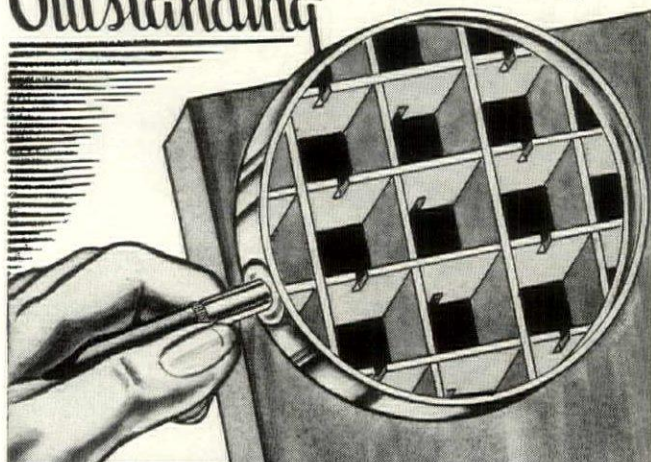
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Put these patented,
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It is true that all flush doors can be made to look alike—but it's what is inside that counts. Beneath the beautiful matched veneers of the 1-3/4" Paine Rezo door, prefitted to exact size, is the vital air-cell core, an open, channeled "breathing space" for overcoming humidity. This patented, cross-braced, ventilated construction feature holds checking, swelling, warping to an absolute minimum. In addition the air-cell core adds great strength to lightness in weight. This trouble-free performance means longer service life, easier operation, and more satisfaction to your client over the years.

On the market since 1935, these original hollow core doors have proved themselves in over 2,000,000 installations in all parts of the country.* They will be a lasting credit to any building you design. Specify them by name as Paine Rezo; write for a factual, detailed architects bulletin.

*Because of production limitations, Rezo doors cannot yet be shipped to the Pacific Coast.

Manufactured by the
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ESTABLISHED 1853

Especially in our cities. The freedom to express is too often the freedom to exploit at others' expense. That freedom's point of view has always fought any step toward zoning or city or regional planning or any measure that would limit or circumscribe the actions of the individual for the welfare of the whole. I recognize the dangers inherent in such public control but I do not agree that the results are necessarily banal, any more than that freedom's products are always inspiring.

OTIS WINN, Architect

Detroit, Mich.

Forum:

Have we really slipped back far enough to have a Board of Experts pass on and censor architecture in New York? You speak of the controls in Paris. I have watched the stores on the Avenue de l'Opera under these controls and seen them deteriorate to deadly rows of antique shops struggling with musty merchandise. I have also seen the calamitous effects on the progress of architecture from Hitler's control over design and Russia's attempts to unify and nationalize the architectural character. Let anyone who believes in style control see the deadly results of it in these countries.

WALTER F. BOGNER, Architect

Cambridge, Mass.

Forum:

The school of vulgarity has never been governed by the least common denominator. Vulgarity has even had a good strong association with virility. At this moment of national confusion in the hearts of all good men, certainly virility, vulgarity, and freedom are part of America that should be preserved, to give us whatever results may come of our individual work.

BERTRAND GOLDBERG, Architect

Chicago, Ill.

Forum:

I completely agree with you. In matters of censorship, it is not the privilege of decision which ever worries me, it is the fact that the responsibility which inevitably should go with the privilege is too often ignored.

W. L. PEREIRA, Architect

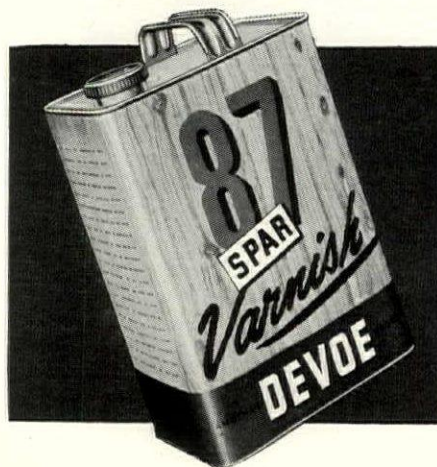
Los Angeles, Calif.

Forum:

I agree that an architects' committee cannot improve design. In Europe such committees have functioned as preserving bodies rather than censoring bodies. Even the best committee of architects and designers cannot establish form formulae for an evolving civilization. The uniformity and homogeneity which we all want is not a matter of committee style discussion but

(Continued on page 34)

DEVOE CREATES A NEW STANDARD FOR VARNISH SPECIFICATIONS



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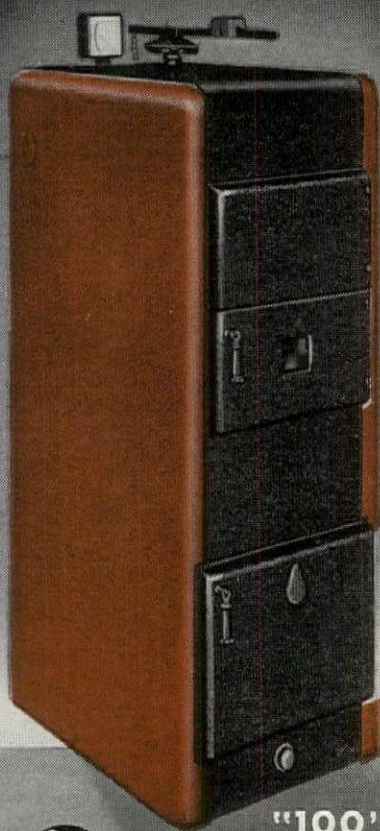


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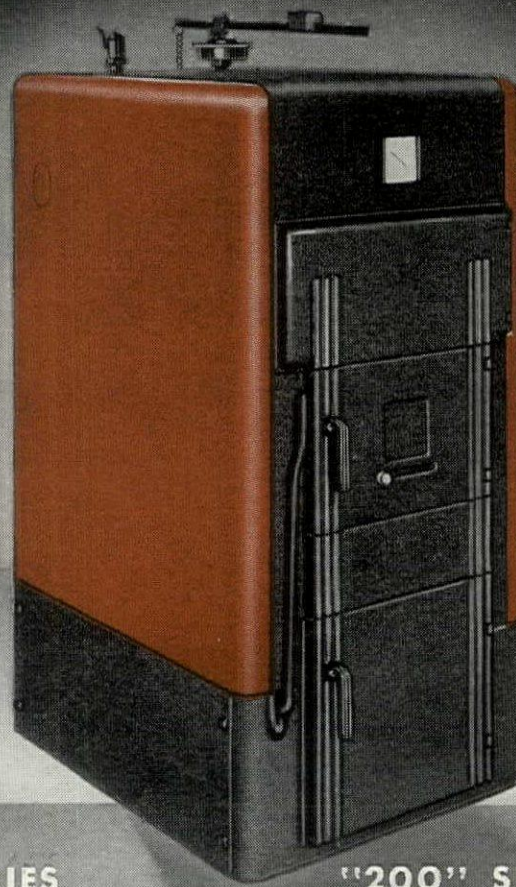
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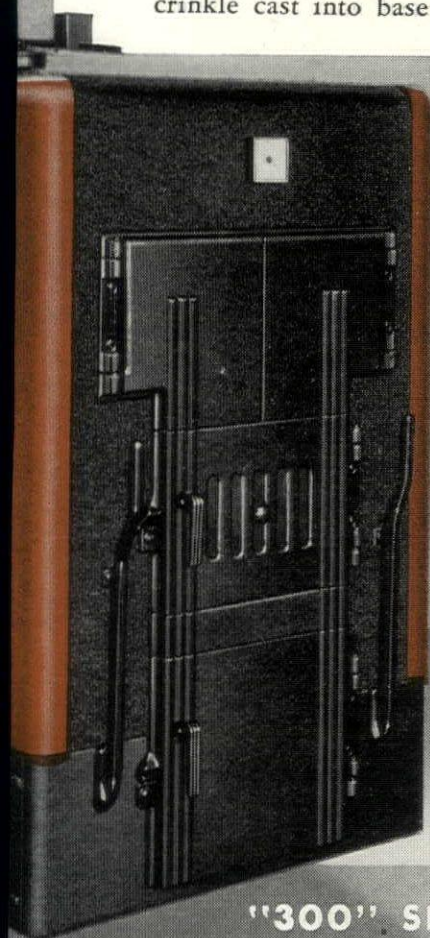
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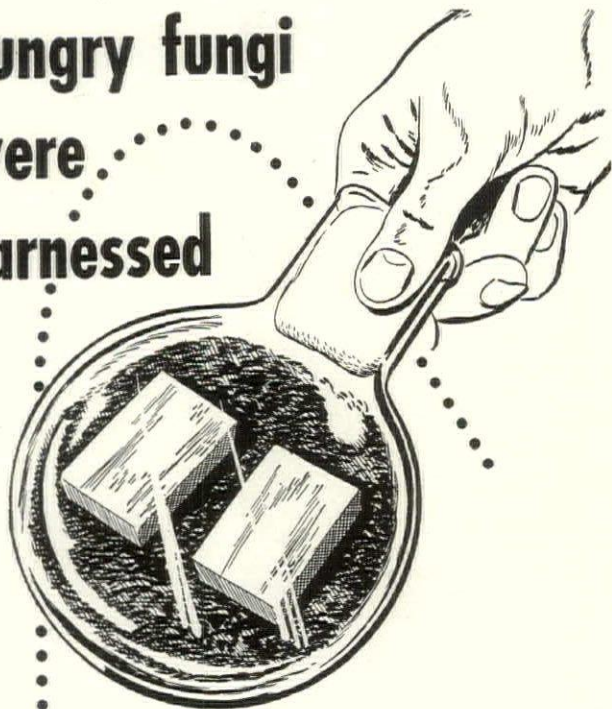
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Out of these tests—out of consultations by eminent scientists—came the six important steps which help to make wood a better building material than ever... supplementing its natural lasting qualities through reliable measurements of toxic treatment efficiency. Here is what NDMA has done—and is doing—to serve the public and you:

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has to start at the well of our cultural development.

WALTER BAERMANN, Designer
New York, N. Y.

Forum:

You present the dilemma! Control, or freedom of expression! Abuse is inherent in both. But I stand pat with "Pat"—"Give me liberty or..." At least with that we might be heckled on towards progressive good architecture by you and your editors as might be the other architects of the Fifth Avenues of the world and our public.

MAX ABRAMOVITZ, Architect
New York, N. Y.

Forum:

The gloomy hand of bureaucracy would soon create a collection of dull architecture on Fifth Avenue, so we had best take a chance on freedom of design.

At one time, a few years ago, I was raving about the winning design in a national competition—its modern fresh quality and clear thinking—when a member of the committee observed that my remarks of approval might be true, but he nevertheless assured me that the design under discussion would never be approved for building. This seems to me a good example of the point you made in your article.

JOHN MATTHEWS HATTON, Architect
New York, N. Y.

Forum:

I think we have learned through long experience that in a democracy there must be freedom of expression in every field; that even though there are occasional lapses, the damage involved to the public is far less than the potential damage from any form of censorship.

JAMES F. EPPENSTEIN, Architect
Chicago, Ill.

Forum:

I am in hearty agreement with the sentiments incorporated in your column and further believe that every opportunity should be taken to combat restrictions on design. I can't help but feel somewhat pessimistic, however, about the success of eliminating this type of censorship in every case. Though the Russians claim to be better democrats than anybody else, censorship seems to be more rather than less stringent there. Another ironical example of the attempt to preserve a select grouping of desirable activities is the initiation into the club system here at Princeton. Nearly every year reforms are urged by one and all—students, faculty, alumni and trustees—to no avail, for every year the same things happen again.

KENNETH KASSLER, Architect
Princeton, N. J.

(Continued on page 38)

make a note
of this...

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Ideal
Wire Nuts
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joints



(THE SOLDERLESS, TAPELESS WIRE CONNECTORS)

On new construction, remodeling or re-wiring—wherever wire joints are required—make sure you specify IDEAL "Wire-Nuts". They screw on the stripped ends of the wires—like a nut on a bolt—and make neat, dependable joints... far superior to "old-fashioned" methods.

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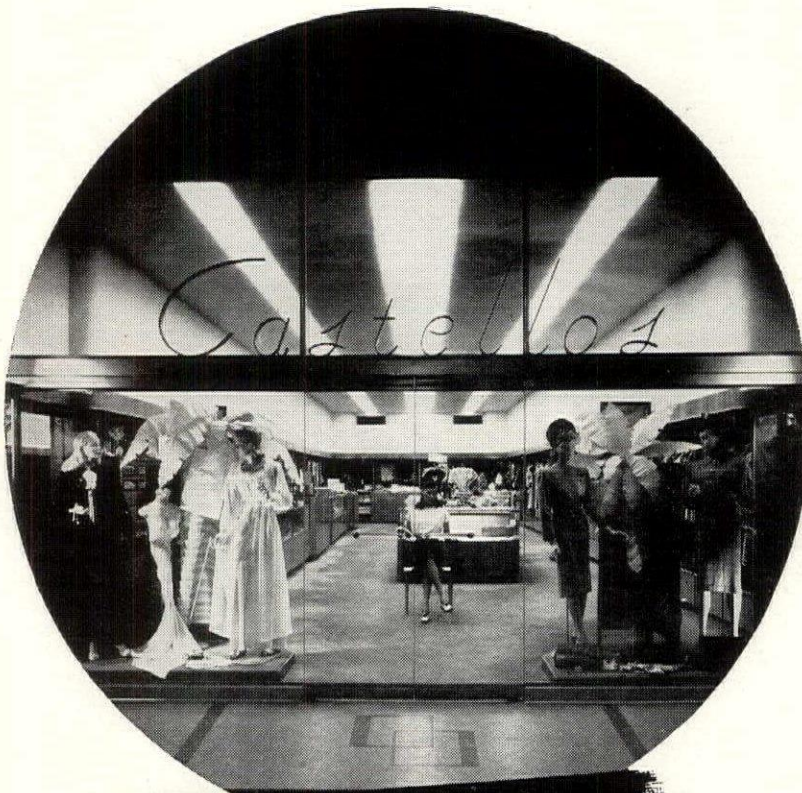
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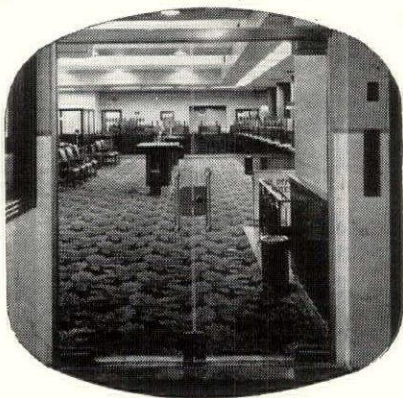
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Tuf-flex doors are an important element of this Visual Front in Houston which displays the entire store to window shoppers.



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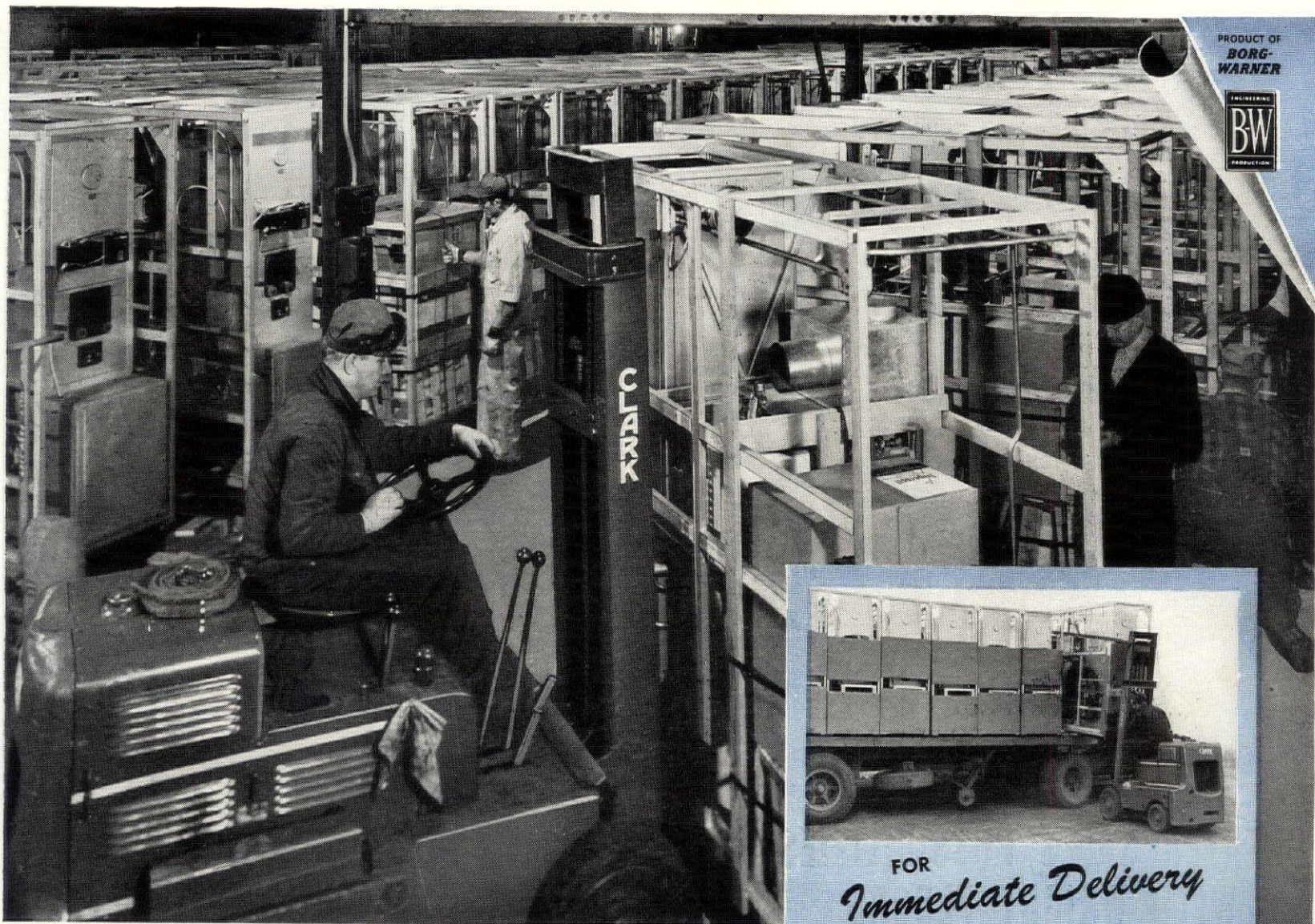
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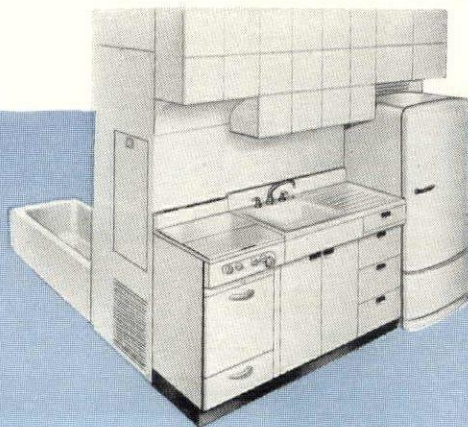
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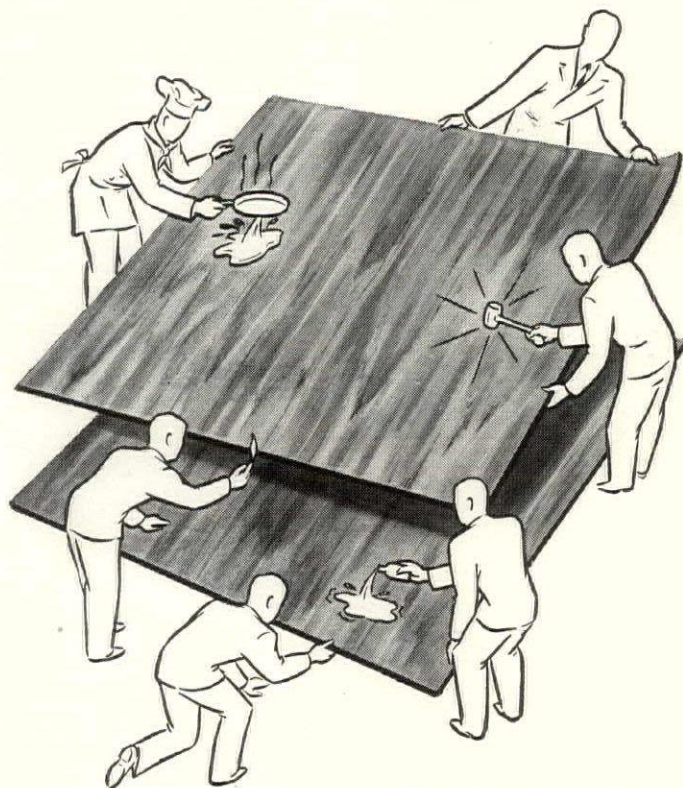
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WRIGHT RUBBER TILE
Flooring of Distinction.

Forum:

I concur with you on the matter of a board of experts. Any controls on design, other than the present set-backs and zone requirements, are sure to retard progress and originality.

Certainly on Fifth Avenue, where land values are at a premium, business buildings are not put up for posterity.

I can well imagine what such a board of experts would attempt to do with Frank Lloyd Wright's museum design.

It seems, therefore, healthier to plant a tree in front of the building in question and move on to the next issue.

SAMUEL E. HOMSEY, Architect
Wilmington, Del.

Forum:

"Architectural censorship," such as that referred to in the Publisher's Letter, is to be taken care of by an Architectural Board of Review ready now to come out of committee for enactment in the present session of Michigan's legislature. California has already enacted such a law, and I believe we will be the second state to do so. This bill will enable the municipality to set up an Architectural Board of Review to do the very thing you desire [?] in New York. Such a board also will have the authority to safeguard areas adjacent to parks, bridge approaches, federal and municipal buildings, etc.

The precedent so established by an industrial state like Michigan should mean a lot to other states and make easier the passage of similar protective measures.

ROBERT B. FRANTZ, Architect
Saginaw, Mich.

ON MICROCLIMATE

Forum:

I wish to congratulate the FORUM for the very provocative article in the March issue on Microclimatology. It offers a challenge to the building industry and an opportunity to really do a job.

There is a great deal of room for improvement in our industry. Many facts are known which will add to "better living" of the average American, if we will just follow through and use them.

The best part of it is that many of these improvements need not cost additional money but need only be included in the planning.

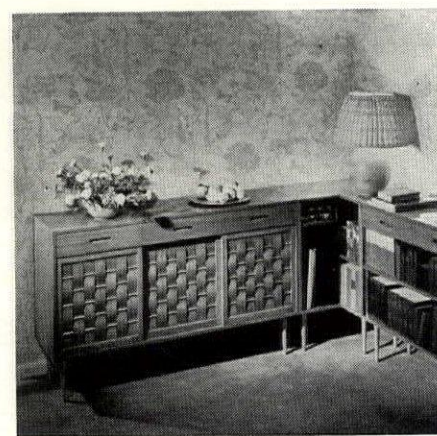
Research, however, must be done by the builder himself, to find the place of these improvements in his operation. I think we will get it, especially if we continue to be challenged by fine articles of this type.

JOSEPH H. SCHULTE, Director of Research
Kaiser Community Homes
Los Angeles, Calif.

(Continued on page 42)



DUNBAR *For* MODERN



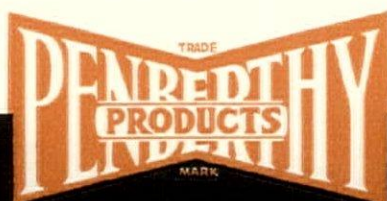
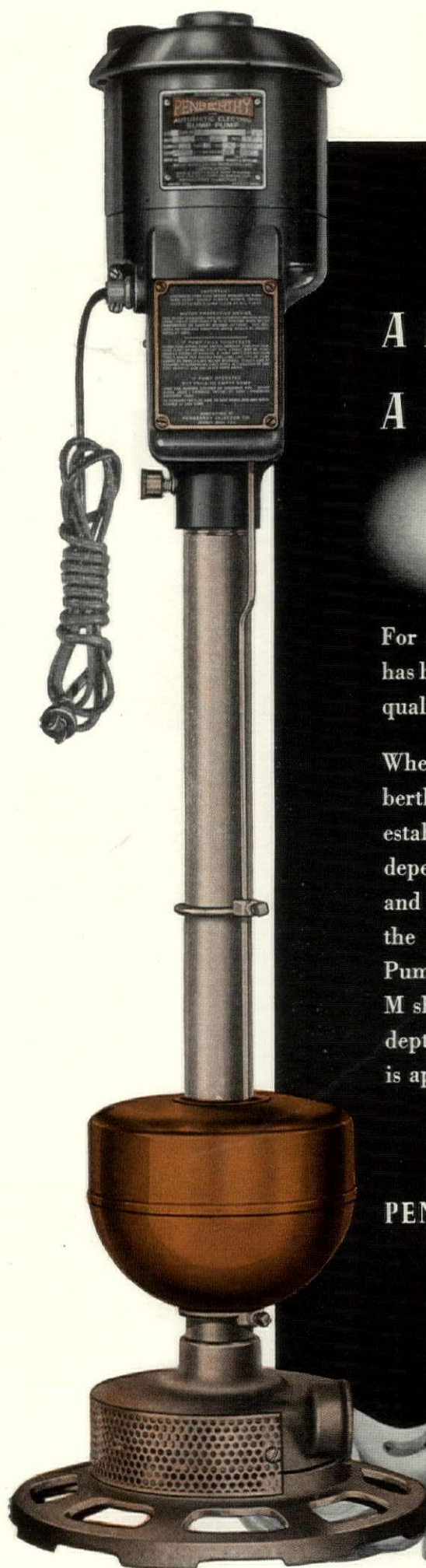
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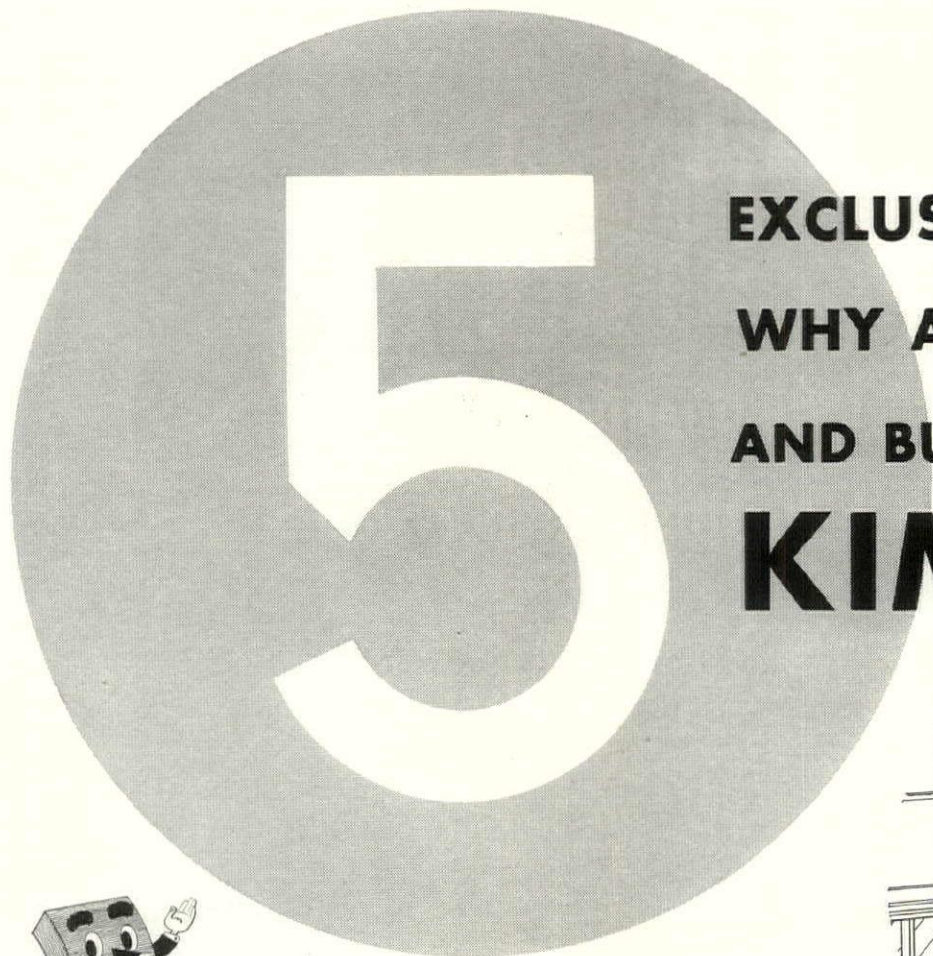
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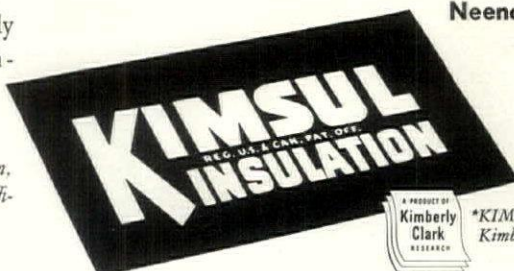
KIMSUL insulation is a prefabricated blanket, with uniform thickness built right into it in manufacture. It's simple for anyone to install... just cut to desired length, expand, and fasten in place. It's moisture-resistant, fungi-resistant—termite-proof. And it's lightweight, clean, and odorless... no irritating dust or splinters, easy on workmen's hands. KIMSUL is a remarkably efficient insulation for homes, commercial buildings, and industrial construction.



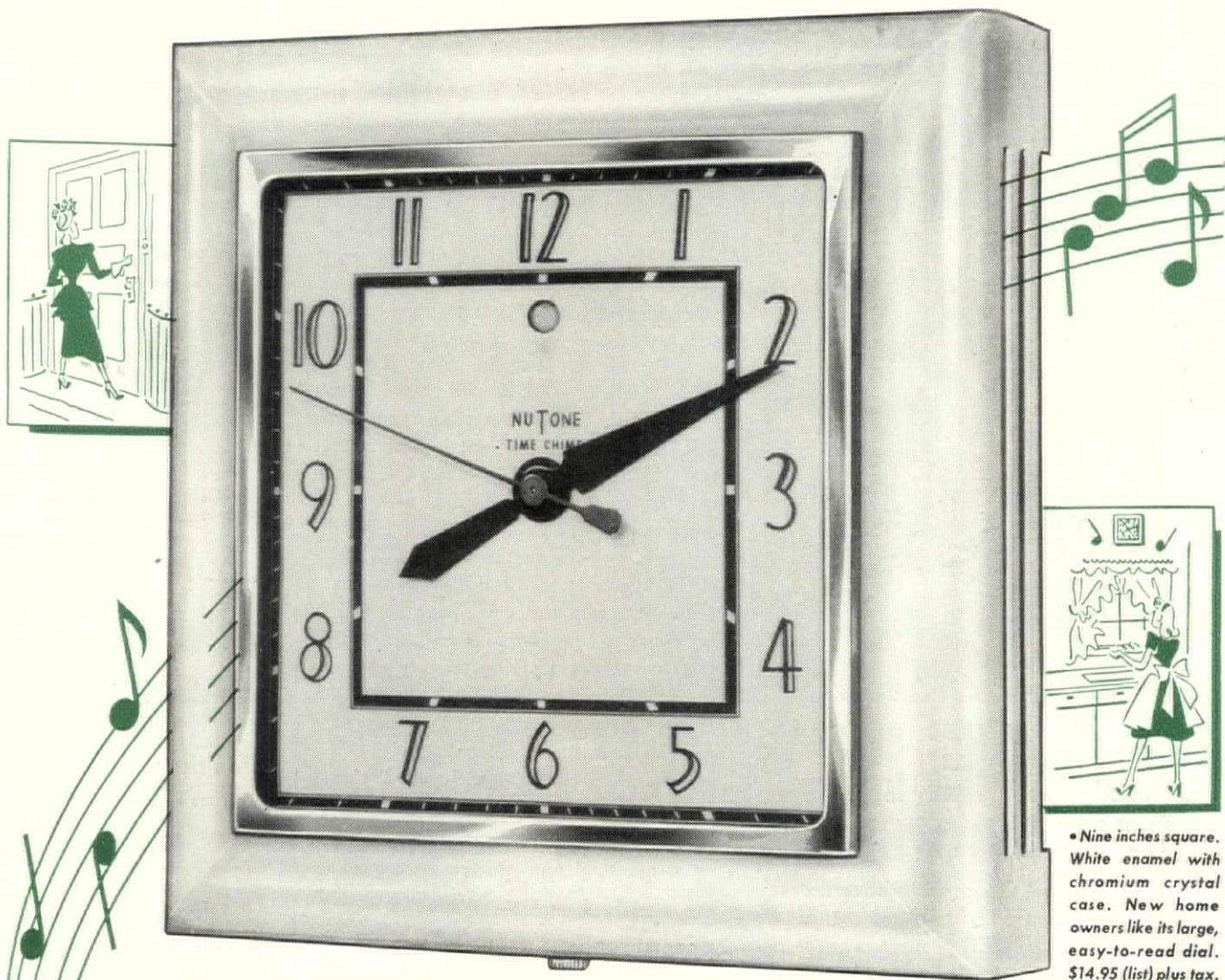
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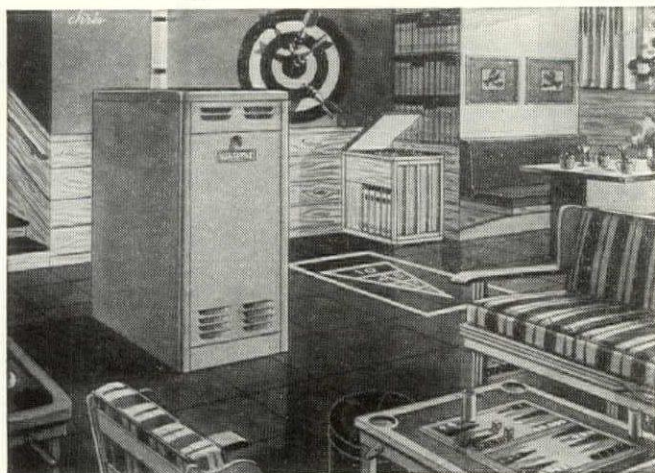
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LE CORBUSIER AND COUSIN JEANNERET

Forum:

At the risk of exposing my abysmal lack of sophistication to you knowing Easterners, I would like to go into a little matter that I mull over from time to time during sleepless nights, or going up in elevators, or leafing through old copies of architectural journals. Some years ago, one of my better educated friends explained that the great French architect who now seems to be overwhelming our press apparently got tired of the rather pedestrian name of Jeanneret and forthwith adopted the name, Le Corbusier. This is all right with me, as I often wish I could reach for a little variety myself. But having finally got it straight that there is no first name involved, the gentleman apparently being satisfied with an indicative article, I am a little annoyed to be puzzled by such signatures as Le Corbusier et P. Jeanneret. Now if Le Corbusier is Jeanneret, why the devil does he feel it necessary to sign his plans double? Is this just to make everything terribly clear to stupid fellows like me? Or is there still a Jeanneret somewhere on the lot? I am sure you can clear this up for me..

HARLAND L. JONES, Designer
Detroit, Michigan

Le Corbusier, born Charles Jeanneret, formed an architectural firm with his second cousin, Pierre Jeanneret, in 1924. It took us a while to get this straight, too—Ed.

REPORT FROM THE RUSSIANS

Forum:

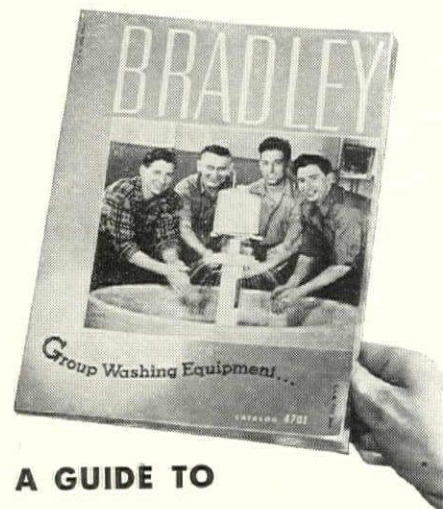
The old Russian city of Kalinin (formerly Tver) is an industrial, administrative and cultural center of a large flax-growing region and also a port on the Moscow-Volga Canal. Though the Nazis were here only 62 days, they wrought furious damage, put more than 70 large industrial enterprises out of commission, including the "Proletarka" and "Vagzhanovka" textile mills, the May 1 steel works, the railway car works and others. More than half of the residential houses—7,700—were razed to the ground, as were the theatres, libraries, schools and other cultural institutions. Architectural memorials also sustained severe damage.

The restoration of Kalinin was begun as soon as the enemy was repelled. The surviving houses got electric lighting ten days after liberation. All of the Kalinin factories and plants have been recommissioned. Seven thousand houses with a total floor space of 500,000 square meters have been rebuilt.

The new architectural plan for Kalinin, approved by the government, differs considerably from its predecessor. The old

(Continued on page 46)

NEW CATALOG NOW READY



A GUIDE TO SANITARY WASH FACILITIES

This new edition of the Bradley Group Washing Equipment Catalog will prove a handy reference for those interested in improved and more adequate washroom facilities.

Industrial users of Bradley Washfountains and Multi-Stall Showers have found that these modern, sanitary fixtures cut water and maintenance costs, reduce employee washing time—improve morale and goodwill.

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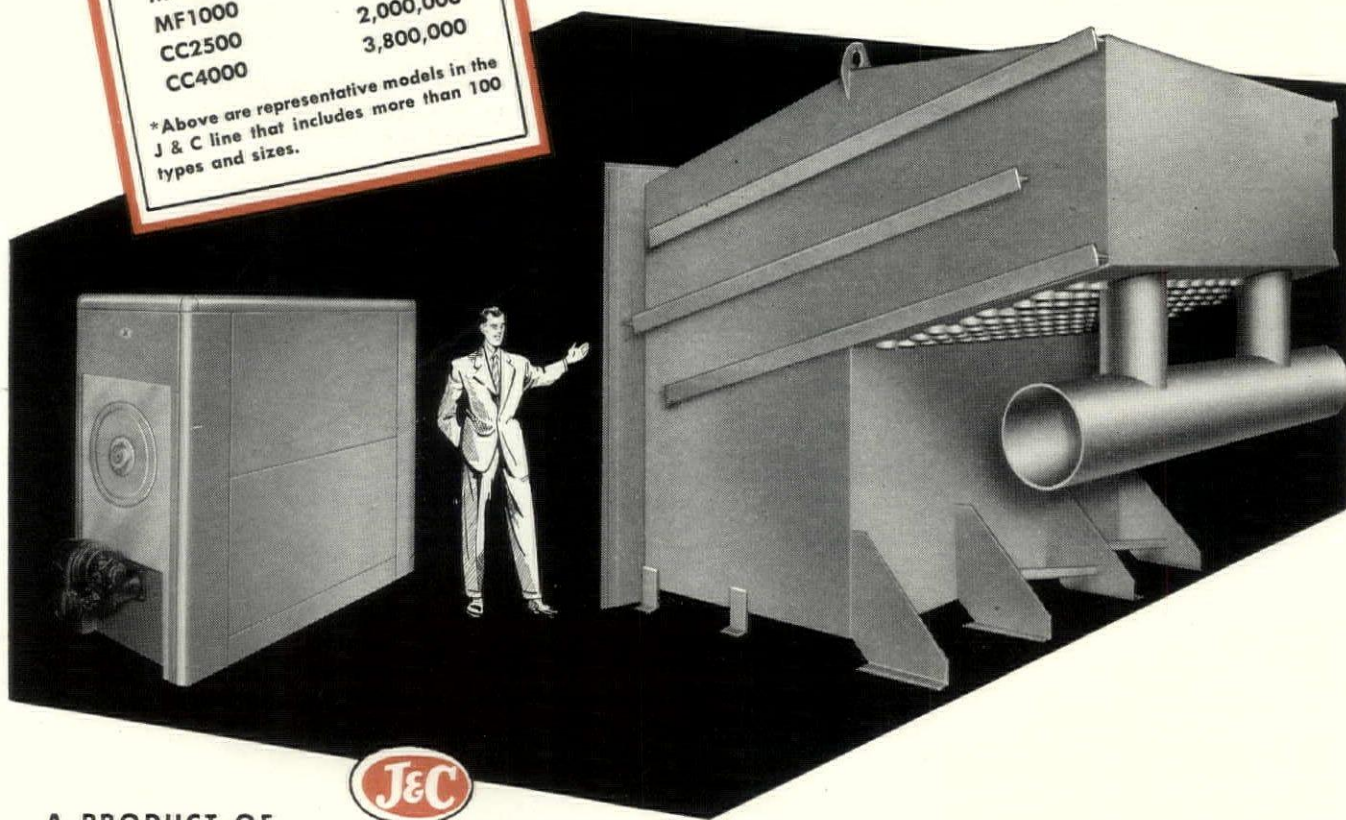
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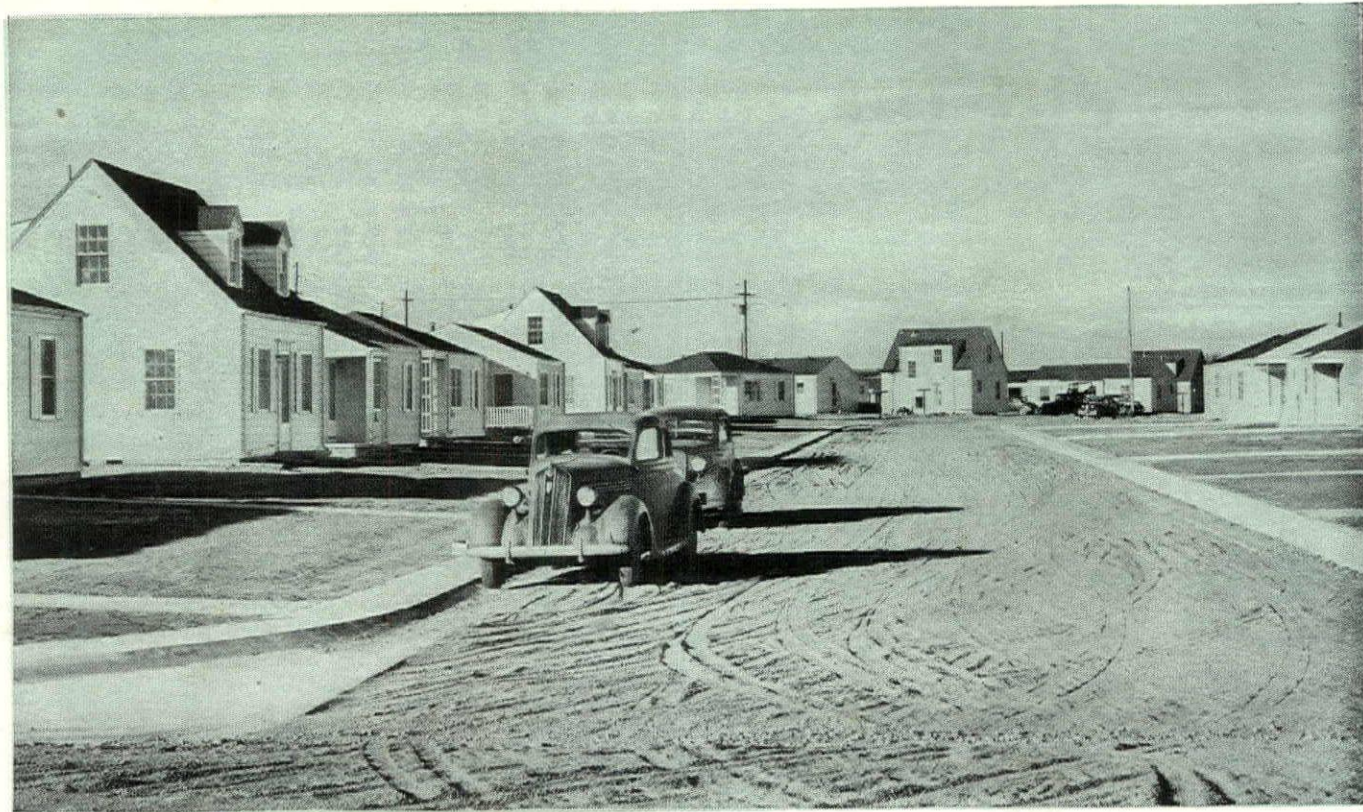


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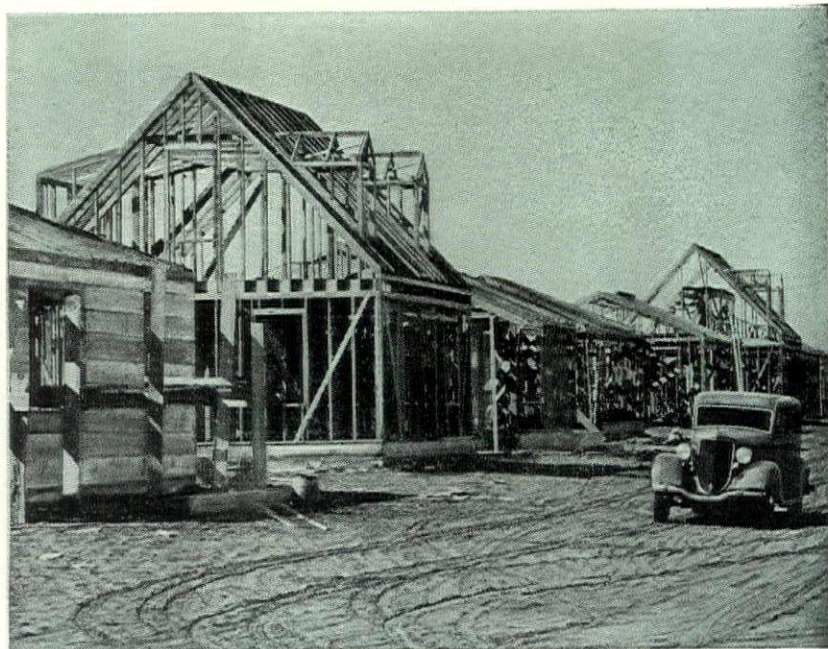


No selling problem here. Just a few of the 412 new homes that Garrett-Bromfield & Co. are building in Denver. General Electric equipment included as a basic part of these homes promises the

owners "better living, electrically." And Garrett-Bromfield, like many other builders all over America, know that *better living means faster selling.*



GENERAL ELECTRIC
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If I include completely equipped, ready-to-run electrical kitchens, will they help my homes sell?

Can I include this equipment and still keep my prices competitive with homes that don't offer as much?

The answer to both questions is "YES!" Here's the proof—practical, on-the-site proof from a leading firm of operative

builders, Garrett-Bromfield & Company of Denver, who say:

"For as little as \$7200 we're offering an 'electrical home' that's equipped with General Electric Refrigerator, Range, Steel Storage Cabinets and Sink Unit, and Washer.

"The prospective buyer is usually amazed when we explain that all this top-quality equipment will cost him only about \$2.50 to \$3.00 a month. And that he will probably save more than that through lower operating and maintenance costs.

"Does all this help our homes sell?

"Well, there may be empty new houses in this area, but they're not ours! As a matter of fact, practically every new home we build is sold before it's started."

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So, if you want to see your homes in the "best seller" class, why not include the appliances most people want—General Electric.

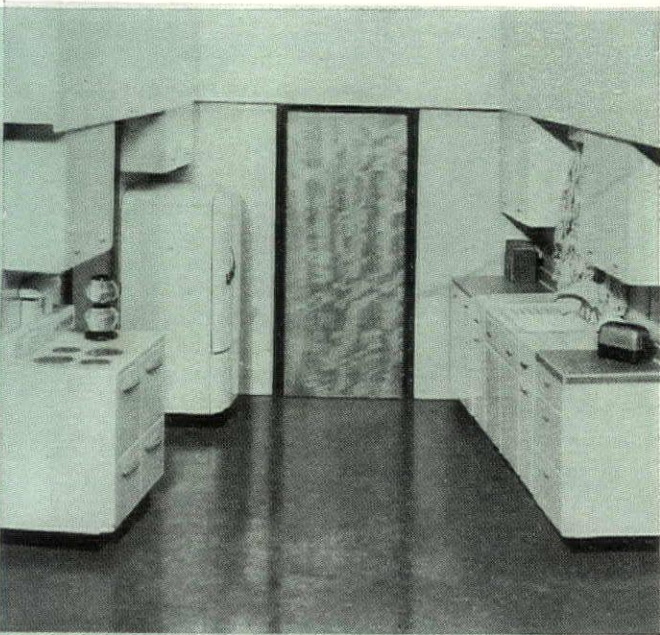
How General Electric Can Help You

The General Electric Home Bureau has worked closely with architects and builders all over the country. If you would like the benefit of this experience in helping solve some of your problems, we'll be glad to do all we can.

For complete information about available services, write to Home Bureau, Appliance and Merchandise Department, General Electric Company, Bridgeport 2, Conn.

THE APPLIANCES MOST WOMEN WANT MOST

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General Electric Kitchens like this are effective salesmen for Garrett-Bromfield homes. All of the equipment is included in the long-term mortgage with only a minor difference in initial cost. The slight increase in monthly payments can be more than offset by the economical operation, long life, and low maintenance of dependable General Electric Appliances.

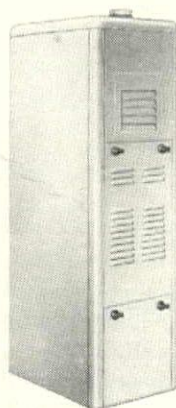
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with **GAS** or **OIL**

GAS

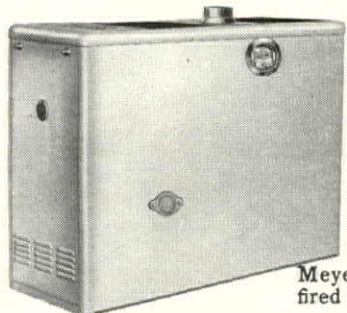


Meyer Gas-fired
Air Conditioner

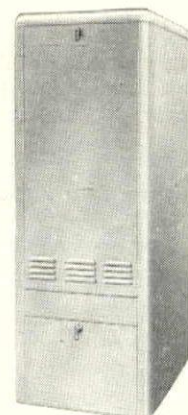


Meyer 'Hi-boy'
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Meyer Oil-fired
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Meyer 'Hi-boy'
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plan, drafted after two devastating fires in the second half of the 18th century by the famous Russian architects, Matvei Kazakov, Pavel Nikitin and others, was connected with the Moscow-Petersburg highroad passing through the town and with its historical center, the Tver Kremlin. The Volga, without the existence of the Moscow-Volga Canal, played a minor role and therefore received scanty consideration. The new plan links the city with the great Russian river. The colorful disposition of Kalinin on the banks of the Volga will be emphasized by the new architectural ensembles.

Careful preservation of the historic aspect of the reconstructed city and the retention of the most progressive elements of the old plan are the alpha and omega of Soviet city planning in practice.

The scale of thoroughfares, squares and main structures as chosen by the old architects was highly artistic, and discerning taste will be required to preserve the old ideas in the new construction while, at the same time, giving due consideration to the growth in the population and those enormous changes in economic and political conditions which took place in Soviet times.

A new administrative and social center of Kalinin is to arise on the left bank of the Volga. This will be the site of a large regional executive committee building, facing a broad parade square. Terraces and stairways will connect the building and square with the waterfront. Two buildings, designed in the 18th century by Matvei Kazakov, are to be preserved on the waterfront thoroughfare, otherwise lined with new structures. The two old buildings will face a square over the river, and here there will be room enough for the construction of a theatre, the heart of the new ensemble. The area between this thoroughfare, a continuation of the Leningrad Highway, and the river will be a park zone, connected with the waterfront by stairways. The highway will be lined with apartment houses, the yards of which will open on the Volga.

On the main thoroughfares and riverside drives there will be new three- and four-story buildings. The other sections of the city will be built up with two-story houses containing two- and three-room apartments. Considerable attention will be given to the individual construction of cottages and gardens. State loans are being extended to the population for this purpose.

The new plan provides for the construction of three new bridges. Trees will be planted in large numbers. The old parks will be restored and new parks laid out.

Kalinin is rising from its ruins. The architects engaged with reconstruction are striving not only to restore the homes of the

(Continued on page 50)



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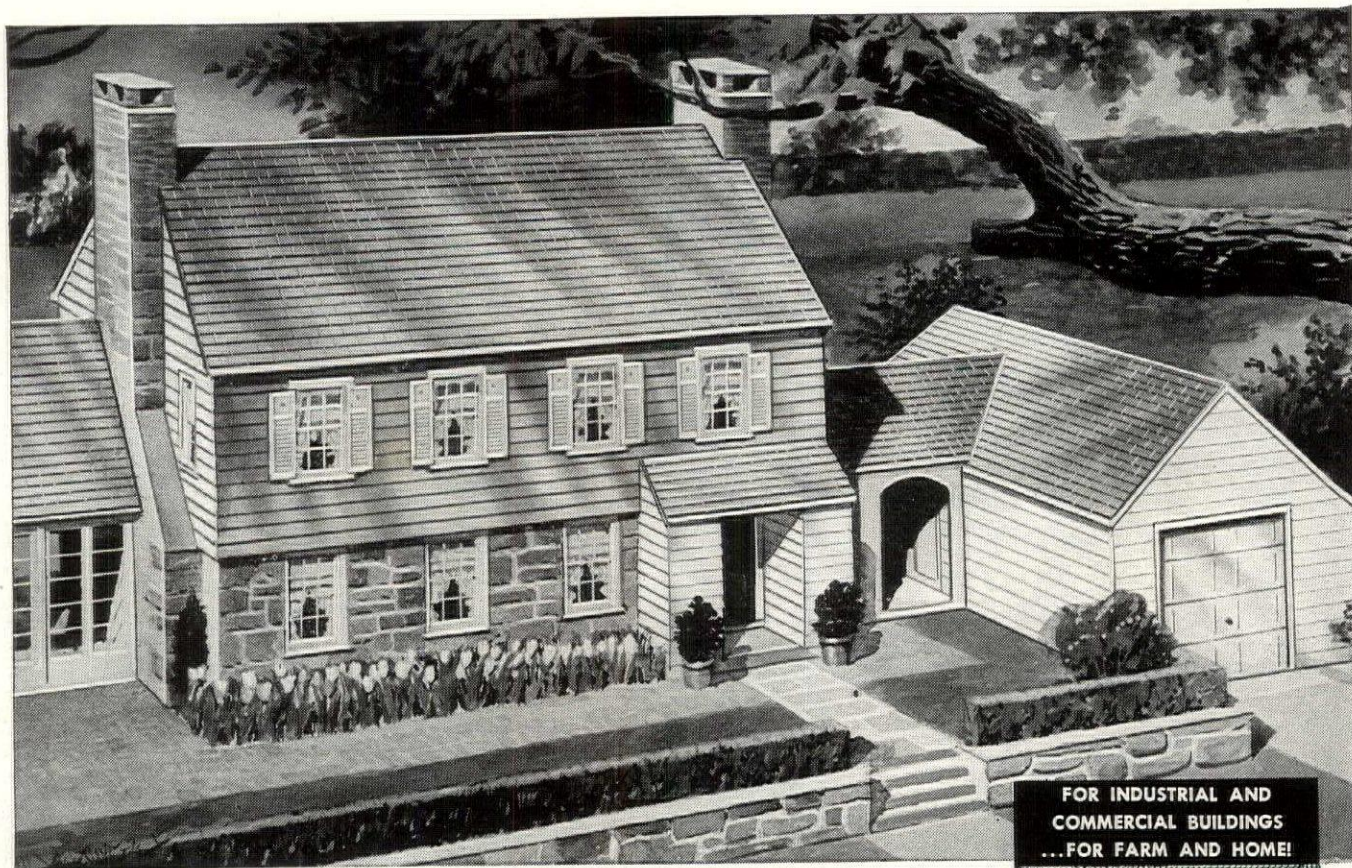
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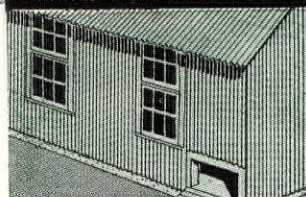
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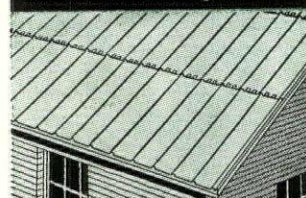
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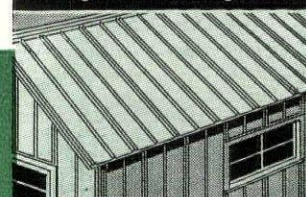
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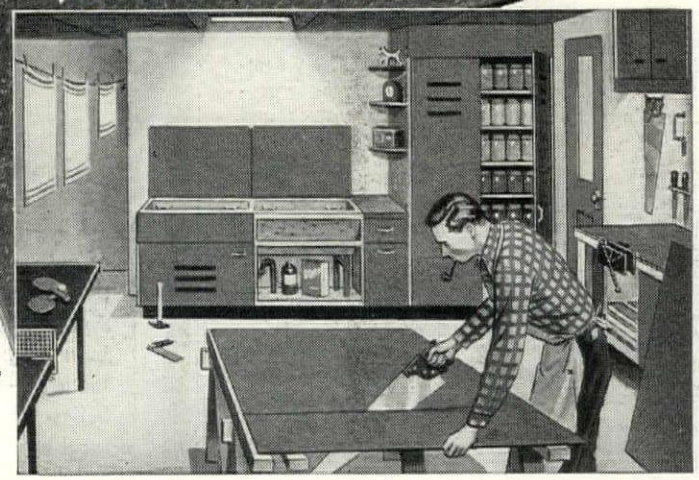
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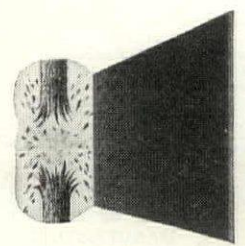
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FROM EXPLODED WOOD TO VERSATILE HARDBOARD

LETTERS

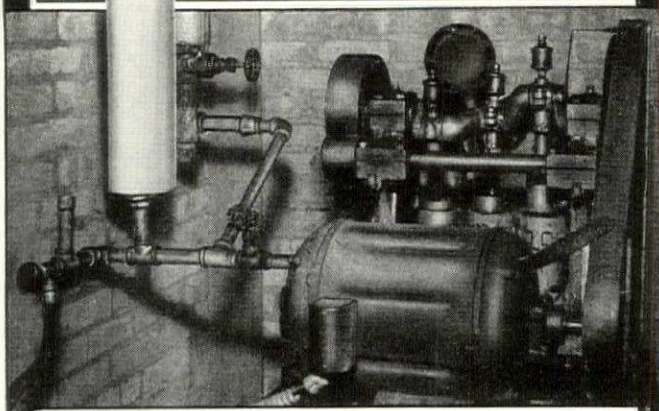
"Does a Fine Job" —SAYS VETERAN PLUMBER

He's speaking about the Wade Sealed Air Chamber. But let's hear directly from Chas. E. Gawne, prominent Chicago plumbing contractor... "We installed a $\frac{3}{4}$ " water line to a high pressure pump used for truck washing operations at the Midwest Transfer Company, Chicago. The 150 lbs. discharge pressure at the spray nozzle backed up in fluctuating pressure surges past the pump into the city water line. This created a dangerous vibration of the entire piping system—so much so that the pipe was torn loose from its hangers. We installed your No. 134 Sealed Air Chamber on this water line and it stopped all vibration. THIS WADE SEALED AIR CHAMBER REALLY DOES A FINE JOB."

More and more plumbers, engineers and architects are learning how the Wade Sealed Air Chamber effectively solves water hammer problems. They cushion the shock created by high surge pressures to prevent stretching and straining of pipes, valves and fittings.

Take a tip from Mr. Gawne and learn more about this modern effective answer to destructive water hammer. Send today for our new Sealed Air Chamber booklet which includes Selector Tables to determine the correct size Air Chamber for each job.

Photo shows the Wade No. 134 Sealed Air Chamber, installed on a $\frac{3}{4}$ " pipe at the Midwest Transfer Company, Chicago. It "stopped all vibration."



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Wade, makers of the HydraFilter grease interceptor and the Sealed Air Chamber manufactures a complete line of floor and shower drains, roof drains, backwater valves and swimming pool equipment. Consult your nearest Wade representative or write direct to us for further information.



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Academy of Architecture
of the U.S.S.R.; Chairman,
Moscow Architects' Union

KAISER COMMUNITY HOMES

Forum:

It is a great satisfaction to see that the ends to which you work are achieved by others. At least your thinking is vindicated. The Kaiser Community Homes setup is one answer to housing production.

Housing is big business and under-capitalization is its basic ill. KCH is a good pilot to show what can be done where an adequate capital structure is established. However, since by far the largest volume of houses is built in small communities, how can these techniques be adapted to them? I refer particularly to those of the middle west, whose weather conditions are the extremes and where the annual increments to the existing communities are necessarily small. Anything you can publish on this angle would be helpful to many striving builders.

Please keep your pages full of this sort of enterprise. It is only from the stimulation generated by stories like that of KCH that courage will come to others and a total industry be created. To me, this is "architecture"—design is only one element and I believe that housing needs more architectural thinking.

ARTHUR BOHNEN

Menasha, Wis.

Forum:

I have read your article regarding the Kaiser-Burns Community Developments with very much interest.

Not so long ago I had the opportunity to visit the Kaiser-Burns project at North Hollywood, Calif., and at that time they had 500 houses under construction, with 51 completed. We here at Bradford Homes are using many of the same methods of fabrication, have 175 houses currently under construction, with 12 completed each week. While our current project is much smaller than Kaiser's, we do feel the comparison of completions is of interest.

Of course, we feel that large housing projects properly built at the right prices are the answer not only to the present housing problem, but also the answer to "more house for the money." Your article on Kaiser-Burns brings out this point, and we feel that your presentation was excellent.

GALE BRADFORD, President
Bradford Homes, Inc.

Evansville, Ind.

(Publisher's Letter on page 56)

REZNOR THE AUTOMATIC GAS FIRED HEATER



with the BIG, QUIET FAN

As the "Big, Quiet" Fan moves a generous quantity of air quietly through the multi-section heat exchanger, the room is comfortably and uniformly warm. Only Reznor Suspended and Floor Type Heaters have the ply-metal, corrosion resistant, air-tight, chatter-proof, indented type tubes—for more heat quietly and easily distributed.

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The Truscon Planning Board Says: "With the high degree of production efficiency which has now been attained in the

Truscon plants, we are able to meet normal demands for delivery of many of our steel building products." Contact the nearest Truscon District Sales Office for up-to-the-minute information, and cooperation in filling your requirements with the greatest efficiency.

608 New Apartments

There'll soon be a lot of pleased and happy new residents in the area between 9th and 10th Avenues, and West 25th and West 27th Streets, in New York City. This is the site of the Elliot Housing Project, consisting of four big modern structures containing 608 modern apartments, and rapidly being readied for habitation.



Truscon Diamond Metal Lath Used in Elliot Housing Project, New York City.

Large quantities of Truscon Diamond Metal Lath, in conjunction with Truscon $\frac{3}{4}$ " Channels and Tie Wire, were used for the 2" solid metal lath and plaster partitions for this project. These Truscon steel building materials served several important functions: (1) They permitted the quick, low-cost coverage of large areas with smooth, flat lath; (2) they met strict fire-proofing requirements; and (3) they helped attain a high quality of plastered job, and will protect the fine appearance of the walls and ceilings for a great many years.

Truscon Diamond Lath is a flat metal lath, uniformly expanded throughout the entire

sheet. Its use is almost universal, for it is adaptable for practically all classes of work—as a base for walls, partitions, ceilings, as a reinforcement for stucco, as a protection for steel beams and columns, and for protecting hazardous points in wood frame construction—such as ceilings under inhabited floors, especially over heating plants and coal bins, around flues, and back of kitchen ranges, stair wells, and under stairs.

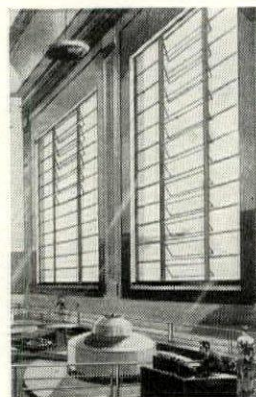


Truscon Cold Rolled Channels are straight and true, with square corners that prevent rolling.

Illustrating the straight, true plastered walls secured with Truscon Metal Lath Products.

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There is a growing use of Truscon Donovan Steel Windows for structures housing power units. These windows permit modern, streamlined design for exterior distinctiveness in appearance. Large areas can be covered by one complete window unit, permitting ample introduction of light and air. The operator mechanism, although concealed, assures positive control of the window openings. This mechanism replaces the unsightly mechanical operators usually necessary to effectively control ventilators. The steel sections used in Donovan Windows are rolled exclusively for Truscon, and are the largest and heaviest steel sections manufactured expressly for windows. Write for free catalog describing Truscon Donovan Steel Windows.

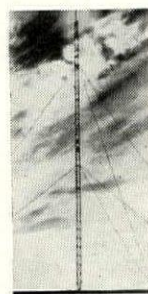


A Steel Window for Every Purpose

Did you know that Truscon Steel Company fabricates a more diversified line of steel windows than any other window manufacturer? Truscon also manufactures practically all of the necessary collateral window equipment such as mechanical operators and screens. There is a type of window design to meet any window requirement in any type of building in any industry. Ask for information on Truscon's complete line of steel windows.

Sky High

Truscon design and engineering ability in steel construction is evidenced by Truscon contracts to build America's tallest radio towers. The tallest one right now, is the WKY Radio Tower in Oklahoma City, 956 feet high from the ground to the top of the FM antenna. Tall or small, AM to FM, Truscon can supply guyed or self-supporting radio towers for every requirement.

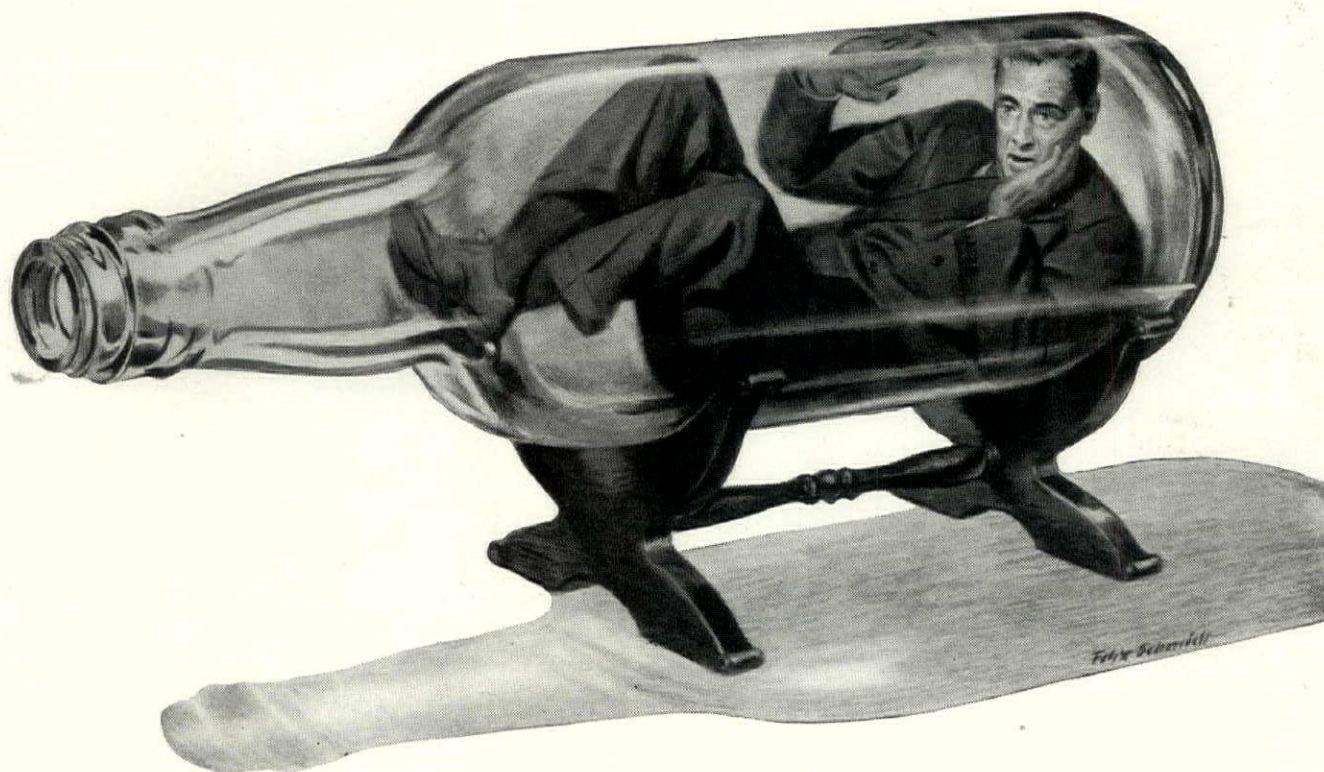


New Literature

Write for catalog describing the new Truscon line of plastering accessories, including Bull Nose and Scalloped Edge Corner Beads, Special Base Grounds and Screeds, Picture Mold, Casings, Fittings and other items.



TRUSCON
STEEL COMPANY
YOUNGSTOWN 1, OHIO
Subsidiary of Republic Steel Corporation



Don't you hate to see a home owner "bottled up"?

● There's no fuel that can match Bituminous Coal for providing a home with uniform, dependable, low-cost heat. Every architect and builder knows that!

And in the future, the advantages of coal heat will become even more pronounced—especially when stoker developments and improved local services make coal an "automatic" fuel as well.

So when a client of yours *insists* on some other fuel for his new home, make sure he can turn to coal later on. Don't let his house plans "bottle him up" with his initial fuel choice forever.

Simply be sure that the house plan provides: (1) A chimney with sufficient flue capacity to burn coal efficiently; (2) Sufficient space adjacent to the heating unit for eventual coal storage and stoker installation.

Such sensible precautions involve but trifling cost—and they may add greatly to the future value of a house.

Coal supplies uniform, *steady* warmth throughout every portion of each room. For there's always a fire in the furnace—no "pop on and pop off" periods that permit accumulated heat to rise to the ceilings and leave floor areas dangerously cold. That, plus its low cost, is why more than 4 out of every 7 homes in the United States now heat with coal!

BETTER AND BETTER THINGS ARE COMING FROM COAL!

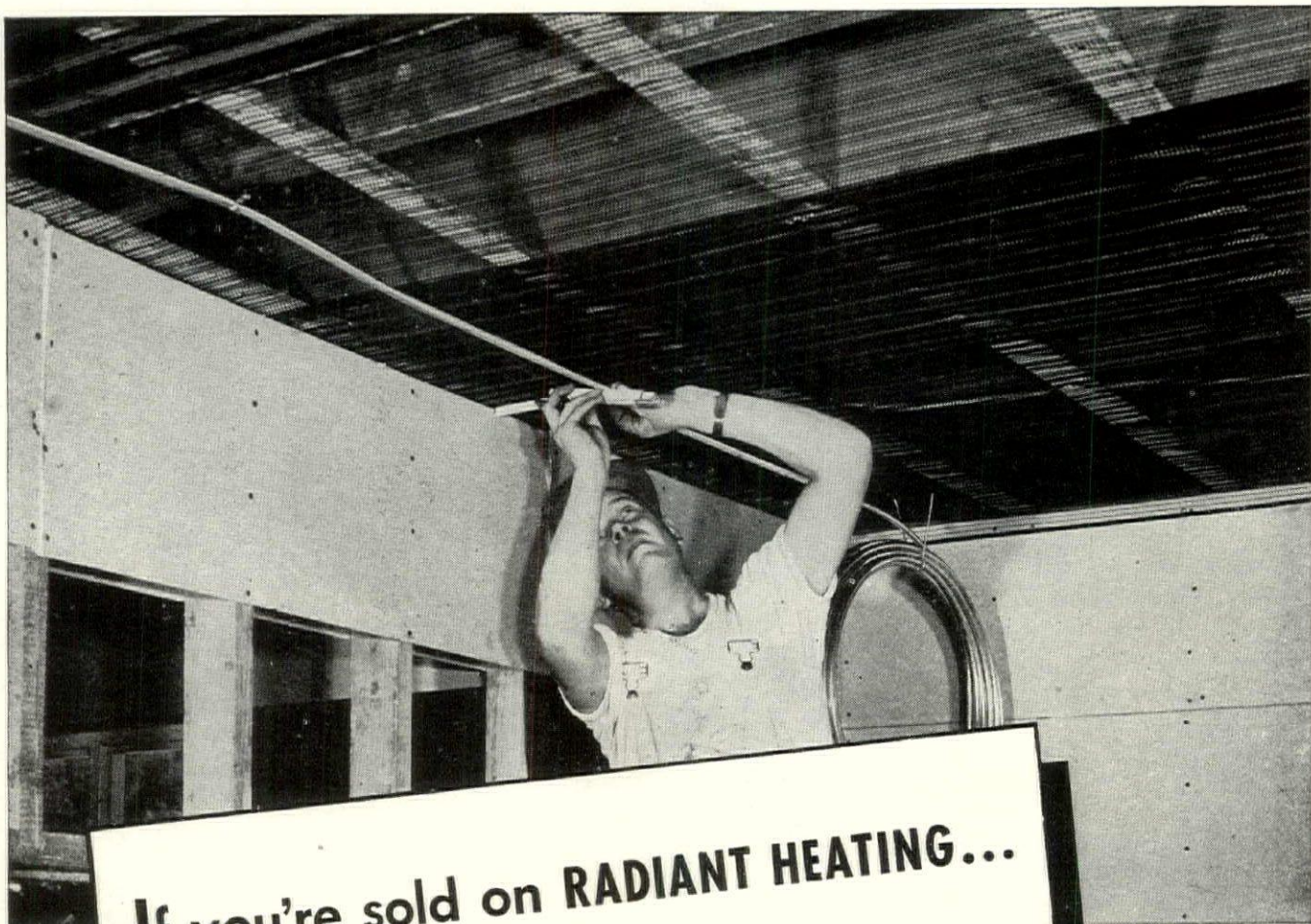


As you undoubtedly know, the modern research facilities of the Bituminous Coal industry are hard at work not only to make coal a still better fuel; but also to devise new, low-cost *automatic* equipment that will make coal-heating even cleaner, more comfortable, more convenient and more economical. This makes it all the more important that every new home built today be planned to permit the eventual burning of coal—no matter what fuel may initially be selected.

BITUMINOUS COAL

BITUMINOUS COAL INSTITUTE
Washington, D. C.

Affiliate of NATIONAL COAL ASSOCIATION



If you're sold on **RADIANT HEATING...**

Recommend *Copper Tube!*

IF you are sold on radiant heating, plan to use Chase Copper Tube, for copper tube has many advantages for radiant heating installations.

Copper tube can be bent easily, on the job. It is light in weight—easy to handle. And it can be installed in the standard plaster coat.

To these advantages add the long-recognized economy of Chase Copper Tube and you can see how

the specification of copper tube can make a radiant heating system appear even more desirable.

The demand for Chase Copper Water Tube is so great that we are not able to satisfy it at all times. However, the technical information is now available to you for future planning, and is being distributed throughout the building industry.

Send today for your copy. Simply address Dept. AF67.

7 Reasons WHY CHASE COPPER TUBE FOR RADIANT HEATING

1. EASY TO BEND
2. LIGHT IN WEIGHT
3. SOLDERED FITTINGS
4. SMALL DIAMETERS
5. LONG LENGTHS
6. LOW COST
7. LONG LIFE

Chase



the Nation's Headquarters for
BRASS & COPPER

WATERBURY 91, CONNECTICUT

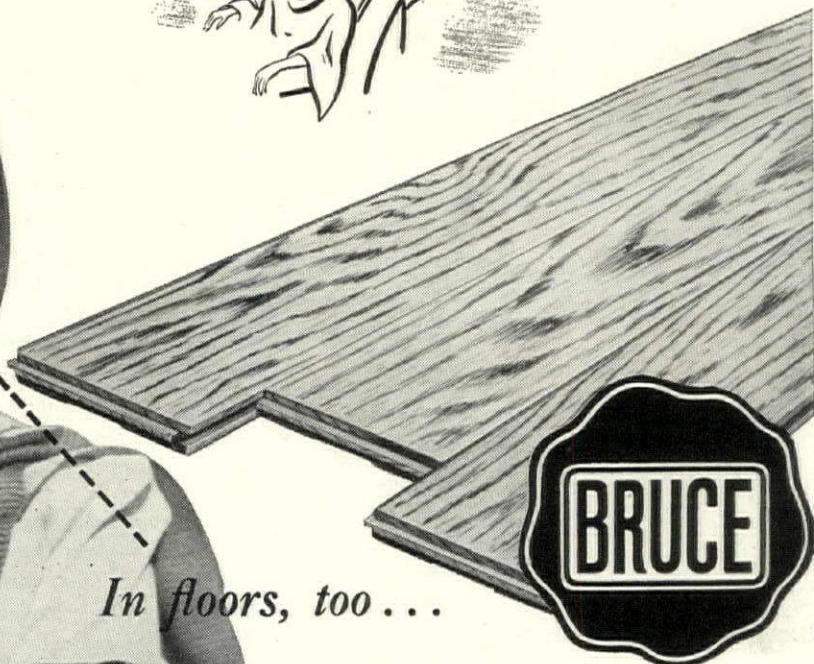
SUBSIDIARY OF KENNECOTT COPPER CORPORATION

THIS IS THE CHASE NETWORK...handiest way to buy brass

ALBANY: ATLANTA: BALTIMORE BOSTON CHICAGO CINCINNATI CLEVELAND DETROIT HOUSTON INDIANAPOLIS JACKSONVILLE KANSAS CITY, MO. LOS ANGELES MILWAUKEE MINNEAPOLIS NEWARK NEW ORLEANS NEW YORK PHILADELPHIA PITTSBURGH PROVIDENCE ROCHESTER SAN FRANCISCO SEATTLE ST. LOUIS WASHINGTON (†Indicates Sales Office Only)

WHAT A WORLD OF DIFFERENCE

the right finish makes...



In floors, too...

IT'S THE *Finish*
THAT COUNTS!

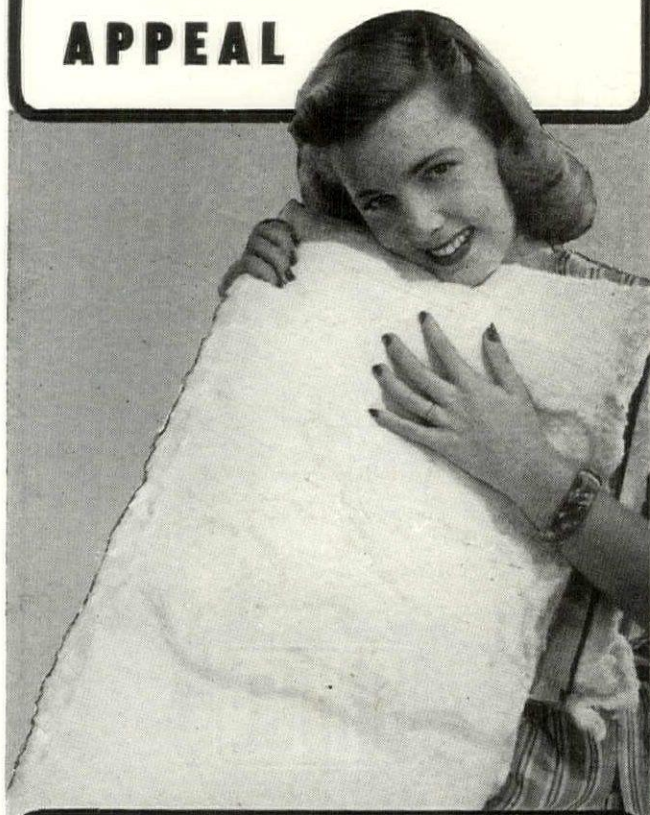
*America's
Beauty
Floors*

A thorough, scientific beauty treatment gives Bruce Finished Floors 8 advantages over ordinary floors finished on the job. Here they are, every one of them important: 1. Every strip is sanded to perfect smoothness on precision sanders. 2. Finishing starts immediately after sanding—no raised grain, moisture content is right. 3. Highest quality silex filler is thoroughly worked in. 4. The finish penetrates, seals the pores, beautifies the grain. 5. Infra-red heat welds finish into tough, even film. 6. High-speed brushes burnish finish, provide a hard, smooth surface. 7. A special extra-durable wax is applied evenly, polished to perfection. 8. The floor is ready for use when laid. For uniformly beautiful floors, and a substantial saving of time on the job, specify Bruce Finished Floors... it's the *finish* that counts!

E. L. BRUCE CO., MEMPHIS, TENN.
World's Largest Maker of Hardwood Floors

BRUCE FINISHED FLOORS

A PRODUCT WITH APPEAL



Sell your customers the flameproof insulation that's soft and safe as a powder puff, and yet too tough for heat or cold! Cotton Insulation appeals to your workmen, too . . . doesn't make their skin smart or sting - unrolls like a rug and makes the job of installation simple, quick, and easy.

Sell new **economy, safety** and insulation **performance**. Sell featherweight, flameproof, efficient Cotton Insulation - made to specifications of the U. S. Department of Agriculture - tested and proved by successful service from Alaska to the tropics.

COTTON



Look for this emblem when you buy.

FREE! Send for your copy of the new folder "Cotton Insulation." It gives you many suggestions for dramatizing the powerful sales story of this amazing product. Address National Cotton Council, Box 18, Memphis, Tenn.



**COTTON INSULATION ASSOCIATION
NATIONAL COTTON COUNCIL OF AMERICA**

A LETTER FROM THE PUBLISHER

Dear Reader:

Last month another department of this magazine noted the 50th anniversary of the *Architectural Review* of London. This is a fine occasion for any



group of journalists and an especially fine one for the *Review*, from which we have derived such continuous delight and stimulation. The *Review* has been and remains wonderful and unique among all professional papers in the world. While its dependence on good wishes is at the very most, nominal, we are happily determined to extend ours.

* * *

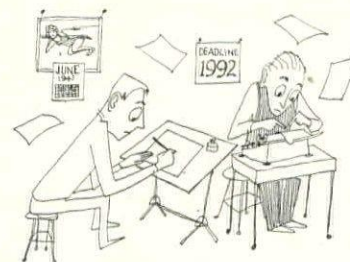
Somewhat belatedly this reminds us that the *FORUM* reached its first half-century in January 1942. The matter having been overlooked at that time due to a chronically faulty editorial memory, we shall await 1992 as our next opportunity for celebration. Chances are better than even that some of the present staff will no longer be here (or, for that matter, anywhere else), others will have reached happy though impoverished retirement. Certain things are clearly foreseen: The *FORUM*'s pre-millennium editor is a tall, imperious, defiant woman, with a fine bone structure, who converses easily in the universal language. The anniversary has brought felicitous messages from many people and places. Perhaps it will be of most peculiar interest to learn that the head of the USSR, President Masha Ivanovna, sent us one of the most gracious salutes. The 1992 reader will remember that in 1965 the continued threat of World War III evaporated in a bloodless revolution when the women of the world contemptuously



took over from the men. For the benefit of the morbid and curious, we add that several years earlier, communism proved a complete bust. In fact, when the iron curtain, (which by then had become pretty rusty) finally disintegrated, it was seen that the USSR was running one of the most successful free enterprise democracies on earth. Corporate dividends for the third quarter reached an all-time high. In the Russian President's cabinet were eleven females, three males.

* * *

Just one more small matter. Naturally, the 100th Anniversary issue of the *FORUM* will carry a whopping amount of advertising. We hope much of it will display an appropriate nostalgia. It is just as well to anticipate these things, and we give fair warning to advertising copywriters and art directors to start accumulating suitable blurbs and illustrations now. Only 45 years until closing . . .

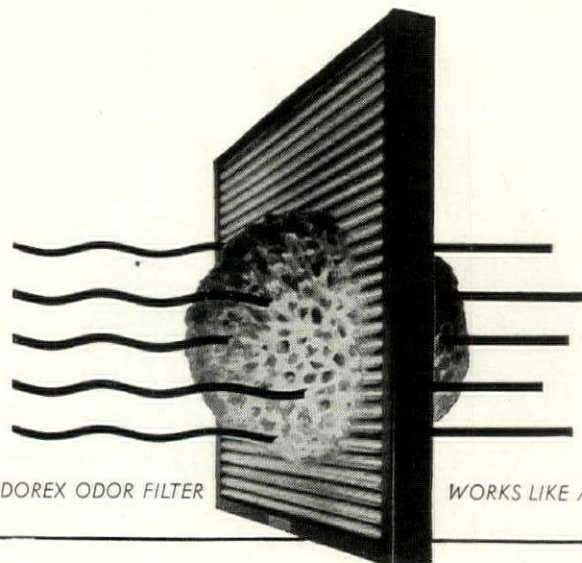


Apparently, the question mark we placed after the words "art commission" in last month's letter has found a responsive audience, though far from agreement. From all parts of the country and from people of varied backgrounds, including some with long experience in Europe, have come considered opinions often based on personal experience with censorship. As many as possible of the most interesting letters appear in the current Letters column (see p. 22). Others will be published next month, and until all points of view have been displayed, we invite your reading of these letters and your comment if you find something left unsaid. Some deplore the "anarchy" which complete freedom of design permits. Others deplore equally the "banality" which seems to follow control. For example, writes Roi Morin of Portland: "I do not agree. I have long felt that the Building Department should exercise some esthetic function as well as structural, sanitation, stupidity or what have you".

Where do you stand?

H.M.

Are you spending
too much for
Air Conditioning
...and are
you getting it?



DOREX ODOR FILTER

WORKS LIKE A SPONGE

Dorex Air Recovery Units save equipment, power, and fuel by this simple method: They change stale air to fresh air. Thus, you can recirculate more of the air you have already conditioned instead of throwing it away because it is stale and odorous. That means less outdoor air to heat or cool, less costly equipment, and less operating expense. Best of all—nothing is added to the air. Odors are removed by soaking them up with activated carbon, one of the most powerful adsorption materials known.

It may pay you to get the facts!

Air conditioning is basically a simple proposition. When the outdoor air you bring in is too hot, you cool it. When it's too cool, you heat it. Sometimes you dry it. Sometimes you moisten it. *All that costs money.*

Why not re-use more of this conditioned air and save money?

Most people believe that oxygen imparts freshness to air. Actually, this is a fallacy. Stale, stuffy air is caused, *not by lack of oxygen*, but by *odors*—just plain smells that originate from occupants and their habits (body, respiratory, tobacco, and cosmetic emanations), from beverages and food in preparation and serving, and from lubricating oils, solvents, etc., in industrial processes. So you bring in quantities of outdoor air to dilute the odors—and you must continually condition this new air. The amount of air you need to bring in determines, to a large extent, the size and cost of your equipment and your operating expense.

You can get better air conditioning for less money.

By removing the odors from your expensively conditioned indoor air, you can greatly cut down your need for unconditioned outdoor air. A Dorex Air Recovery Unit does just that for you—soaks up the odors in your indoor air—cuts your need for new unconditioned air in some cases by as much as 75%—cuts your fuel, power, and water cost substantially—and gives you all the fresh air you need into the bargain.

Do you have one of these 3 air conditioning headaches?

1. You *can't* keep the room cool enough (or warm enough) with your present air conditioning equipment, *and at the same time keep the air comfortably fresh.*
2. You *can* keep the premises cool enough (or warm enough), but you have to bring in a lot of outdoor air through the ventilating system, or you have to air the place out by opening doors and windows, to keep the premises from becoming stale, stuffy, and odorous.
3. You *can't* get outdoor air economically, or you *can't* get air that's odor-free.

If you are planning to put in air conditioning, investigate Dorex. It may enable you to keep the premises comfortable and pleasant with smaller equipment, thus saving on installation cost, as well as year 'round operating expenses.

Free engineering help available

Trained specialists will study your present ventilating problems and tell you frankly, without charge to you, whether or not it will pay you to install Dorex Air Recovery Equipment. Their services are also at the disposal of consulting engineers, architects, and air conditioning dealers.

Write us about any problem of your own on which we may be able to offer suggestions or estimate definite savings. For full information on Dorex Equipment, call the nearest district representative or write Dept. M-40.

DOREX Units are being used in:

Airplanes
Banks
Bars
Bowling Alleys
Breweries

Buses
Chemical Plants
Stores
Film Mfg. Plants
Food Processing Plants

Hospitals
Hotels
Industrial Plants
Institutions
Laboratories

Libraries
Locker Plants
Offices
Oil Companies
Precision Mfg. Plants

Railroad Cars
Refrigerated Storage
Restaurants
Telephone Exchanges
Theaters

W. B. CONNOR ENGINEERING CORP.

AIR DIFFUSION

AIR PURIFICATION

AIR RECOVERY

112 East 32nd Street



New York 16, N. Y.

Representatives in Principal Cities • IN CANADA: Douglas Engineering Co., Ltd., 1405 Bishop St., Montreal 25, P. Q.



Crude asbestos fibre in its original rocklike state.

Made of **ASBESTOS** each ply is a flexible covering of stone

There's the secret of that Rock-of-Gibraltar resistance to wear and weather which you get in Johns-Manville Flexstone Roofs! It's in the *felts*. They're made of the magic mineral *asbestos*—fireproof, rotproof, long-lasting.

Give your buildings that kind of all-out protection.

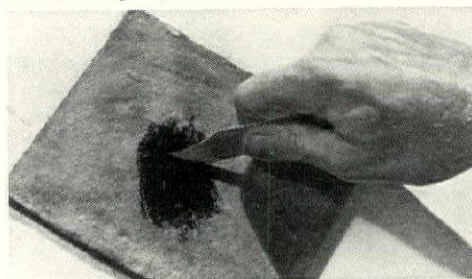
Flexstone Roofs are *smooth-surfaced*, permitting fast and thorough roof drainage, eliminating the extra weight of slag or gravel, and making it easy to locate and repair any damage. They need no periodic coating. Asbestos felts are perforated to insure smoother and better application.

All Flexstone Built-Up Roofs are engineered to the particular requirements of your building—whether it's new construction or re-roofing. To insure skilled application, they are applied only by J-M Approved Roofers.

Three types are available: Flexstone *Super "A"*, Flexstone *Standard*, and Flexstone *Service*—each the finest that can be specified for its purpose. Write for our brochure BU-51A. Johns-Manville, Box 290, New York 16, N. Y.

Because of unprecedented demand, there may be times when we cannot make immediate delivery. Please anticipate your needs.

Resist drying-out action of the sun



"SCRAPE TEST" proves it!

Wherever you scrape the gray surface of a Johns-Manville Flexstone Roof, you'll find black live asphalt underneath, showing that the felt itself and the waterproofing agent between the plies is effectively protected from the sun by the asbestos fibres within the felts. Result: Flexstone Roofs won't dry out . . . give extra years of service.



Johns-Manville **FLEXSTONE** BUILT-UP ROOFS



they eat!

But how *well* they eat depends on whether or not you specify a Gas range. For nothing — absolutely nothing — can touch the live Gas flame for lusty, crusty broiled meat flavor. As for baking . . . only a Gas range has an air-circulated oven. The one sure way to get evenly-browned cakes, rolls and feather-light biscuits!

they work!

But how *hard* the cook-of-the-family works is up to you! See that she has a new Gas range for cooking that not only is faster and more flexible . . . but is also cooler and cleaner. No long lingering top-burner heat! No clogging from spill-overs!



they play!

But how *often* they play can be increased a hundred-fold by a completely *automatic* Gas range. This 20th century miracle has a clock control that turns the heat on at a specified time and temperature—cooks a delicious oven meal from soup to dessert—and turns itself off. Other automatic features in every Gas range built to "CP" standards include automatic lighting of top burners, oven,

and broiler and an oven thermostat that holds any heat from 250° to 550°.

they pay!

But how *much* they pay for what they get is *your* responsibility. Remember! No other automatic range can compare with a new automatic Gas range in economy of initial purchase — or — in economy of operation.



they come back for more

. . . recommend your services to more people . . . when the appliances you specify give them more! This holds true not only in Gas for cooking but in Gas for all the other big jobs in the modern home . . . refrigeration, water-heating, house heating and air-conditioning. For Gas is the *dependable* fuel no matter what it is used for. And Gas appliances are the most *trouble-free* to own and install of *all* modern automatic equipment.

See your local Gas Company for the latest technical information on modern Gas appliances and installations.



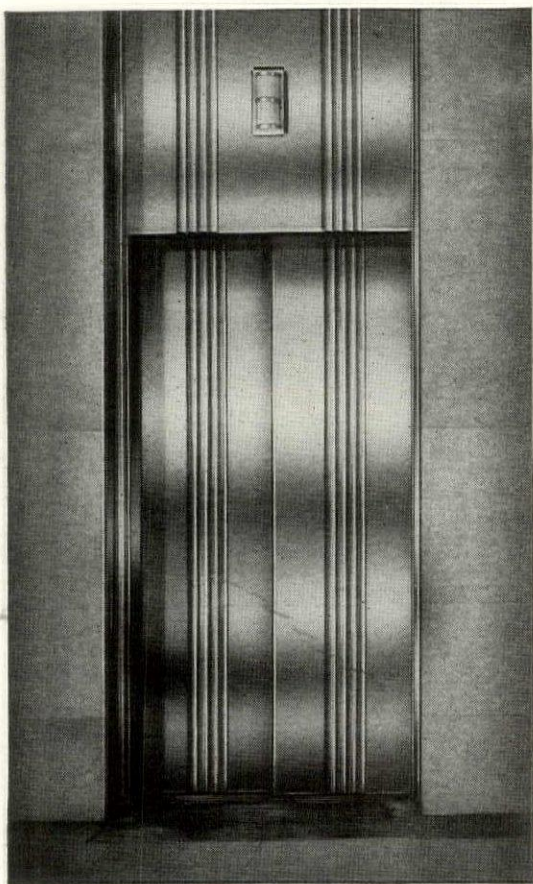
GAS



THE WONDER FLAME THAT
COOLS AS WELL AS HEATS

AMERICAN GAS ASSOCIATION

Build for tomorrow with what they want today



Architectural FACE LIFTING



It's not done with mud-packs, massages or mirrors. In fact, it's an entirely different technique. You can remove the old "face" and replace it with a modern, attractive Dahlstrom Elevator Entrance. Call it "structural plastic surgery" or just plain "modernization", it's good, sound business.

Architectural beauty is more than "skin-deep." A modern front may attract business to your premises, but it takes pleasing interiors as well to keep tenants

happy and visitors impressed. Dahlstrom Elevator Entrances are not only structurally superior, they are impressively regal in appearance.

Dahlstrom invites you to let our representatives serve you, without obligation, in answering your elevator entrance design and engineering problems. Years of similar service have provided the answer for many building modernization projects. It can do the same for you!

*Illustrated above: Dahlstrom Elevator Entrance
in the Pacific Electric Building, Los Angeles, Calif.
Claude Beelman, Architect, Herman Spackler, Associate.
Doors of lacquered aluminum with extruded aluminum
fluted inserts.*

DAHLSTROM

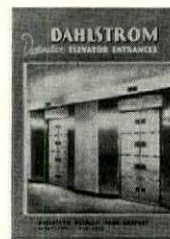
METALLIC DOOR COMPANY, JAMESTOWN, N. Y.

Branch Offices:

NEW YORK, CHICAGO, PHILADELPHIA, BOSTON, CLEVELAND, BUFFALO, ATLANTA, SAN FRANCISCO

Representatives in Principal Cities

Get This Catalog



Sixteen pages, covering construction details, design treatment, specifications and installation illustrations. Send for your copy.

This catalog is also reproduced in the current Sweet's Architectural File.

There is no substitute for
TRUE CHURCH TONE
delicately enriched by the Wurlitzer Voix Celeste

THE beauty of moonlight on a lake, with gentle breezes softly shimmering the waters, perfectly describes the effect produced by the Wurlitzer Organ's Voix Celeste.

Because Wurlitzer's electronic organ has been designed and engineered with fidelity to pipe organ tradition, it naturally includes this lovely voice. The throbbing vibrancy of the Celeste enhances any ensemble and provokes in listeners an inspiration of deeply religious peace. Like the massed strings of an orchestra playing *vibrato*, the Celeste adds a shimmering brilliance which, once heard, is accepted as indispensable.

Your nearest dealer will gladly arrange a demonstration of this and of the many other exclusive Wurlitzer features. See him soon.
The Rudolph Wurlitzer Co., Organ Division,
N. Tonawanda, N. Y.



The **WURLITZER ORGAN**

Series 20 Two-Manual

If it's got to be seen,
do it with Seaporcel!



SEAPORCEL gives the architect an artist's palette for color, the sculptor's clay for contour.

Sparkling ceramic fused to steel at 1550° F., **SEAPORCEL*** can be fabricated to *any* shape, form, section . . . finished in *any* shade, from purest white and pastels to deepest black.

Light in weight, **SEAPORCEL** combines stiffness with strength, is fireproof, easily handled, quickly erected. Shortages do not faze **SEAPORCEL**—wood blocking or light porcelain iron furring provide all support necessary.

And, thanks to multiple coating of enduring ceramic fused to steel, **SEAPORCEL** will never crack, fade, corrode. Through the years, it remains clean, *lustrous*.

SEAPORCEL is equally adaptable to broad and dramatic sweep for building facades, store fronts, interiors of public buildings, restaurants, banks, schools, hospitals, hotels. Make your final word on your next preliminary sketches: **SEAPORCEL!**

WRITE TODAY for bulletins showing applications and current jobs.

SEAPORCEL PORCELAIN METALS, INC.
Formerly Porcelain Metals, Inc.

28-24 Borden Avenue, Long Island City 1, N. Y.

*Registered U. S. Pat. Off.



A. F. of L.
Plant

Seaporcel
"Member Porcelain Enamel Institute, Inc."

FORUM

Behind the scenes with **FORUM** contributors



Danish-born Architect **VILHELM LAURITZEN**, designer of the General Broadcasting Corporation building in Copenhagen (p. 69), has studied and labored in all climes from the mild Mediterranean to the icy Baltic. His battered passport bears the stamp of nine countries: Spain, Italy, France, Greece, Turkey, England, Holland, Germany and Austria, while the roving Lauritzen drawing board has yielded such structures as the main building for Denmark's largest Kastrup Airport.



BURTON SCHUTT ran away from his Bismarck, North Dakota home at the age of 16 to launch a speculative building business that netted him a neat \$32,000 profit on one of his first ventures before he was 21. He has since branched into an equally spectacular architectural career, strongly influenced by a lengthy stay in Honolulu. The tropical touch acquired in Hawaii is seen at its best in Los Angeles' lush Bel-Air Hotel (p. 77).



WALTER WURDEMAN and **WELTON BECKETT'S** college friendship graduated into an architectural partnership after commencement. They first invaded California in '26 when Becket played in the Rose Bowl while Wurdeman watched. Discarding footballs for T-squares, they returned in '32 to design everything from corner restaurants (p. 82) to a jai-alai stadium.



HUSTON RAWLS, president of National Retail Recentralization, Inc., the group responsible for the North Shore Shopping Center (p. 84), is a Kentuckian with a close resemblance to his neighbor, the late Irvin S. Cobb, and a serious interest in shooting and fishing. Supposedly in retirement since 1940 after a lifetime in publishing and banking, Rawls was not one to loll in the luxury of leisure indefinitely. He is now back at his desk with a brand new career in development building.



While still in knickerbockers, Washington Architect **CHARLES GOODMAN** bowed into building running a blueprint machine after school. By 1934 he was crusading against eclecticism in the Public Buildings Administration, continuing his missionary work in private practice (p. 94). He returned to government service as wartime head architect-engineer of the ATC. His design creed: "Analyze more, draw less. Refine until the design's simplicity looks easy to the uninitiated."



WHITNEY R. SMITH graduated from the University of Southern California, served his apprenticeship in the offices of Harwell H. Harris and W. L. Pereira, staked out his own practice, and returned to U.S.C. as faculty member, all in seven years. A later tour of duty with the FPMA yielded such projects as 4092-S, familiar to **FORUM** readers as the exciting Linda Vista Shopping Center. Back in private practice, Smith majors in residential (p. 98) and commercial building.

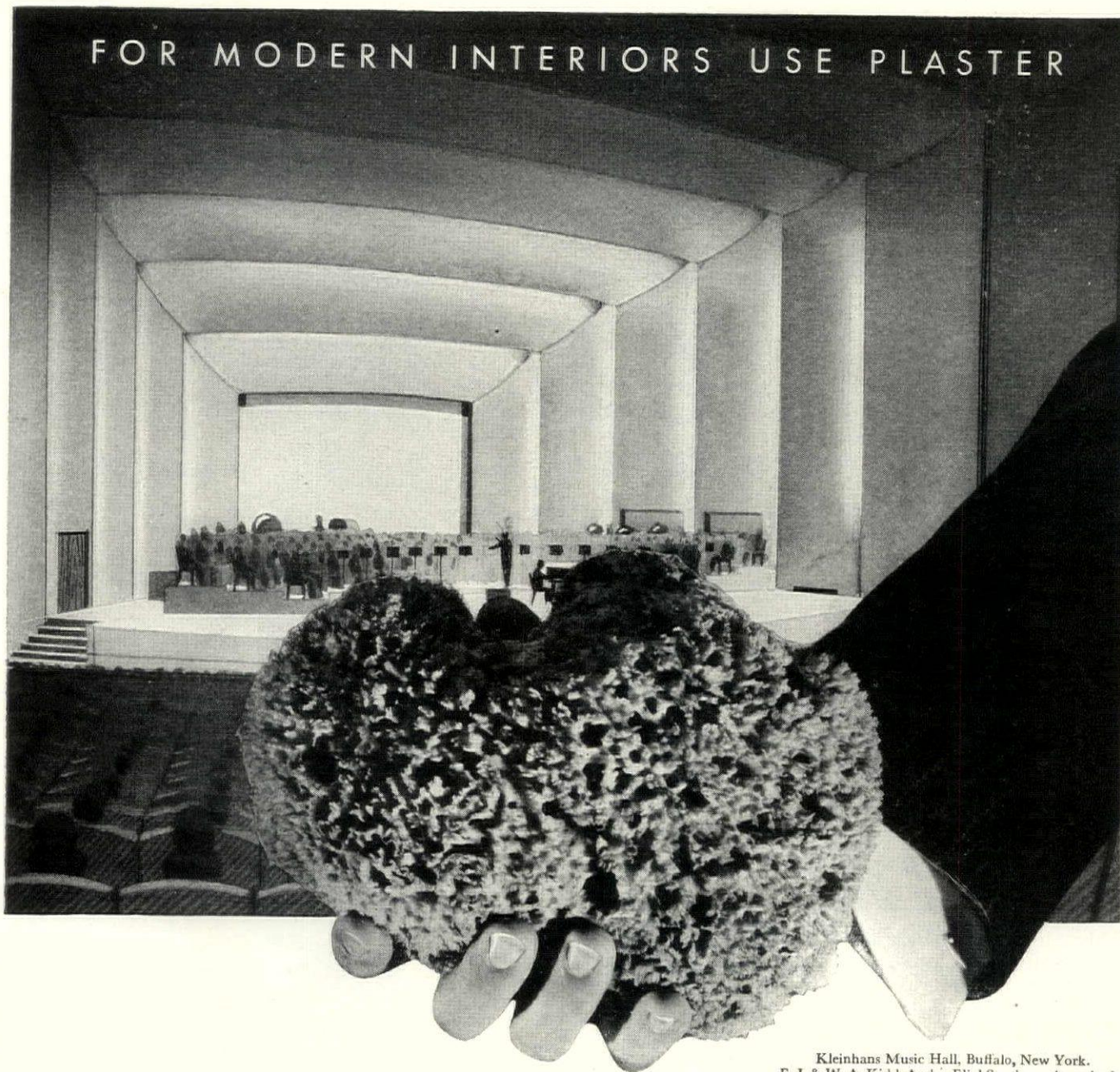


HENRY BLATNER (far right) abandoned civilian architecture in 1942 to serve a naval engagement in the Special Devices Department. Off duty hours were devoted to the design of 75 different schemes for an addition to his rustic, timbered house in Slingerlands (near Albany), N. Y. (p. 99). Of these, 74 were laughed out of existence by buddies Russ Amdal, Sam Homsey and Donn Emmons (see photo), fellow officers, who served as official critics on the job.



President **CARL GUNNAR STRANDLUND** of the Lustron Corporation left his native Sweden for America 43 years ago, stayed to achieve a distinguished record as an industrial engineer. In World War II the particular Strandlund genius saved one million man hours and a half million machine hours through a revolutionary method of treating armor plate. He now guides Lustron's activities in tooling up to produce 30,000 porcelain enameled steel houses a year (p. 105).

FOR MODERN INTERIORS USE PLASTER



Kleinhans Music Hall, Buffalo, New York.
F. J. & W. A. Kidd, Arch.; Eliel Saarinen, Asso. Arch.

SABINITE* PLASTER *absorbs noise*

Like a dry sponge soaks up water . . . SABINITE absorbs noise and reduces reverberation.

The architect employs SABINITE to provide modern quiet offices—better reception in auditoriums and churches—a more restful atmosphere in restaurants and hospitals.

A welcome advantage is the fact that both the design and application follow standard practice. For the unbroken surface of SABINITE

acoustical plaster finish is as unobtrusive as the plastered walls themselves.

SABINITE combines sound absorption, decoration, light reflection, fire resistance—all in one material which is applied by any good plaster craftsman. It is easily cleaned and maintained. This results in saving time and money which means full value in noise quieting per dollar.

Send for literature giving complete details.

*SABINITE used above is a registered trademark which distinguishes the acoustical plaster manufactured only by the United States Gypsum Company.



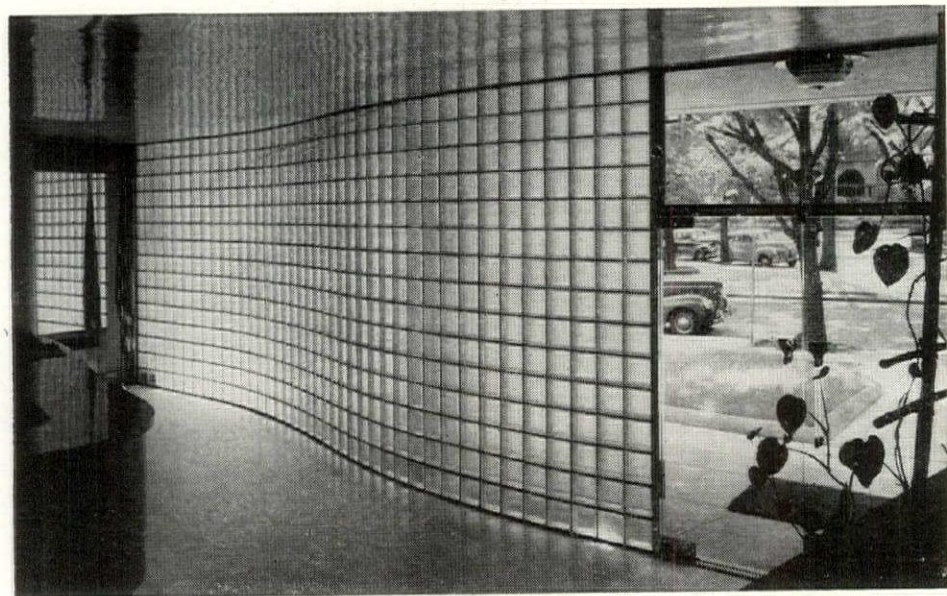
United States Gypsum

For Building • For Industry

Gypsum • Lime • Steel • Insulation • Roofing • Paint



In residential design Insulux Glass Block panels open the way to new and flexible plans. Usually dark and gloomy spots are cheerfully lighted with Insulux. One example, the hallway of this San Francisco home is flooded with softly diffused daylight—and full privacy is maintained.



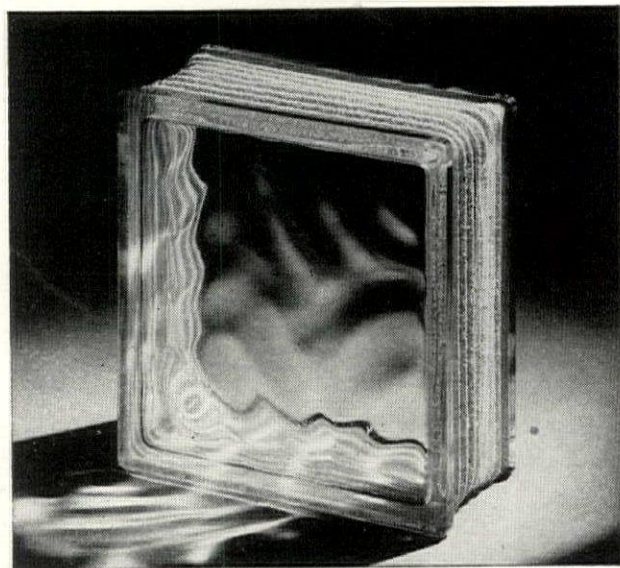
How about daylight and privacy for an apartment lobby? A gracefully curved floor-to-ceiling panel of Insulux was the answer in the Croydon Apartments, Washington, D.C. An occasional washing keeps Insulux fresh, sparkling. Architects: Berla and Abel.

Answer to the call for private daylight

THERE'S a definite demand for lighter, brighter living—in residences, in apartments.

A blessing to architects meeting this demand is the ability of Insulux Glass Block to transmit and diffuse daylight while barring vision. Panels of Insulux are easily installed in a manner similar to ordinary brick. Once in place these panels are permanent, high in insulating value, and remarkably easy to maintain. There's nothing to rot, rust or corrode and no painting is needed.

In residences, commercial and industrial buildings, architects are solving problems with Insulux. For complete technical data, specifications and installation details on this versatile, modern material, see the "Glass" Section of Sweet's Architectural Catalog, or address Dept. D-18, Owens-Illinois Glass Company, Insulux Products Division, Toledo 1, Ohio.



OWENS - ILLINOIS
INSULUX
GLASS BLOCK

Insulux Glass Block is a functional building material, designed to do many things other materials cannot do. It is manufactured in three sizes, many functional and attractive face patterns. Investigate!

GENERAL ELECTRIC Q-FLOOR WIRING ADDS FLEXIBILITY TO STORE LAYOUT

To provide an electrical system that can be quickly adapted to any changes in store arrangement, the new Abraham Drug Store in Burlington, Vermont, has been equipped throughout with Robertson Q-Floors and General Electric Q-Floor wiring.

Planned for Efficiency

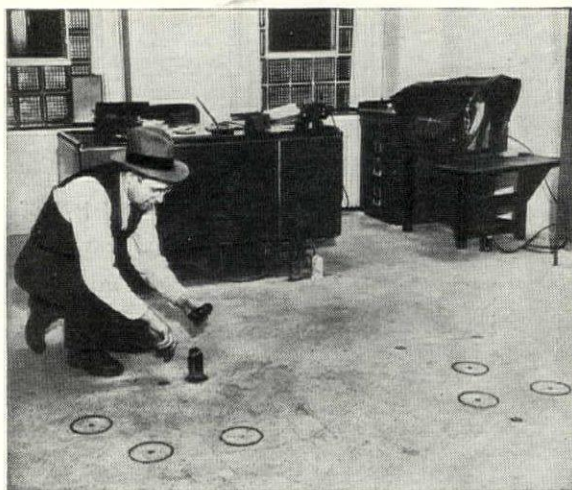
This attractive four-story building, like larger buildings constructed with Q-Floors, was designed for efficient service and economical maintenance now and throughout its life. Today, Q-Floor wiring provides ample facilities for general and showcase lighting, for cash registers, and other electrical needs. In the future, as layout changes are made, electric outlets can be moved and new outlets added wherever needed — quickly, and without the expense of ripping up floors or installing new raceways.

How Q-Floors Save

Any building, large or small, can be designed to stay electrically flexible with G-E Q-Floor wiring. The Q-Floor system — a series of hollow steel cells under the finished floor — provides raceways that can be tapped anywhere in the floor on six-inch centers. Thus, electrical facilities can be changed at any time, with little effort, and at low cost. When building, get Q-Floor planning assistance from your General Electric Merchandise Distributor or a factory underfloor specialist. For information, write to Section C59-64, Appliance and Merchandise Department, General Electric Company, Bridgeport 2, Connecticut.



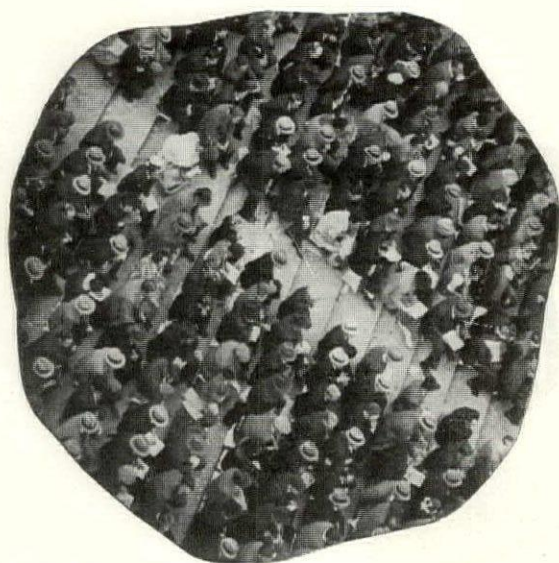
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Left: Orin Lambert of Sherwin Electric Company, electrical contractors, demonstrates the ease with which new electric outlets can be installed in Q-Floors. Right: L.S. Newton, architect, proudly makes a purchase in the new Abraham Drug Store, which he designed to include General Electric Q-Floor wiring. Note accessibility of electric outlets.



GENERAL  ELECTRIC

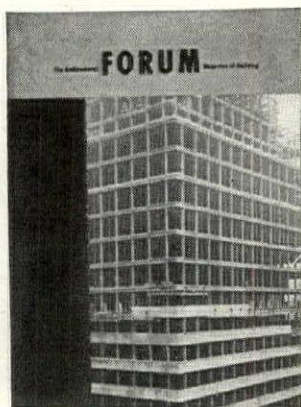


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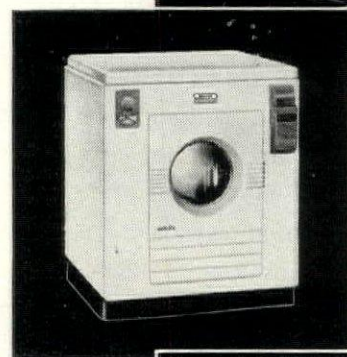
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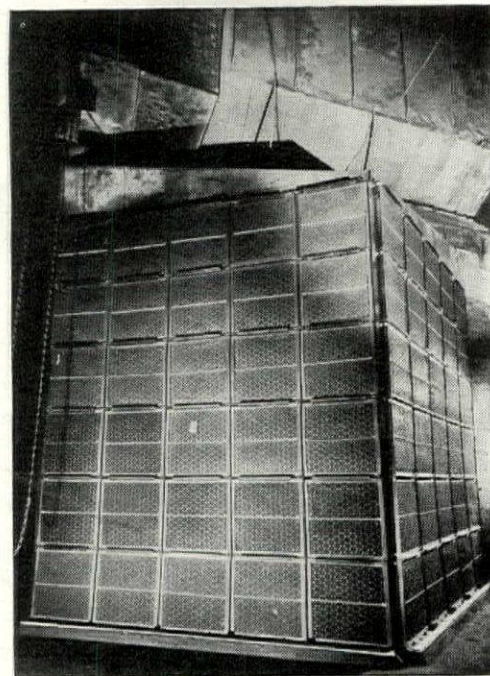
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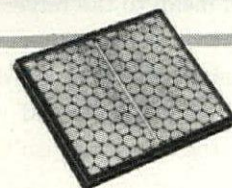
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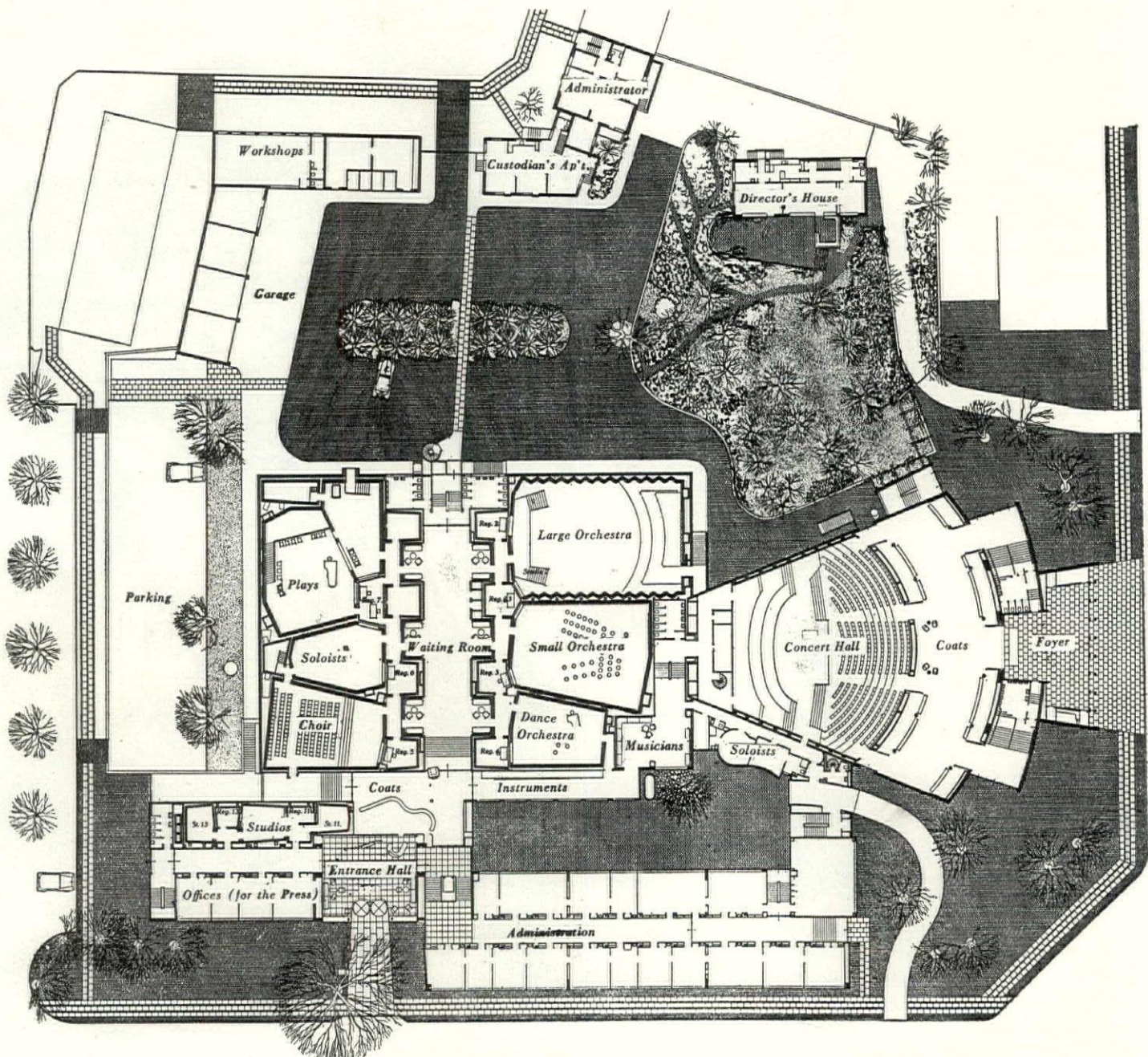
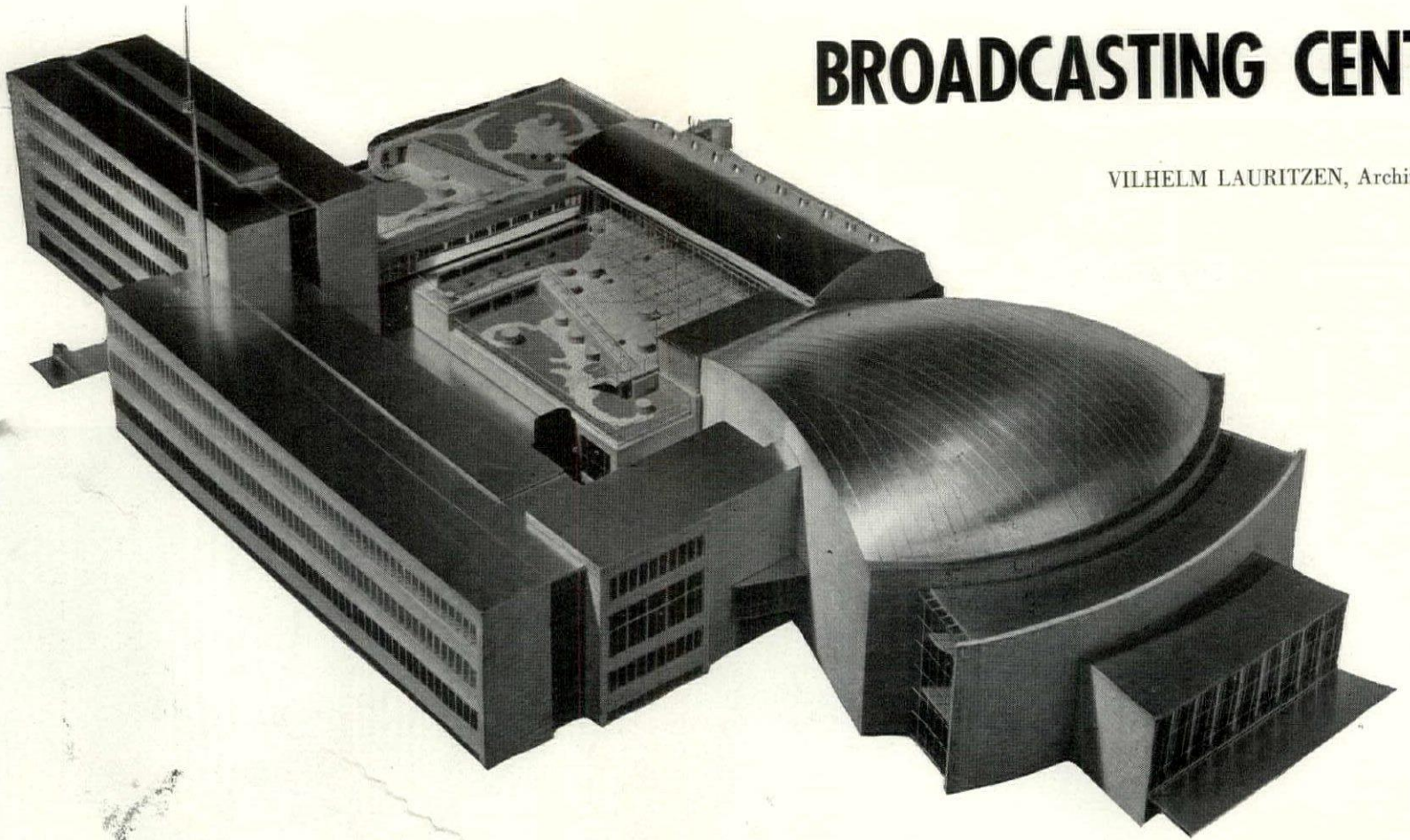


THE DANES SHOW
SKILL AND GOOD TASTE
IN THE NEW HOME
FOR THEIR STATE RADIO

Strüwing Photos

BROADCASTING CENTER

VILHELM LAURITZEN, Architect



Denmark's public radio gets a new home.

If Americans have come to hold contemporary Scandinavian architecture in high regard, it is because we recognize in much of it the solution of certain subtle problems which lie at the heart of design. How to achieve simplicity without sterility, how to attain elegance without pomp; how to combine large scale with modesty, modern technique with cultural tradition. The Scandinavians have a knack for this sort of thing and Radio House, the new home of the Danish State Broadcasting System, is no exception to this rule.

Located in the heart of the capital city of Copenhagen, this big and thoroughly up-to-date complex of studios and offices was actually begun almost a decade ago. Partially finished when the Nazis marched in, construction was sporadic during the occupation. Thus, when the building was finally opened in the fall of 1945, the occasion was something of a national event: the Danes were understandably proud.

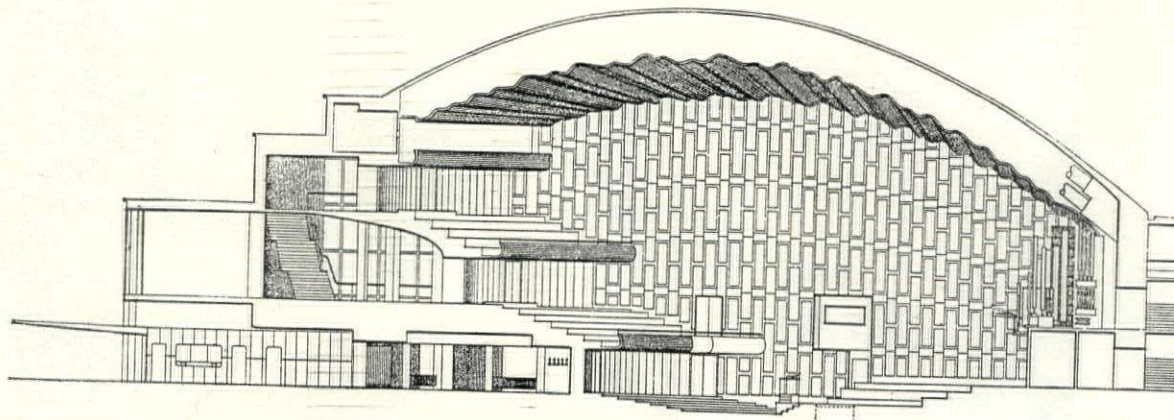
Radio House consists, essentially, of three related elements—an office block along the street side, a large concert hall facing the plaza and—connecting the two—a block of specialized studios in the center. Supplementary facilities in the landscaped grounds include a house for the director, a block of apartments for the staff, garages, etc.

The rectilinear portions of the building are neat if somewhat conventional: a concrete frame sheathed in large, pale yellow unglazed tiles. But there are many notable features elsewhere. The Concert Hall is brilliantly roofed with two concentric shells of astonishing thinness—the outer one 4.8 in., the inner one (undulated to break up sound reflections) only 2.4 in. thick. The central block is actually a group of polygonal studios ingeniously nested within, but structurally isolated from the outer envelope. This envelope, with characteristic economy, uses the earth fill of a charming roof garden as an insulation against external sound.

Contrary to American practice, where the trend in studio design seems to be toward flexibility for multiple use (FORUM, Oct. '46), each studio in Radio House is designed for one and only one type of program. Thus, the Concert Hall was built for the best possible acoustic response to a large orchestra and audience of 1,200, while studio No. 5 is for chorus and No. 6 for soloists, both without audience. The skill with which every aspect of studio contour and surface has been manipulated is indicated in the performance of the Concert Hall. Empty or full, its acoustics are excellent—due largely to a low and (at most frequencies) constant reverberation time.

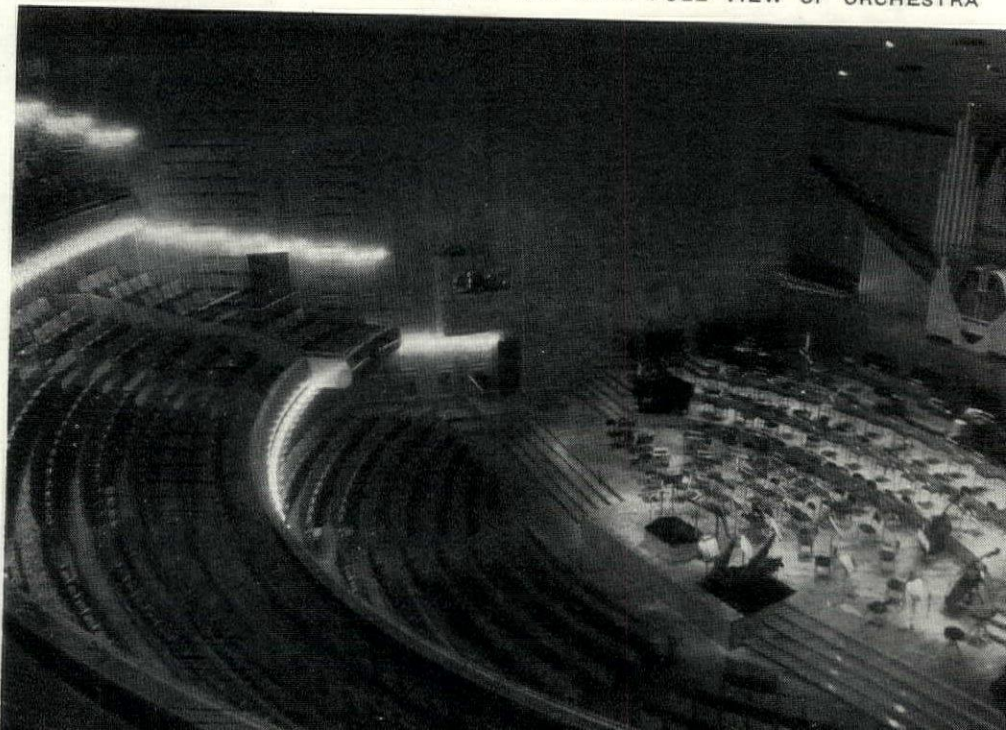


ITS EVERY CONTOUR CAREFULLY ENGINEERED, HALL IS BUILT LIKE A VIOLIN

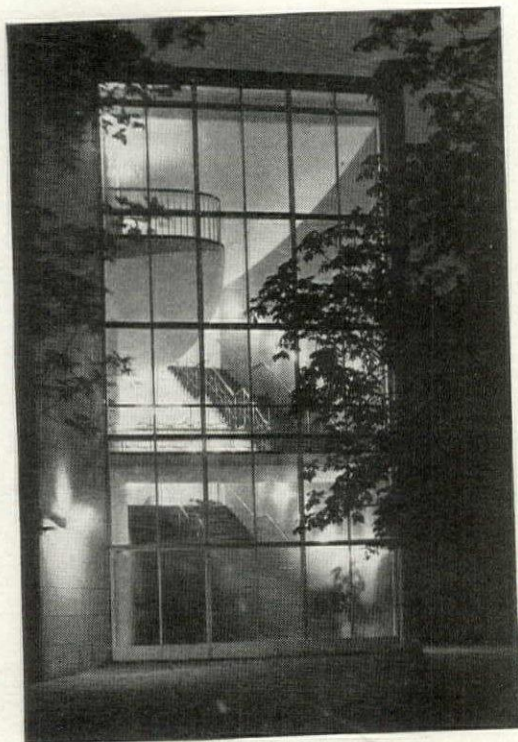


SECTION THROUGH CONCERT HALL

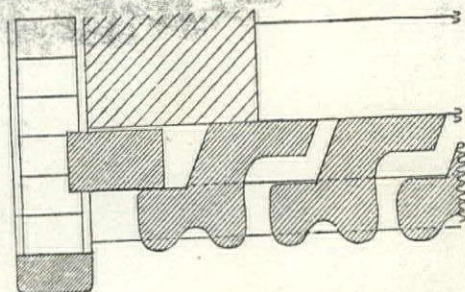
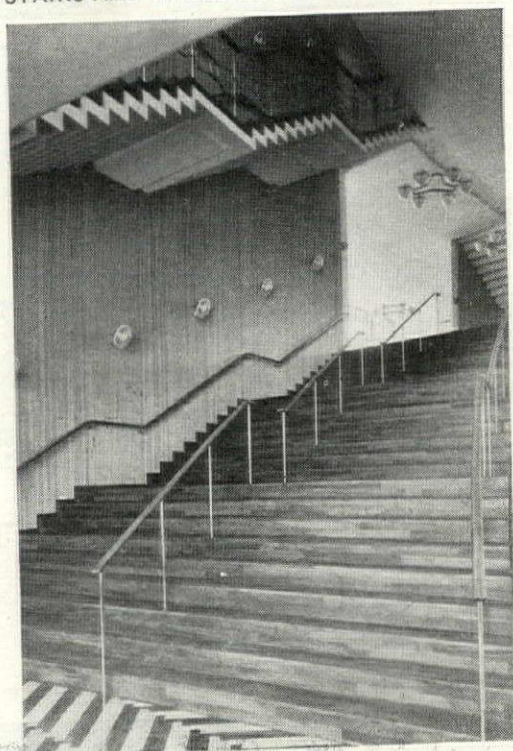
THREE-TIERED SEATING ACCOMMODATES 1,200 WITH FULL VIEW OF ORCHESTRA



"RADIO HOUSE" strikes a typically Scandinavian balance between a lively design sense



FOYER FOLLOWS CURVE OF CONCERT HALL
STAIRS AND WALLS ARE WOOD-SHEATHED



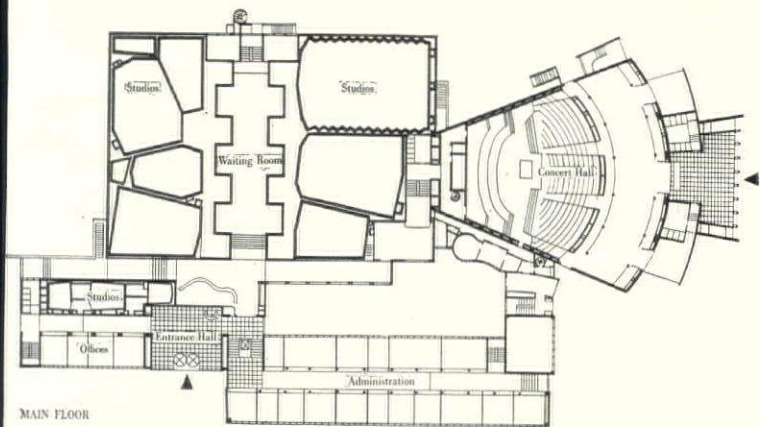
TO AVOID diaphragm action of a panel and achieve desired ratio of reflective to absorptive surfaces, Conference Room walls consist of spaced vertical slats, free of each other but backed up with a sound-absorbing blanket.

The skill with which the manifold engineering problems of Radio House have been solved is fully matched by the effortless grace of its interior design. A refreshing freedom from cliché marks the detailing. Notable in this connection is the handling of materials. Because of its acoustic brilliancy, wood is widely used but there is nothing mechanical in its application. In some studios it is applied in panels, in some as continuous sheets, and in the Conference Room (below) vertical mahogany slats form a sinuous screen. The same flexibility is apparent in the architect's handling of concrete. In the cantilevered stair at left, it is crisp and angular; in the rooftop cafe (bottom, facing page), it is smooth and syrupy. In neither case has the form been tampered with. Where illumination requirements are precise, the fixtures are sternly utilitarian. But where the need is less sharply defined, the fixture design is freer, more imaginative. (The Scandinavians, incidentally, do not seem to share our obsession with high-level, built-in general illumination.) All in all, Radio House demonstrates an enviable synthesis of taste and competence.

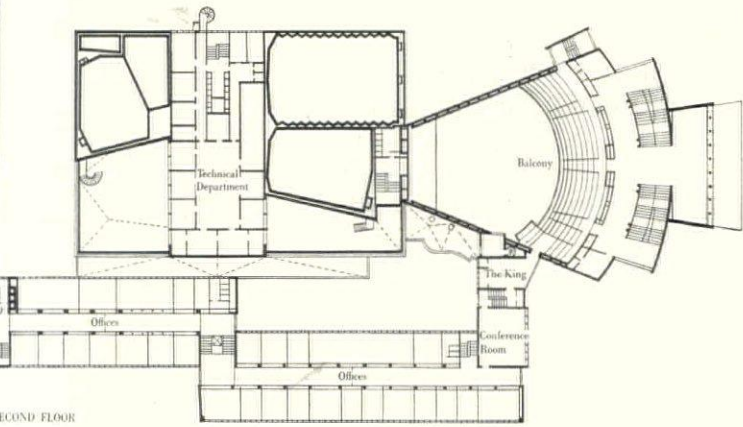
WOOD IN MANY FORMS GIVES CONFERENCE ROOM GOOD LOOKS, GOOD ACOUSTICS



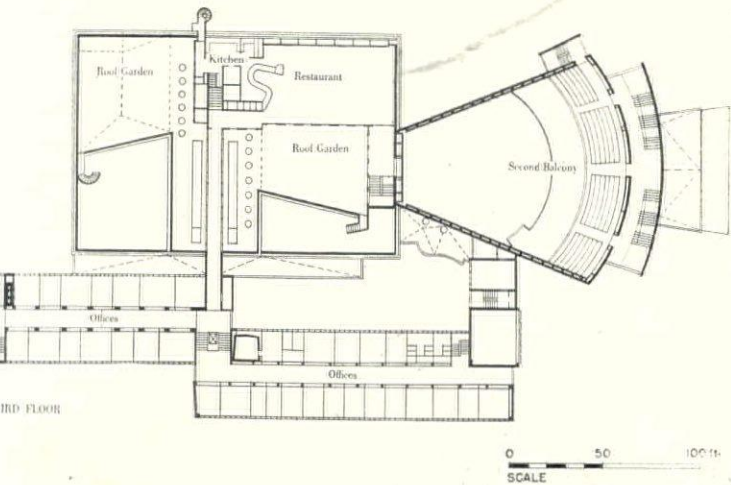
and high technical discipline.



NORTHERN LOVE OF PLANTS ENLIVENS CORNER OF MAIN ENTRANCE HALL



OFFICE WALLS USE 5 FT. MODULE FOR EASY CONVERSION



ROOFTOP CAFE FACES SOUTH ACROSS TERRACE AND GARDEN

ARBITER OF THE ARTS

A Beaux Arts dean has reigned



THE career of Everett Victor Meeks, roly-poly, mandarin-eyed Dean of the Yale School of Fine Arts, is the story of the Beaux Arts tradition in American architectural education. It is also the story of a man who has ridden the tide of changing taste throughout his entire life. Over and over, Meeks has hit the current trend of architectural thinking at exactly the moment when his particular background and abilities were at a premium, suggesting the eerie idea that history was tailored to fit Everett Meeks rather than vice versa. Unlike some unyielding advocates of an atrophied ideology, he has, when change demanded, shifted his bet. Thus, every time the wheel of fortune took another spin, Meeks was standing by with his chips on the payoff number.

If Everett Meeks had not been born into a family of comfortable circumstances in the year 1879, it is more than likely that he would not have become a follower of the Beaux Arts. But in the last two decades of the 19th century, when Meeks was growing up, architecture was regarded as a gentleman's profession—a satisfactory pursuit for artistically inclined younger sons of important families. Meeks' qualifications for such a career were letter-perfect.

If the Dean had not been of an age to begin his architectural studies in the early 1900's, it is quite possible that he would not have left Columbia for France's famed *Ecole des Beaux Arts*. But at that time almost no colleges in America offered adequate courses in architecture, and the Paris *Ecole* was at its height as a mecca for ambitious architectural students. Meeks' background and inclinations made it the only possible choice.

When Meeks returned to New York in 1908 to begin his professional career, the Beaux Arts tradition was, of course, in full flower along the eastern seaboard. McKim, Mead & White, Carrère & Hastings and other colleagues who had planted the seed of eclecticism with the Chicago Fair of 1893 and the Society of Beaux Arts architects in 1894, were reaping a fat harvest in European palaces for wealthy Americans. Meeks' Beaux Arts *diplome* and his record of honors at the *Ecole* proved the open sesame to Carrère & Hastings, where he earned the choicest of drafting jobs and became the envy of less-favored co-workers.

Before Beaux Arts monumentality began to show its age in the twenties, it had secured a new stronghold in expanding architectural schools throughout the country. Prodded by New York's Beaux Arts Institute, an organization dedicated to spreading the gospel on a national scale with intercollegiate competitions, the colleges swallowed whole this imported fashion in education. In 1922, Meeks was asked to become Dean of the Yale School of Fine Arts. Again, his special talents proved to be at a premium.

By the late 'thirties, when America's de-

over Yale's architecture, painting, sculpture and drama for the past quarter of a century

layed architectural explosion became violent enough to penetrate even the ivy-clad halls of American colleges, the Dean was so thoroughly entrenched in his job that he was able to act as shock absorber. Under his guidance, New Haven's genteel art academy had developed into one of the foremost professional training grounds in the country. Now, without relinquishing his own Beaux Arts ideal, he gradually changed the college philosophy to keep up with the changing times. From a strictly eclectic curriculum, he switched over a period of years to advanced studies of prefabrication and city planning. He brought in such radical lecturers as Le Corbusier, Frank Lloyd Wright, Eliel Saarinen, Buckminster Fuller, Alvaar Aalto, Fernand Leger and Amédée Ozenfant to amaze the inmates of his Gothic catacombs. Once again, Dean Meeks had kept the reins in his hands.

Today in June, 1947, Dean Everett Meeks resigns as head of New Haven's Fine Arts School, handing his office on to Charles Sawyer, former director of Massachusetts' Worcester Museum, future coordinator of the arts at Yale. After a quarter of a century of Meeks' benevolent sway, the college will undoubtedly miss the presence of the genial bachelor dean. And nothing less than an iron-clad ruling that faculty must retire at 68 could have jimmied Meeks from his impressive tapestried office in the Fine Arts Gallery, for he has built the past twenty-five years of his life around the school.

THROUGHOUT the years, the Dean has left New Haven frequently to pursue his lifetime hobby of world travel. But even abroad he has always been the representative of Yale, spreading her fame in both Europe and the Far East. His castle is the dour, thick-walled Fine Arts Gallery with its vaulted ceilings, madonna-filled niches and heavy, iron-hinged oak doors. His other stamping ground is Weir Hall (nicknamed Weird Hall by students because of its narrow twisting stairways and tiny-windowed drafting rooms). In his famous Architecture 10 class he rules supreme, his high-pitched squeaky voice leading each year another band of neophytes through the mysteries of the Corinthian column and the Romanesque intersecting and ribbed vault. He can now look back with equanimity on even such indignities as the time a student brought an old shirt to class and, just as the Dean stooped laboriously to pick up an eraser, tore it. He is still a bit touchy, however, about his predilection for the phrase "*tour de force*," which in years past led students to make pools on the number of times it would occur per lecture.

Actually, the Dean, remembering, no doubt, his own Beaux Arts days in Paris, is indulgent toward undergraduate pranks. Student life in the heyday of the *Ecole* has become, with much retelling, a purple legend of wild evenings in the dives of Montmartre,

run-ins with the *gendarmérie*, bohemian orgies at the famed *Bal des Quatze Arts*, and frantic designing *en charette*. According to Meeks, the amount of time spent at the drafting board has been greatly underrated, and that spent at the Moulin Rouge blown up out of all proportion to fact. Even so, the Yale boys' water fights up and down the narrow stairways of Weir Hall and their predilection for throwing fire bombs at next-door neighbors in the senior secret society, Skull and Bones, seem like rather small potatoes. Only the Beaux Arts Balls at Yale fill the Dean with a lingering terror. Not, of course, because he disapproves of them, but because of his fear that less worldly-wise Yale faculty might not sympathize. To eliminate unwanted guests, he sets trusty guards at every door and bars any member of the yellow press. In spite of his precautions, the Bridgeport *Herald* usually manages to come out with some fairly startling headlines. After years of such treatment, however, Meeks has become almost inured to such exaggerations of fact.

FROM his boyhood milieu of Long Island summer homes, Manhattan brownstones, hansom cabs and preparatory schools; through his Beaux Arts days in Paris and his pleasant apartment in New York's Turtle Bay; even in his yearly trips to Europe or the Orient, Dean Meeks' life has been both comfortable and cosmopolitan. His existence at Yale has been no exception. Home to him is a quietly elegant "fellows' suite" in Saybrook College, furnished with choice antiques and objets d'art (a Samarkand silk rug, Chinese Coromandel screens, a black lacquered chair inlaid with mother-of-pearl, a black and gold clock of the French Empire period, original Heppelwhite chairs, Chinese draperies), all garnered on his far-flung travels. In this artistic setting he gives small dinner parties served up by his man, Vince (a faithful retainer of 27 years standing), and concocted by an equally faithful cook.

The Dean's childhood was typical of well-bred society in the 'seventies. Winters were spent in the Meeks brownstone at 50 East 83rd Street,* but summers on the South Shore formed the most important family background. Everett's great grandfather, Joseph Meeks, was the first New York gentleman to set up a summer home on Long Island, buying the 200 ancestral acres near Islip in 1827 from a friend who had inherited the property from Queen Anne. It was Everett's grandfather, however, who improved the family status from that of landed gentry to American aristocracy. As a manufacturer of inordinately carved rosewood furniture, he enjoyed the cream of the trade from 1840 to 1870, furnishing the White House, among other elegant residences, and

* Sold in 1889 to a mirror manufacturer, Jacques Kahn, father of famed modern architect Ely Jacques Kahn.

salting away a comfortable fortune for his sons and grandsons. By the time Everett and his three brothers came along, there were three generations of Meeks "cottages" side by side on the Long Island property, and summertime each year meant a gathering of the clan which, in patriarchal fashion, grouped itself around Grandfather Meeks. Everett believes that his excellent table was never laid for less than twenty to twenty-five persons. Aunts, uncles, cousins, bachelors, old maids and poor relations all descended on the family estate for the summer season, and social life was a family affair, since there were always more than enough relatives to make a party. As a rule, the children were left largely in the care of nurses and governesses, but each night Everett's father read aloud to the entire family for precisely half an hour before the small fry were packed off to bed.

When Meeks started his Beaux Arts training in 1904, his ideas of how to live had already been firmly established. The Paris diggings, shared with six other American students, was one of the few apartments to boast of elevators and modern plumbing. In addition to these plebeian assets, it also enjoyed a spectacular view of the roofs of Paris and nearby Church St. Sulpice where Vidor, the famed French organist, played. Arising late on a spring Sunday morning, the seven Americans breakfasted leisurely to the strains of Vidor's organ and the rickety-coo of fat pigeons on the cornices below. Their *bonne a toute faire* was an elderly native of the Fontainebleau district, Henriette, who pampered her masters' stomachs with superb French bourgeois family cooking, blacked their shoes each morning and carefully turned down their beds at night.

Actually, in spite of this background of apparent leisure, Meeks worked harder than he had ever worked before in his life. After passing the competitive entrance examinations to the *Ecole*, he entered the *Atelier Déglane* and, thenceforward, spent many a hard-pressed weekend and evening at the drafting board. Once a week the *patron*, who ranked slightly lower than God, came to criticise. Dead silence and furious work greeted his arrival. After a proper interval of acknowledgement, a quiet group of students followed him reverently from desk to desk to catch each precious criticism. If some gauche *nouveau* hung his hat and coat on the hook reserved for the *patron*, he was given a stiff fine and a stinging rebuke. It was in this atmosphere that Meeks acquired his mastery of the 2B pencil which stood him in such good stead at Carrère & Hastings. He managed to wrest many honors from the traditionally tough *Ecole*, and in his thesis he amazed conservative French critics with the then-daring use of reinforced concrete. But even in the midst of sweating it out, Meeks retained his interest in good living. After a day of gruelling work at the *atelier*, it was customary to drop in at the *Cafe Deux Magots*

to discuss with friends the problems of art and architecture over an urbane liqueur. Meeks and his *camerades* were also frequent visitors at the *Opéra Comique*, the *Comédie Française* and the old *Variété*. In spite of their preoccupation with architecture, they managed to take short trips to Bern, Rome, Berlin, Madrid and London.

Meeks' favorite cruise, however, was one taken many years later—the Odyssey tour, a luxurious pilgrimage to shrines of classical art and architecture from Venice down the Dalmatian coast to Greece and on through the Aegean Sea to Constantinople and the Duodecanese Islands, with stops at Delphi and Olympia. Meeks particularly appreciated its "fundamental emphasis on fine things rather than a good bar." He also did not object to the deluxe accommodations. "It was the *most* comfortable way to do it," he explains. In Dean Meeks' philosophy, the esthetic is obviously not incompatible with creature comforts.

AS a representative of the Beaux Arts tradition, the richness of the Dean's personal way of life is quite in keeping with his architectural philosophy. For asceticism is one of the points at which tradition and the modern idiom, perhaps regrettably, part company. The European beginnings of modern design were essentially an aftermath of World War I, when the great need for housing and the shortages of money and materials prohibited any but the simplest construction and the plainest of unadorned surfaces. Out of this situation grew a new architectural philosophy based on the needs of the great mass of underprivileged people and occasioning a revolt against the opulent architecture of aristocracy. America, during the same period, however, was in a heyday of prosperity, and the cast-off trappings of European nobility suited her plushy tastes as a pink silk lampshade appeals to the *nouveau riche*.

When Dean Meeks came to Yale in 1922, he was heading into a period of architectural confusion. For the most part, America's tastes ran to the pink silk lampshade. Unlike former fads in our building history, such as the Greek Revival under Jefferson and the Gothic love affair during the Victorian period, the borrowing of past styles had become completely indiscriminate. Anything went—banks shaped like Greek temples, college dormitories fashioned after French cathedrals, hotels designed in the pattern of Roman baths, English Tudor suburban mansions. Side by side with these imported monuments, however, the first tender shoots of authentic American ideas were beginning to appear. In 1919, Bertram Goodhue had won the competition for the Nebraska State Capitol with a dome and tower which were intended to be a new American order. In 1922, ground was broken for Raymond Hood's American Radiator Building which, except for its Gothic spires, was a refreshingly straightforward expression of the steel frame. These two designs signalized the first break

in a twenty-year tradition of executing styles. They were paralleled by another shift in domestic architecture. The White Pine Monograph series, a group of photographs of early colonial dwellings put out for the first time in 1914, were republished as a yearly bulletin starting in 1924. They also represented a shift from European to American thinking, although they can be credited with the rash of fake Cape Cod cottages which have been dotting our cities ever since. In the middlewest, Frank Lloyd Wright, in lonely obstinacy, was carrying on and developing the idea of organic architecture which he had started years before under Louis Sullivan. Looking backward, it is clear that these contradictory trends marked a significant step toward a new American architecture, but at the time they were lost in an almost total confusion.

DURING this period, the Yale School of Fine Arts was busy with its own problems as a growing professional college. When Everett Meeks first settled into the ample leather-covered Dean's chair, the department of architecture was practically non-existent. Meeks not only expanded this department, but administered a shot in the arm to flagging painting and sculpture courses and, in 1925, added a graduate department of drama to the arts roster. Under the Dean's skilful wheedling of University funds, the Fine Arts campus expanded from one ancient structure, Street Hall, to include three other huge Romanesque and Gothic buildings: the ponderous Fine Arts Gallery which is the repository for Yale's Italian primitives and the Garvan collection of early American silver, furniture and prints; Weir Hall, the romantic but cramped and ill-lighted architectural school; and the University Theater, a professionally equipped experimental workshop for the new Department of Drama.*

At the same time, Meeks expanded the scope of teaching with what he considers the most important contribution of the Beaux Arts system: the integration of architecture, painting and sculpture by collaborative problems. An architect-artist-sculptor team worked out the preliminary parti together, fitting each of their jobs into a unified design as they went along. Almost as important was his practice, adopted from the *atelier* system of the Paris *Ecole*, of bringing in critics from the ranks of successful practising architects, still very much a part of architectural education.

With the Dean's build-up, architectural registration jumped from a mere 25 students to 130. Under the Meeks regime, Yale also gained its reputation as "the greatest prize-winning institution in the U.S." New

* As a member of the corporation's architectural committee, Meeks was also in on Yale's biggest building boom. It included the famed Harkness Quadrangle and the infamous "half-and-half" Davenport College, whose main facade was built in Gothic style to match a Gothic section of campus while the back, facing Georgian buildings, was made Georgian.

York's Beaux Arts Institute, whose competitions were at their height in the 'twenties and early 'thirties, time after time awarded top honors to Yale contestants. The *Prix de Rome* in painting, sculpture and architecture was won by Yale men for so many consecutive years that it was nicknamed the "Prix de Yale."

As guiding light for the Fine Arts School, Dean Meeks enjoyed the position of a buddha benignly ruling over an expanding cultural empire. The addition of the drama school, for instance, was one of a series of personal coups. The Dean had learned that George Baker, Harvard's famed professor of drama, was dissatisfied with the break he was getting in Cambridge and that, if Yale was able to provide him with a theater, he would be more than willing to make a switch. With a spur-of-the-moment phone call to President Angell during the summer of 1925, Meeks sewed up the deal, acquiring at one blow a new department, a distinguished head for it and one of the best equipped drama workshops in the country.

THERE is, however, a large faction among the Dean's alumni of the 'twenties who insist that, of all his accomplishments, the master stroke was the acquisition of the late Otto Faelton. As chief designer in the firm of James Gamble Rogers, Faelton has been credited with most of good work the office turned out while he was there. As chief design critic in the Fine Arts School from 1919 to 1933, he is credited with the phenomenal reputation which Yale's architectural department acquired during these years.* He and Lloyd Morgan, another famed critic of the period, were the lodestones which drew transfer students from colleges all over the country and shot the admissions up to an all-time high. Faelton is also deemed responsible for Yale's uncanny success in the Beaux Arts Institute competitions. Through the years he has become an almost legendary figure—a combination of Falstaff and Leonardo da Vinci. Those who were lucky enough to go to Yale during Otto's sojourn still speak of his master draftsmanship, his fluid design sense, his stature as an architectural philosopher—not to mention his capacity for liquor—in tones of awe. True to the spirit of the uncertain 'twenties, he was not a modern architect, but his conception of planning was far ahead of the times and his handling of details has often been called inspired. "Otto Faelton was an undisputed genius," Meeks himself remarks, "and it's not often that you find this combined with a real gift for teaching. He could bring out the best in a student in a really miraculous way."

Faelton used to come up from New York on Thursday and the first criticism he gave that day was a fairly routine affair. As the weekend progressed, and Otto consumed a rising

* Meeks was not yet Dean when Faelton came to Yale, but in his former position as a visiting critic he was responsible for getting Otto on the faculty.

(Continued on page 152)

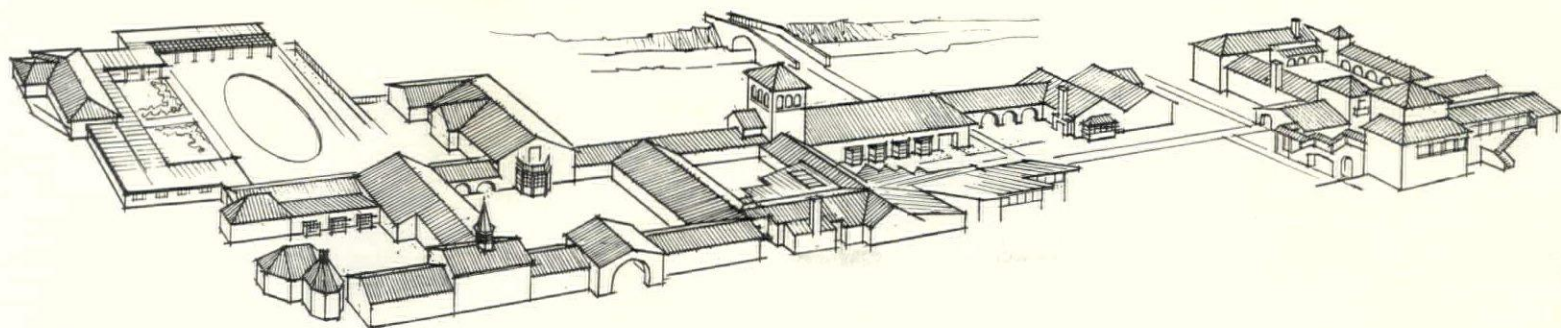


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BURTON SCHUTT, Architect

McNEIL CONSTRUCTION CO., Contractors



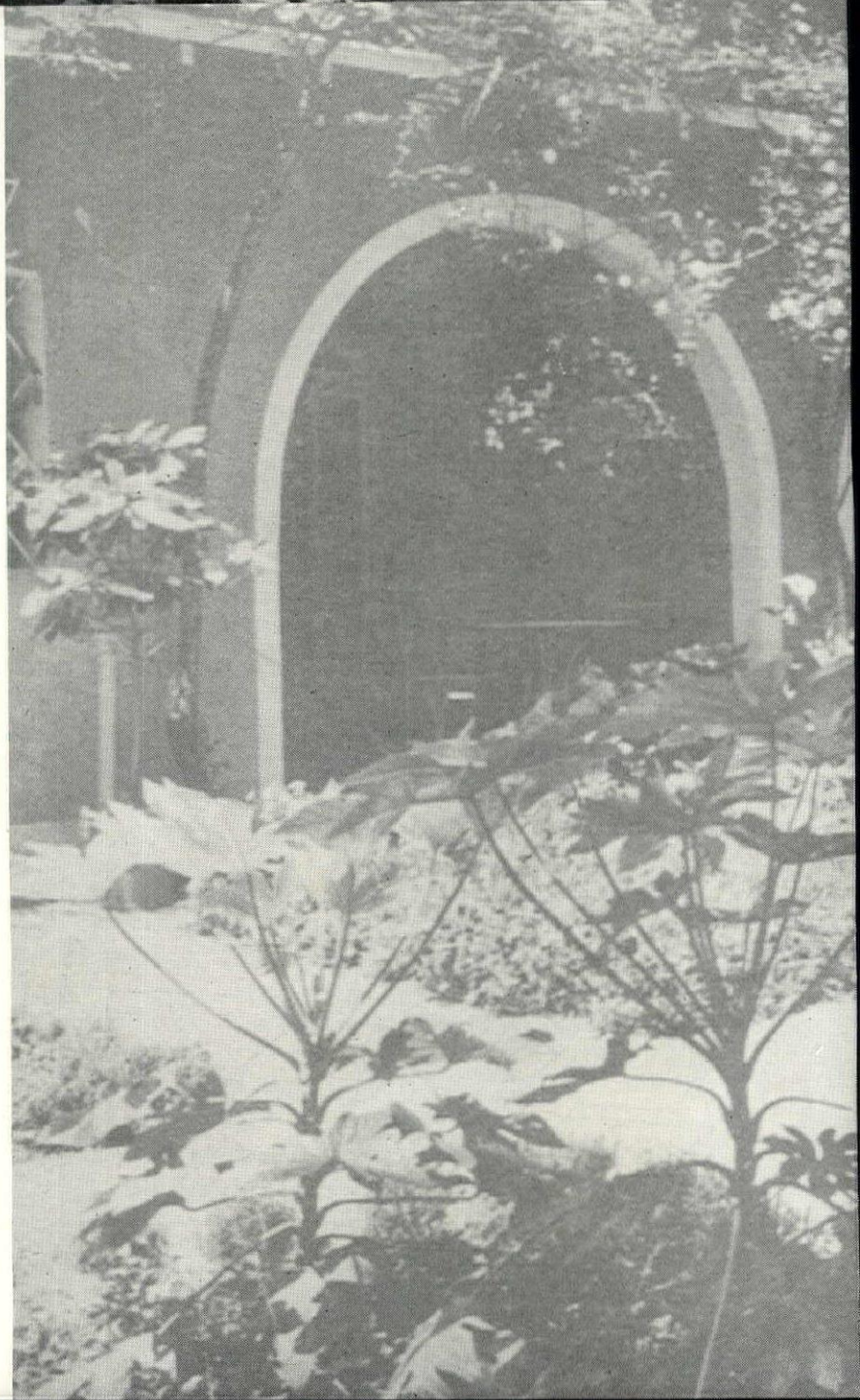


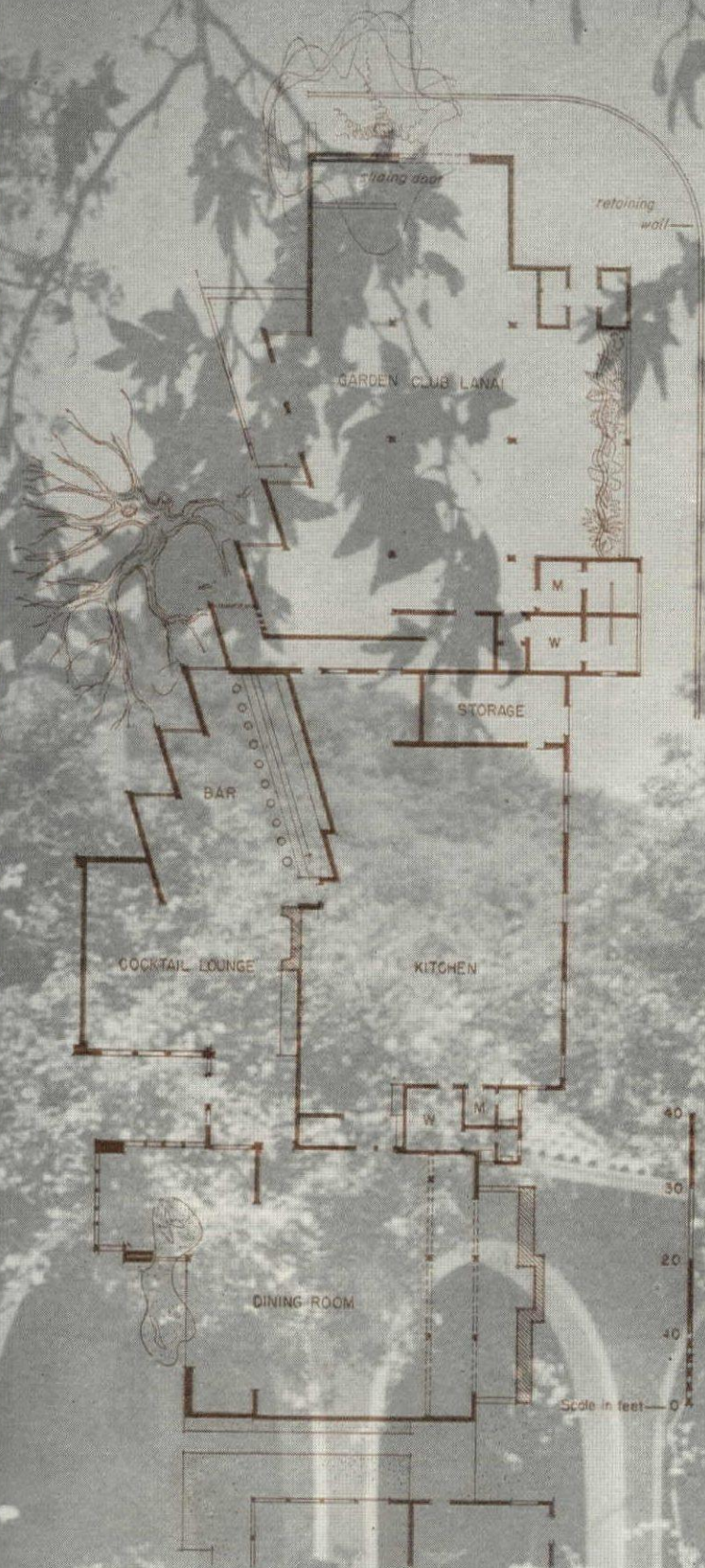
According to the best known maxims for successful hotel design and operation, the Bel-Air should be the example *par excellence* of a beautiful bust. Instead, it is, and has been from the outset, one of the most popular and lucrative hostelries in the country. Several existing buildings (to which a number were subsequently added) were originally intended to serve as stables, shops and the administrative offices for Bel-Air, swank and expensive residential development in which the hotel is located.

Nestling in a hollow and virtually hidden by dense, jungle-like foliage, the Bel-Air is not only inaccessible but actually hard to find, has a habit of eluding even old-time cabbies. It is a good half hour's drive from the Los Angeles railroad station, further from the airport; but at an average rental of \$40 a day per room, European plan, it is safe to assume that a five dollar cab fare does not stand in the way of the clientele.

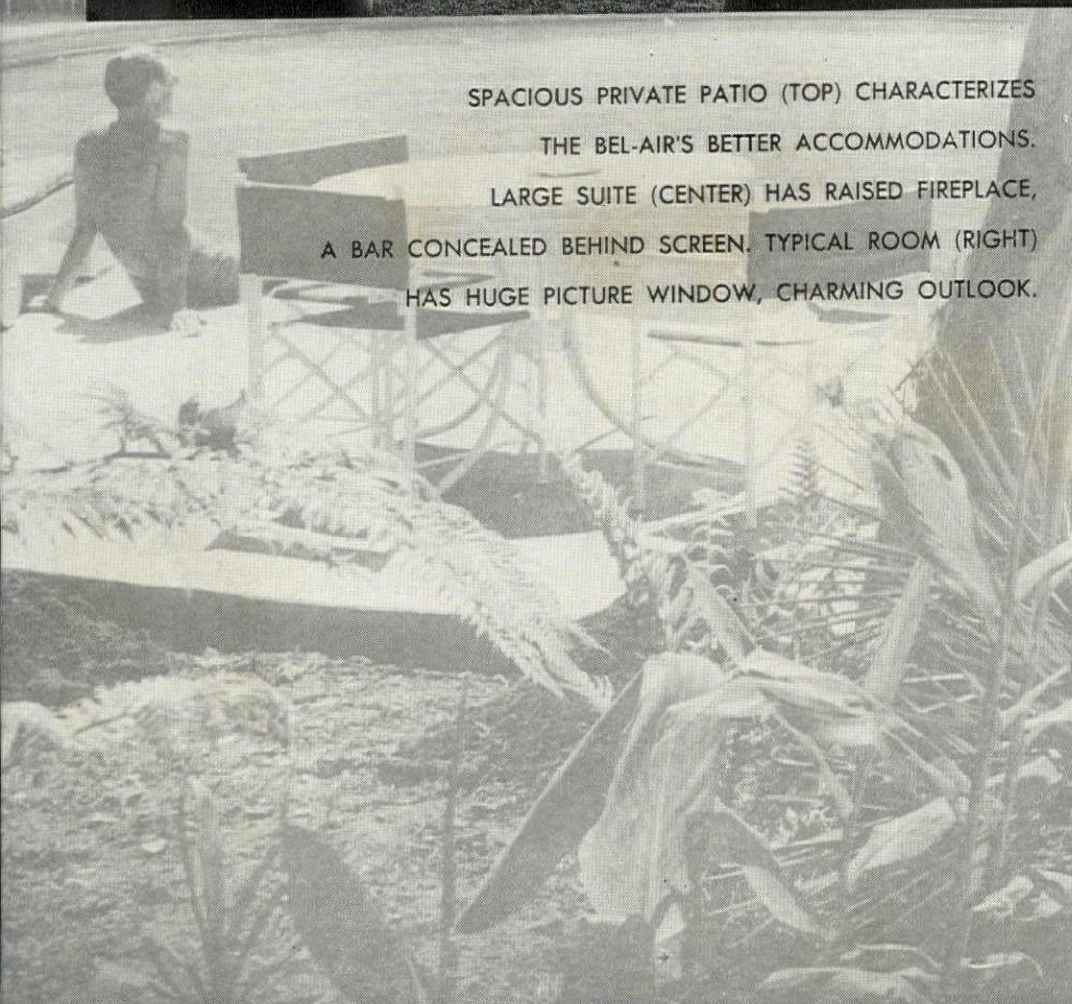
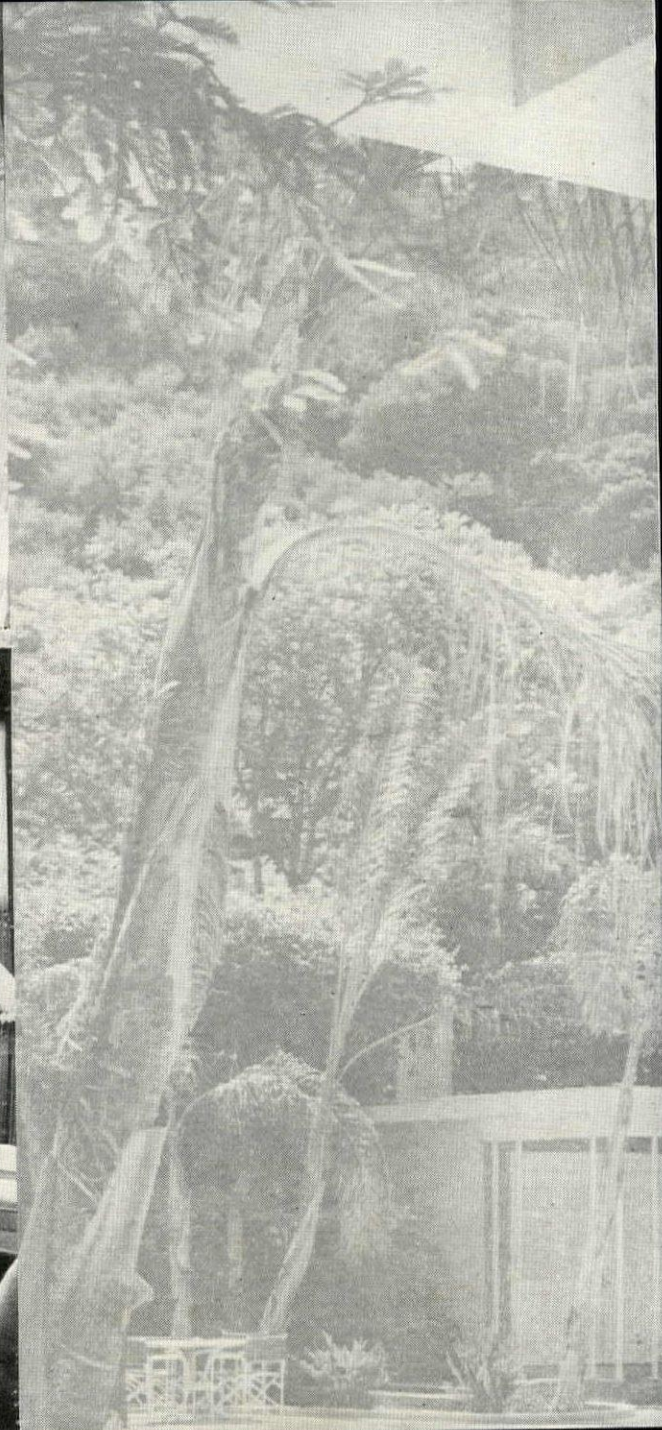
Architect Burton Schutt, an impresario with sturdy convictions, was so taken with his concept for a resort hotel that he not only undertook single handed the purchase, design, construction and operation of the establishment, but weathered a series of financial nightmares that would have withered more experienced men.

Nearly all guest rooms are located on the ground floor, overlooking lush, romantically landscaped gardens. Many have private patios. Public rooms are interspersed with and connected by innumerable patios, loggias and colonnades. The interior bespeaks quiet opulence typified by the upholstery in the cocktail lounge, which is no mean cowhide, but a natural shade of glove-quality chamois. Since privacy and facilities for indoor-outdoor living constitute much of the hotel's charm, great splashes of flower and foliage plants are used indoors, effectively integrating it with the surrounding landscape.





THE UNCROWDED ATMOSPHERE OF THE GARDEN CLUB LANAI AND DRAMATIC INTERPOLATIONS OF NATURAL SURROUNDINGS AS IN THE DINING ROOM ARE IMPORTANT CLUES TO THE HOTEL'S SENSATIONAL POPULARITY.



SPACIOUS PRIVATE PATIO (TOP) CHARACTERIZES

THE BEL-AIR'S BETTER ACCOMMODATIONS.

LARGE SUITE (CENTER) HAS RAISED FIREPLACE,

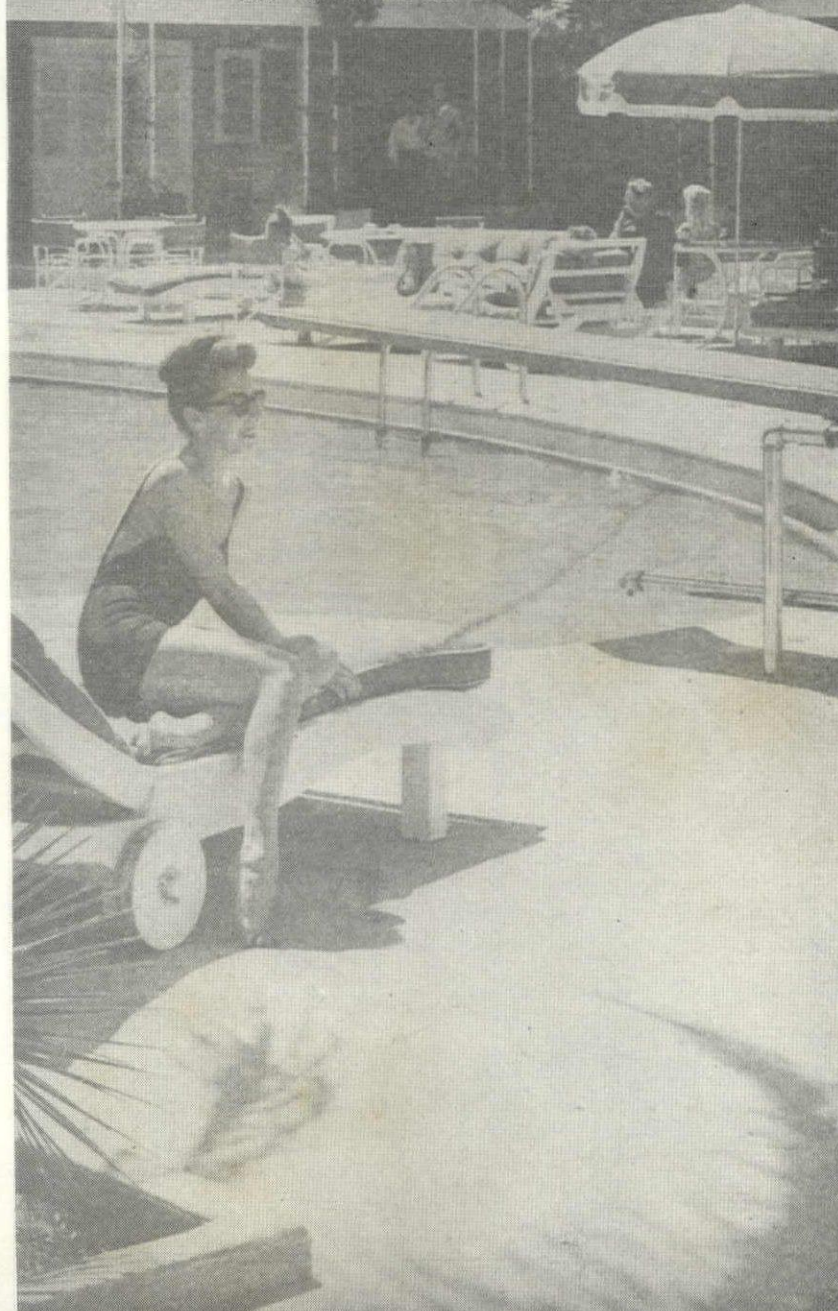
A BAR CONCEALED BEHIND SCREEN. TYPICAL ROOM (RIGHT)

HAS HUGE PICTURE WINDOW, CHARMING OUTLOOK.





ELLIPTICAL SWIMMING POOL SURROUNDED BY GARDENS
AND LOW, SPRAWLING BUILDINGS GIVES THE HOTEL
AN INFORMAL COUNTRY CLUB ATMOSPHERE.



The pseudo-Spanish architecture of the original buildings was left undisturbed and blends surprisingly well with the more modern additions. However, since most of the structure is draped in a dense mantle of vines, style is rendered inconsequential. The lasting impression is one of low, pleasantly rambling buildings twined about numerous picturesque patios. Approach is from a motor court via a rustic footbridge which spans a small, gurgling stream brimful of frogs, lilies and aquatic plants. The spread-out arrangement with its large courtyards minimizes the presence of crowds, increases a feeling of leisure and relaxation. Service, no push-button affair, is nevertheless efficient and unobtrusive, though trays must sometimes travel half the building's 800 ft. length.

Guest rooms are simply but richly appointed. Some have small bar-kitchenettes. All have huge windows, spectacular outlooks, monotone carpeting with ankle-deep pile. Furniture is luxurious and anything but commercial looking. Blond woods predominate with a few exotic touches of lacquer, natural teak, etc. Other than its pool, the Bel-Air offers no recreational facilities, but relies solely on its excellent cuisine and general atmosphere of muted elegance to swell the waiting list.



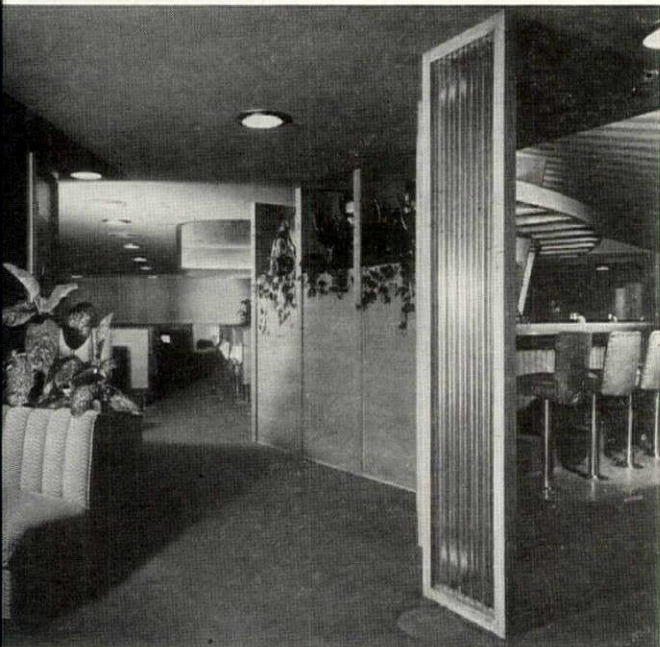
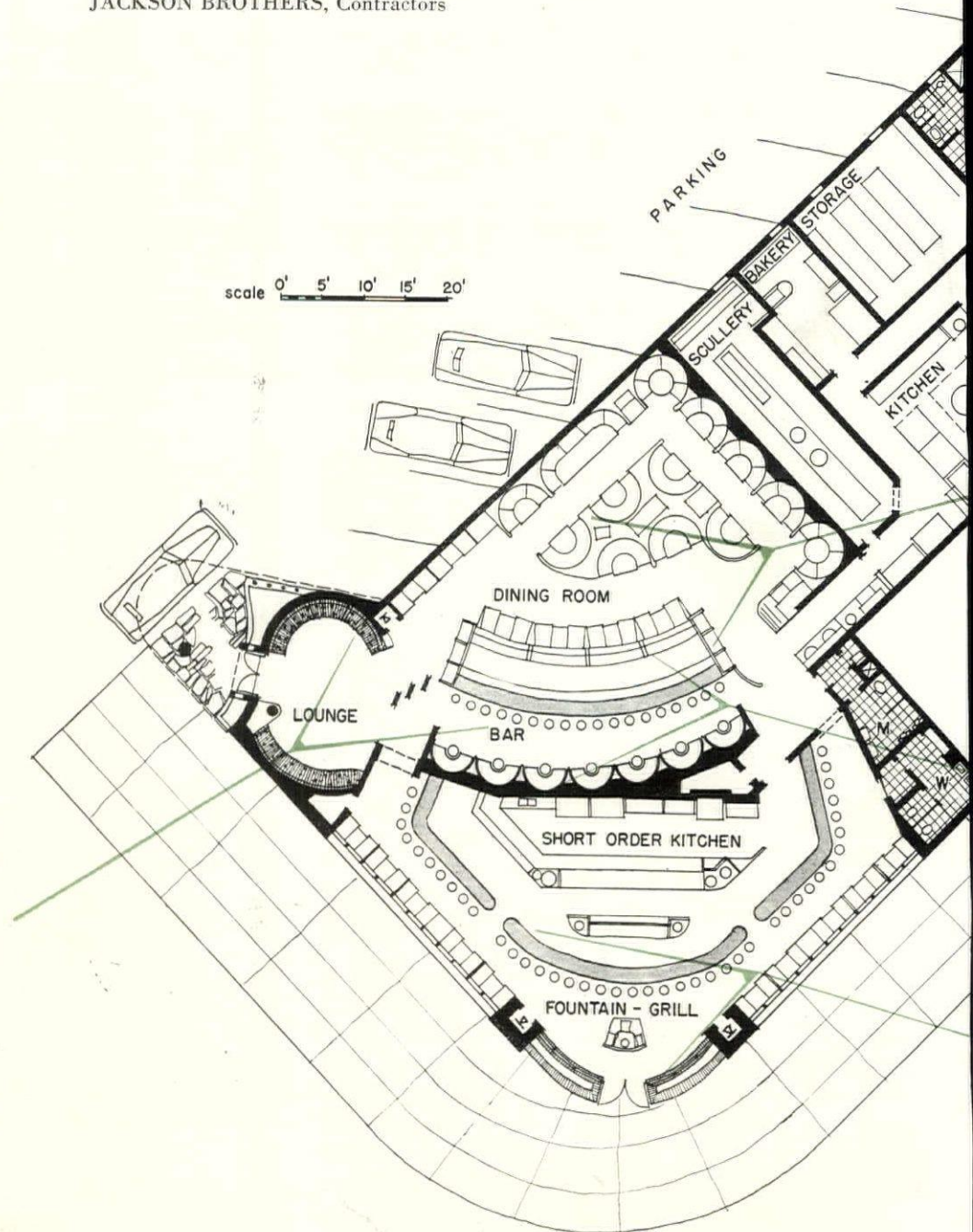
RESTAURANT combines quick counter service and leisurely dining.

Tilford's restaurant, at the corner of Wilshire Boulevard and La Brea Avenue in Los Angeles, is a deluxe edition of the quick-lunch counter. Its location at a bus transfer point on one of the busiest thoroughfares in the city determined the type of service which it would offer and influenced the character of the design. The entire upper portion of the building provides an attention-getting signboard which is silhouetted by background illumination at night. Inside, the major part of the dining area is devoted to counters and booths for quick meal service. An adjacent short-order kitchen caters to this large grill room and can be conveniently reached from the main kitchen and scullery in the rear without passing through the public dining space.

In order to catch the trade of more leisurely diners, a bar and dining room have also been included, reached by a separate entrance through a pleasant, glass-paneled lounge. The decor of simulated leather booths and stools, diffused cove lighting and interior planting creates an atmosphere a touch above the ordinary garish lunchroom. However, businesslike plastic-surfaced counters and terazzo floors provide the necessary stamp of identity. Off-street parking for customers is included near the dining room entrance and a florist shop occupies a separately leased portion of the building.

WALTER WURDEMAN & WELTON BECKET, Architects

JACKSON BROTHERS, Contractors



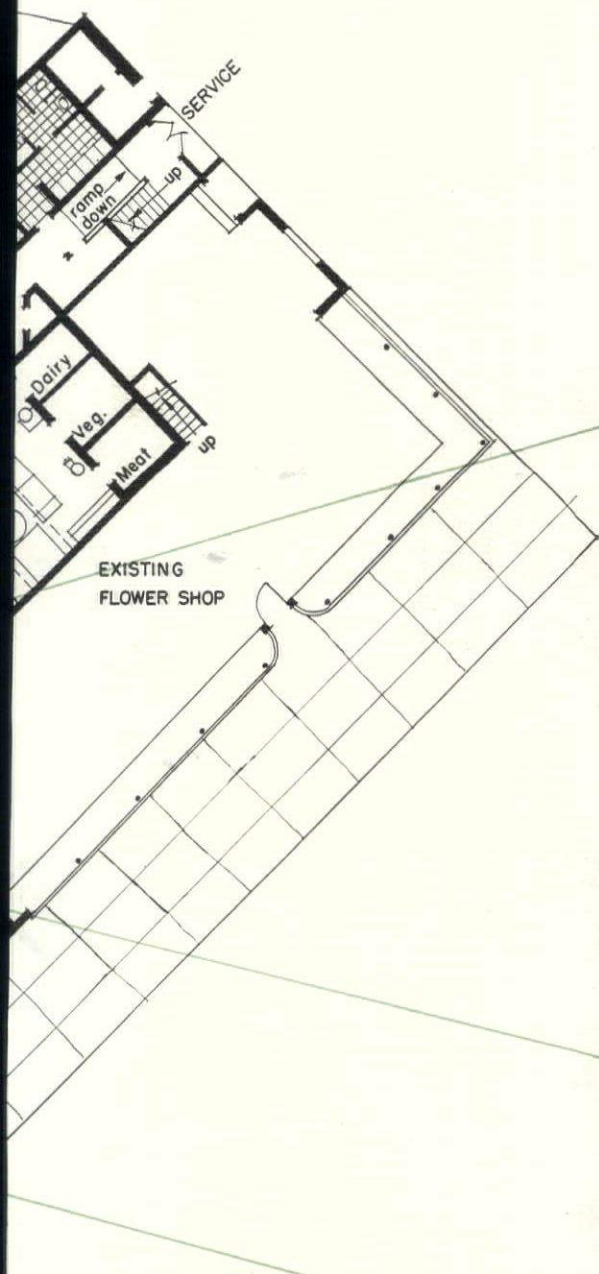
LOUNGE FEATURES FLORAL WALLPAPER, GLASS SCREENS

CONSTRUCTION OUTLINE

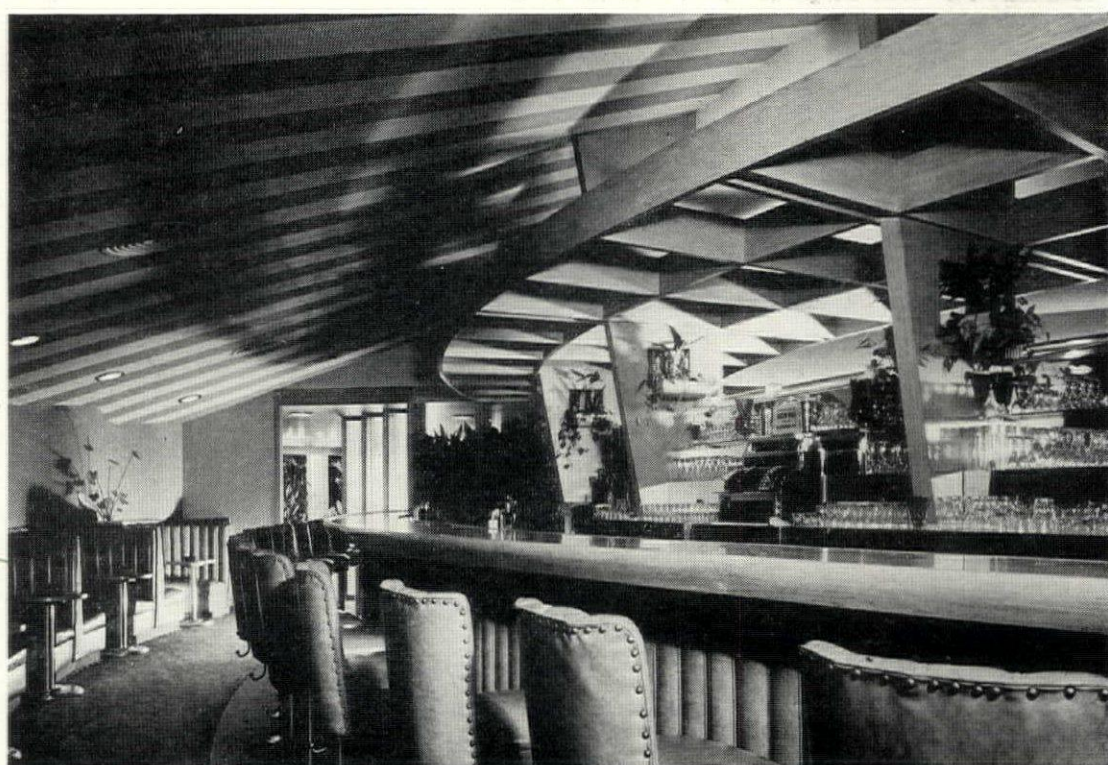
STRUCTURE: Exterior walls—brick, Gladding, McBean & Co.; Inside—wood studs, metal lath and plaster. Ceilings—Acousti-Celotex, Celotex Corp. **ROOF**—composition, Flintkote Co. **FURNISHINGS**—leather, E. I. DuPont de Nemours & Co. **Bar**—Formica, Formica Insulation Co. **HARDWARE**—Russell & Erwin Mfg. Co. **PAINTS**—W. P. Fuller & Co. **ELECTRICAL EQUIPMENT**—General Electric Co. and Westinghouse Electric & Mfg. Co. **PLUMBING FIXTURES**—American Radiator-Standard Sanitary Corp. **Water pipes**—copper tubing, Revere Copper & Brass, Inc. **Soil pipes**—cast iron, Crane Co. **Branch vents**—galvanized steel, Republic Steel Corp. **KITCHEN EQUIPMENT**—Dohrmann Hotel Supply Co. **HEATING**—gas fired system, Payne Furnace & Supply Co. **Air conditioning**—evaporative cooling system. **Grills**—Tuttle & Bailey Mfg. Co. **Regulators**—Minneapolis-Honeywell Regulator Co. **Water heater**—Ruud Mfg. Co. **Speaker system**—Muzak Corp.

EXTERIOR IS STRAIGHTFORWARD BUT UNINSPIRED EXPRESSION OF PLAN





DINING AREA HAS TYPICAL MAXIMUM-SPACE ARRANGEMENT OF STAGGERED CIRCULAR BOOTHS



BAR ACHIEVES A CHICHI ATMOSPHERE WITH STRIPED CEILING AND EGGRATE LOUVERS



COUNTER AREA IS TRIANGULAR SHAPE TO TAKE ADVANTAGE OF CORNER STREET FRONT

Photos by Julius Shulman

SHOPPING CENTER

for suburban Boston uses location, unlimited parking, a pedestrian mall and modern design to safeguard a \$6 million investment.

Owner: CONANT REAL ESTATE TRUST

General Consultants: NATIONAL RETAIL RECENTRALIZATION, INC.

Economic Surveys: KENNETH C. WELCH, Architect

Site Plan: FREDERICK J. ADAMS

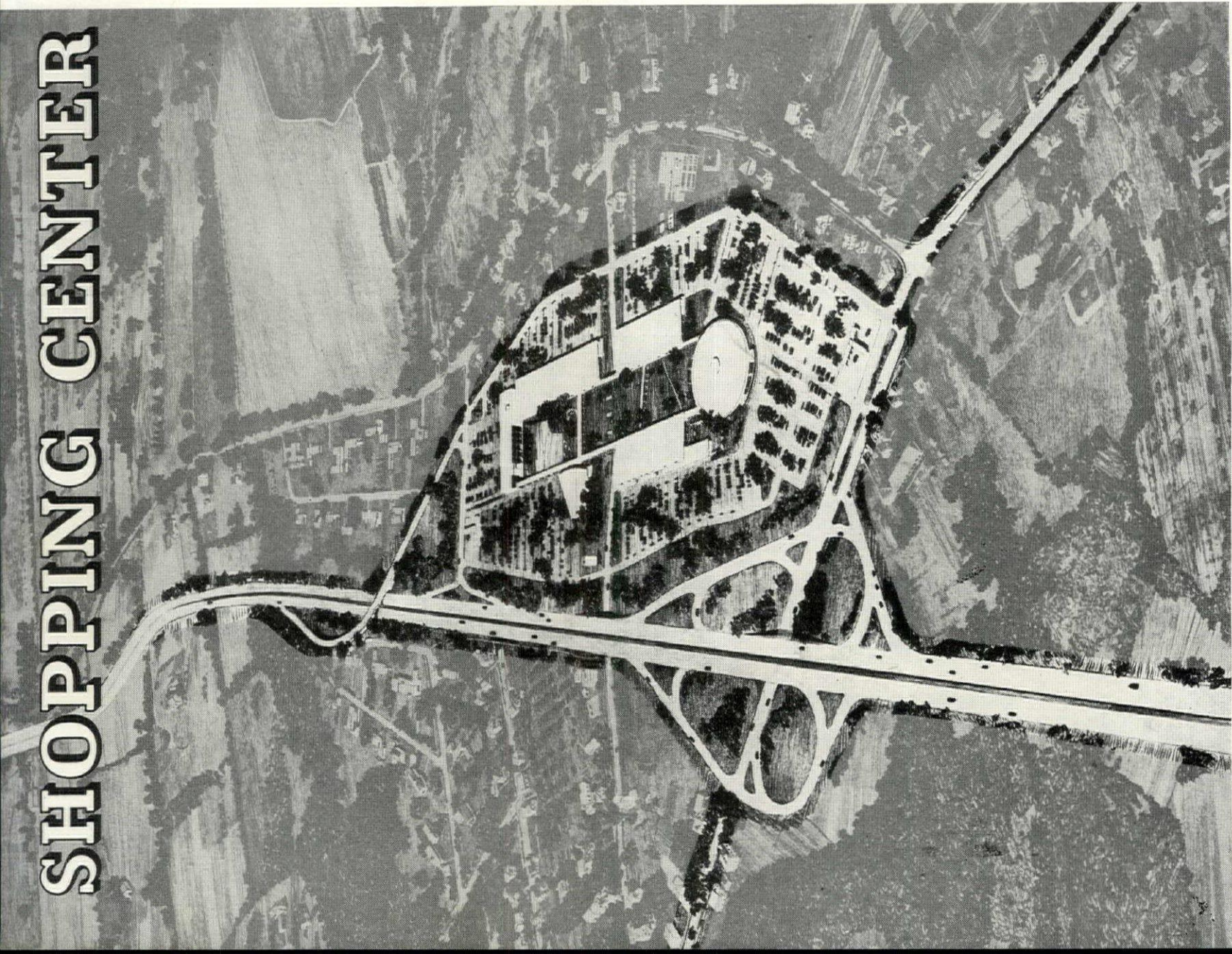
Design and Construction: KETCHUM, GINA & SHARP, Architects;
ANDERSON & BECKWITH, Associate Architects

Landscape Design: ARTHUR A. & SIDNEY N. SHURCLIFF and
THOMAS CHURCH, Associated Landscape Architects

Pinched between the automobile's increasing use and the increasing difficulty of finding a place to park it, downtown merchants are gasping for air—Boston lost \$80 million in retail sales during the 'thirties. A few trend-conscious merchants escaped to the uncongested hinterland, discovered that business per square foot is bigger and more economical—suburban Boston gained \$30 million in retail sales during the 'thirties. But, these pioneers of decentralization and their customers are once again plagued by inadequate parking. Worse still, the uncontrolled real estate development they started has so inflated nearby realty values that the price of additional land for parking is prohibitive.

In the disintegration of downtown Boston and the shortsightedness of merchants who decentralized, a group of local realty investors has seen an opportunity to make life easier for thousands of harassed suburban shoppers, business better for a select group of merchants and investment safer for themselves. They envision for Boston (and ultimately the nation) a series of huge regional shopping centers, up-to-the-minute in every respect and stoutly protected against all foreseeable contingencies. To plug every possible loophole, they have staffed their subsidiary, National Retail Recentralization, Inc., with experts in all fields of building and selling.

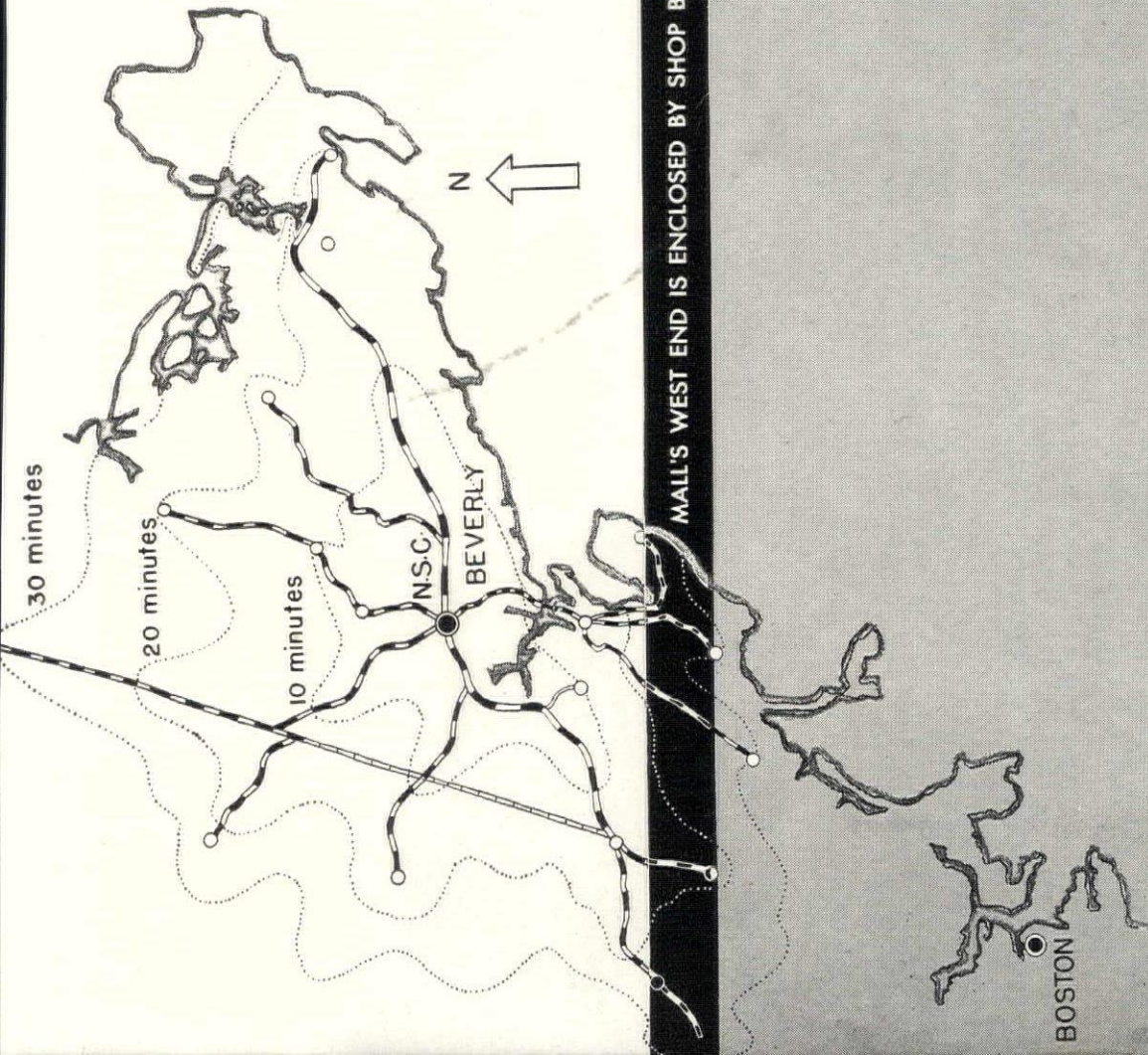
The first project to come from this high-powered organization is the North Shore Center, scheduled for immediate construction near Beverly, Mass.—18 miles north of Boston. Unlike the usual shopping center, this \$6 million project is a completely integrated community of retail, service and entertainment facilities. Its 30-odd retail stores will be dominated by a circular



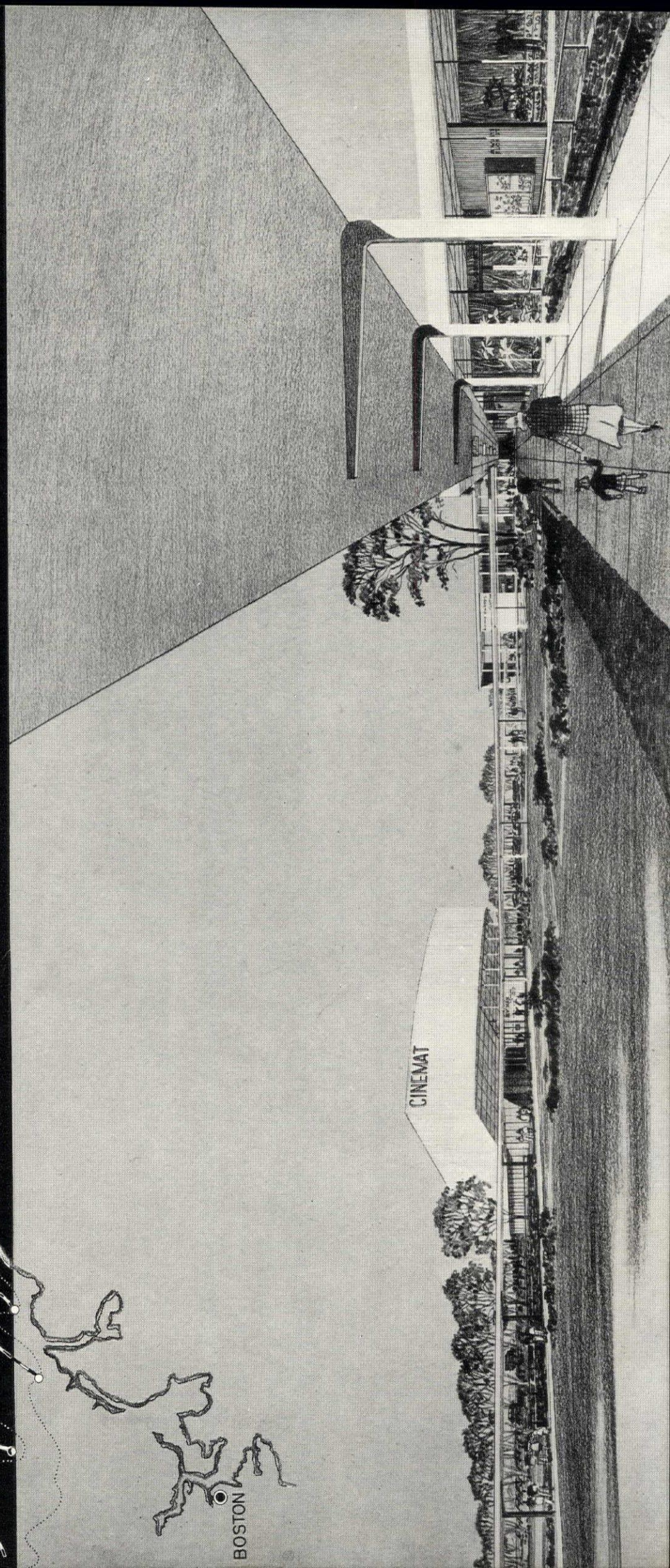
department store and supplemented by a 1,500-seat theater, 20 bowling alleys, a restaurant, exhibit hall, professional offices and service establishments—all built around a traffic-free grass mall.

Intimately geared to the auto-borne shopper, North Shore Center has much that will attract big business. It has a strategic location at the convergence of three main highways and easy access from all three, including a specially built entrance and exit on Boston's six-lane circumferential parkway. It has 3,000 parking spaces—more than enough for the peak hour of the peak day of the year. It has handsome buildings designed for maximum consumer attraction, maximum selling. It has covered walks connecting all buildings, making the center and its business weatherproof. And, it has complete protection against an erosion of values due to uncontrolled expansion.

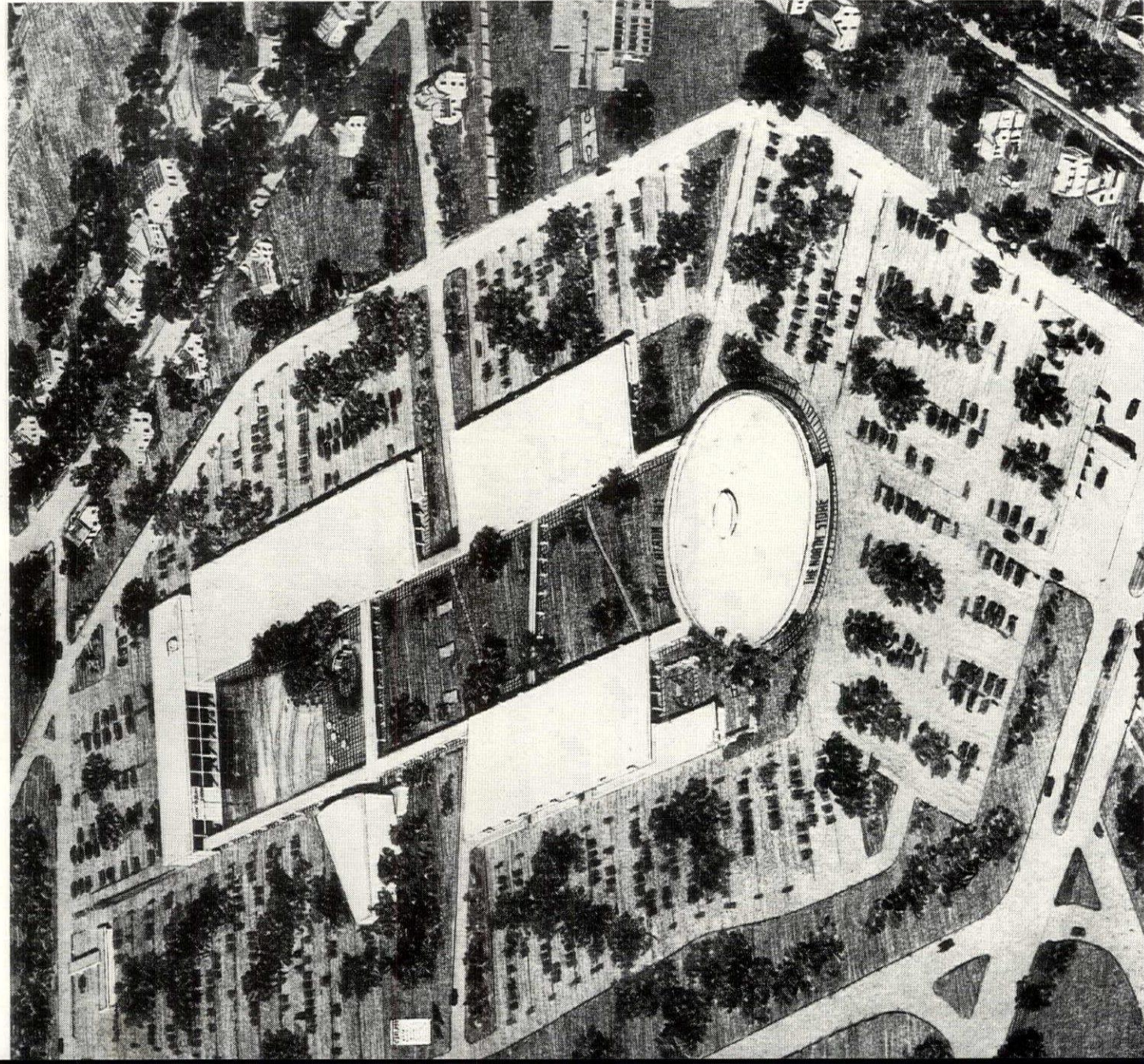
Renderings by Vincent Furno



MAILL'S WEST END IS ENCLOSED BY SHOP BUILDING (RIGHT), EXHIBIT HALL AND THEATER. SIDEWALK CANOPIES BRIDGE GAPS BETWEEN CANTILEVERED ROOFS.



SITE PLAN features a quadrangle of buildings around a central mall, served by 3,000 parking spaces, protected by a residential belt.

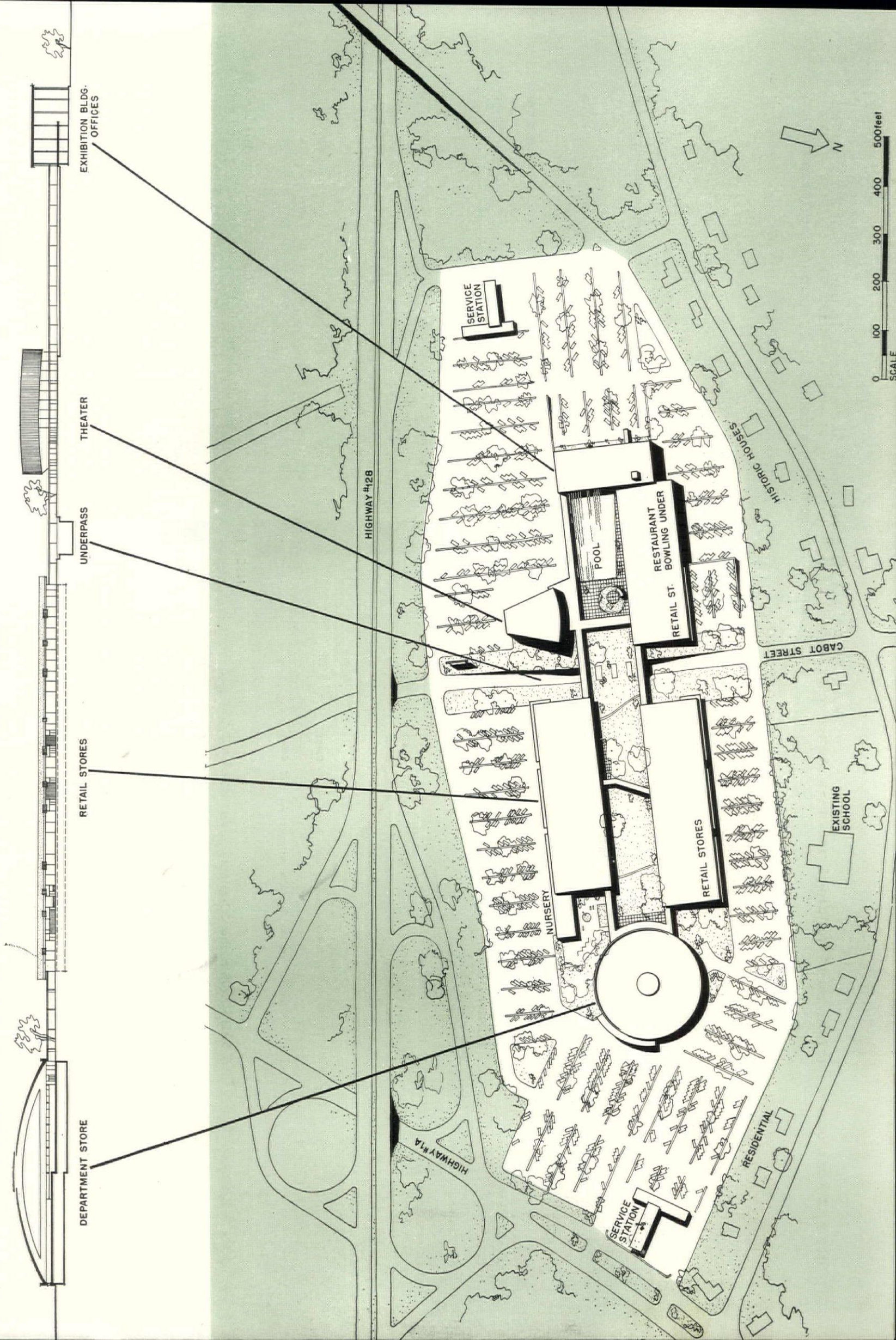


North Shore Center is much more than a mere group of buildings. It is an ideal location in one quadrant formed by the intersection of two major highways which deliver traffic to either end of the site. A third artery brings traffic to the project's center, then underpasses the central mall to avoid interference with shopping pedestrians. None of the auto-borne shoppers using these highways will ever pass by NSC for lack of parking space. The 3,000 spaces surrounding the buildings are calculated to exceed the combined peak requirements for all stores and services. Even on the last Saturday before Christmas, NSC will have an excess of parking space. No simple rule of thumb determined the size of the parking lot. It was figured from a series of experience ratios (1.6 passengers per car, 310 sq. ft. per car, a turnover of 3.5 cars per space, a peak of 1.7, a \$3 average sale, 1.7 sales per customer, etc.) which point to 225 spaces for every million dollars of shopping goods sales. Similar calculations boost the total for all retail sales to 2,000 spaces; services, amusements and employees need 1,000 more. Thanks to the intermittent planting of trees, appearance of this 3,000-car parking area will not be as forbidding as the usual sea of asphalt.

At NSC the dismounted shopper will be given the same consideration as his auto. Grouping the buildings around a long landscaped mall, the architects set the department store at one end and the recreation and entertainment facilities at the other. Their balanced position will help keep pedestrian traffic moving by the wide-open display windows of shops between. Around and across the mall are covered walks which will connect all shops and services, protect customers from sun and rain and help smooth out weather-made peaks and valleys in merchants' business curves. Bordered by an outdoor dining terrace, the reflecting pool at the mall's west end will be a winter skating rink.

To preserve the center's character and prevent deterioration from uncontrolled outside activity, the project owners have purchased a protective belt of land surrounding the three sides not already protected by the state parkway. Zoned for residential and public use, much of this land is already developed; some will be developed with a collection of historic colonial houses moved from the commercial site and other nearby towns; the balance has been offered to the community as a playground.

Most important result of the center's well planned site plan will be the controlled creation of great real estate value, sharply contrasting with the normal outcome.



DEPARTMENT STORE

RETAIL STORES

UNDERPASS

THEATER

EXHIBITION BLDG.
OFFICES

HIGHWAY #128

HIGHWAY #1A

NURSERY

SERVICE
STATION

POOL

RESTAURANT
BOWLING UNDER
RETAIL ST.

RETAIL STORES

RESIDENTIAL

CABOT STREET

HISTORIC HOUSES

EXISTING
SCHOOL

0 100 200 300 400 500feet
SCALE

N

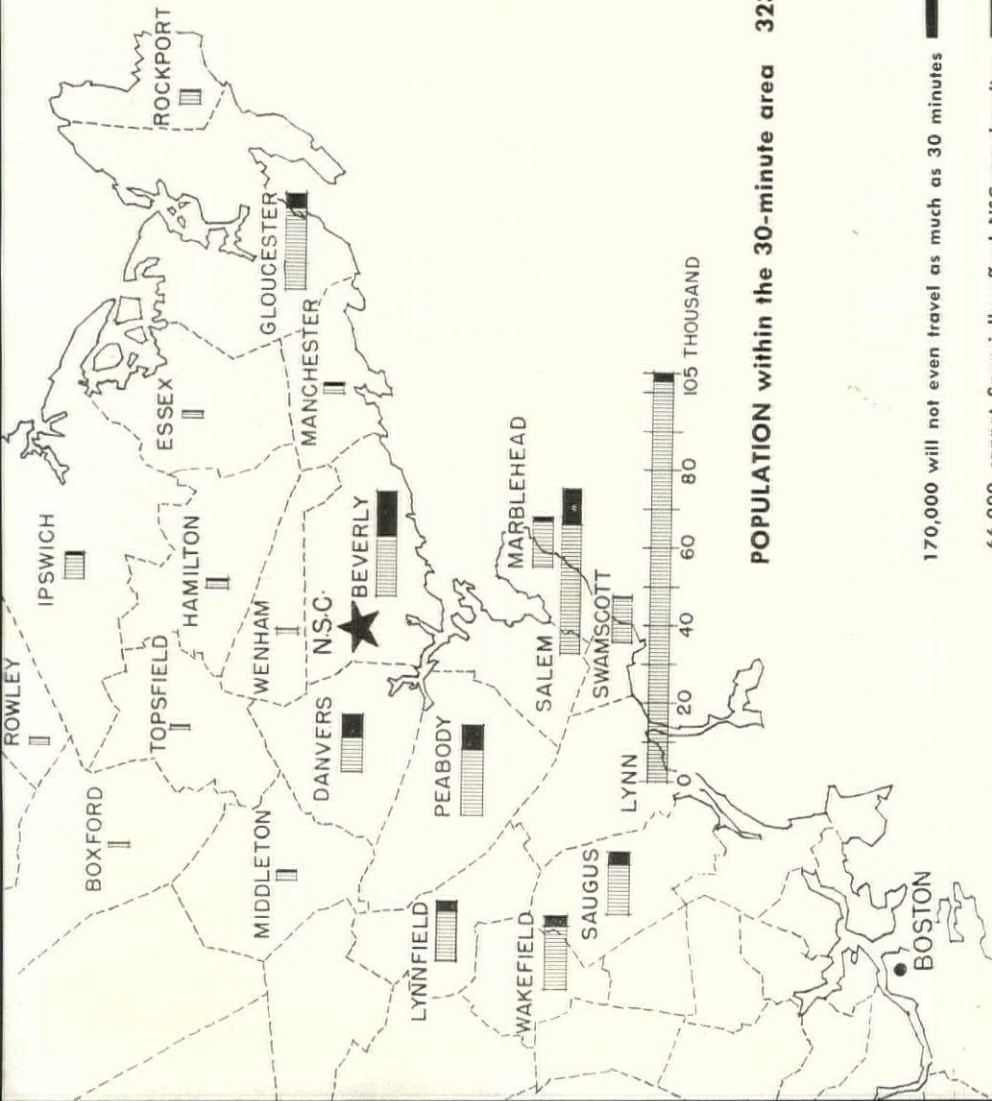
MARKET ANALYSIS gives North Shore Center 16 per cent of the shoppers and 6 per cent of the dollars in 21 surrounding communities.

Siting a retail store is customarily a matter of hunch, bargain land, the obvious prosperity of nearby stores or a consumer survey based, not on shoppers' desires, but on habits which they have been forced to accept. Operating on a big scale in virgin suburban areas, National Retail Recentralization cannot follow these simple expedients. Instead, it relies on a long list of cold, hard facts and figures to determine the proper site and size of its projects. Behind the North Shore Center are two years of comprehensive research covering the economic level, spending power and buying desires of all the people in Boston's 21 North Shore communities.

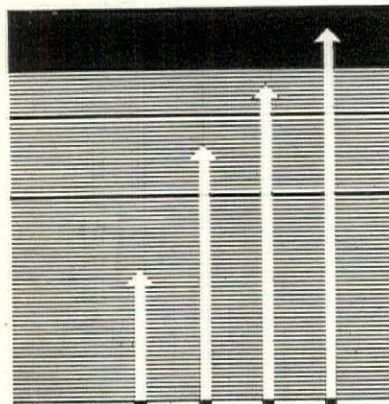
Based on this exhaustive research, the center's indicated market of 50,000 people and \$15 million is a conservative estimate. Actually, within 30 minutes of the project there are 323,000 people spending \$249 million a year. But National Retail Recentralization logically assumes that many of them will consider even a 30 minute shopping trip too long. It has therefore discounted the population of the 21 communities in direct proportion to their time-distance from the center. The varying discounts combine to eliminate 170,000 people from the potential market. Some 66,000 more are ruled out for lack of sufficient income to afford NSC's medium and better class merchandise, a figure derived from a study of rentals, assessed valuations, income tax returns, telephone service and auto registrations. A third reduction of 37,000 is made to reflect the competition offered by the area's existing and prospective retail stores.

These three factors cut NSC's population market 85 per cent to 50,000 sure-fire shoppers. This numerical market is based on purchase of only so-called "shopping goods" (general merchandise, apparel, furniture, furnishings, and luxury goods), for most people will not come to NSC only to buy other items broadly classed as "convenience goods." On the basis of per capita sales of about \$300 per year, the center's annual business is predetermined at \$15 million. This is only 6 per cent of the total market.

Since about three quarters of the center's retail floor space, including that of the department store, will be devoted to shopping goods, NSC logically anticipates a larger share of this kind of business. Such sales will average \$10 million, two-thirds of the center's total, will account for 12 per cent of all shopping goods dollars spent within the 30 minute area. On the other hand, the center expects to take only 3 to 5 per cent of the area-spending for convenience goods.

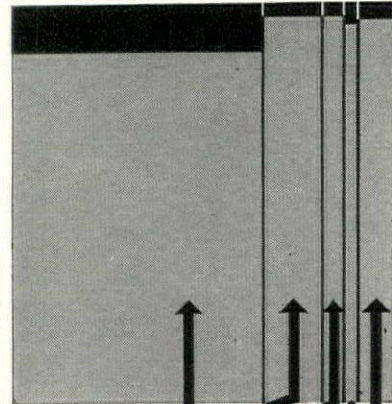


POPULATION within the 30-minute area 323,000



NSC: 16%

SALES within the 30-minute area \$248,767,000



Area Sales

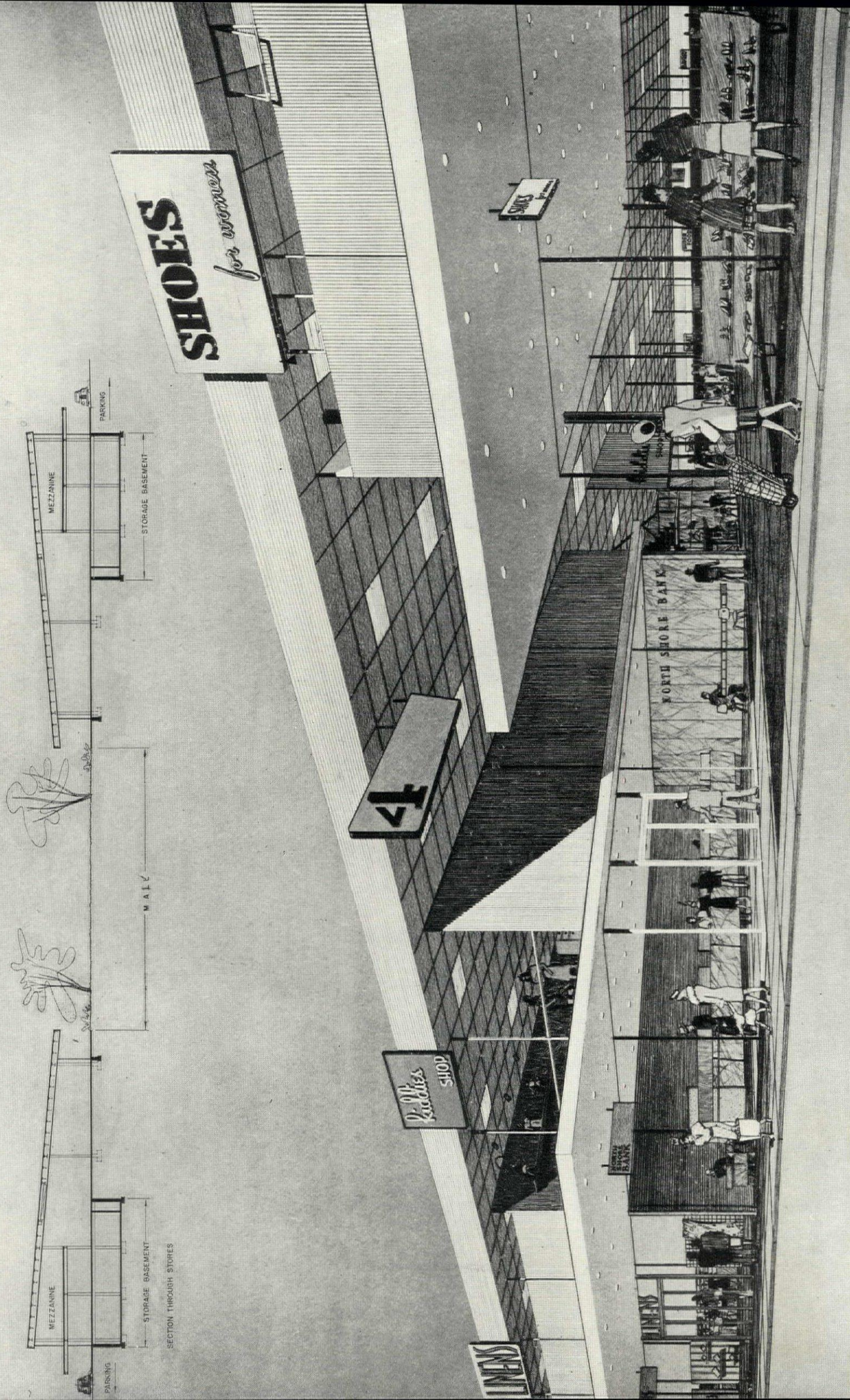
SHOPPING GOODS
General merchandise,
Apparel, Furniture,
House Equip., etc.

FOOD
MEALS & DRINKS
DRUGS
MISCELLANEOUS

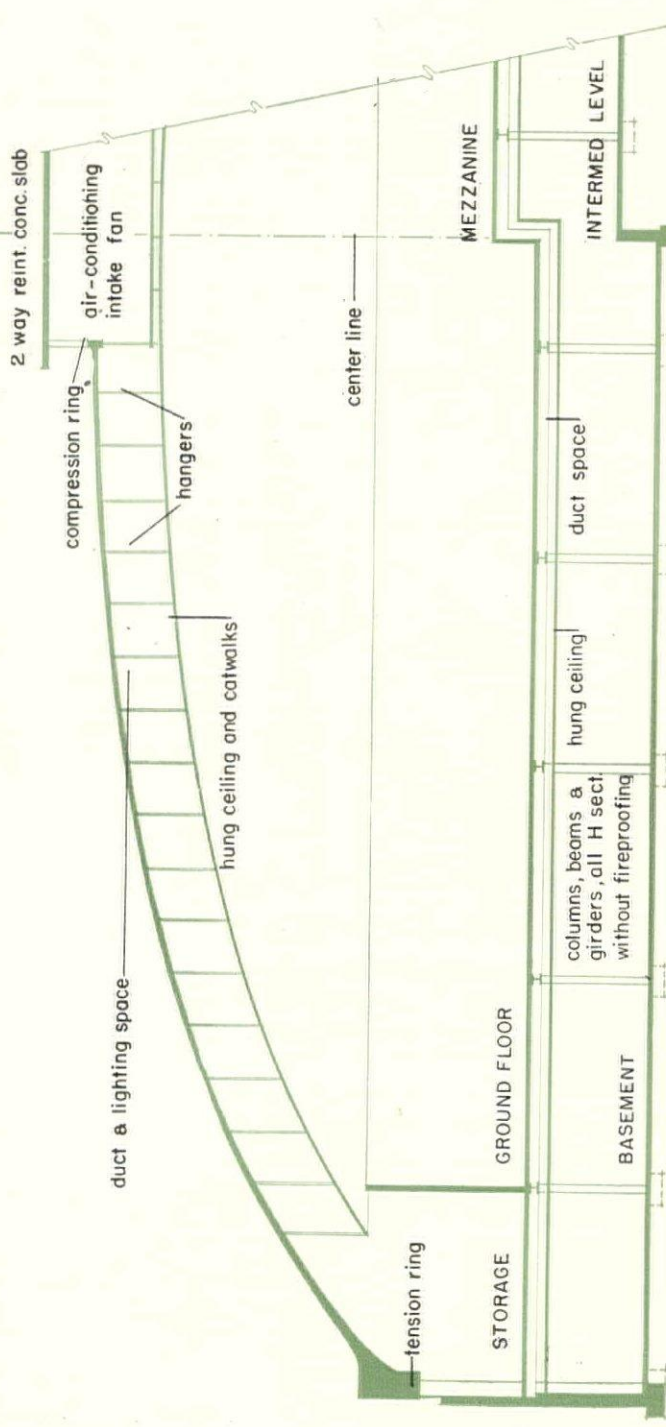
TOTAL

NSC: 6%

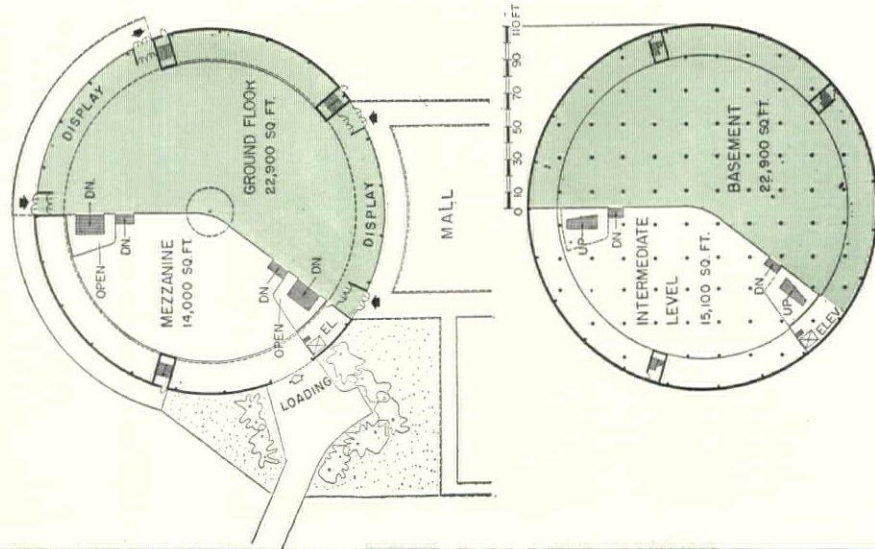
REAR OF TYPICAL STORES FACES PARKING LOT. MEZZANINE FLOOR ADDS STORAGE AND SALES SPACE, PROJECTS TO SHELTER SIDEWALK AND SHOW WINDOWS. NUMBERED PASSAGE LEADS TO MALL



DEPARTMENT STORE is a public attraction, a circular machine for selling. Shops are designed to capitalize on the traffic it generates.



SECTION THROUGH DEPARTMENT STORE

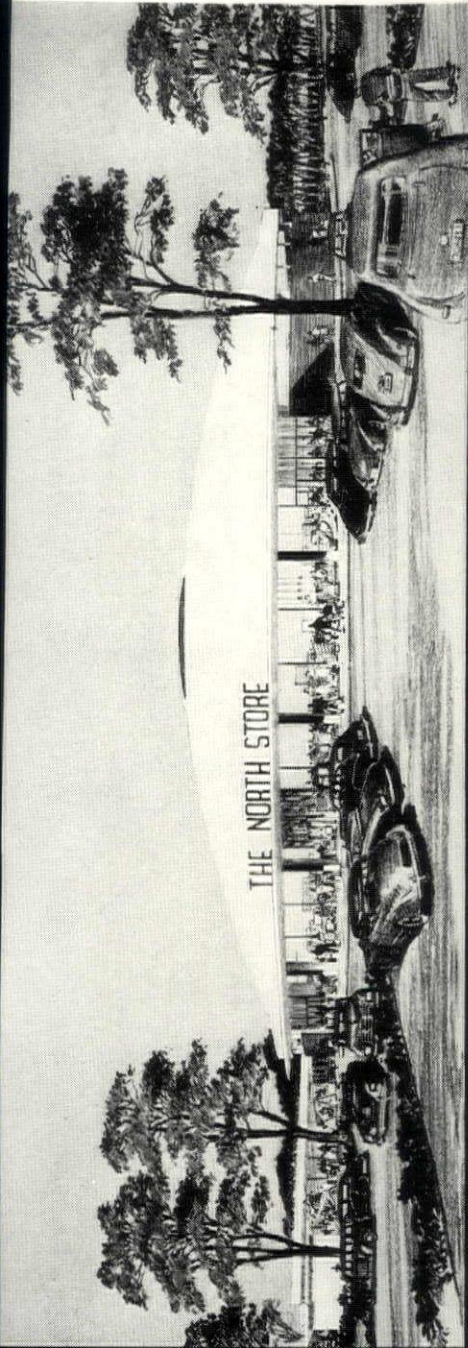


Keystone of the North Shore Center in location as well as purpose, the domed department store at the end of the mall toward the traffic circle is big and will be operated by a big-name tenant. Its size and name will be the center's No. 1 attraction, its greatest revenue producer and an important generator of heavy shopper traffic for the benefit of other stores in the group. It will feature a wide selection of merchandise which suburbanites heretofore could find only in Boston's congested center.

Although its diameter may be changed to suit the tenant, the store's shape will certainly be circular—a novel form whose efficiency has struck the fancy of all prospective tenants. As shown on these pages, the circle measures 220 ft. across, providing a gross area of 74,900 sq. ft. on the four staggered floors. Since the prestressed dome of reinforced concrete is supported by a tension ring and permits a clear span of the building, main selling areas on the first and mezzanine floors are uncluttered by columns. In the two lower levels, columns are widely spaced (20 ft. on centers) to offer minimum interference with the arrangement of relatively small "basement" sales departments. Thanks to the building's unique design, net selling area at 54,860 sq. ft. is 73 per cent of gross—24 per cent higher than average. Non-selling service areas, concentrated in the lower, least productive levels, account for 24 per cent of the total floor area; stairs, elevators, mechanical equipment, etc., occupy a mere 3 per cent.

These economical figures also reflect the multi-level arrangement of floor space. The short stair runs floor-to-floor are easy to climb, making costly elevators and escalators unnecessary and encouraging shopper circulation throughout all levels and departments. In addition to a mezzanine freight dock, the building has four main-floor customer entrances, two opening on the mall's covered walkways, two on the parking area.

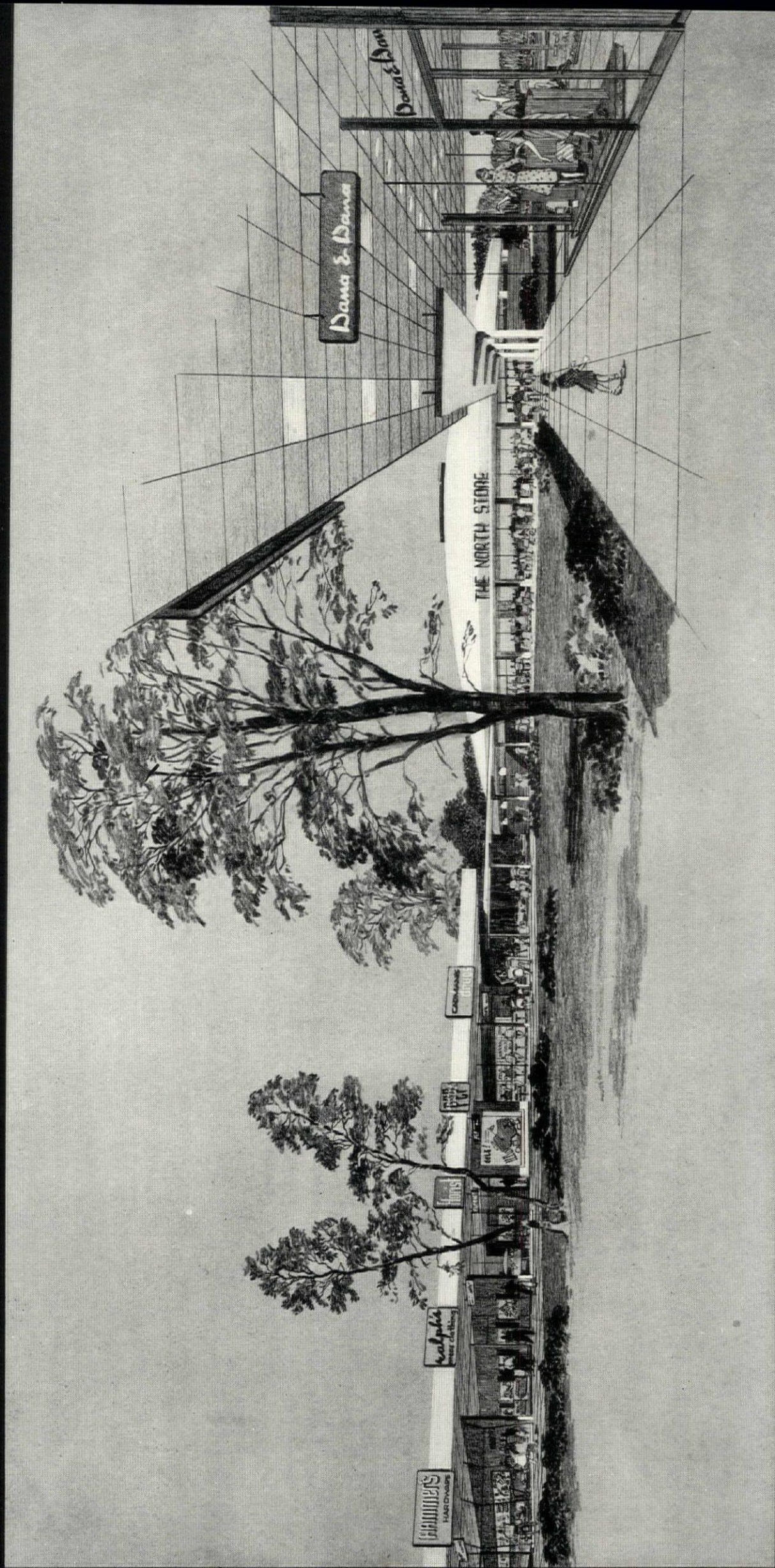
All the center's 30-odd shops, like the department store, are designed to achieve a density of pedestrian shopper traffic (per sq. ft. of displayed merchandise) higher than that found in the busiest downtown store. This results from the fact that most exterior store walls are entirely glass and that the store buildings are flanked on both front and rear by covered walks. Of light steel frame construction with 30 ft. bays, these store buildings are of trim, functional exterior design and lend themselves to flexible planning for original store requirements and, later, for expansion and contraction between productive and non-productive units. Big stores will extend the full 100 ft. depth of the building and may have rear entrances opening on the parking area. Small shops of less depth may occupy space on either side



THE NORTH STORE

of the four passageways connecting parking area and mall. The shed roof of the typical store building tilts up 6 ft. from a height of 12 ft. along the mall to make room for a small mezzanine floor. Intended for storage or additional sales space, it eliminates the need for a more costly full basement. Need for storage area is further reduced by provision of a central warehouse and receiving depot for all NSC merchants. Located on a nearby site, this warehouse will reduce merchants' handling costs and limit trucking operations at the center to that performed by small panel trucks.

CONSPICUOUSLY LOCATED AND STYLED TO ATTRACT PUBLIC ATTENTION, CIRCULAR DEPARTMENT STORE WITH LOW-LYING DOME OPENS ON BOTH MALL AND PARKING AREA AT EAST END OF SITE



OPERATING ESTIMATES for the \$6 million project promise below-average rents and expenses, above-average sales and profits.

SPACE ALLOCATIONS, ANNUAL SALES AND RENTS—A Preliminary, Tentative Synopsis

Store Type	Store Area Gross Sq. Ft.	Estimated Sales		Fixed Minimum Rentals ¹		Percentage % Sales	Rentals ² Amount
		Total	Per Sq. Ft.	1st Yr.	Thereafter		
Department	50,000	\$3,000,000	\$60	\$48,000	\$60,000	2.6	\$78,000
Women's Apparel	27,000	2,300,000	85	32,000	42,000	3.5	80,500
Men's Clothes	10,000	700,000	70	12,000	15,000	6.0	42,000
Variety	10,000	825,000	83	9,000	12,500	4.0	33,000
Shoe	10,000	705,000	71	12,000	17,000	7.0	49,350
House Equip., etc.	6,500	450,000	69	9,000	12,500	8.0	36,000
Super Market	8,250	1,400,000	170	9,000	13,000	2.0	28,000
Grocery & Liquor	15,000	784,000	52	15,000	21,000	6.0	47,040
Other Food	7,000	460,000	66	12,000	17,000	8.0	36,800
Drugs	7,250	475,000	66	8,000	11,000	5.0	23,750
Eating & Drinks	25,000	1,000,000	40	26,000	37,000	8.0	80,000
Hardware	6,750	270,000	40	7,500	10,000	6.0	16,200
Jewelry	5,400	540,000	100	12,000	15,000	8.0	43,200
Misc. Stores	17,700	706,000	40	18,000	26,000	8.0	56,480
Theater	1,500 ³	320,000	213 ³	30,000	30,000	15.0	48,000
Bowling	20 ⁴	220,000	11,000 ⁴	24,000	24,000	15.0	33,000
Exhibit & Offices	30,000	.....	.....	54,000	72,000	.....	72,000
Services & Misc.	.....	1,226,000	.....	30,000	40,000	6.5 ⁵	80,000
TOTALS		\$15,381,000		\$367,500	\$475,000	5.7⁵	\$883,320

¹ Includes 10% for proportionate share of parking area, private streets, walks, landscaping, etc.

² Where there will be more than one store of a type, percentages are averages.

³ Seats & per seat.

⁴ Alleys & per alley, incl. concessions.

⁵ Average.

CONSTRUCTION COST ESTIMATE

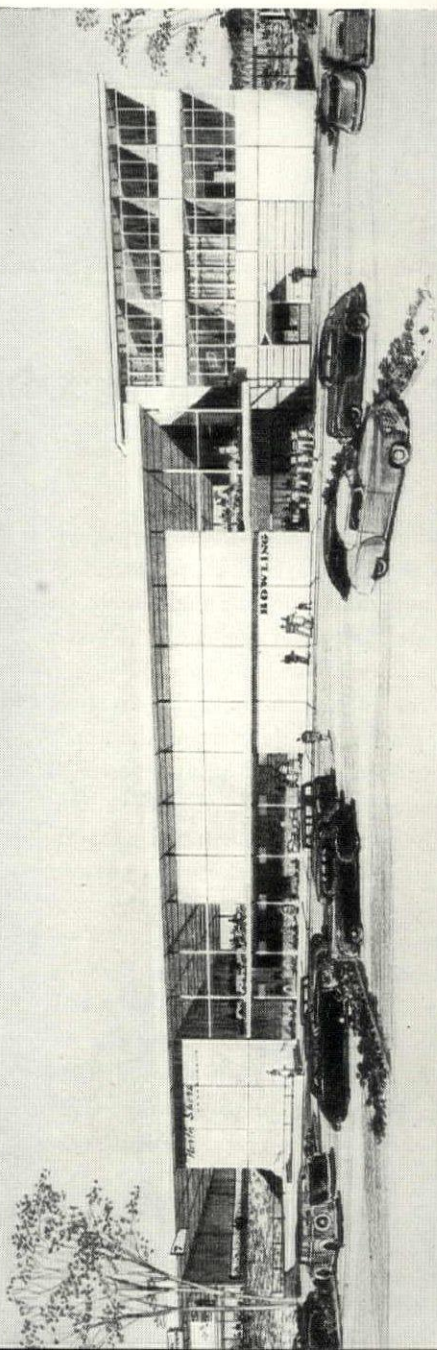
Store Buildings	\$1,852,600
Theater & Restaurant Buildings	455,000
Exhibit-Office Building	300,000
Connecting Walks & Passage ways	120,000
Parking Area & Curbs	310,000
Landscaping, Pools, Skating Rink	80,000
Heating Plant & Truck Ways	450,000
Contingencies	235,000
Fees	200,000
TOTAL	\$4,002,600

If the North Shore Center had been located in the town of Beverly three miles south of where it is, the land alone would have cost twice as much as the entire project presently planned. And, rents and operating costs would have been correspondingly high. As it is, the 62 acres have been capitalized at only \$1 per sq. ft. (\$3 to \$5 assessments prevail in Berkely's business district), and the \$4 million cost of improvements will boost the total investment to \$6 million.

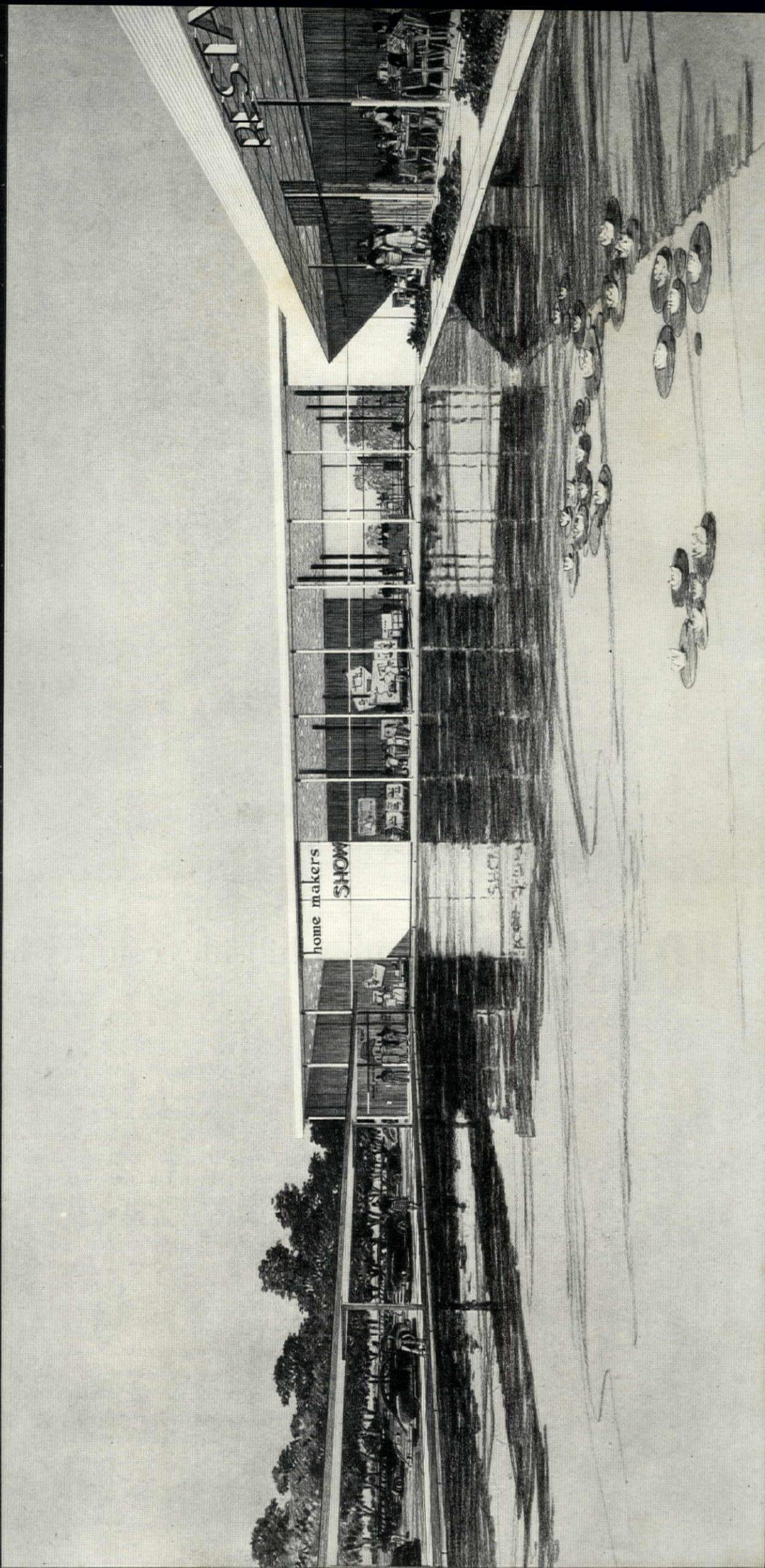
Compared with anticipated sales, these costs and the closely related rents are low. Each tenant will pay a minimum fixed rental based on store size and type of merchandise and covering his prorated share of such public facilities as parking areas, walks and landscaping. To help him get started in the new location, this rent will be shaved a fifth to a quarter during the first year. When the center hits its stride and a merchant does the business expected of him, his rental basis will change to a percentage of his gross sales, keyed again to store size and type of merchandise. Minimum fixed rents, as tentatively set, range from \$1.20 per sq. ft. for the department store to \$2.78 for a lucrative jewelry shop. The NSC average of about \$1.80 per sq. ft. is higher than, but compares favorably with, the national average of \$1.50, based largely on stores of outmoded design with unproductive basement sales area, and without the benefits of integral parking and the host of other sales aids incorporated in NSC. Percentage-of-sales rentals, also tentative, range from 2 per cent for the supermarket to 8 per cent for some of the smaller shops. This percentage-type lease prompts the project sponsors to do all they can to boost their tenants' business.

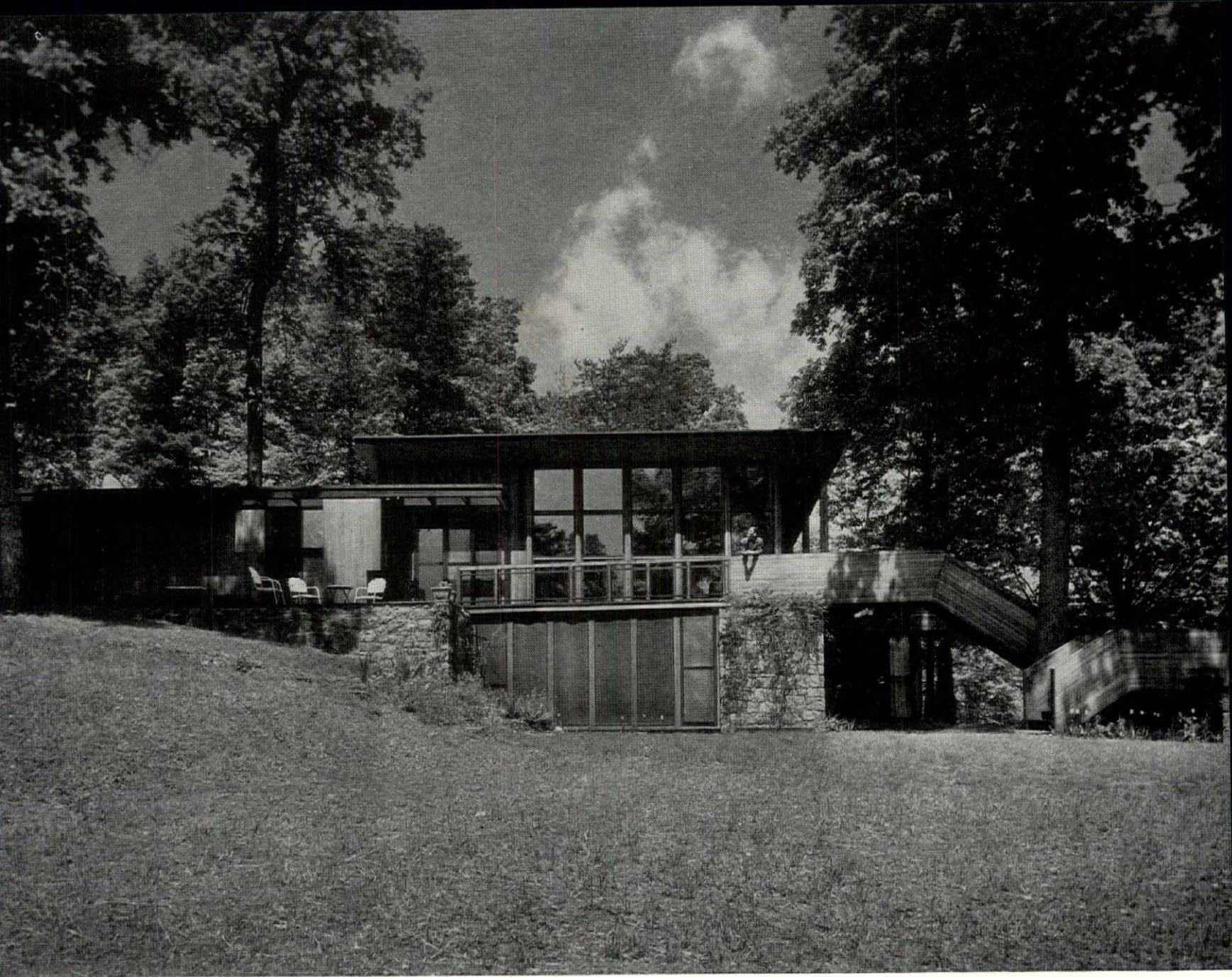
A reasonable rental is only one of the attractive figures which NSC shows prospective tenants. Studies indicate that the average merchant's usual costs of distribution will drop 13 per cent when he moves in. This results from the center's consolidated warehousing, trucking, central heating and servicing operations and from other economies of occupancy, selling and delivery. Calculated to cover the 6 per cent interest and amortization payments on a construction loan from an insurance company, minimum fixed rentals, as tentatively set, will total \$367,500 during the first year, \$475,000 thereafter. When NSC sales reach their expected level, the sponsors will collect an additional \$408,320 in percentage-of-sales rentals. The total \$883,320 rental income will easily cover all fixed and operating expenses and repay the developers with a return of at least 6 per cent on their invested cash. It will also justify their decision to raise a big part of this cash by unloading downtown business properties of doubtful future, now netting a fraction of this amount.

SERVICE AND RECREATIONAL FACILITIES, concentrated at the end of the mall opposite the department store, will give North Shore Center a powerful magnetism. These shopper attractions include a 1,500-seat theater of outstandingly straightforward design, which may be used by NSC tenants for fashion shows and other demonstrations prior to the 2 o'clock movie matinee; a large restaurant whose walls of glass open on the mall's reflecting pool to the south and the colonial restoration to the north; 20 bowling alleys with appropriate concessions; a three-story office building for doctors and dentists; and a two-story exhibition building for the permanent display of home building materials, equipment, appliances and furnishings or, alternatively, automobiles. Displayed items would be offered for sale in the center's stores or by local dealers in the area, but not in the exhibition hall itself.



RESTAURANT AND EXHIBIT HALL OVERLOOK POOL (USED AS WINTER SKATING RINK) AT MALL'S WEST END. BOWLING ALLEYS AND THREE-STORY OFFICE BUILDING ARE ENTERED FROM PARKING LEVEL



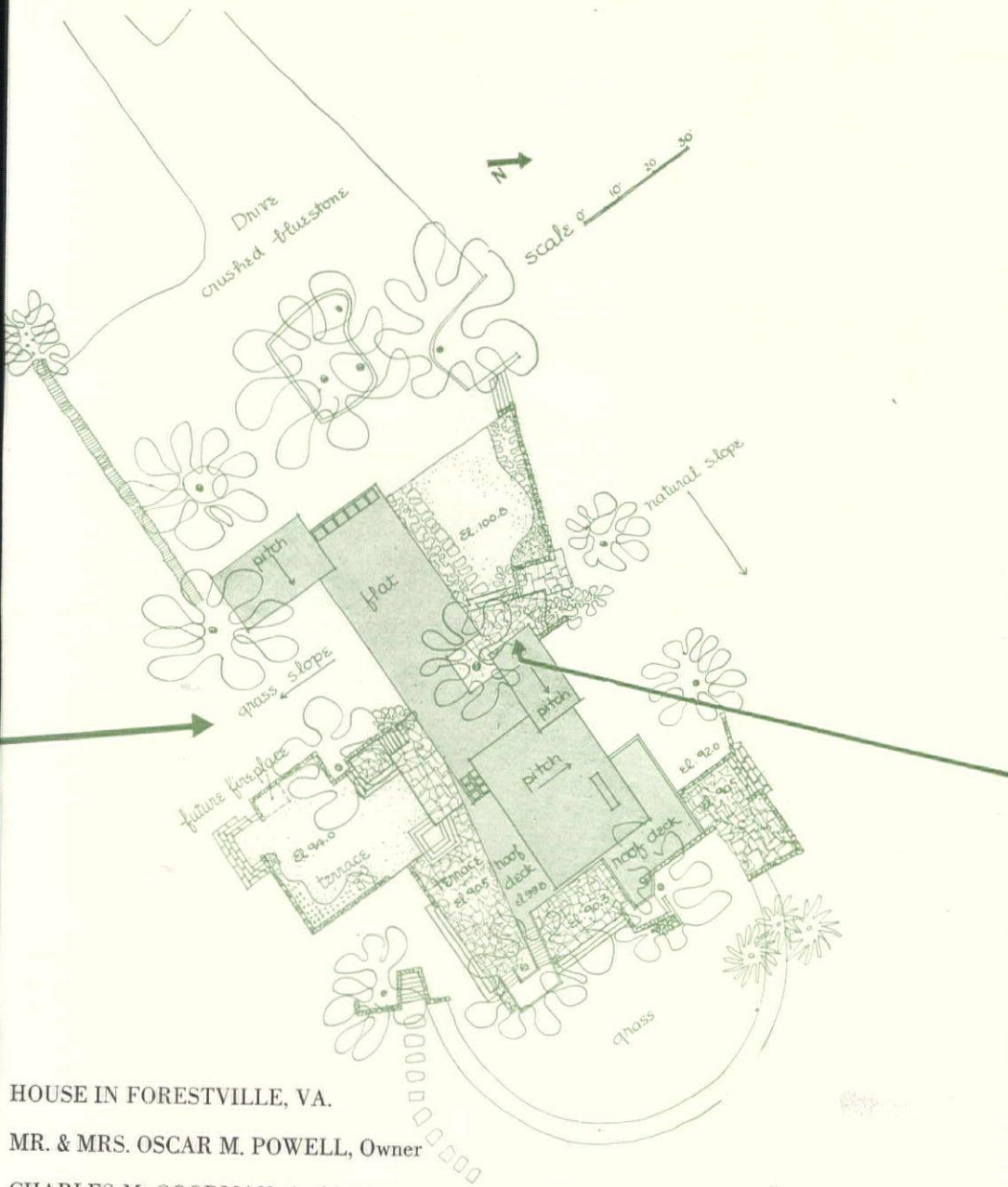


HOUSES Built into a hillside, country house displays a flexible

Dominating a hilly 150-acre site near the Potomac River, this house enjoys unusually beautiful surroundings which abound in beech, sycamore, poplar, dogwood, laurel, etc. As the house is located a half mile from the main road, no particular thought had to be given to privacy and full advantage could be taken of a spectacular view which includes one of the Potomac's many waterfalls.

Following the currently popular solution for hillside houses, the architect here preferred to invert the conventional plan, place living quarters on the upper level, bedrooms below. Though two of the bedrooms face east, a large screened porch at ground level and the main living area above are oriented to the south. Approach is from the rear of the house where the carport, workshop and servants' quarters appear to form a separate building mass. This feeling is further stressed by the presence of a small patio in the center of the house, adjacent to the front door, which effectively lights an interior kitchen and bath.

Masonry walls, used outside and in, are of native brownstone acquired from a nearby quarry, where rock formation permits it to be cut either as building blocks or in slabs for terraces, hearths, stairs, etc. The homogeneity of the stonework, however, contrasts sharply with a wide variety of natural woods used on the interior. The living room, for example, has walnut plywood walls, edge-grain fir ceiling with walnut plywood insets, and a floor of random white oak. Vertical redwood siding is used as the exterior wood finish.

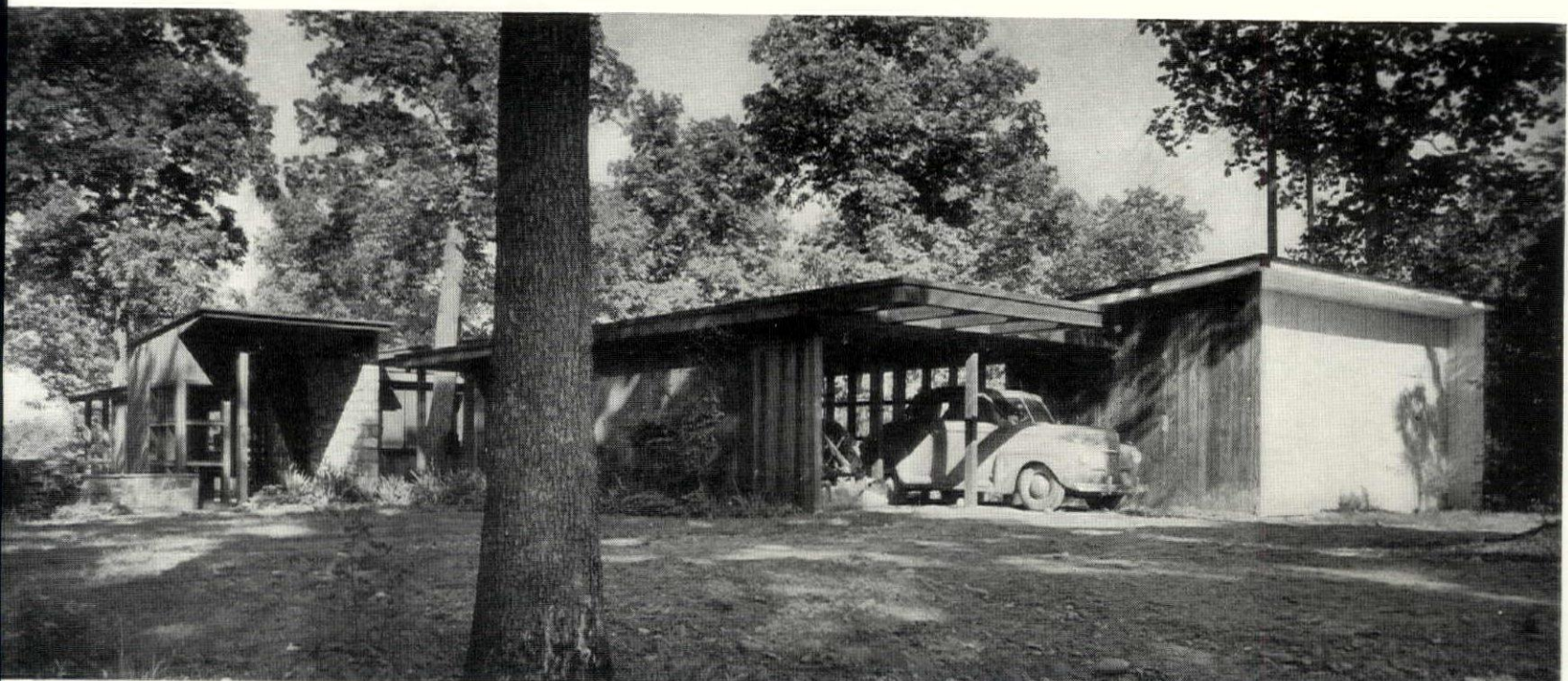


HOUSE IN FORESTVILLE, VA.
 MR. & MRS. OSCAR M. POWELL, Owner
 CHARLES M. GOODMAN, Architect



VIEW FROM FRONT DOOR TO APPROACH DRIVE

approach to planning and boldness in rich contrasts of materials

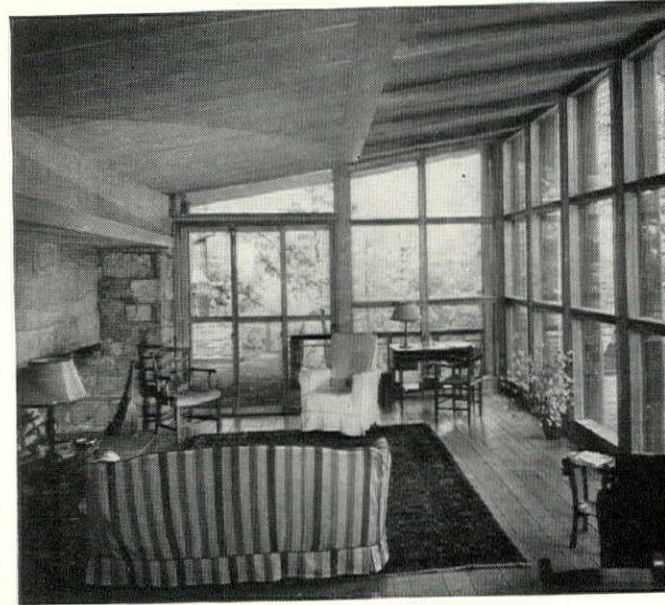


ON APPROACH SIDE, COVERED WALK CREATED BY OVERHANG LEADS FROM CARPORT AND WORKSHOP TO MAIN ENTRANCE AT LEFT

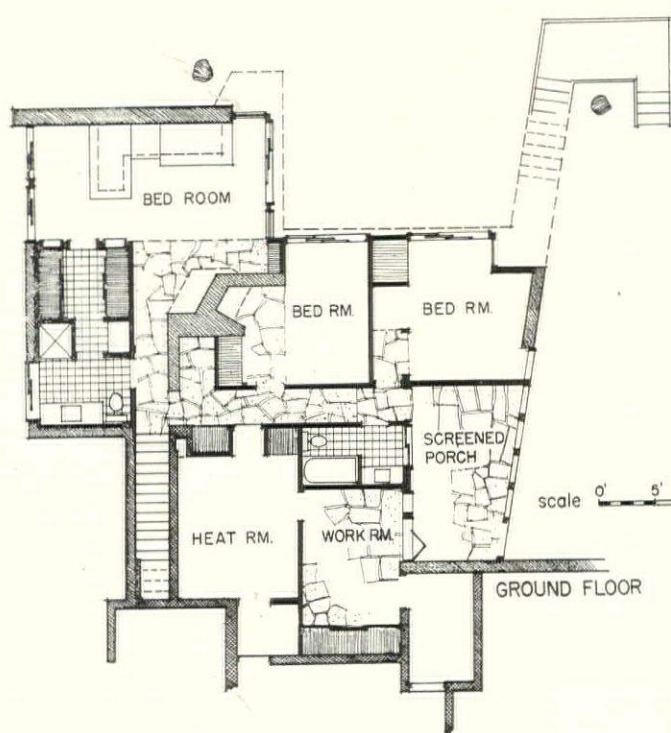
All principle rooms adjoin outdoor living space. Bedrooms have sliding glass doors opening to a terrace on the east side of the house. Particularly noteworthy in the ground floor plan is a central unit comprised of a double fireplace and three closets, which introduces an intimate sitting space into the flanking bedrooms with maximum conservation of space.

CONSTRUCTION OUTLINE

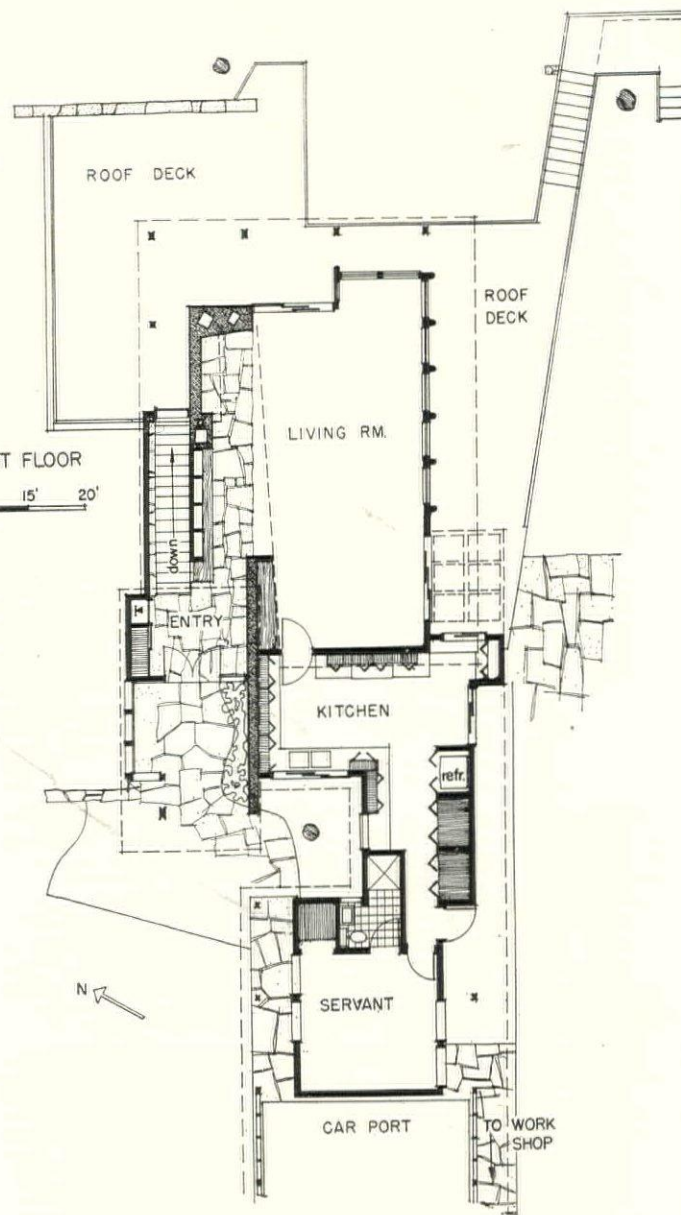
FOUNDATIONS—concrete, cinder block walls. **STRUCTURE:** Exterior walls—brownstone random, exposed on interior, wood frame, diagonal sheathing, felt, 1 x 4 shiplap, vertical redwood. Floors—concrete slab or oak. **ROOF**—3-ply tar and felt, crushed bluestone surface. **FIREPLACE:** Damper—steel, Bennett Fireplace Co. **SHEET METAL WORK:** Flashing—copper; remainder—galvanized iron. **WINDOWS:** Sash—pine, horizontal sliding and casement. Glass—Crystal Sheet, American Window Glass Co. **FLOOR COVERINGS:** oak or flagstone. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—tile. **WALL COVERINGS:** Living room—walnut plywood. Bathrooms—gum plywood. Remainder—knotty pine. **PAINTS**—Minwax Co. **HARDWARE**—Schlage Lock Co., Knap & Vogt Mfg. Co. and Vincent Whitney Co. **ELECTRICAL INSTALLATION:** Wiring—BX. Switches—General Electric Co. **KITCHEN EQUIPMENT:** Range and refrigerator—General Electric Co. **BATHROOM FIXTURES**—American Radiator-Standard Sanitary Corp. **HEATING**—forced warm air, Quiet May, May Oil Burner Corp. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—General Electric Co.

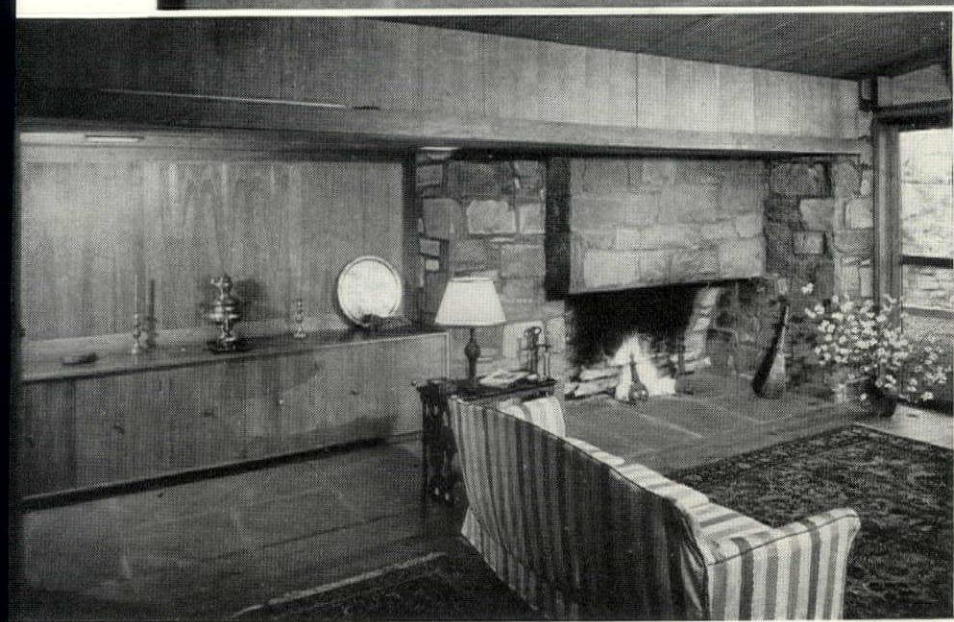
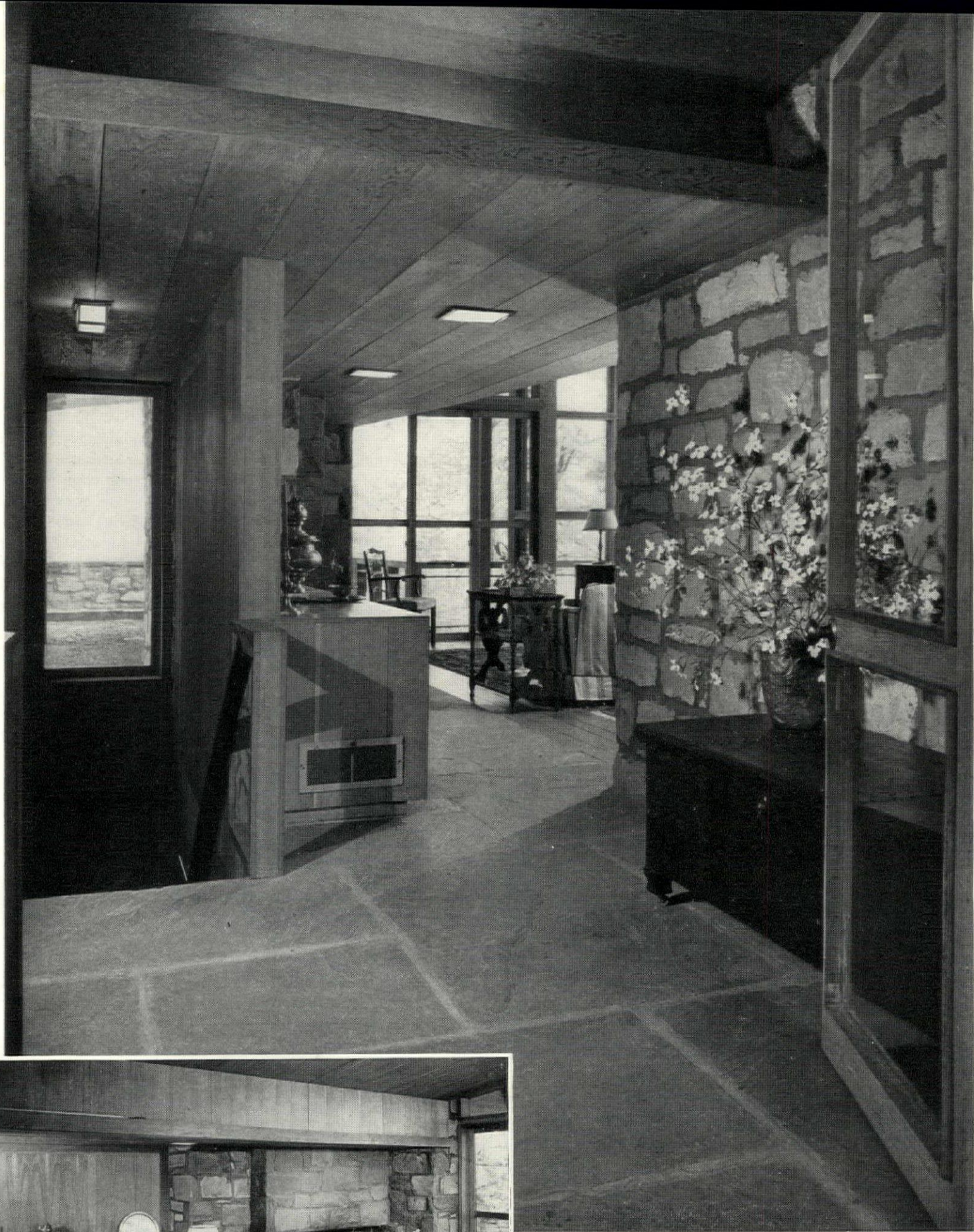


SMALL VERANDA SKIRTS LIVING ROOM'S GLAZED WALLS



TWIN FIREPLACES, OBLIQUELY SET, GIVE TWO BEDROOMS ADDED LOUNGE SPACE





ENTRANCE OPENS TO LIVING ROOM AND STAIRS
DESCENDING TO BEDROOMS BELOW. STAIRWELL
IS SEPARATED FROM LIVING ROOM BY CHIMNEY
AND CABINET WALL (LEFT)

Rodney McCay Morgan Photos

Suburban house combines privacy and open planning on a standard lot

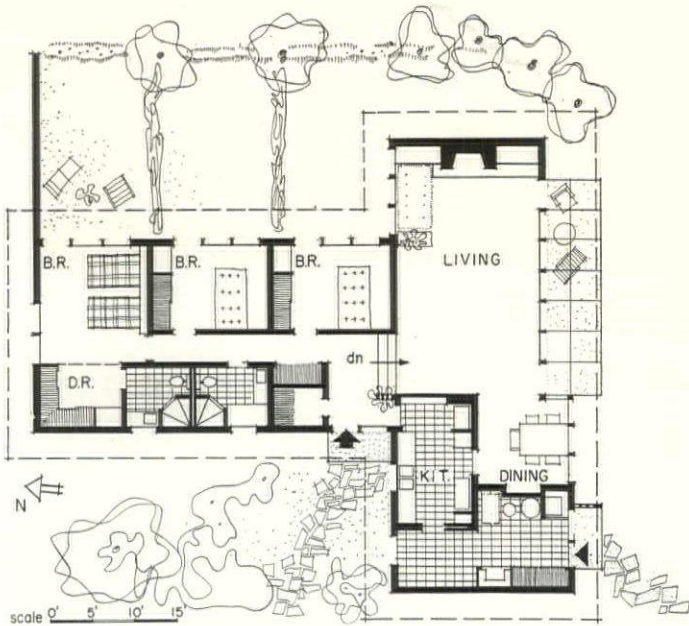
HOUSE IN SAN MARINO, CAL.

G. C. BILLMAN, Owner

WHITNEY R. SMITH, Architect

This small house is an excellent illustration of privacy, freedom and comfort provided on a typical lot in a built-up community. The unusual compactness and order of the plan derive maximum performance from each room, with careful attention to orientation. Contrary to usual practice, the T-shaped layout is divided longitudinally, with service, utility and storage comprising an efficient barrier against noise and intrusion on the approach side. A minimum of fenestration is used to the north and west while the plan opens wide to two other exposures. Bed-rooms face east, each with its own outdoor living space screened by planting. The living-dining area is oriented to the south. This portion of the house together with the kitchen and utility room is at a slightly lower level than the bedroom wing. Opening to a narrow terrace under the eaves, the living room has five fixed glass panels flanked by doors. The slight projection of the dining room separates the terrace from the service entrance. A freestanding garage is located southeast of the house.

HOUSE OPENS TO EAST AWAY FROM ENTRANCE



Maynard Parker

PLANTING ON APPROACH SIDE SCREENS ALL BUT SERVICE WING

LIVING ROOM AND DINING ALCOVE FACE DUE SOUTH

RECESSED GLAZED WALL IN LIVING ROOM PROVIDES OUTDOOR LIVING SPACE



Photos by Philip Fein





House for a northern climate uses native raw materials to harmonize with rugged surroundings

HOUSE IN SLINGERLANDS, N. Y.

HENRY L. BLATNER, Owner-Architect

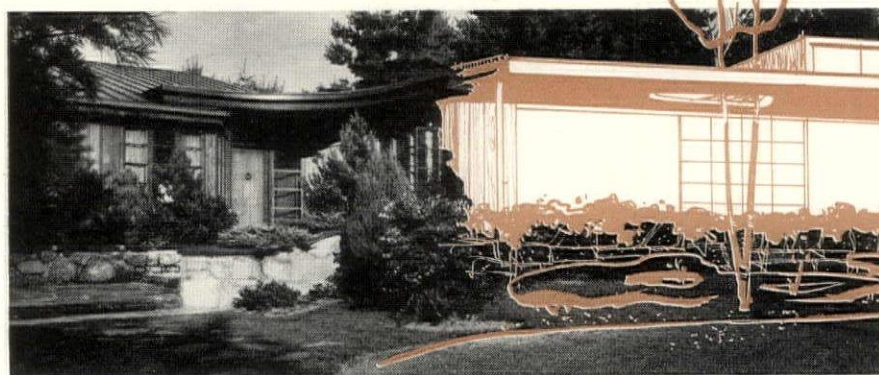
GEORGE A. TELLING, Consultant Engineer (heating)

ROSCH BROS., General Contractors

Built as the first of a trio on a 27-acre tract in upper New York State, this house occupies a level site, half of which is taken up by a magnificent stand of northern white pine. Orientation was worked out to provide abundant summer shade, inside and out, since the region during that season is hot and humid and enjoys little breeze. Though the plan sacrifices some winter sun, as in the case of the terrace and dining room pictured above, a choice

had to be made, and the owners have never regretted their decision. To disturb the beauty of the natural landscape as little as possible, indigenous materials—wood, native stone and brick—were used in quantity.

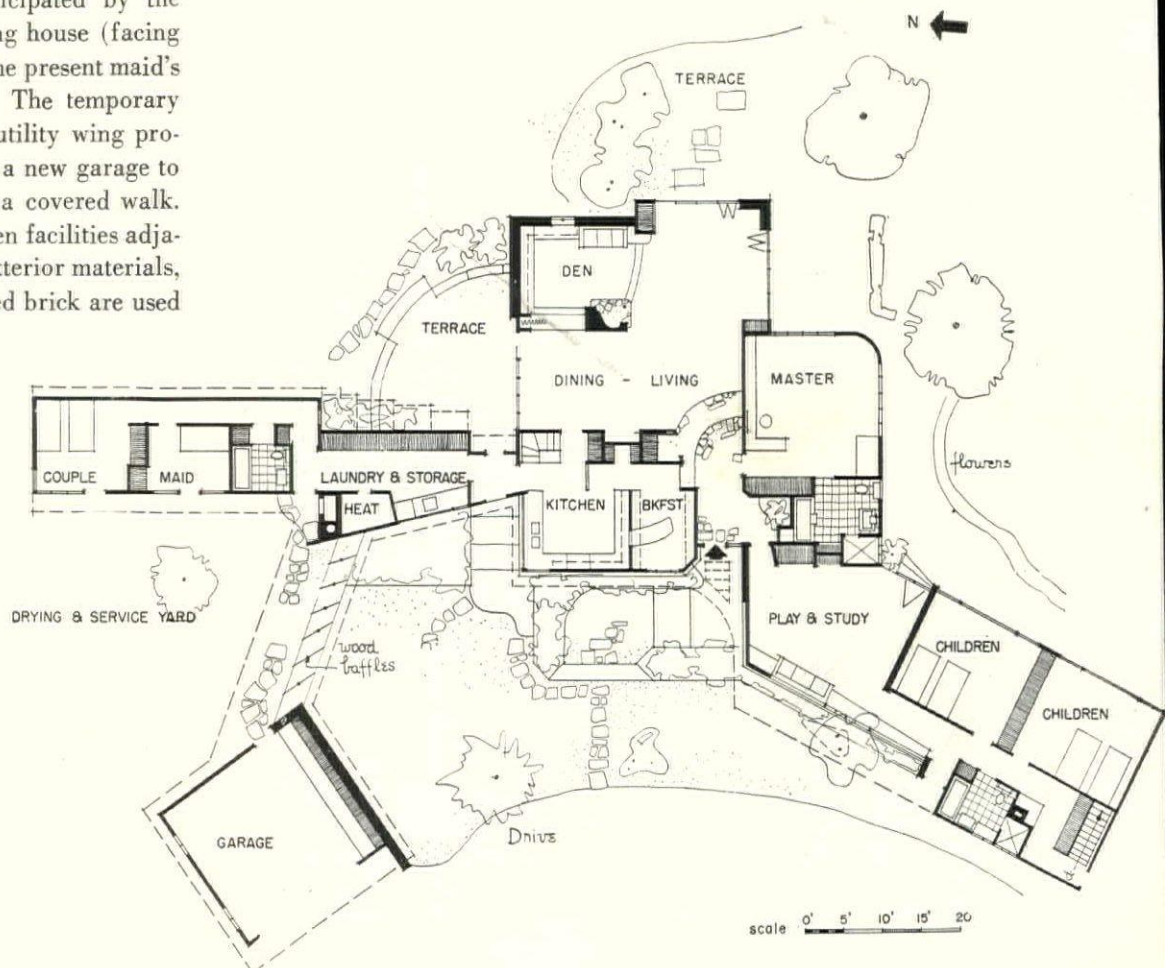
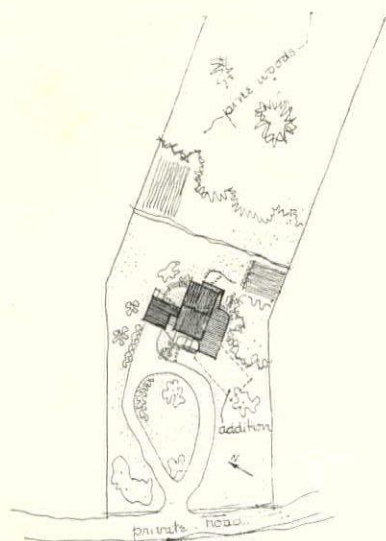
A careful study of heating, with particular respect to large glass areas, made possible an openness and integration with the outdoors that might otherwise have been impractical in view of the locality's severe winters. The house as shown was designed as the nucleus of a larger structure, which accounts for the outsize proportion of the living, dining and master's bedroom as compared with service facilities. Under way at the moment is a children's wing, an extended drawing of which appears below.

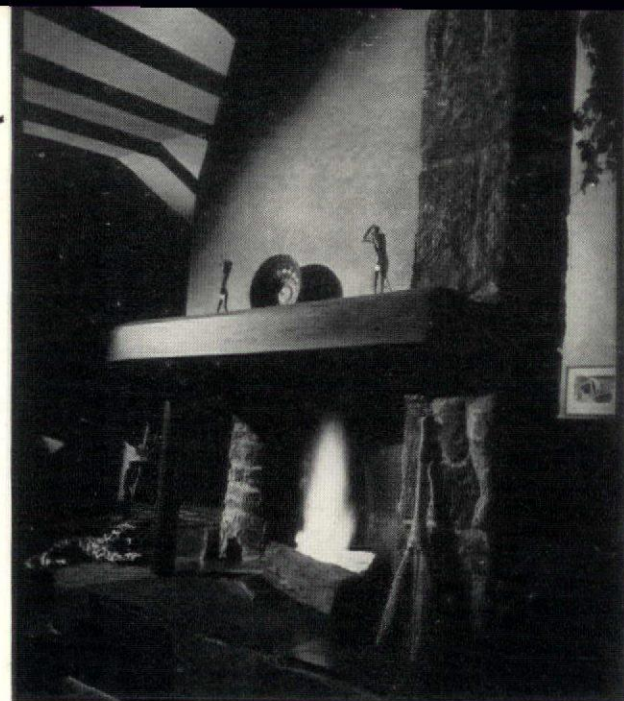
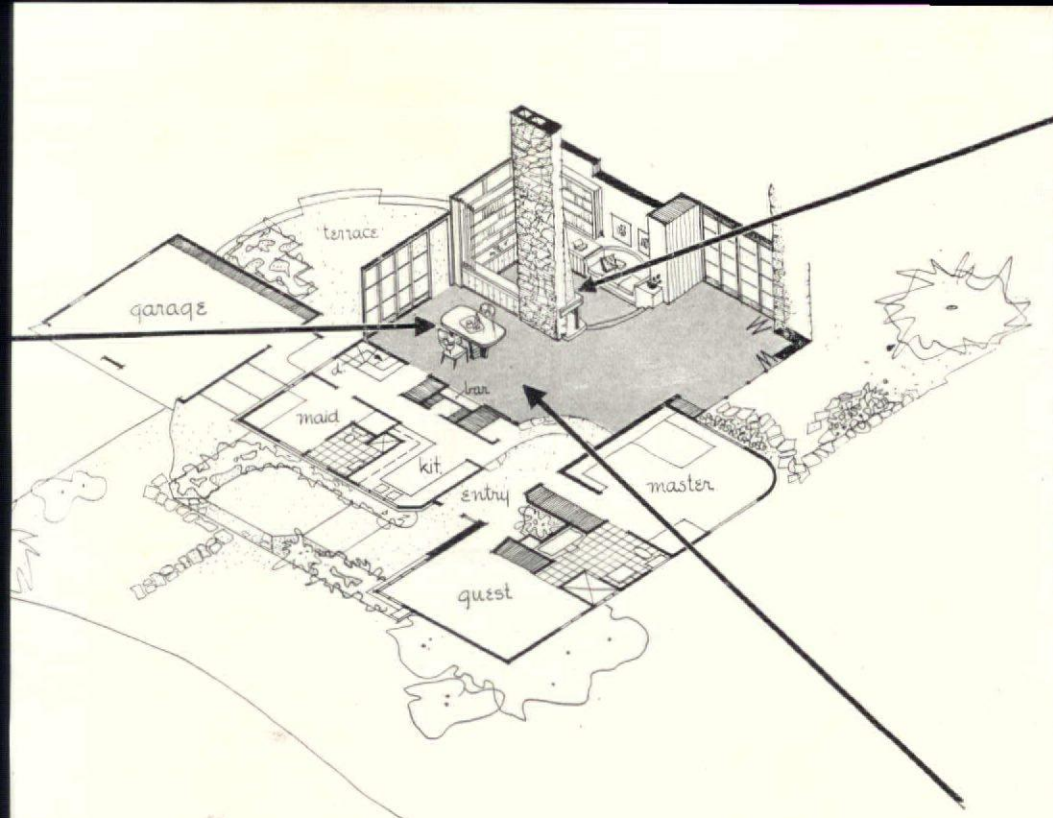




FREESTANDING STONE CHIMNEY IS THE HUB OF THE LIVING-DINING AREA. SITTING ROOM FACES SOUTH AND EAST

The ultimate sprawling scheme (below) anticipated by the owner-architect ingeniously converts the existing house (facing page). Utilizing the same plumbing facilities, the present maid's room and bath will become a large kitchen. The temporary garage will give way to an elongated service-utility wing providing increased privacy for the terrace, while a new garage to the northwest will be joined to the house by a covered walk. The new children's wing will have its own kitchen facilities adjacent to the basement stair. Echoing the sturdy exterior materials, exposed beams, undressed stone, slate and glazed brick are used on the interior.





OPEN END FIREPLACE SERVES DEN AND LIVING ROOM

Damora Photos

CHANGES IN FLOOR AND CEILING LEVELS CONTRIBUTE A FEELING OF SECLUSION TO THE DEN, THOUGH IT IS OPEN TO CENTRAL PART OF HOUSE



FORUM *Yardstick* HOUSES

The editors examine the houses of five topflight builders,
measure them in terms of sales price per square foot,
offer their basic average of \$6.37 as a mark for Building to better.

With the cost of building a house on contract running anywhere from \$10 to \$15 per sq. ft. and with most speculatively built houses selling in the lower reaches of this bracket, it is significant that the best of today's builders can and are selling livable houses at \$7 to \$9 per sq. ft., including land. Such are the houses shown to the right. Their sales prices also include one or more of these "extras": garage, expansion attic, a lot of built-in cabinetwork, a completely equipped kitchen, an abundance of closets and radiant heat. Reduced to a common denominator which takes into account the value of these unfinished areas and "extras", these five houses sell at basic unit prices averaging only \$6.37 per sq. ft. excluding land. And, despite wide variations in geographic location, city size, fabricating technique and production volume, their basic unit sales prices are within 30 cents of each other. All these houses have been analyzed structurally and production-wise in recent issues of the FORUM; this month they are analyzed price-wise and grouped as the first in a series of yardstick houses. Against them, builders everywhere may measure the relative value of the houses they are marketing.

In determining the basic unit sales price of the yardstick houses, several reasonable but arbitrary procedures were followed. Few builders are expected to concur in all of them. In the first place, sales prices were used instead of costs, for the simple reason that sales prices are matters of public record, while costs are usually guarded secrets. Moreover, sales prices are what interest the consumer. In reducing the products of these five builders to a comparable level (as shown at the top of page 104), the FORUM has adjusted upwards the gross finished area of each house by adding a certain percentage of its unfinished area (attic, garage, basement or porch, if any). It has also adjusted downwards the actual sales price of each house by deducting the estimated prices of the principle variables—the lot (based on frontage), kitchen equipment in excess of the usual minimum (a sink), built-in cabinets and furniture above a minimum of 20 hori-

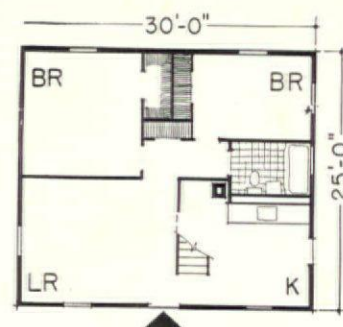
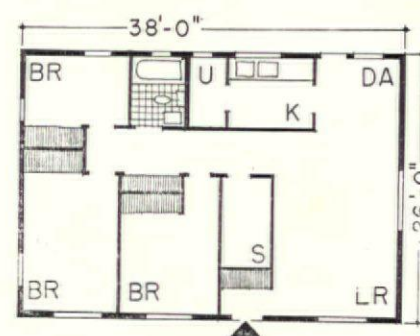
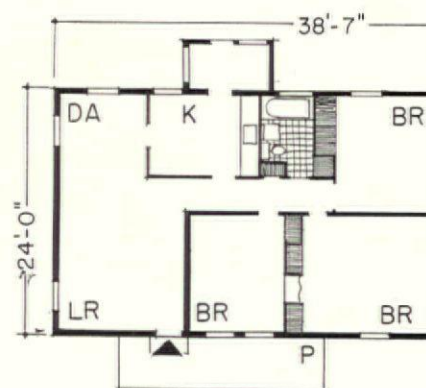
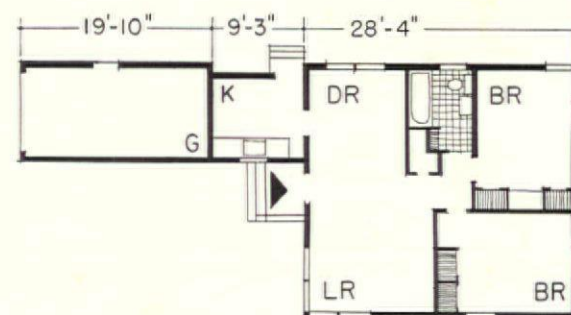
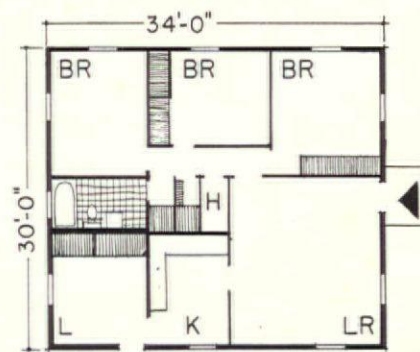
zontal sq. ft., and closet space in excess of a 36 sq. ft. standard. The yardstick "basic unit sales price" is simply the adjusted sales price per adjusted square foot.

Of course, other adjustments affecting individual houses could be made. They would penalize the Byrne house for its lack of a finished floor, mark down the Place project for its unimaginative site plan, boost the Levitt house for its attractive landscaping, dock the Farrington and Kaiser houses for their pier foundations and minimum heating systems. But, FORUM limited its adjustments to those factors which affect a house's livability. (In Texas and California, pier foundations and space heaters are adequate.)

In addition to the basic unit sales price, two other unit prices are included in the tabulation on page 104. They are interesting but of less significance. For example, the actual unit price of the big, one-story, unequipped Place house (\$7.21) cannot be compared with that of the small, story-and-a-half, equipment-heavy Levitt job (\$9.32). And, while unit prices obtained by dividing the actual sales price by the adjusted area reflect the provision of unfinished floor area in some of the houses, they make no allowance to the marked differences in kitchen equipment, cabinet work, etc.

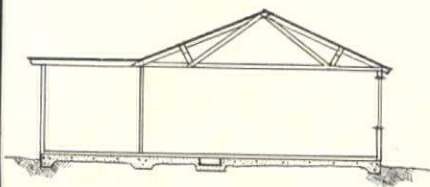
According to the FORUM's analysis of basic unit sales prices, today's yardstick is 77 per cent shorter than the prewar rule (i.e. prices are up 77 per cent). Thus, the FORUM analyzed three speculatively built houses it published in 1938-40 (see details, page 104) and found that their average basic unit sales price was \$3.59.

It is sad commentary on current building practice that use of the FORUM's current yardstick will be embarrassing to the majority of builders—but no more embarrassing than the long rows of new unsold houses built by this majority. This truth is underlined by the fact that the low-priced, high-valued yardstick houses do not remain unsold for long. Their builders know how to achieve minimum cost and they know that it is more profitable to price their houses closely and sell them quickly than to overprice them and carry them for months.



PLACE & COMPANY in South Bend, Ind. offers 1,020 sq. ft. of house and an array of sizable closets for . . . \$7,350

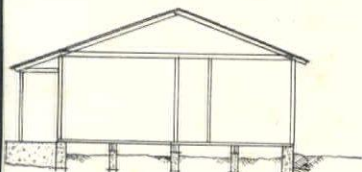
HOUSE SIZE:
5½ rooms & laundry
LOT SIZE: 42 x 125 ft.
PROJECT SIZE: 180 units
BASIC UNIT SALES PRICE:
\$6.45 per sq. ft.



OUTLINE SPECIFICATIONS: Concrete slab; oak floor on wood sleepers. Conventional wood frame with truss rafters; gypsum lath and plaster interior finish; solid plaster partitions; wood shingle, bevel or plywood exterior finish; asphalt shingle roof. Cotton insulation in ceiling. Forced hot air heat with supply and return ducts serving all rooms.
FABRICATION: Shop precutting of all lumber; site fabrication of trusses and walls in horizontal jigs; shop fabrication of closet partitions.
STANDARD EQUIPMENT: Gas range, heated laundry drying closet, steel door frames.
EXPANSION AND UTILITY SPACE: Large laundry-utility room with closets could be used for spare bedroom or storage.
FORUM REFERENCE: July 1946, page 142.

WM. G. FARRINGTON CO. in Houston Tex. attaches to its 803 sq. ft. house a one-car garage, sells them for . . . \$6,250

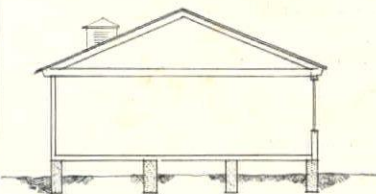
HOUSE SIZE:
4½ rooms & garage
LOT SIZE: 50 x 100 ft.
PROJECT SIZE: 175 units
BASIC UNIT SALES PRICE:
\$6.30 per sq. ft.



OUTLINE SPECIFICATIONS: Concrete pier foundation; oak floor finish. Conventional wood frame; plaster board interior finish; bevel siding exterior finish; built-up roof. No insulation. Hot air floor furnace in living room; electric wall heater in bathroom.
FABRICATION: Some site precutting and site fabrication.
STANDARD EQUIPMENT: Metal kitchen cabinets, copper screens, concrete driveway.
EXPANSION OR UTILITY SPACE: One-car garage with large built-in racks for dead and temporary storage.
FORUM REFERENCE: October 1946, page 120.

KAISER COMMUNITY HOMES in Los Angeles, Calif. markets its 971 sq. ft. bungalow with two-car garage for . . . \$8,650

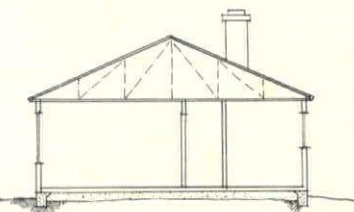
HOUSE SIZE:
5½ rooms, 2-car garage & service porch
LOT SIZE: 60 x 100 ft.
ANNUAL VOLUME: 10,000 units
BASIC UNIT SALES PRICE:
\$6.56 per sq. ft.



OUTLINE SPECIFICATIONS: Concrete pier foundation; oak or carpet floor finish. Conventional wood frame; precoated kraft paper interior finish on plywood; stucco exterior finish in combination with other siding materials; asphalt shingle or built-up roof. No insulation. Gravity warm air heat to living room, hall and adjacent bedroom.
FABRICATION: Wall, floor and ceiling panels, roof trusses, plumbing tree, closet-partitions, kitchen cabinets, garage doors prefabricated in shop.
STANDARD EQUIPMENT: Plastic kitchen counter top, porcelain enamel steel wainscoting in bathroom, awning type windows, built-in dressing table and shelves.
EXPANSION AND UTILITY SPACE: Garage, service porch, closets and cabinets provide ample space for all kinds of storage.
FORUM REFERENCE: March 1947, page 105.

BYRNE ORGANIZATION in Baltimore, Md. limits its 988 sq. ft. to the bare essentials, its sales price to . . . \$6,950

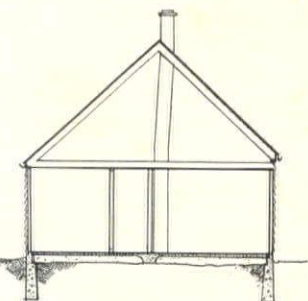
HOUSE SIZE:
5½ rooms & utility space
LOT SIZE: 60 x 100 ft.
PROJECT SIZE: 1,200 units
BASIC UNIT SALES PRICE:
\$6.26 per sq. ft.



OUTLINE SPECIFICATIONS: Concrete slab with paint as floor finish. Light steel frame; metal lath and plaster interior finish; stucco, asbestos shingle, aluminum siding or red cedar shingle exterior finish; asphalt shingle roof. Glass insulation in walls and ceiling. Hot water radiant heat in floor.
FABRICATION: Complete roof, completely framed walls, heating coils, plumbing lines and closets prefabricated in shop at the site.
STANDARD EQUIPMENT: None beyond the customary minimum.
EXPANSION AND UTILITY SPACE: Heater room has space for clothes washer; large interior closet for dead and temporary storage.
FORUM REFERENCE: April 1947, page 82.

LEVITT & SONS in Long Island, N. Y. sells 750 sq. ft. plus an attic and a kitchenful of equipment for . . . \$6,990

HOUSE SIZE:
4 rooms & attic
LOT SIZE: 60 x 100 ft.
ANNUAL VOLUME: 3,000 units
BASIC UNIT SALES PRICE:
\$6.29 per sq. ft.

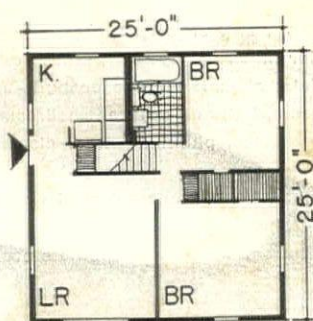


OUTLINE SPECIFICATIONS: Concrete slab; asphalt tile floor finish. Conventional wood frame; fabric coated or painted plaster board interior finish; asbestos shingle exterior finish; asphalt shingle roof. Cotton insulation in walls and ceiling. Hot water radiant heat in floor.
FABRICATION: Heating coils, plumbing lines, stairs and cabinet work shop fabricated. All framing lumber is pre-cut.
STANDARD EQUIPMENT: Automatic clothes washer, gas range, electric refrigerator, metal kitchen cabinets and bathroom closet, built-in bookcase and corner cupboard, metal venetian blinds at all windows, generous landscaping.
EXPANSION OR UTILITY SPACE: Unfinished attic with finished access stairs makes room for one or two additional bedrooms with closets and bathroom.
FORUM REFERENCE: May 1947, page 70.

BASIC UNIT SALES PRICES are calculated by adding unfinished areas and deducting beyond-normal standard equipment.

POST WAR BUILDERS (houses shown preceding page)	AREA & ADDITIONS (Gross Sq. Ft.)			TOTAL AD- JUSTED AREA	SALES PRICE & DEDUCTIONS						TOTAL AD- JUSTED SALES PRICE	UNIT SALES PRICE (PER GROSS SQ. FT.)		
	Finished	Attic, Bsm't Garage @ 1/2	Porch @ 1/4		Actual	Lot @ \$10 per ft.	Extra Equip- ment	Fire- place	Cabi- nets over 20 sq. ft. @ \$6	Closets over 36 sq. ft. @ \$3		Actual price & fin- ished area	Actual price & ad- justed area	Adjusted price & adjusted area (BASIC)
PLACE & COMPANY	1,020	None	None	1,020	\$7,350	\$420	None	None	\$234	\$120	\$6,576	\$7.21	\$7.21	\$6.45
WM. G. FARRINGTON CO.	803	100	7	910	6,250	500	None	None	18	3	5,729	7.78	6.89	6.30
KAISER COMMUNITY HOMES	971	180	30	1,181	8,650	600	None	None	288	9	7,753	8.91	7.52	6.56
BYRNE ORGANIZATION	988	None	None	988	6,950	600	None	None	None	165	6,185	7.03	7.03	6.26
LEVITT & SONS	750	173	None	923	6,990	600	\$490	None	66	24	5,810	9.32	7.57	6.29
PREWAR BUILDERS (houses shown below)														
STANDARD PROPERTIES	625	144	None	769	2,990	350	75	None	None	None	2,565	4.78	3.89	3.34
ROBERT L. MASON	784	492	None	1,276	5,675	336	None	\$200	None	None	5,139	7.24	4.45	4.03
COUNTY HOMES INC.	802	684	None	1,486	5,895	420	\$400	None	18	None	5,057	7.35	3.97	3.40

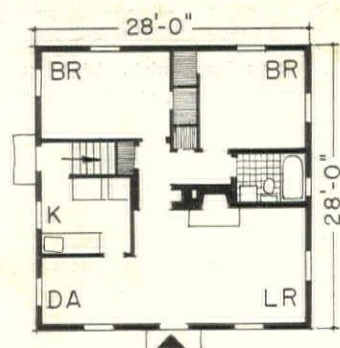
STANDARD PROPERTIES in Washington, D. C., priced their 625 sq. ft. house with expansion attic at only . . . **\$2,990**



HOUSE SIZE:
4 rooms & attic
LOT SIZE: 50 x 109 ft.
PROJECT SIZE: 45 units
BASIC UNIT SALES PRICE:
\$3.34 per sq. ft.

OUTLINE SPECIFICATIONS: Concrete block pier foundation; oak floor finish. Conventional wood frame; plaster board interior finish; asbestos shingle exterior finish on plywood sheathing; asphalt shingle roof. Aluminum foil insulation in walls; wood fiber blanket in ceiling. Forced warm air heat from subfloor furnace.
FABRICATION: On-site assembly of walls in horizontal position.
STANDARD EQUIPMENT: Gas range.
EXPANSION AND UTILITY SPACE: Unfinished attic with access stairs for one or two bedrooms, closets and bath.
FORUM REFERENCE: December 1940, page 538.

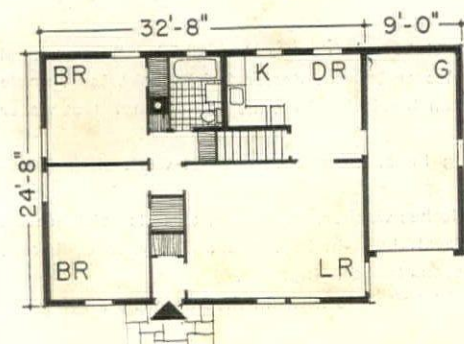
ROBERT L. MASON in Indianapolis sold 784 sq. ft. house with full basement, fireplace and landscaping for . . . **\$5,675**



HOUSE SIZE:
4 1/2 rooms & basement
LOT SIZE: 48 x 135 ft.
PROJECT SIZE: 17 units
BASIC UNIT SALES PRICE:
\$4.03 per sq. ft.

OUTLINE SPECIFICATIONS: Concrete block foundation; oak floor finish. Conventional wood frame; gypsum lath and plaster interior finish; clapboard exterior finish on insulating sheathing. Asphalt shingle roof. Balsam wool insulation in ceiling. Gravity warm air heat.
FABRICATION: Completely conventional.
STANDARD EQUIPMENT: Fireplace, screens, generous landscaping.
EXPANSION AND UTILITY SPACE: Full basement divided into utility-laundry-furnace room, coal bin and playroom.
FORUM REFERENCE: September 1940, page 214.

COUNTY HOMES INC., in White Plains, N. Y., included a garage, basement and attic in its 802 sq. ft. house at . . . **\$5,895**



HOUSE SIZE:
4 rooms, basement,
garage & attic
LOT SIZE: 60 x 100 ft.
PROJECT SIZE: 116 units
BASIC UNIT SALES PRICE:
\$3.40 per sq. ft.

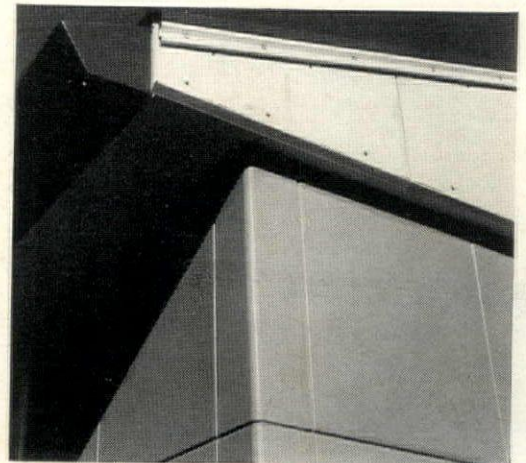
OUTLINE SPECIFICATIONS: Concrete block foundation; oak floor finish. Conventional wood frame; painted or papered plywood interior finish; asbestos shingle exterior finish; asphalt shingle roof. Rock wool insulation in walls and ceiling. Two-pipe steam heat.
FABRICATION: Completely conventional.
STANDARD EQUIPMENT: Electric range, refrigerator and automatic dishwasher, metal kitchen cabinets.
FORUM REFERENCE: June 1938, page 521.

LUSTRON CORP. develops an enameled steel house with integral color, ample storage space, radiant heat; promises 100 duplicates a day at \$7,000 each.



COLORFUL PORCELAIN ENAMELED STEEL WITH SEMI-MATTE FINISH ENHANCES THE TRIM EXTERIOR DESIGN, ELIMINATES ALL PAINTING

While many a prefabricator has staked his cash on an all-steel house and lost, Lustron Corp. has dauntlessly chipped in \$2 million of research and development on the hunch that the all-steel house, despite its unlucky past, is still a good bet. Dubious at first, RFC is now betting \$12.5 million on Lustron, and Wall Street negotiations for a still bigger wager are near completion. When all bets are placed, Lustron will start turning out 10 houses a day at Cicero, Ill., and the rate is expected to go to 100 as soon as equipment is moved into a huge war plant acquired at Columbus, Ohio. Lustron believes it has engineered out of its house most of the bugs which plagued earlier steel-house builders—its design is an attractive conservative modern; its steel is protected with porcelain enamel finish; its insulation and radiant heating system minimize the usual bugaboos of thermal conductivity and condensation. Moreover, Lustron has engineered into its \$7,000 six-room house several plusses—its wide range of integral pastel colors, inside and out, eliminate redecoration and maintenance; and its built-in furniture and cabinet space augment seven generous closets and a big utility room.



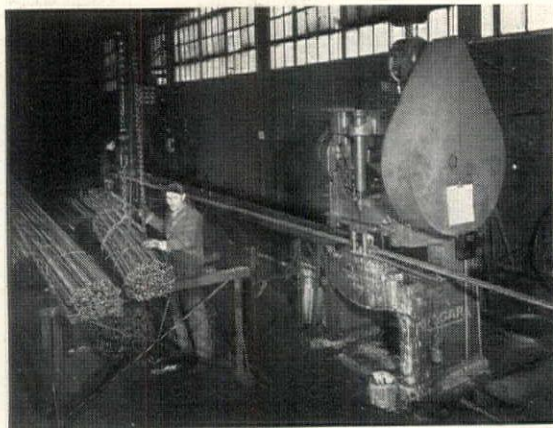
FABRICATION of steel frame and finishing panels is highly industrialized, includes porcelain enameling of everything.

Lustron Corp. is a newborn affiliate of Chicago Vitreous Enamel Product Co., a leading producer of such porcelain enamel building items as toilet stalls, laundry chutes, store fronts and standardized auto service stations. Its present housing venture was launched to recoup the business lost through the postwar curtailment of non-residential building.

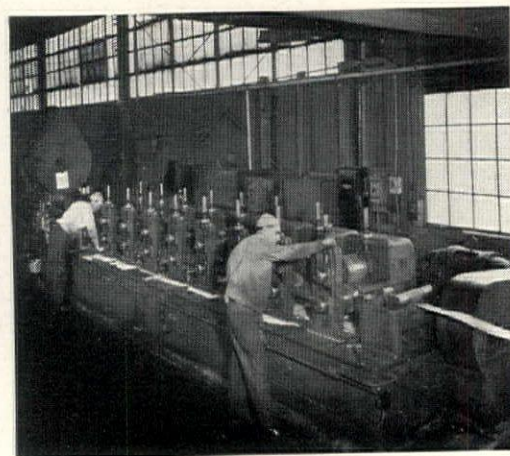
Skeleton of the house is made up of nailable steel channels (factory-welded into studs, wall sections, trusses and other framing members), all of which are protected against oxidation with porcelain enamel. Other principal parts of the construction system are interlocking porcelain enameled pans or panels and "shingles" which finish the inside and outside walls and roof. Exterior pans measure 2 ft. square and are insulated with 1½ in. of fiber glass. Interlocking with one another along two adjacent sides, they are secured to the studs with a minimum number of screws. Compressed between the pans, a flexible plastic gasket assures an air- and weather-tight enclosure. Interior walls and ceilings are finished with uninsulated square pans and vertically-ribbed panels of porcelain enamel steel. All trim, window and door assemblies and storage partitions are factory-fabricated of the same material, as are also the gutters, downspouts and the 1 x 8 ft. roof "shingles."

The only non-steel items in the house are the concrete floor slab and its asphalt tile finish. For this reason, practically the entire house will be included in the Lustron package. Exceptions, to be provided locally: foundation and flooring materials, glass and mirrors, electrical conduit, wire, switches, etc., and pipe. Included in the package, however, will be a plumbing stack and all light fixtures. Following the practice of the auto industry, Lustron plans to assemble these packages in ten regional warehouse-assembly plants for truck shipment to local dealers, who are expected to finish the job with 130 man-hours of site labor—from pouring the slab to hanging the storm sash. It is hoped that AFL sheet metal workers, electricians and plumbers will be able to handle all the work without jurisdictional squabbles with other trades. However, if union difficulties develop, Lustron will concentrate its activities in small towns and rural areas, where labor is not unionized and the house's low fire insurance rate should prove particularly attractive.

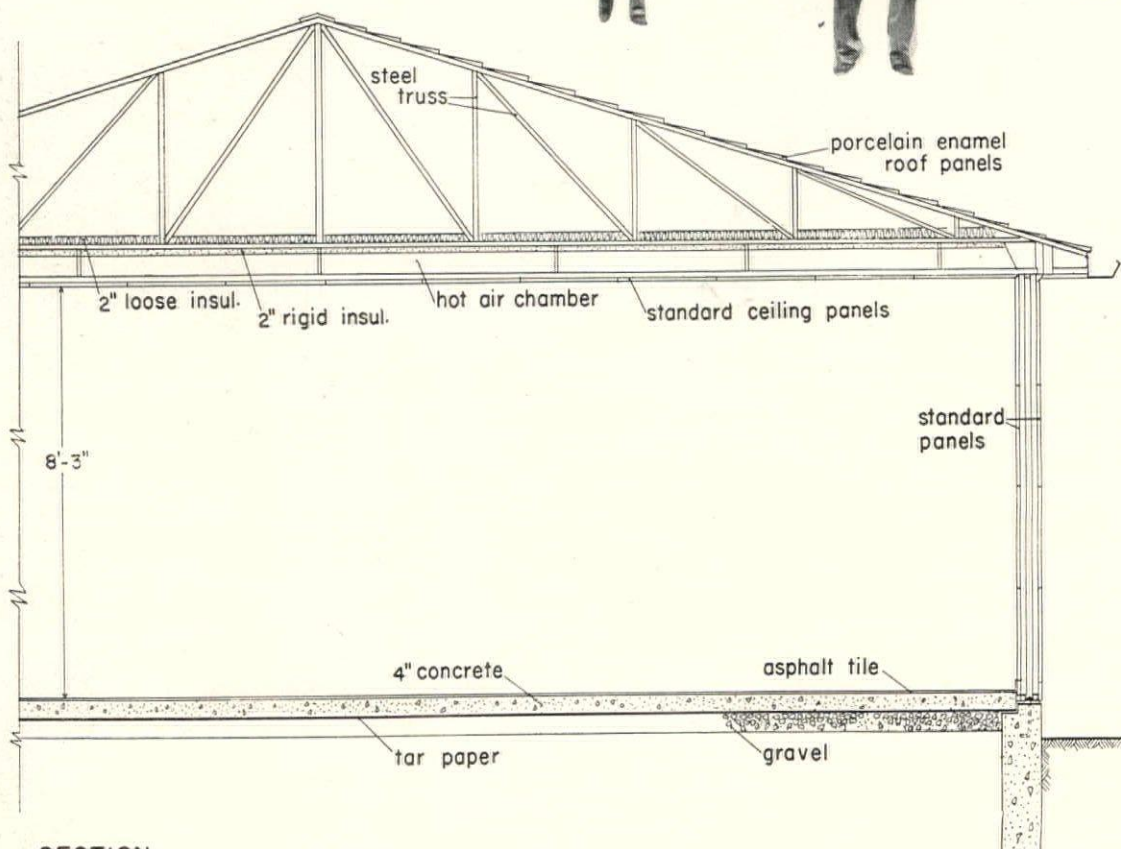
Besides its attractive, colorful appearance, salesmen will make the most of Lustron's low rate of depreciation, ease of maintenance, ease of cleaning and its proof against vermin, decay and fire. Moreover, Lustron will help them with a continuous national promotional program financed on a unit appropriation basis. With this intensive consumer advertising, Lustron hopes to meet its competition and, more importantly, to overcome any opposition from the building industry's vested interests and the steel industry's longstanding customers who may object to the big quantities of steel which Lustron will require.



NAILABLE FRAMING MEMBERS are rolled from a continuous strip of steel at the rate of 100 ft. per minute and pushed to an adjacent machine (above) for cutting and bundling. Later they are porcelain enameled.

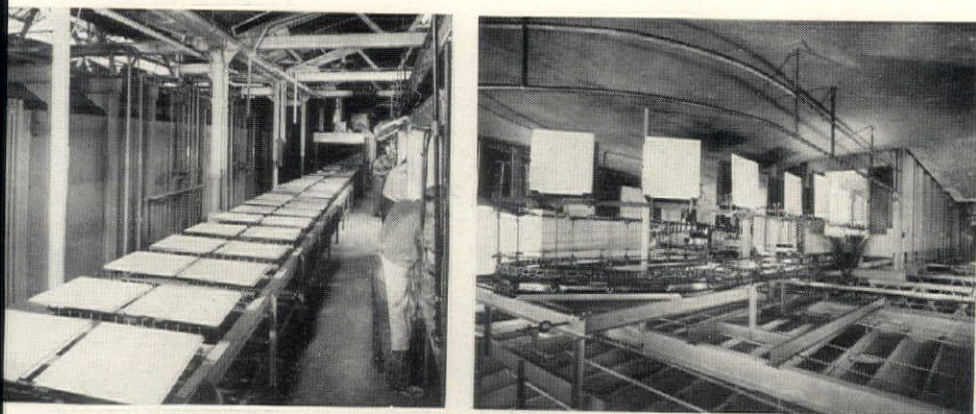


STEEL FRAME ASSEMBLIES, factory welded, are easily handled by three men. Typical house requires 20 wall sections of 11 different types, six partition panels, several storage partitions and ten trusses.



SECTION

Site assembly will require only 130 man-hours.



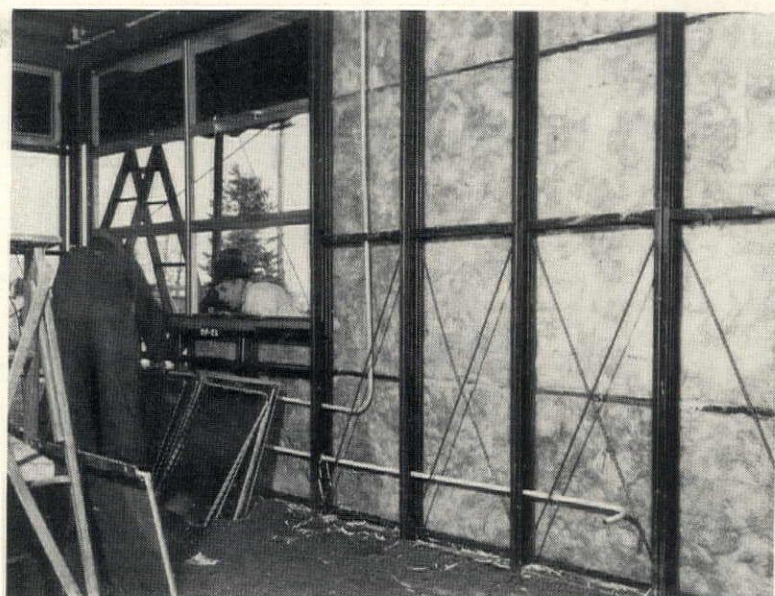
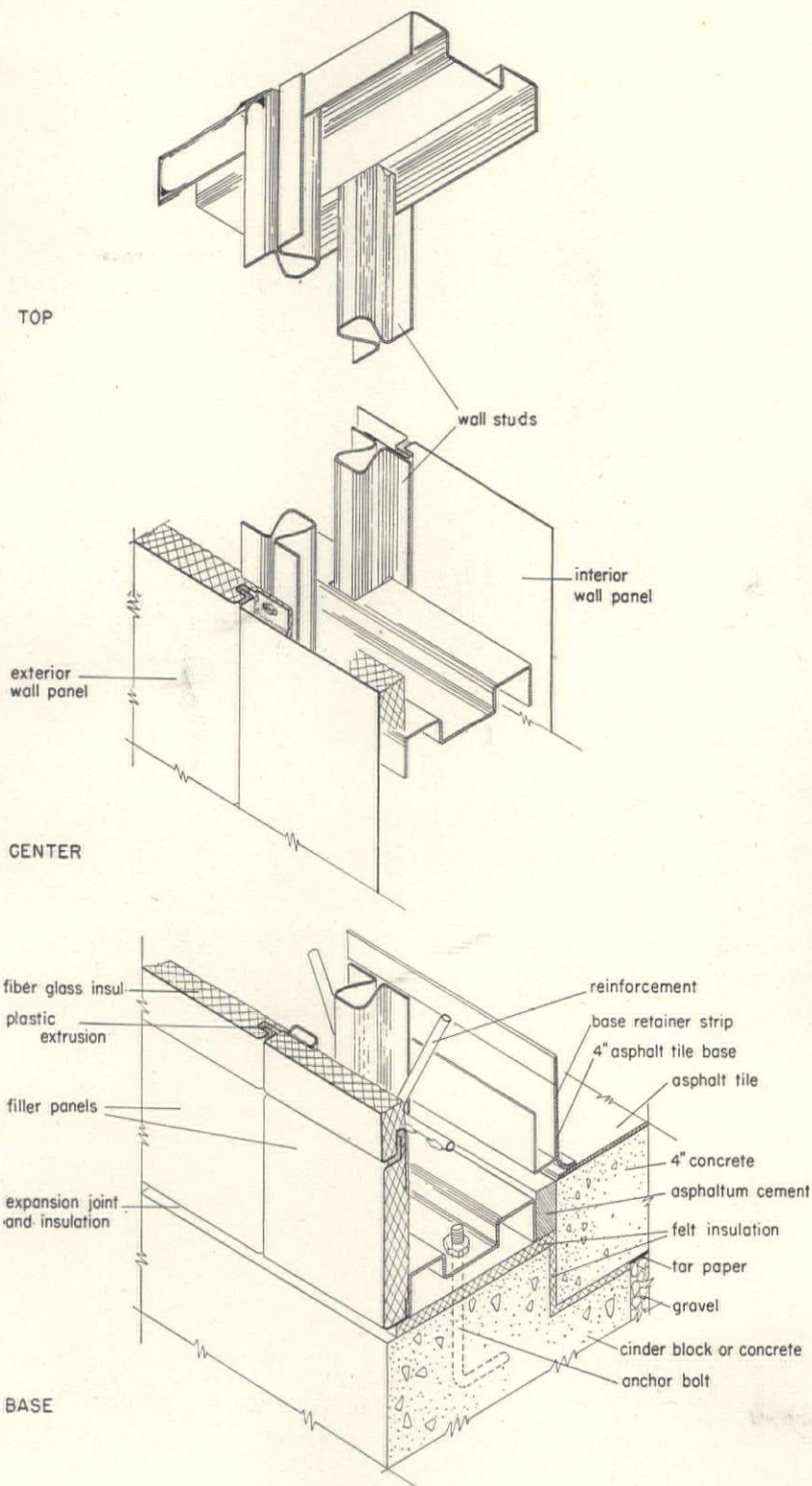
PORCELAIN ENAMELING of wall and ceiling pans is done on Lustron production lines: Left—pans are sprayed with enamel in booths, then placed on conveyor for trip through drying ovens. Right—pans emerge from continuous firing furnace where 1,550° temperature fuses enamel to steel, are then conveyed to shipping area. Coloring is integral part of enameling process.



PREFABRICATED FRAME IS BOLTED TO CONCRETE SLAB



EXTERIOR PANS INTERLOCK, ARE SCREWED TO FRAME



INSIDE PANS WILL CONCEAL INSULATION AND CONDUIT

CEILING PANS FORM THE RADIANT HEATING SURFACE





SMALL BEDROOM'S HIGH WINDOWS INCREASE PRIVACY AND WALL SPACE

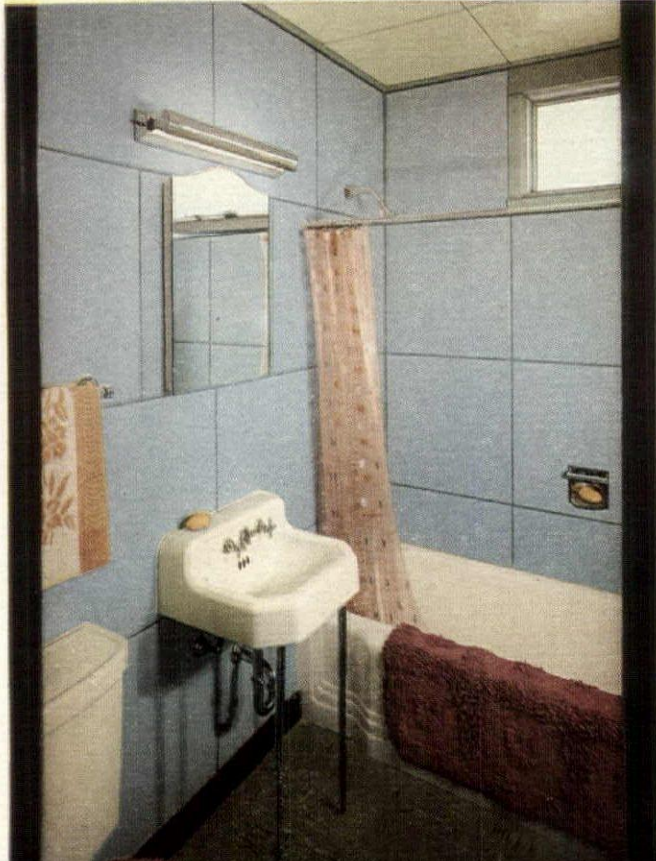
DESIGN, based on an efficient floor plan, features big

2290
3/15

BUILT-IN FEATURES of the Lustron house are shown below. The prefabricated partition between kitchen and dining room provides storage space in both rooms and a pass-through counter to simplify serving of meals. One wall of the master bedroom (center picture) consists of a large mirrored dressing table completely surrounded by steel drawers, cabinets, closets and, on the reverse side, by recessed shelves for the living room. Additional closets are provided for each bedroom and for linen, coats and cleaning equipment; and most of them have sliding doors to increase accessibility. The fluorescent-lighted kitchen is equipped with a large sink-cabinet unit, four wall cabinets and an exhaust fan. Range and refrigerator are the only extras not included in the average \$7,000 sales price of the house.



BATHROOM, LIKE KITCHEN, HAS SQUARE WALL PATTERN



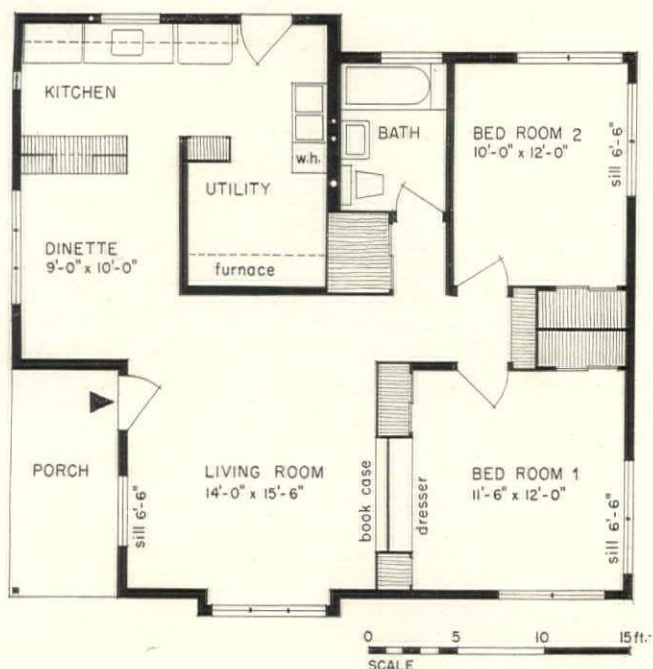
DINING SPACE OFF LIVING ROOM HAS BIG WINDOW AND CABINET



windows, built-in furniture, a lot of storage space and harmonious use of integral colors.



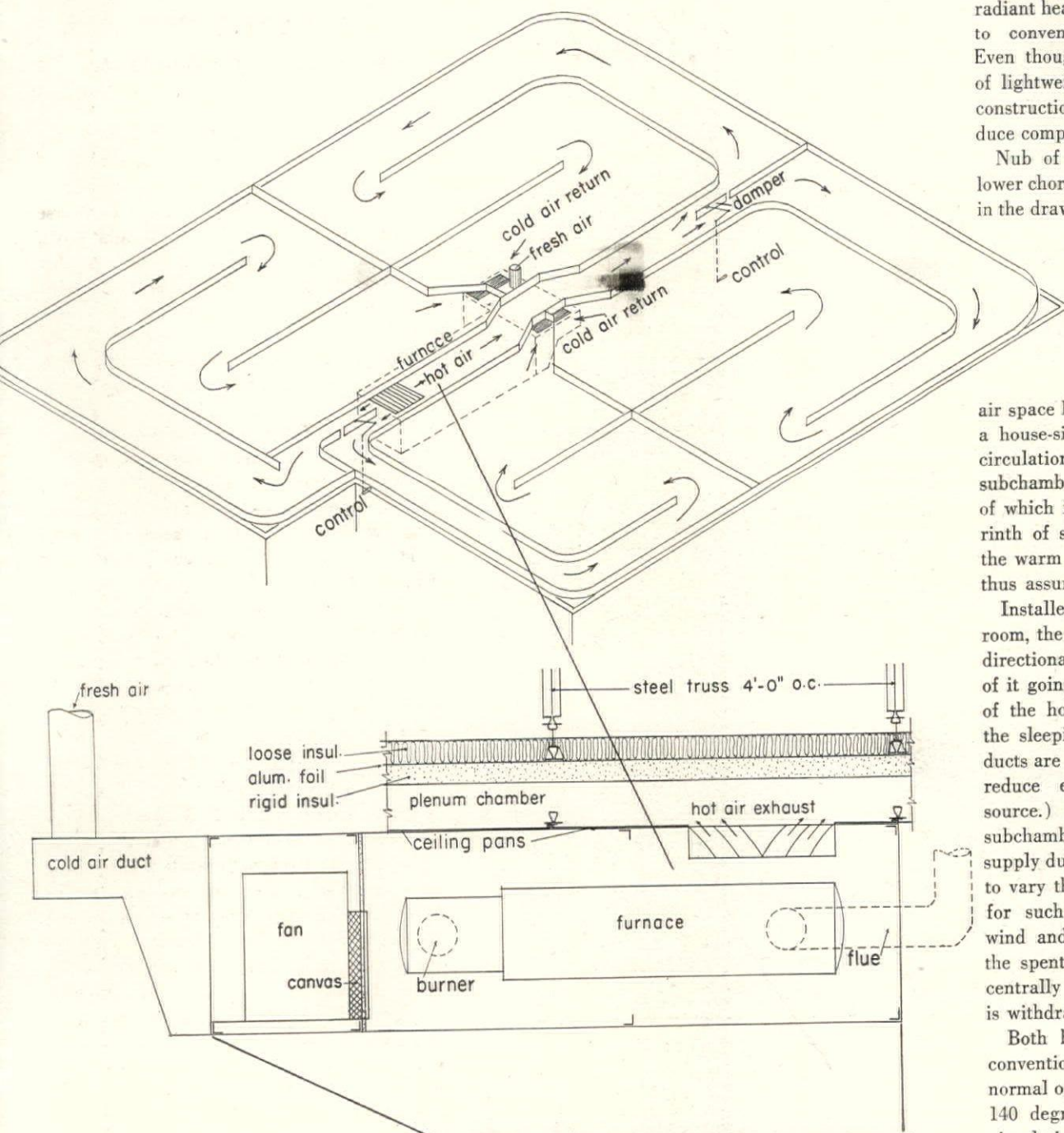
LIVING ROOM BOASTS A BIG BAY WINDOW AND RECESSED SHELVES. FINISHES ARE PERMANENTLY COLORED AND EASILY CLEANED



PLAN AND DESIGN are sensible and simple. Lustron's consulting architects, Blass & Beckman, have arranged the open plan for maximum convenience and economy—only the bedrooms and bath are enclosed with doors and much of the floor area is subdivided by prefabricated storage partitions and closets. Windows are large, but leave ample wall space for flexible furniture arrangement. Both interior and exterior styling features attractive combinations of 12 colors and two structural patterns—2 ft. squares and narrow vertical panels.

Since erection of the test house pictured on these pages, Lustron has made several revisions in the floor plan. Most important, the offset on the bathroom side of the house has been eliminated, adding 34 sq. ft. to the bedroom-bathroom wing without adding to the sales price. Also, the laundry trays have been moved to the other side of the water heater where they will not be visible from the kitchen.

RADIANT HEAT is provided by warm air in a ceiling plenum. Overhead furnace reduces ductwork, saves space.



HEATING UNIT in porcelain enameled housing is hung from the utility room ceiling, thus occupies no useful space. Small size of the furnace is made possible by thorough insulation of the house's all-steel construction. Exterior wall panels are completely insulated, and the only through-conductivity occurs at the points where these panels are screwed to the studs. Moreover, studs are comprised of two vertical members joined by only three small metal spacers at the top, center and bottom. The thermal conductance value of the wall is thus reduced to 0.20 BTU per sq. ft. per degree—0.05 better than the factor for uninsulated wood frame construction and relatively good for an all-steel wall. With a ceiling factor of less than 0.10 and a floor factor of 0.70, the house's total heat loss is estimated at about 55,000 BTU.



Particularly well suited to a mass-produced house, Lustron's simple, efficient warm air radiant heating system may be readily adapted to conventional small house construction. Even though the design is based on the use of lightweight metal roof trusses, wood truss construction, properly engineered, could produce comparable results.

Nub of the Lustron system is the double lower chord of the steel roof trusses. As shown in the drawing (left, below), its lower member serves as a joist from which is hung the metallic ceiling. To the under side of the upper member, big sheets of 2 in. insulating board are clipped, which, in turn, support aluminum foil and 2 in. of fiber glass insulation. The 6 in. air space between the ceiling and insulation is a house-size plenum chamber for the forced circulation of warm air. It is divided into four subchambers by sheet metal partitions, each of which is further divided by a simple labyrinth of sheet metal baffles, which distribute the warm air throughout the subchamber and thus assure an evenly heated ceiling.

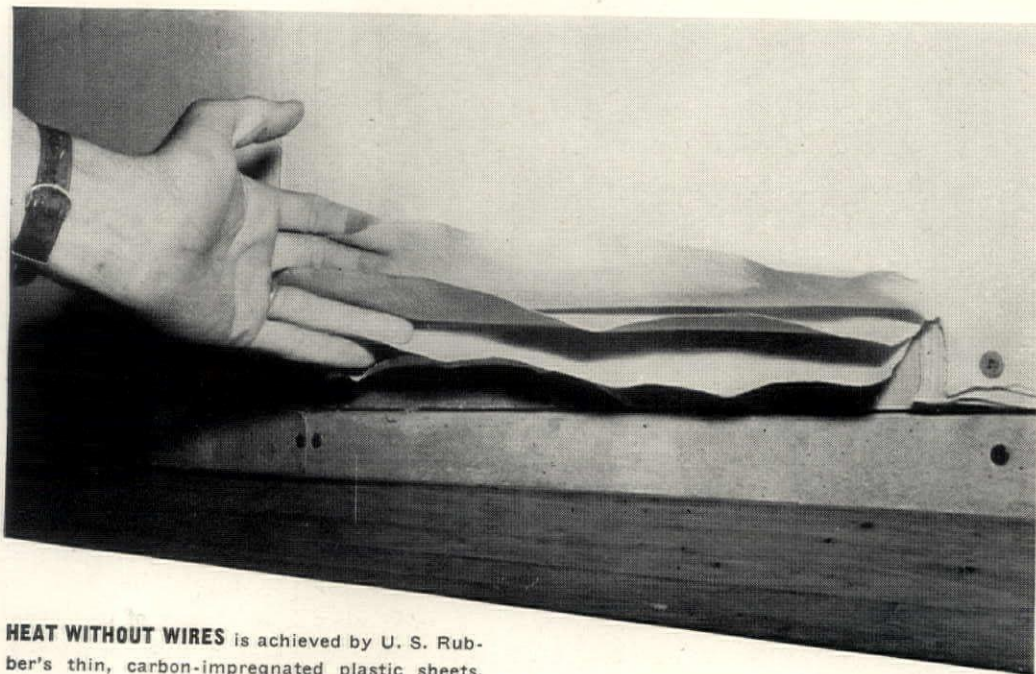
Installed close to the ceiling of the utility room, the heating unit discharges air through directional vanes into the ceiling plenum, half of it going via a short duct to the living half of the house, the rest, via a longer duct, to the sleeping half. (Ceiling pans under both ducts are insulated with $\frac{1}{2}$ in. of fiber glass to reduce excessive heat transfer near the source.) Distribution of the air to the four subchambers is controlled at the end of each supply duct by dampers which may be adjusted to vary the room temperatures or compensate for such outside temperature influences as wind and sun. Four cold air returns carry the spent air to a small chamber (above the centrally located coat closet) from which it is withdrawn by a fan and recirculated.

Both burner and fan are activated by a conventional living room thermostat. During normal operation, hot air is delivered at about 140 degrees, loses about 45 degrees during circulation and maintains the ceiling surface at an average temperature of 105 degrees. Being metal, the ceiling reacts quickly to the action of the thermostat. The temperature gradient between points 3 in. off the floor and 3 in. below the ceiling averaged less than 3 degrees during Chicago's traditionally cold winter.

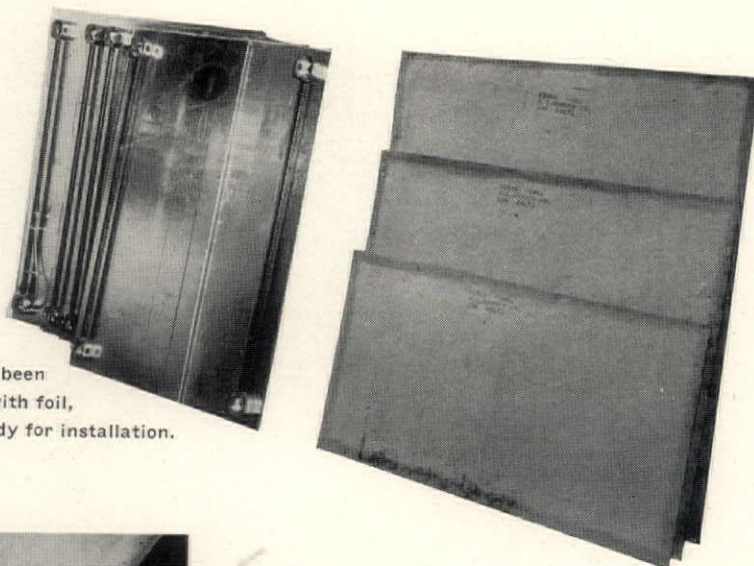
Although there has been no evidence of condensation in the walls of the test house, Lustron admits its possibility. To minimize its effect and, at the same time, increase the house's radiant heating surfaces, 5 to 10 per cent of the heated air in the ceiling plenum is bled into the exterior walls. To compensate for this loss of air, an equal amount is taken into the system through a roof vent equipped with a barometric damper control.

PRODUCTS AND PRACTICE

FURNACE ROOM NO THICKER THAN A SHEET OF CARDBOARD made possible by new electric heating elements. U. S. Rubber's coilless panel and Crittall's "radiant wallpaper" promise spectacular savings in space, weight and maintenance.



HEAT WITHOUT WIRES is achieved by U. S. Rubber's thin, carbon-impregnated plastic sheets.



ENTIRE HEATING SYSTEM lies in these thin, lightweight panels. Heating membrane has been bonded to 1/4 in. board, backed with foil, faced with fabric and wired ready for installation.



NAILED DIRECTLY TO RAFTERS, panels are connected by electricians from above, then covered with 8 in. insulation fill. "Blank" panels are used in those portions of the ceiling where no heating is required.



JOINTS TAPED, panels are ready for finish. Paper or paint may be either applied directly to fabric surface or on top of very thin coat of finish plaster.

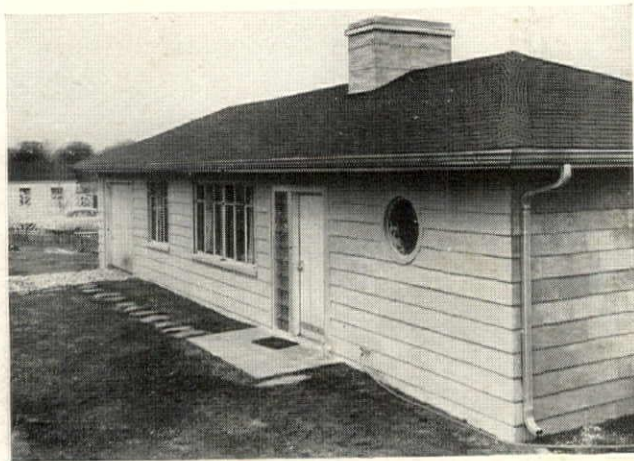
The question of which must come first—the hen of low electric power rates or the egg of high domestic demand—is still a matter of controversy. But developments such as reverse cycle heating (FORUM, Nov., '46 and April, '47) are obviously bringing closer the day when electricity will be fully on a par with other fuels. Two recent developments—the electric panel heating system of U. S. Rubber Company and Richard Crittall Radiant Heating, Inc.—undoubtedly will accelerate this trend.

Of the two, that of U. S. Rubber is the most novel. Unlike the Crittall system, it employs no heating coils but instead relies upon a carbon-impregnated rubber sheet as an electrical conductor. The new sheets have been field-tested in the TVA cheap power area, where Stuart Fonde, Knoxville contractor, has used them as a radiant ceiling in the house shown here. Covering about 70 per cent of the total ceiling area, the thermostatically-controlled panels have held the house to an even 69-70 degree air temperature. Operating costs of this silent, clean, invisible and completely automatic heating system will run around \$65 per year at TVA's low rates.*

Basic component of U. S. Rubber's panel is the conductive membrane. Kin to the manufacturer's war-developed flexible heating pads for airplane propellers and guns, this element is a carbon-impregnated sheet of plastic and rubber laminate, 4/100 in. thick. Voltage is passed across the sheet from one edge to the other by the carbon black particles embedded in it. Resistance to the passage of the current through the dispersed particles heats the sheet uniformly. As fabricated for the Knoxville project, the membrane was bonded to a thin asbestos board, faced with a cotton fabric surface and backed up with aluminum foil. The result is a rigid, quarter-inch panel, factory-equipped with junction boxes and conduit. The panels are fabricated in a single width of 4 ft., and in three lengths—2, 3 and 4 ft. There is a 2 1/2 in. carbon-free border for trimming and nailing. No screws or nails should perforate the effective area of the panel. However, holes up to 2 in. in diameter may be cut for outlets provided they have an insulating bushing or washer.

Installation of panels proved simple and quick. Using "blanks" of same size and thickness where no heat was required, carpenters nailed the panels directly to ceiling joists, foil-covered surface up. After panels were connected by electricians, an 8 in. rockwool blanket was placed on top. In part of the

* Three cents for first 50 k.w., sliding down to a minimum rate of three-fourths of a cent for everything over 1400 k.w. in any one month.



HEAVY INSULATION is essential to economical electric panel heating. Knoxville demonstration house has slab floor, insulation-filled concrete block walls and eight-inch blanket above foil-covered heating panels.



house, the joints were merely taped and the ceiling painted. But Builder Fonde feels that a light plaster coat, applied directly to rough fabric surface, yields a better looking surface.

The electrical side of the installation was surprisingly simple, too. Organized into five circuits (largely by rooms), the panels were hooked up in parallel. Short BX jumpers connected one panel to the next, ending up with a No. 12 BX lead for the group. Individual

thermostats control each group. Electrical input is 16 w. per sq. ft. of panel, except in bath and sunporch ceilings where 20 w. per sq. ft. were used. (Obviously, various wattages can be achieved by varying density of carbon particles.) Total load is 11.2 k.w.

The Knoxville system is designed to operate at a maximum surface temperature of 110 degrees. Under test, it maintained an inside air temperature of 80 degrees when it was 5

above zero outside. The day the system was turned on, with an outside temperature of 10 degrees, it took ten hours for the house to reach 70 degrees—the temperature at which maximum comfort was reached. Because of this time lag in heat accumulation and decay—a characteristic of radiant systems—Mr. Fonde designed this installation for continuous operation. However, because the house has large glass areas facing south, the thermostats cut off at regular intervals due to the effect of solar heat gain.

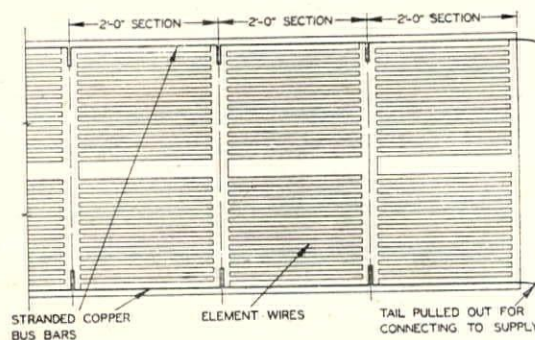
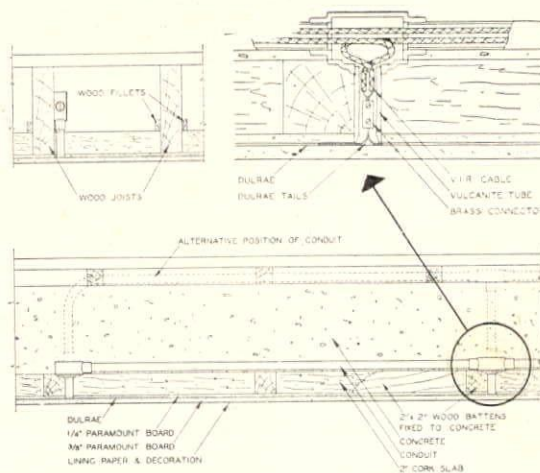
Although confident of the efficiency and operating economy of their new system, U. S. Rubber is not yet able to hazard more than a guess on installation costs. The panels used in the Knoxville house were hand fabricated. Until they get into volume production—which will probably take several months—U. S. Rubber can only say that it will be competitive with other systems and “cheaper if possible.”

Mr. Fonde is convinced that the new system will prove successful in many areas. He points out that it is not only the kilowatt cost of power that is important but also the number of k.w. hours per heating season. In many parts of the country this is comparatively small. Key to successful electric heating, in his opinion, is first-rate insulation of walls and ceiling.

DELIVERED IN ROLLS LIKE CARPETING, Crittall's low-temperature electric heating element may be installed like wallpaper.



IDEAL FOR REMODELING, Crittall's heating element comes in 100 ft. strips, may be cut every 2 ft., has 2 in. selvage for stapling to joists.



ELECTRICAL INSTALLATION is simple. Material can be cut at 2 ft. intervals, built-in “tail” pulled out for connection to transverse conduit. Details at left show typical installations in wood and concrete.



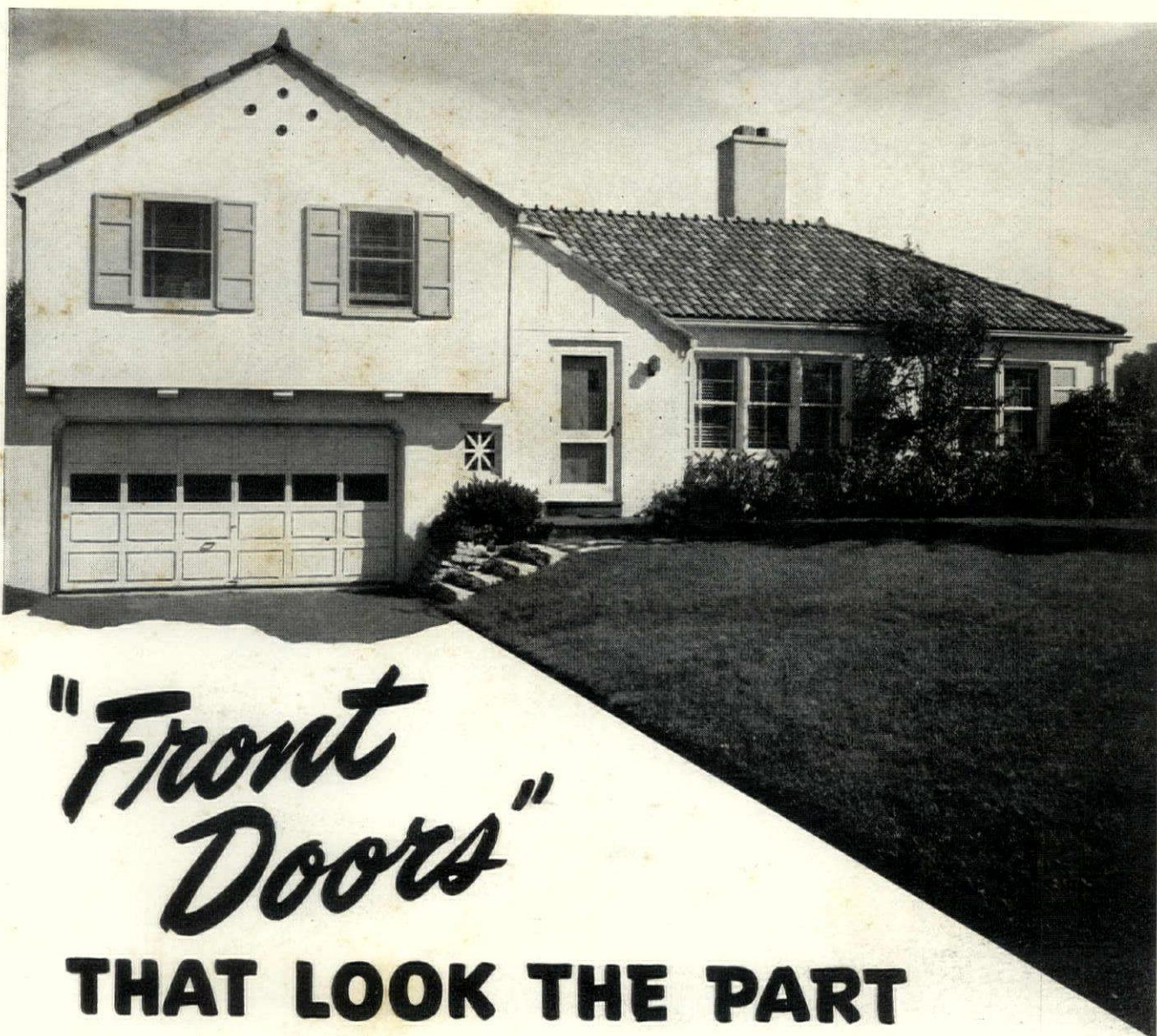
ONE OF MANY commercial installations in England, this showroom has a Dulrae electric ceiling. Higher fuel costs are offset by lower installation costs, elimination of boiler rooms, etc.

Operating on the same principle as the familiar electric blanket, Crittall's low-temperature electric heating element, Dulrae, consists of a fine chrome nickel coil embedded in a thin sheet of plasticized paper or fabric material. Although it can be shop-fabricated into panels similar to those of U. S. Rubber (above), its widest and probably most practical application abroad has been as a “heated wallpaper.” Coming in 100 ft. rolls, in 24 and 48 in. widths, the coils are fabricated so that it can be easily cut in multiples of 2 ft. The roll has a 2 in. “selvage” for stapling. Dulrae operates on 18 w. per sq. ft., with a surface temperature of 98 to 100 degrees and a thermal output of approximately 50 BTU per sq. ft. For special industrial and transportation applications, however, the Crittall element comes in two higher capacities—*Medrae*, up to 150 degrees, and *Hirae*, up to 900 degrees.

Although Dulrae can be applied like wallpaper, it does not furnish a suitable surface for

finished ceiling. Thus, best on-the-site installations have been achieved by (1) stapling it along selvage to building board and then nailing board to studs, heating element up; or (2) forming a sandwich of two boards with the Dulrae element in between. (In either case, the heating grid must not be punctured by nails or staples.) Joints are then taped and ceiling painted or papered. Insulation above the ceiling is placed after electricians have hooked up the grids. Where heat is not required, panels are merely left dead.

Electrically, Dulrae is simple—and safe enough for Lloyd's to grant 100 per cent approval for residential, commercial, aircraft and marine installations. A negative and positive wire is built in along either side of panel strip and a conduit is run across them to pick up each panel. Installation costs abroad have run “somewhat cheaper” than conventional systems, operating costs about 10 per cent higher, according to Crittall.



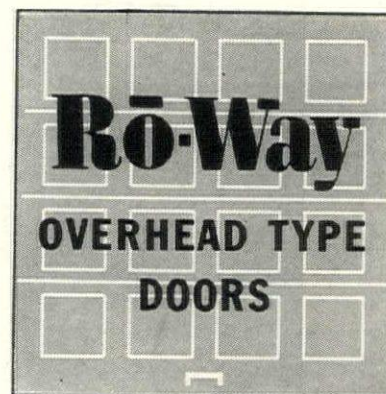
*"Front
Doors"*

THAT LOOK THE PART

"Good Looks" is a "must" in the garage doors you use for the homes of today. These are the doors that have moved up front, but Ro-Way styling and construction got there first, with lasting good looks, smooth operation and lasting service.

Exclusive Features make Ro-Way the most wanted "Front" Door for today's up front "garages" . . . For example, each spring is "Power-metered" to balance the weight of the Ro-Way Door on which it is used. Then too, all hardware is Parkerized and painted after fabrication.

Ro-Way Overhead Type Doors are built completely in the Ro-Way plant and dependable Ro-Way sales and installation service is available all over America. Write for free catalog. See our catalog in Sweet's.

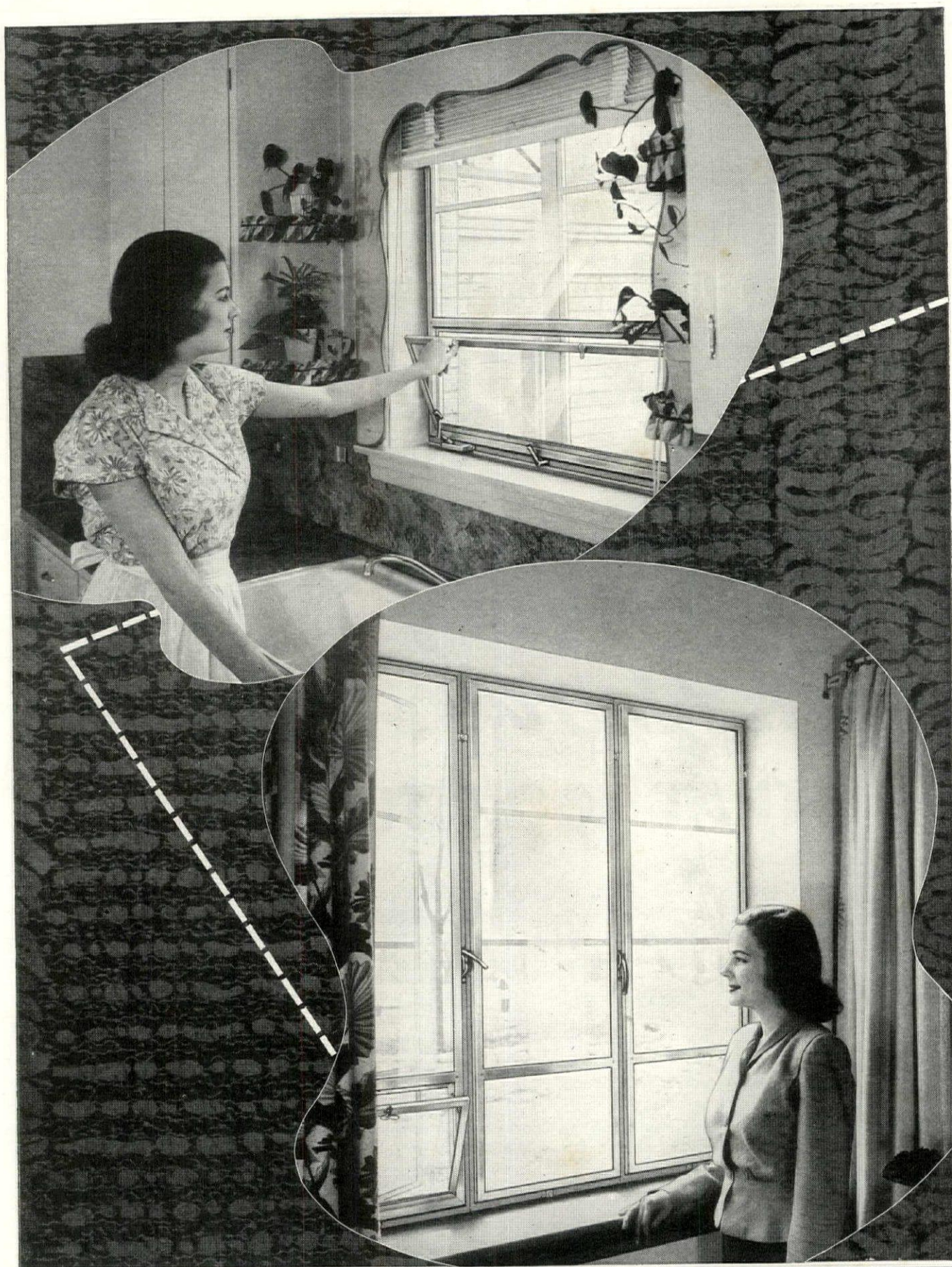


ROWE MANUFACTURING COMPANY

923 Holton Street

Galesburg, Illinois, U. S. A.

There's a RoWay for every Doorway!



In construction products **CECO ENGINEERING**

Why Ceco added something NEW to Metal Windows

How many times have you said to yourself, "Metal windows are all right in the summertime, but what about winter?" Ceco considered that question and got busy. What they did and what they learned became history when Ceco announced All-Aluminum Storm Windows for metal casements. Now, for the first time, you can get a storm window that really allows you to use the controlled ventilation principle built into metal casements. Metal screens have always offered perfect ventilation, so summer presented no problem. Now the winter problem is solved. Here new beauty and utility are combined with ease of installation. Here, truly, is the first trouble-free, beautiful storm window for steel casements.

WHY SPECIFY CECO STORM WINDOWS AND SCREENS?

- 1 Ceco's special-design storm panel covers the entire window opening—the condensation problem is solved, yet ventilation when needed is also provided.
- 2 Rubber weathering seal around the perimeter of the window sash provides the tightest possible seal.
- 3 Ceco storm windows are easy to put in and take out from the inside.
- 4 They are neat and trim—slender frames mean more light gets in.
- 5 Ceco storm windows fit perfectly—which means no on-the-job planing is necessary.
- 6 Maintenance cost is eliminated—no painting or re-painting required.
- 7 Ceco screens cost no more than ordinary screens—factory finish—no on-the-job trimming or fitting.
- 8 Standard screens for every purpose—will not warp, shrink, swell, twist or rot.

CECO EXPANDS AGAIN...

To improve service in the Eastern market, Ceco provides additional manufacturing and warehousing facilities through its newly opened New York District plant and office at Hillside, N. J.

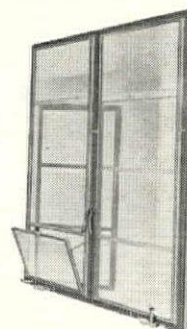
CECO STEEL PRODUCTS CORPORATION

GENERAL OFFICES: 5701 W. 26th Street, Chicago 50, Illinois

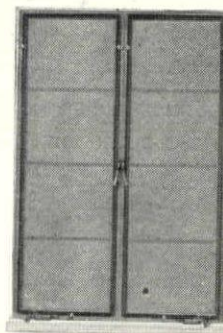
Offices, warehouses and fabricating plants in principal cities

**CECO
STEEL**

makes the big difference



Aluminum storm windows in position with optional hopper vent. Roto operator of casement operates casement ventilator for perfect controlled ventilation.



Notice the neat appearance of the screens installed on the metal casement above. Precision engineering means a perfect fit.

Partial list of other Ceco Products:

COMBINATION ALL-ALUMINUM STORM-PANEL-AND-SCREEN FOR WOOD WINDOWS • MEYER STEELFORMS • REINFORCING STEEL • STEEL JOISTS • ROOF DECK • METAL LATH AND ACCESSORIES
HIGHWAY PRODUCTS • CORRUGATED ROOFING



here's a store that's summer-proof

Customers like its smart, modern design and fixtures. But the allure that pulls them in when summer streets are like steam baths is air conditioning.

Shoppers actually seek out stores that offer air conditioning. They linger longer where the "weather" is cool . . . and buy more. Alert retail merchants are putting themselves in a better com-

petitive position with the Carrier 41B Commercial Weathermaker.

This unit—designed for remote installation—has built-in compressors from 5 to 15 tons capacity . . . ample for the small store. Superior fans make it unnecessary to specify oversize duct work. Both fan and compressor speeds are adjustable. Standard size filters

make replacement simple. The 41B has a high salvage value.

Air conditioning by Carrier enhances the prestige of any store. When you specify a Carrier Commercial Weathermaker, your client or customer gets the *plus* advantages of Carrier's world-wide experience. Carrier Corporation, Syracuse, N. Y.

Carrier

air conditioning

refrigeration

industrial heating

Assembly-line building operations effect cost savings that enable the Byrne Organization to produce, in today's market, this three-bedroom, steel-framed house for under \$7,000 — at Harundale, Maryland.

Leading contracting firm
demonstrates
**how to
mass-produce
low-cost homes**
that are a credit
to any firm's reputation

... by utilizing the versatility of **Milcor Steel Building Products**

By applying repetitive operations to line-production methods in the field, The Byrne Organization, Washington, D.C., builds really substantial housing for veterans — at low cost.

At present, the Byrne method is being applied to some 4,500 steel-framed homes — all embodying details of quality, materials, and workmanship hitherto unavailable to home owners of moderate means. The speed of erection is amazing. The structures are lighter,

stronger, less costly — and far safer against fire hazards.

Perhaps the use of Milcor Steel Building Products at the Harundale housing project — a Byrne-planned community five miles south of Baltimore, Maryland — may suggest ways to similarly improve the efficiency of erection for the homes you design and build:

Here, *Milcor Steel Studs*, used as framing, are assembled in the shops

and welded together on the site. They are used also in hollow partitions between rooms.

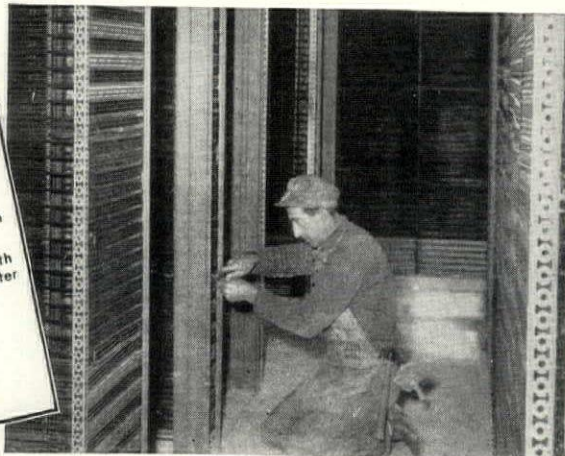
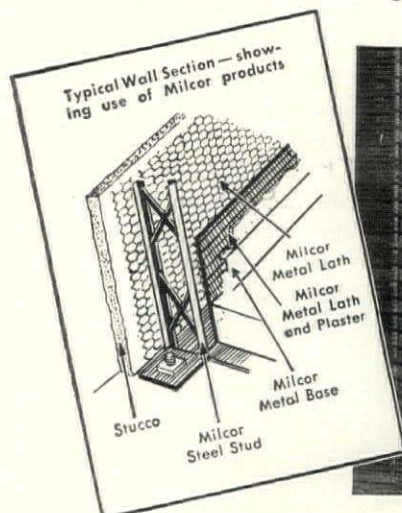
Milcor Metal Lath provides continuous steel reinforcement for the three-coated plaster interior walls and the stucco exterior walls.

Milcor Metal Base, used as interior trim, simplifies finishing; is permanent, sanitary, economical to maintain.

Milcor Louver Ventilators provide air circulation that relieves summer heat and retards moisture condensation in winter.

Consult the Milcor Manual in Sweet's, for data that helps you apply these and other Milcor Steel Building Products to your particular problems.

Left: Tying Milcor Metal Lath to Milcor Steel Stud — in a Harundale home. Note the use of Milcor Corner Bead, to protect the straight-edge beauty of plaster corners.



MILCOR

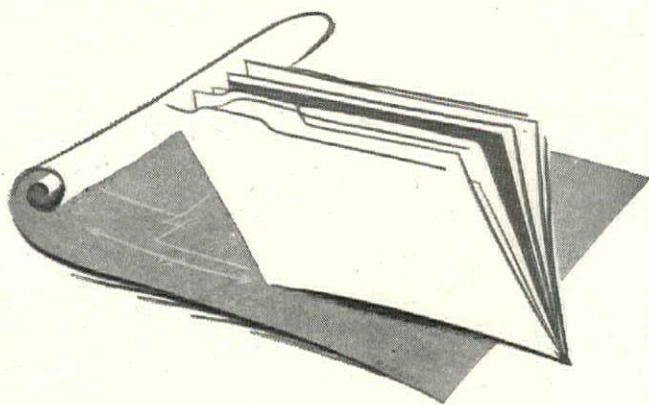
MILCOR STEEL COMPANY

Inland Steel Products

MILWAUKEE 4, WISCONSIN

Baltimore 24, Md. Buffalo 11, N. Y.
Chicago 9, Ill.
Cincinnati 25, Ohio Cleveland 14, Ohio
Detroit 2, Mich.
Kansas City 8, Mo. Los Angeles 23, Calif.
Rochester 9, N. Y.

ANNOUNCEMENTS



A Georgia Marble Service tailor-made for you



Because Georgia Crystalline Marble is used in many different ways, The Georgia Marble Company offers a special service that should be very useful to you.

In our files, accumulated over a period of 62 years, are photographs and data sheets on interior and exterior employment for theaters, store fronts, courthouses, post offices, office buildings, residences, churches, government buildings, banks, schools, museums, stairs, shower stalls, wainscoting, entrances, mantels and other uses.

A reference service for you. If you will tell us the type of usage that interests you, our nearest Sales and Service Office will prepare a tailor-made packet of pertinent photographs and detail data and either bring it or send it to you, together with samples of Georgia Marble—"the marble with the sparkling crystal." For prompt service, contact the nearest of the offices listed below.

GEORGIA MARBLE

The Marble with the Sparkling Crystal

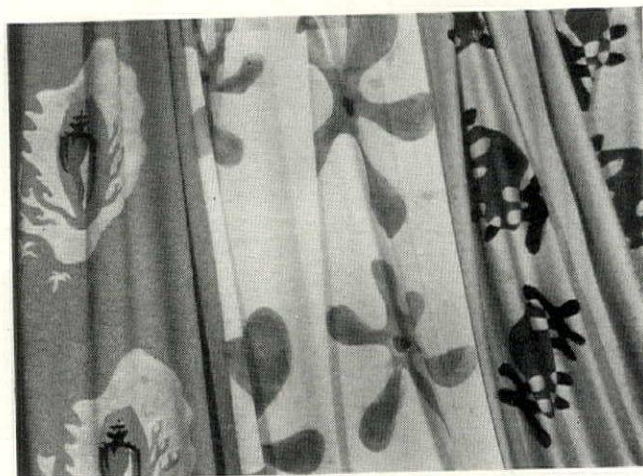
Produced by THE GEORGIA MARBLE COMPANY of Tate, Georgia

Sales and Service Offices

ATLANTA 3, GA., 613 Bona Allen Bldg.	WASHINGTON 5, D.C., 410 Bond Bldg.
CLEVELAND 15, OHIO, 1570 Hanna Bldg.	NEW YORK 16, N.Y., 419 Fourth Ave.
BRIGHTON 35, MASS., 300 N. Beacon St.	ROCHESTER, N.Y., 120 Village Lane
PHILADELPHIA 2, PA., 1256 Commercial Trust Building	

EXHIBITIONS

TOMORROW'S BUILDINGS, an exhibit prepared by the Architectural League of New York, will present current work of its members (projects on the boards or in process of construction) in the fields of architecture, landscape architecture, painting, sculpture and interior design. The exhibit will open on May 22nd and will run until September 15th.



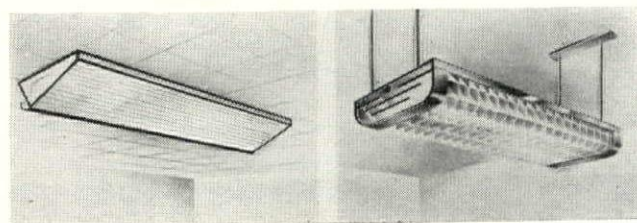
NEW FABRICS from fifteen studios were displayed at Georg Jensen's in New York City during May. The collection included a wide variety of materials ranging in weight from heavy handwoven upholstery fabric to nylon sheers. Among designs presented were: Dan Cooper's hand-screened abstractions; air-brushed designs by Donelda Fazekas (see above); handweaves enlivened with metal thread from designers, Gilbert Blackman Rose and Dorothy Liebes; and a black and white print by Salvador Dali.

BUILDING PREVIEWS

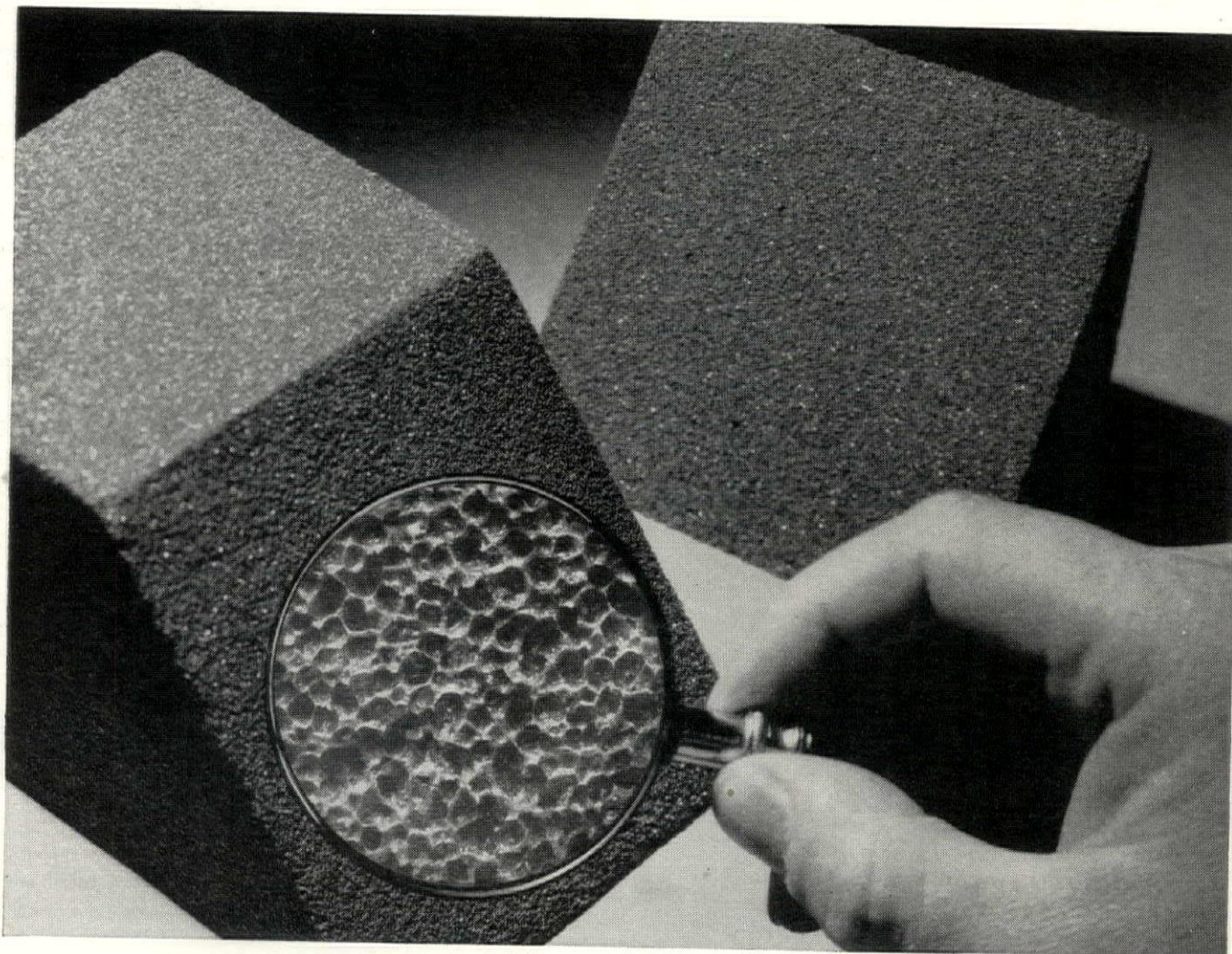
THE COCA-COLA BOTTLING PLANT now under construction in New York City will provide facilities for manufacturing and loading, as well as for sales and executive staff offices. First and second floors of this four-story building are designed to house 90 trucks during loading operations. The third floor (connected with ground level by conveyors and ramps) will house manufacturing processes. This \$2,000,000 building of structural steel with brick and limestone exterior was designed by Walter M. Corey, architect.

A GARDEN-TYPE HOUSING DEVELOPMENT is planned for Orono, Me. by Prudential Insurance Co. (Eaton W. Tarbell, architect). Fifteen two-story buildings containing 60 apartments (1½- to 6-room units) will occupy a 12-acre site. Buildings will utilize solar heating and every apartment will have its own private terrace or balcony. Garages for each apartment will be so arranged that no tenant need walk more than 12 ft. to reach his car.

AWARDS



WINNING DESIGNS in Sylvania Electric's Fluorescent Fixture Design Contest for schoolroom lighting were announced recently. First prize of \$500 went to Lynn Sweetland, Jr. of N. Y. State Electric & Gas Corp. (Continued on page 120)



HERE'S THE SECRET OF Permanent Insulation



● Look at the picture for a minute. You can see that PC Foamglas is composed of tiny glass cells . . . millions of them. And these cells are filled with sealed-in air.

Used as an insulating material on roofs and in walls and floors, PC Foamglas helps to maintain desired temperature levels and to minimize condensation. Because it is glass—and therefore waterproof, verminproof and fireproof—it also has the unique advantage of retaining its insulating value *permanently*.

When you are figuring insulation, our engineers will be glad to help you decide on the *proper thickness* of PC Foamglas to give you efficient, permanent insulation. Meanwhile, send the coupon for your selection of our helpful, informative free booklets. Pittsburgh Corning Corporation, 632 Duquesne Way, Pittsburgh 22, Pa.

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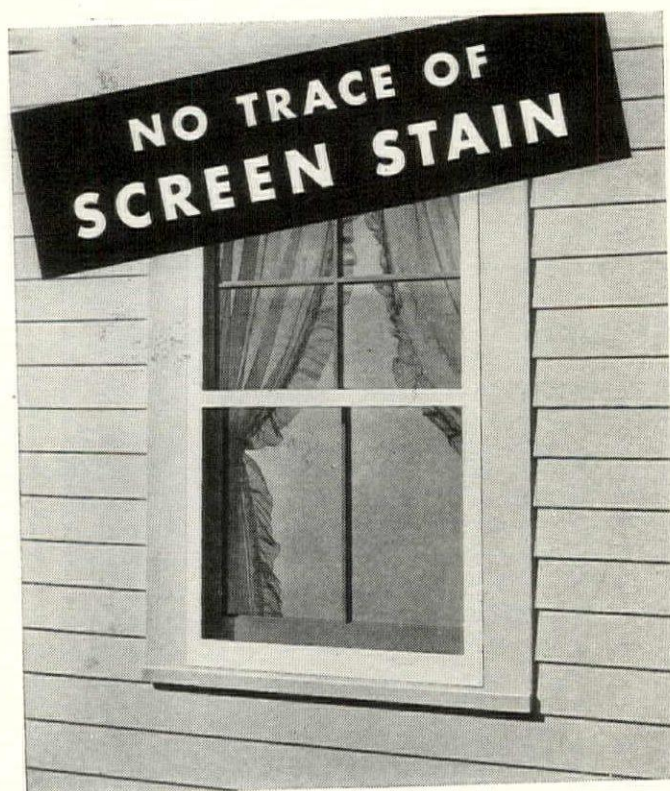
Roofs..... Walls..... Floors.....

Name.....

Address.....

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

ANNOUNCEMENTS



AFTER 4 YEARS

LUMITE screens first installed on homes four years ago show not a trace of wear. Sills and side-walls are untouched by streaks. You know how "bleeding" from ordinary screens can mar the beauty of the homes you build. Specify LUMITE—it's guaranteed never to rust or corrode in any weather or climate.

NEVER NEEDS PAINTING—LUMITE requires no painting or protective coating of any kind. Will not "rust out"—will never change color. LUMITE saves your clients money in the long run because it eliminates screen upkeep.

MORE DURABLE BY TEST—Tests prove LUMITE, made of Dow's Saran, can't be harmed by salt air, rain, sun, heat or cold. A year's soaking in sulfuric acid failed to corrode LUMITE. A 5-pound steel weight couldn't dent LUMITE in 42,300 blows. LUMITE has greater impact strength than metal!

Write for our A.I.A. 35P folder and free sample.

*Sold through Hardware and Lumber Dealers
and Screen Manufacturers*

LUMITE DIVISION

Chicopee Manufacturing Corporation
47 Worth Street, New York 13, N. Y.

LUMITE*

QUALITY INSECT SCREEN CLOTH

*Registered trade-mark

(design left) for a fixture which distributes light directionally toward the front of the classroom. Second award (right) went to Gerald Parks of Reading, Pa. for his design of a fully-louvered lamp with side louvers placed at angles to prevent glare. Third and fourth prizes of \$200 and \$100, respectively, went to Robert Francis of Joliet, Ill. and Warren Weiss of San Francisco, Calif.

THE JOHN WESLEY HYATT AWARD for outstanding achievement in the plastics industry was presented to Dr. John Grebe of Dow Chemical Co.

KARL BILLNER, president of Vacuum Concrete Corp., was awarded the Brown medal of the Franklin Institute for his invention of practical process of treating concrete in construction.

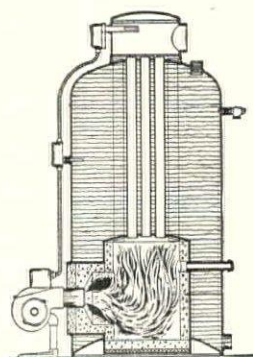
STORE MODERNIZATION EXHIBIT AND CONFERENCE

NEW TECHNIQUES in every branch of store remodeling will be represented at the Store Modernization Show to be held in Grand Central Palace, New York, during the week of July 7th. Examples of most recent developments in store interior and exterior design, as well as a wide variety of furnishings and equipment, will be shown. Exhibits prepared by the United States Department of Commerce and the New York Chapter of the American Institute of Architects will round out the visual presentations of the Show.

A series of "clinic" conferences is planned, where experts in various fields will discuss remodeling problems and make suggestions on individual difficulties. Each topic will be treated in two separate sessions (by different groups of experts). The schedule will be: "Modernized Store Lighting" and "Modernized Customer Comfort", July 7 and 10; "Modernized Store Layout" and "Modern Display and Fixturing", July 8 and 11; "Modern Use of Materials" and (Continued on page 122)

IF YOU NEED LOTS OF LOW-COST

Hot WATER

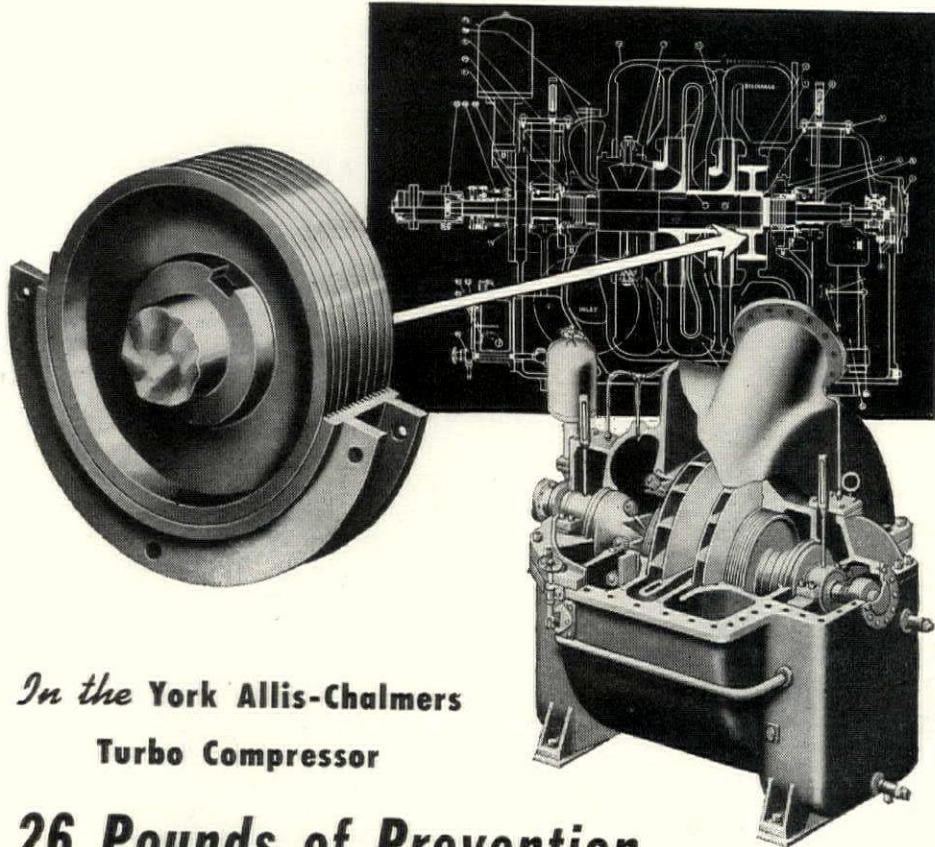


install an AquLux! You'll get more hot water per fuel-dollar ... and more years of carefree, Automatic service. ... AquLux Water Heaters capture and use an extraordinarily high percentage of the heat generated in combustion. That's one reason they are so often recommended by Heating Engineers.

There's an AquLux for every hot water need ... from a 1000-room hotel to a 5-room home ... all built to the standards that have made Johnson Oil Burners famous since 1903.

...Johnson Oil Burners...
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For competent, authoritative assistance... *Quick*



In the York Allis-Chalmers
Turbo Compressor

26 Pounds of Prevention **are worth a ton of cure**

Shaft-thrust on higher speed machinery, such as turbo-compressors creates thrust bearing wear.

York meets the thrust problem by *eliminating* virtually all of this force. By means of the Balance Disc, an exclusive York feature, the thrust built up in one direction by the differential in gas pressure between suction inlet and discharge outlet, is equalized by directing suction pressure against one of the balance disc faces to impose an equal thrust in the opposite direction. The result is a balance so complete that there is but little for the thrust type bearing to do, other than position the shaft.

York Corporation, York, Pennsylvania.

YORK *Refrigeration and*
Air Conditioning



HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

**There's a
seasoned
York Engineer
near you**

All over the United States, experienced York-trained engineers are assisting architects, consultants and contractors in their refrigeration and air conditioning problems . . . in planning, purchasing, installing and maintenance.

In the Atlanta Area, for example, District Manager Crout and his staff of 12 sales engineers devote their full time to the problems of York customers in this region.



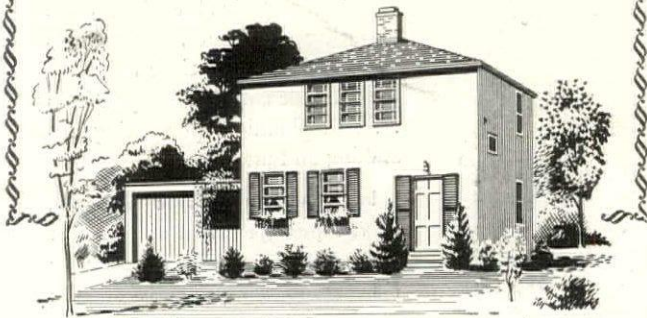
M. M. CROUT,
District Manager

Assisted by:

R. C. Barnes
T. L. Barron
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E. C. Harper
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ANNOUNCEMENTS

Levitt Builds Kilroy this home for \$9,990



with **CELLULITE**

FLAMEPROOF COTTON INSULATION

Maybe somebody is putting up more houses but no one is beating Levitt & Sons Inc., at giving more home for less money. Everybody's wide-eyed over the roomy, substantial homes Levitt is building for less than \$10,000 out on Long Island. They're calling his work the country's outstanding building job.

Lots of people would like to match Levitt. Anyone can go at least part way because

LEVITT INSULATES WITH **CELLULITE**
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Like to know what prompts the nation's outstanding builder to use Cellulite? Fill out and mail the coupon today. We'll send you facts and figures.

THREE TIPS

1. Cellulite's* flameproof cotton is the most efficient insulation material commercially available but Cellulite costs less.
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Send full information on Cellulite* Insulation to

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City Zone State

() Builder () Dealer () Architect

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"Modernized Store Fronts", July 9 and 12.

A competition to plan the remodeling of a shopping center in a medium-sized town has been sponsored among undergraduate architectural students. Prizes of \$250, \$150, \$100 and two of \$50 each will be awarded for the best submissions and these will be displayed at the conference. Further information about any phase of the show may be obtained from: Store Modernization Show, 20 E. 55th St., New York 22, N. Y.

JAMES McCUTCHEON & COMPANY MODEL HOTEL ROOMS

A new idea for refurbishing hotel and club rooms was introduced at the Roosevelt Hotel in New York City last month, with the display of a model hotel room using furniture designed by McCutcheon's department store.

They point out that, in these crowded days, rooms are often used for entertaining, and they believe that hotel room furniture should be designed for living-room use as well as for sleeping-room use. Hotel rooms heretofore have been very inflexible, and to meet the new need for general all-round use McCutcheon has specially designed a so-called "Lounge Bed." It is upholstered, has arms and back, an inner spring or rubber mattress, and the back may be adjusted upwards by pulling a small plunger at the top. Behind the back is ample space for day storage of pillows. Two of these Lounge Beds, where possible placed in a corner at right angles with a table between, make a very satisfactory room arrangement that allows for informal grouping of easy chairs for conversation during living-room use.

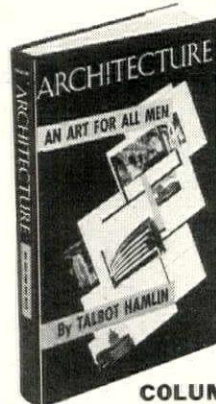
In addition to the room at the Hotel Roosevelt, McCutcheon is installing model rooms in other hotels: the Williamsburg

(Continued on page 126)

Architecture An Art for All Men

By **TALBOT HAMLIN**

Professor of Architecture, Columbia University

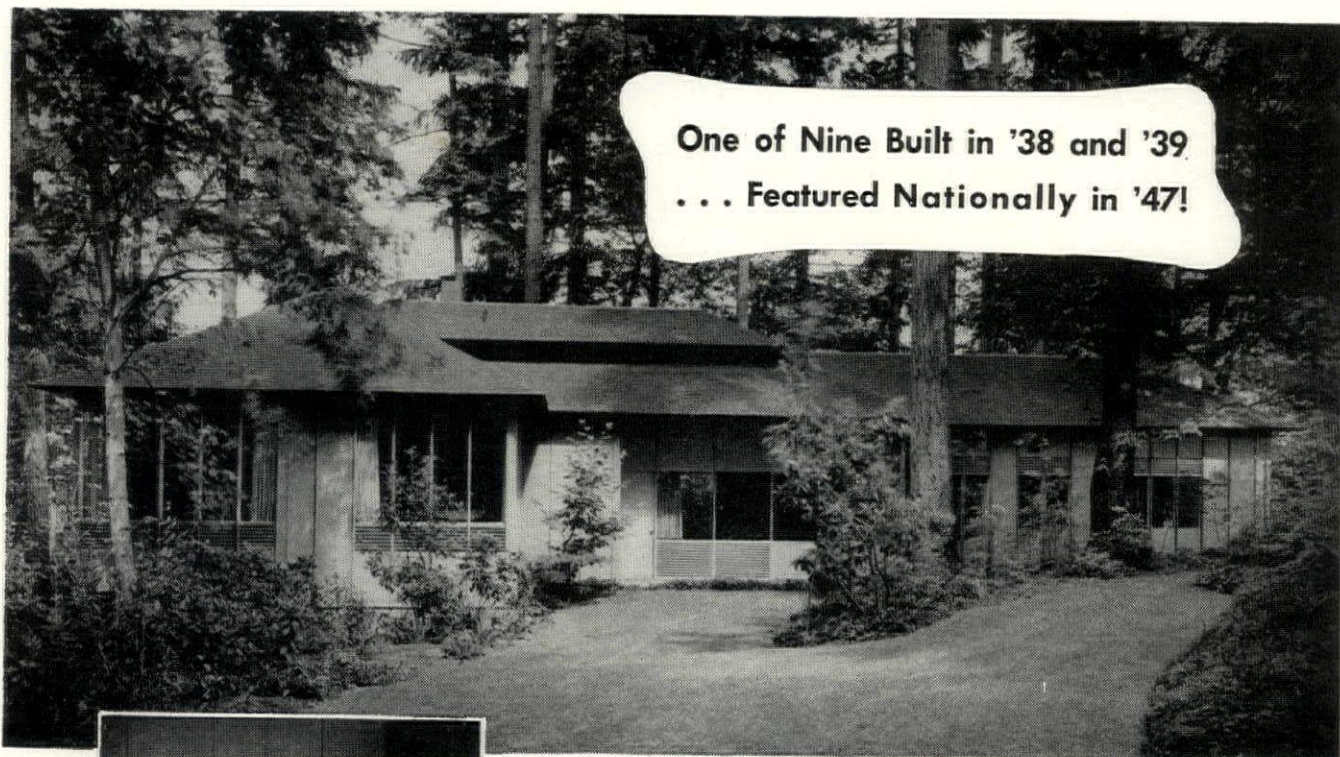


"A new book by Talbot Hamlin always is good news, particularly when it is, as is this, concerned with architectural interpretation ... As usual, Mr. Hamlin has written in lively and interesting fashion."—*Architectural Record*.

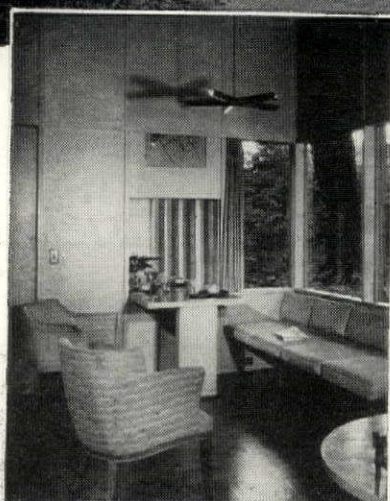
Illustrated with 54 photographs and 29 figures

At all bookstores • \$3.50

COLUMBIA UNIVERSITY PRESS
Morningside Heights, New York 27



One of Nine Built in '38 and '39
... Featured Nationally in '47!



With Exterior-type Douglas fir plywood siding, this home exemplifies one of the unusual methods of plywood application. Battens covered the joints, dividing the outside walls in modular vertical sections. Interior-type plywood was used on the attractive dinette wall shown above.

"These Houses of Plywood have had no repair or maintenance,"
... says Builder Burt Smith,

**"THE PLYWOOD IS MORE THAN
'JUST SATISFACTORY'"**

THIS attractive modern Portland, Oregon, home was featured *this year* by two national publications and termed by one "A House of Great Merit" ... yet it was built not this year or last, but in 1939! One of a group of nine which utilized Douglas fir plywood for exterior walls and interior detail, it features an advanced design which keeps it a "display home," even after six years. The builder, Burt Smith of Oswego, Oregon, says: "The houses were built in 1938 and 1939 and the plywood is more than 'just satisfactory'. There is a definite labor saving in application. The insulation value is good. These houses have had no repair or maintenance, while other houses built by me the same year have had major repairs to exterior finishes."

PLYWOOD'S MANY ADVANTAGES KEEP DEMANDS GREATER THAN PRESENT SUPPLIES

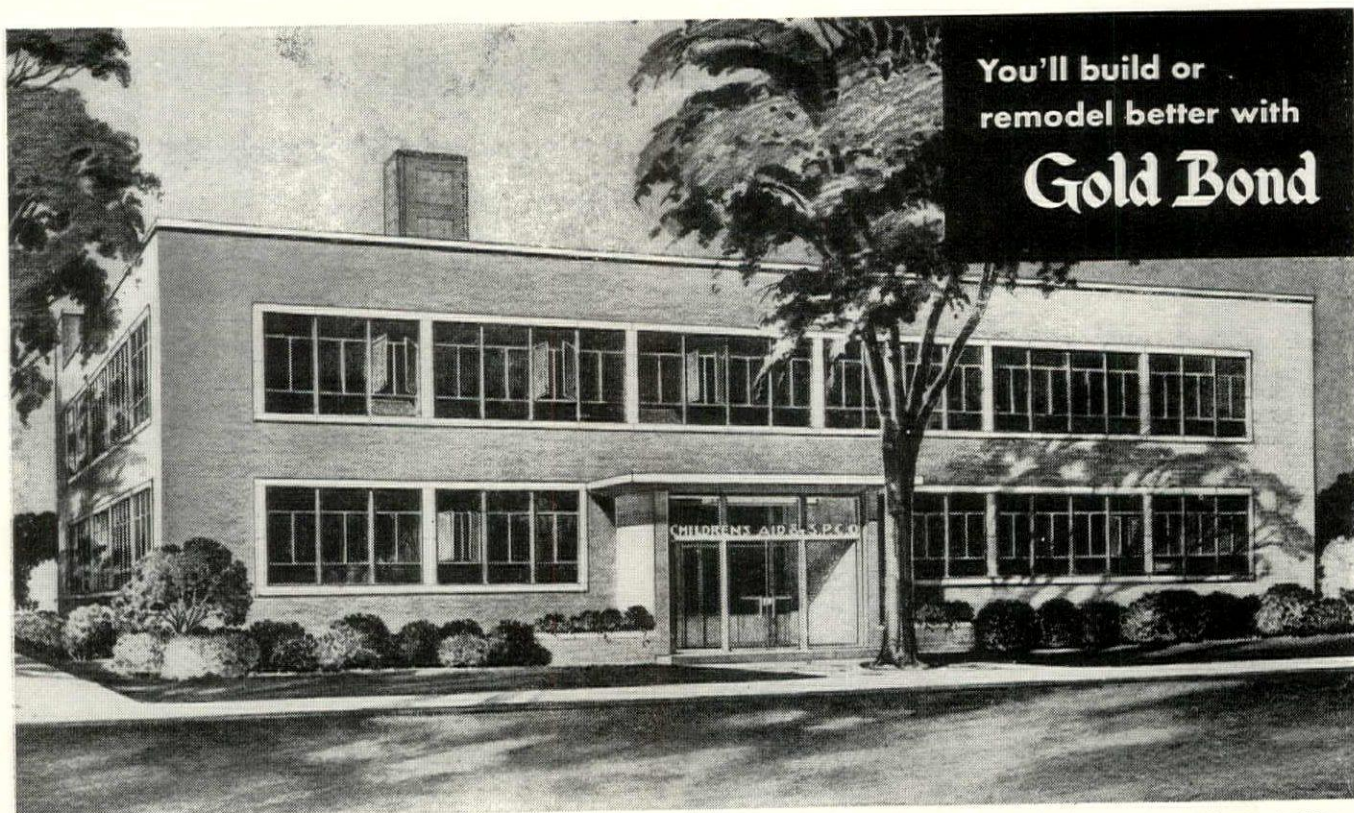
Douglas fir plywood production is greater now than in prewar years. Today's demand, however, is unprecedented — and raw material availability is the controlling factor in obtaining higher output. This uneven demand-supply ratio naturally means that plywood may not always be readily obtainable at any given time and place. Keep in touch with your regular source of supply as to price and delivery information. For technical data, write the Douglas Fir Plywood Association, Tacoma 2, Washington.

**Douglas Fir
PLYWOOD**

LARGE, LIGHT, STRONG

*Real
Wood*
Panels





You'll build or
remodel better with
Gold Bond

Children's Aid Building, Delaware Avenue, Buffalo, N. Y. James W. Kideney, Architect.

Extra working space... *and Quiet, too!*

DESIRABLE features in any new office building are roomy, sound-conditioned offices with a minimum of distracting noise from adjoining offices. The new Children's Aid Building on Delaware Avenue in Buffalo has all these features—thanks to Gold Bond!

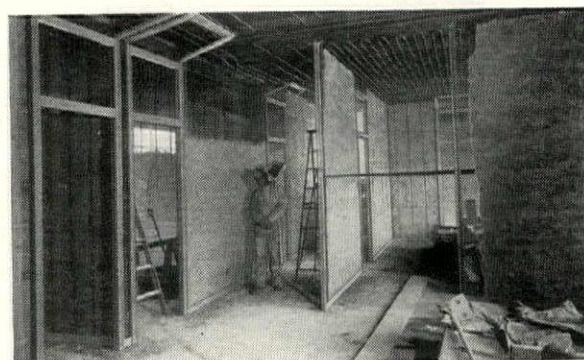
The *extra working space* results from the use of the famous Gold Bond 2 inch solid partition with patented flush type metal base, in place of old style 6 inch walls. These sturdy metal and gypsum partitions, which are fireproof and crack resistant, greatly reduce the transmission of room-to-room noises, too! From the architect's standpoint, they also mean less weight, faster construction, and *lower costs*.

To cut down and absorb noises *inside* each office, Gold Bond Macoustic ceilings were specified. These ceilings of Macoustic acoustical plaster combine a comparatively smooth monolithic finish with unusually high sound absorption—.50 at 512 frequency. Macoustic, a gypsum-base product, is fireproof, vermin-proof, and absolutely permanent. No special tools or specially trained applicators are required.

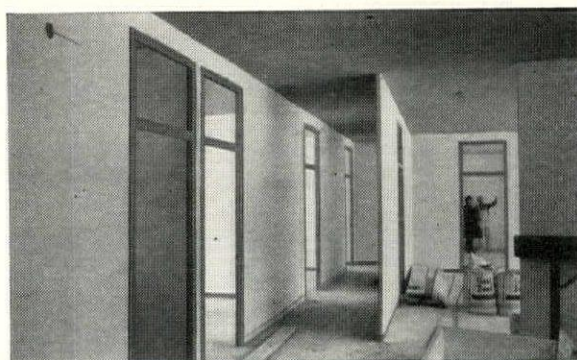
You'll find Gold Bond partition systems and sound control products described in detail in our section of Sweet's. For special information, write to,

NATIONAL GYPSUM COMPANY
BUFFALO 2, N. Y.

Over 150 Gold Bond Products including gypsum lath, plaster, lime, wallboards, gypsum sheathing, rock wool insulation, metal lath products and partition systems, wall paint and acoustical materials.



THE EARLY STAGES. Showing the Gold Bond 2 inch solid partitions in place with the patented flush type metal base. Partially scratch coated job shows sturdy metal reinforcement.



THE JOB WELL ALONG. The finished space-saving walls are trim looking, fireproof, and highly resistant to impact and cracks. Ceilings of fireproof Macoustic acoustical plaster.

Where cleanliness is an absolute necessity...



**specify Tile-Tex
Asphalt Tile for hospital floors!**

In hospitals, every unclean or hard-to-clean surface is a potential staging area for dangerous germ carriers. A sanitary surface that can be cleaned readily is consequently a paramount factor in the selection of floors.

One important reason why Tile-Tex Asphalt Tile is commonly specified by hospital architects is because of its outstanding cleanability. This top-quality asphalt tile has a smooth, closely textured surface which does not harbor dirt and is extremely stain-resistant. Normal maintenance methods keep Tile-Tex floors clean and bright at minimum cost.

Important, too, is the tough, asphalt-asbestos composition of Tile-Tex. It means you'll get extra years of wear under heavy traffic conditions. Your staff will enjoy walking and working on this resilient, easy-tread flooring.

All of these factors, plus the decorative possibilities in the wide range of Tile-Tex colors and sizes, have made it a favorite for hospital floors. The approved Tile-Tex contractor in your city will be glad to give you any additional data you may need. Write today for his name and a copy of "Tile-Tex Products for Today's Hospital."

THE TILE-TEX CO., INC., CHICAGO HEIGHTS, ILL.
Sales Offices: Chicago, New York, Los Angeles and New Orleans



TILE • TEX ASPHALT TILE

ANNOUNCEMENTS



Eagle RTU is *pure white lead*. It has all the famed durability, beauty and economy of this most famous of painting materials.

And, Eagle RTU comes factory-mixed for perfect brushing consistency. It goes to the job in the original container, all set to open, stir and apply.

Eagle RTU spreads smoothly and easily. It covers completely, leaving no ridges or brush-marks, has real white lead hiding and staying power.

And, Eagle RTU makes a smooth, gleaming elastic coat that won't crack or scale... defies time and weather, ages evenly by gradual chalking.

Eagle RTU is favored by builders for its time and labor saving convenience...and because it enables them to do a *better* job more efficiently.

And, Eagle RTU is preferred by homeowners because of its beauty and durability...because of its *whiter* white that stays white *longer*.

Eagle RTU is white lead paint in a *modern* form.

And, Eagle RTU is backed by Eagle-Picher's 104-year-old reputation, as well as by the 2000-year-old reputation of white lead.



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WHITE LEAD**
Paint

Lead, the indispensable metal, is required in increasing quantities for industrial use. This, plus a shortage of linseed oil, has reduced stocks of white lead paint. However, you may look forward, soon, to increasing supplies of Eagle RTU.

Inn, Williamsburg, Virginia; the Radisson Hotel in Minneapolis; the Utah in Salt Lake City; the Olympic in Seattle; and the St. Francis in San Francisco. They had previously set up several rooms using this new furniture and plan at the Hotel Dennis in Atlantic City.

NEW OFFICES

EMERSON SCHOLER AIA has opened an office for private practice at 41 W. Alameda, Tucson, Ariz.

WILLIAM RICH, architect, announces the opening of his new office at 1607 W. Howard St., Chicago 26, Ill.

PAUL JERNEGAN RA has resumed professional practice at 223 Lincolnway East, Mishawaka, Ind.

HUNT, CATON & ASSOCIATES, architects (uniting the firms of B. F. Hunt Associates and R. H. Hunt Co.), are located in James Bldg., Chattanooga, Tenn.

THORNQUIST, WITTE & SMITH, architects and engineers, have opened offices in the Eisfeld Bldg., Burlington, Iowa.

LEONARD WAYMAN and RAY STUERMER announce the formation of a partnership in architecture and engineering at 37 S. Wabash Ave., Chicago, Ill.

HUGH DUNNING, architect and engineer, has reopened an architectural office at 1701 S. 8th Ave., Maywood, Ill.

AIRTEC, a firm specializing in airfield planning and design, has been formed by Thomas Dryce and Joseph Wertz at 1246 20th St. NW, Washington 6, D. C.

GORDON OBRIC ASSOCIATES, INC. offers complete interior design service for commercial and home fields with offices at 7 E. 48th St., New York 17, N. Y.

(Continued on page 130)

FINE WLS WOOD CARVINGS

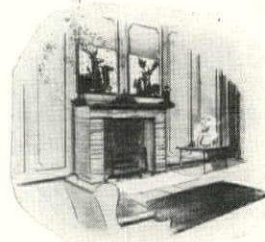
Again Available!

- BEAUTIFULLY DECORATIVE
- FOR HOME SETTINGS OR STORE INTERIORS
- A LARGE GROUP OF DESIGNS FOR YOUR SELECTION



This newest series of plaques carries on the world famous WLS tradition for fine wood carvings.

Exquisite designs are carved of richly grained solid walnut woods, in deep half relief and mounted onto a 3/4" thick, 14 ply light oak plaque, 24" square with edges beveled and finished in gold. They blend with and enrich any setting. Ageless, like the works of the masters, you will use them with pride as a symbol of quality, in windows, departmental displays and home settings. Order now!



CHOICE OF 6 DESIGNS

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G-910 DEER HEADS G-908 HORSE HEADS
G-905 FLYING DUCKS G-906 WOOD DUCKS
G-907 ARABIAN HORSE HEADS
Complete with fittings and wire for hanging. Each, Only \$57.50
Savings on purchase of four or more.

FREE! Giant size catalog illustrating 250 designs and props, 100 "How to Use" Suggestions, for store window and interior decoration. Send for your copy today.



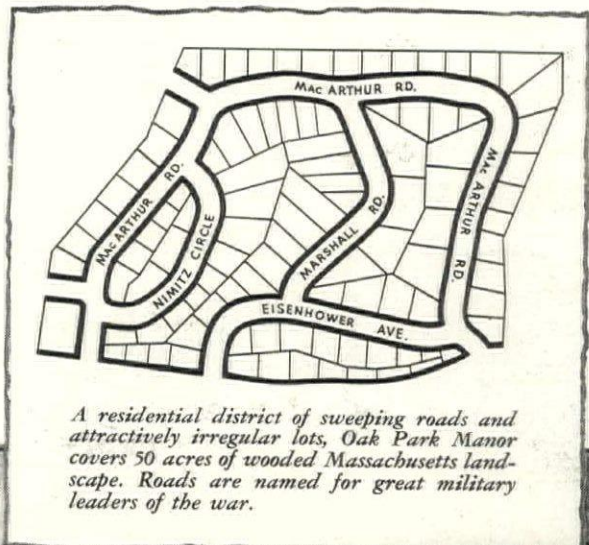
W. L. STENSGAARD AND ASSOCIATES, INC.

327 N. JUSTINE ST., CHICAGO 7, ILL.

America's Largest Organization Specializing in Merchandising Presentation

G. I. Village

**MAKES HOMEOWNERS OF
VETERANS IN A BRAND-NEW
COMMUNITY AT NATICK, MASS.**



A residential district of sweeping roads and attractively irregular lots, Oak Park Manor covers 50 acres of wooded Massachusetts landscape. Roads are named for great military leaders of the war.



**Complete Bryant winter air conditioning assures
cold-weather comfort in Oak Park Manor**

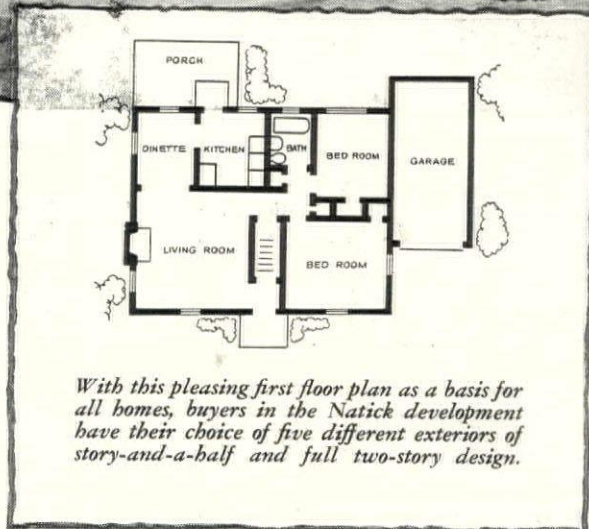


Twenty-five miles from the city of Boston, in Natick, Mass., the construction team of Sumner D. Hersey, builder, and Richard M. Marchetti, contractor, is pushing a great Eastern veterans' housing development to its planned 1947 completion.

Oak Park Manor, dubbed "G. I. Village" by the Boston press, consists of two-hundred large building lots. Situated in a wooded tract, the development borders a 300-acre town park, where excellent facilities, including a ski run, put the accent on recreation for residents of Oak Park Manor.

All "G. I. Village" homes will be bought by veterans under the provisions of the G. I. Bill of Rights, and since the opening last year, more than half of the homes have been sold.

Oak Park Manor homes are Bryant gas-heated, using Bryant 85-BA-88 Winter Air Conditioners. The famed BA-88 is made in seven sizes with outputs from 45,000 to 200,000 btu per hour. Bryant Heater Company, 17825 St. Clair Avenue, Cleveland 10, Ohio . . . One of the Dresser Industries.

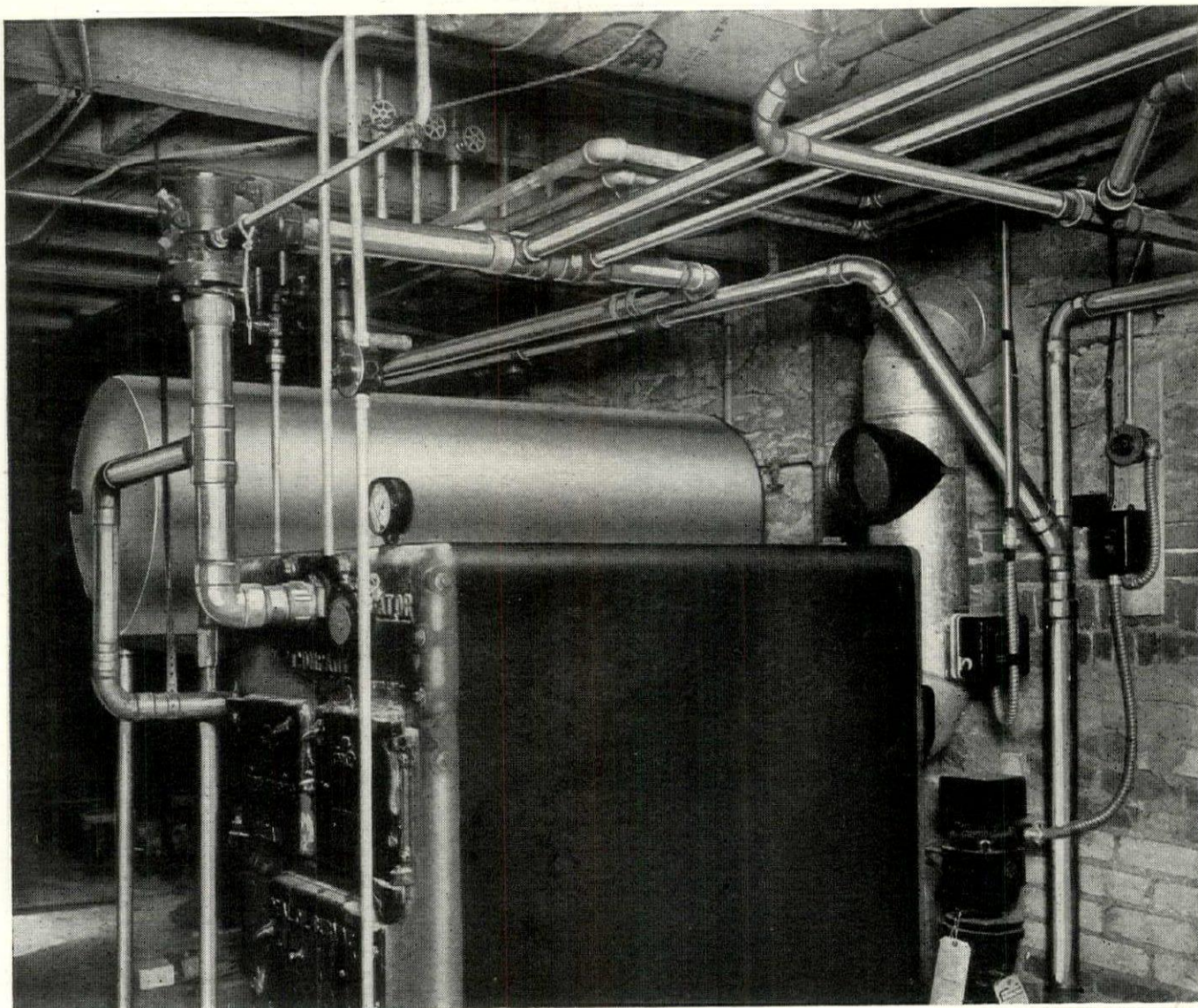


With this pleasing first floor plan as a basis for all homes, buyers in the Natick development have their choice of five different exteriors of story-and-a-half and full two-story design.

bryant
GAS
HEATING



LET THE PUP BE FURNACE MAN



Trouble always costs more than REVERE COPPER WATER TUBE

IF a red light flashed the instant a leak started in a water or heating line, the cost of repairs might be minor. But the first sign of a leak is usually wet plaster, soaked furniture, ruined decoration. And leaks are only one kind of trouble. Rusty tap water, inadequate flow, faulty circulation due to rust-filled lines . . . these call for major repairs.

The way to avoid such troubles is to specify Revere Copper Water Tube. Completely installed, it costs little or no more in the first place, and much less in the long run.

Made for heating, water supply, air conditioning and other services in all types and sizes of buildings, Revere Copper Water Tube is rust-proof and has a smooth gun-barrel interior finish that insures an unrestricted flow of water through the lines. Joints made with either soldered or compression fittings help further to cut down friction loss. The Revere name and the type, stamped on this tube at regular intervals, insure full

wall thickness and the close gauge tolerances so essential for tight sweated joints.

You can also specify such long-lived Revere materials as Red-Brass Pipe; Sheet Copper and Herculoy for tanks, ducts, pans and trays; Copper Tube . . . and, of course, Sheet Copper for roofing, flashing and other sheet metal construction. Revere materials are handled by leading distributors in all parts of the country. The Revere Technical Advisory Service, Architectural, is always ready to serve you.

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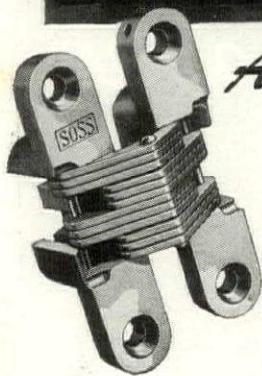
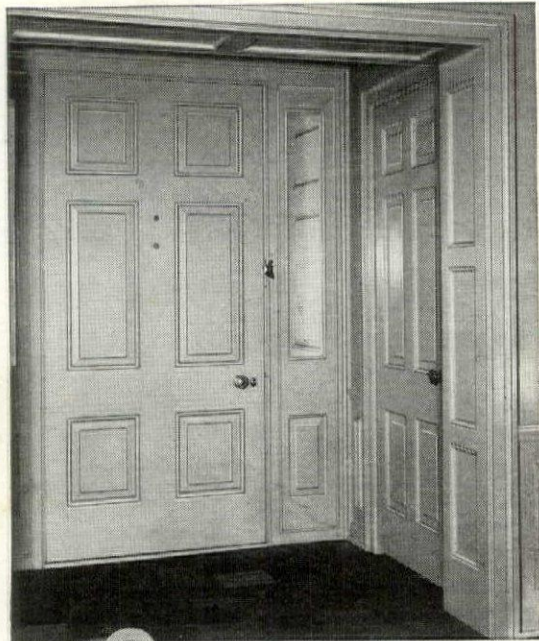
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ANNOUNCEMENTS

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*A logical question
—often asked!*

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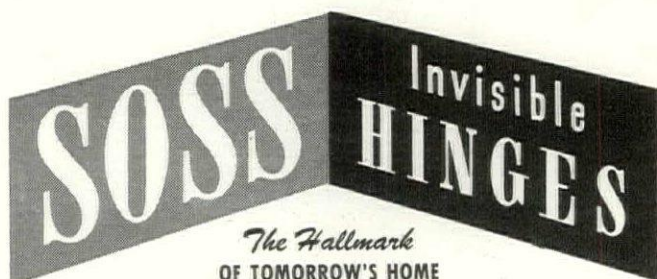
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When Soss Invisible Hinges are a feature of building design, the architect is enabled to employ flush surfaces for doors, panels and cupboards. He can then obtain the streamlined effects which provide so modern and distinctive a touch to home interiors. Your clients will appreciate these modern hinges and the results they make possible.

Write for Soss "Blue Print Catalog" giving full details of these modern hinges. Free on request.



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ROBERT ELLIS, JR. has established an office of landscape design and site planning at 909 SW St. Clair Ave., Portland, Ore.

MORTON LIEBERMAN announces the opening of his engineering office at 5 Maiden Lane, New York 7, N. Y.

JOSEPH MCGINNISS has opened an office for preparation of architectural specifications at 67 E. 59th St., New York 2, N. Y.

LEON MILLER, designer, announces the opening of his office at 811 Prospect Ave., Cleveland, Ohio.

GILCOR PRODUCTS CORP., Dowagiac, Mich., a new firm in the oil and electric water-heating field, has been formed with J. L. Gillen as president and general manager.

PANORAMIC STUDIOS offer complete model construction service in their offices at 2256 N. Broad St., Philadelphia 26, Pa.

DESIGN BUILT STUDIOS have facilities for complete model building services at 41-05 Lawrence St., Flushing, N. Y.

CAREER BUILDERS, an agency specializing in placement of decorating, industrial and display design personnel, has opened offices at 35 W. 53d St., N. Y.

CHANGES OF ADDRESS

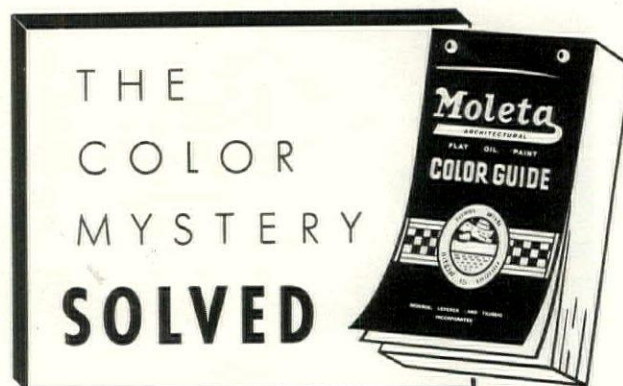
The firms of FRANKLIN, KUMP & FALK and ERNEST J. KUMP COMPANY are now located at 9 Main St., San Francisco 5, Calif.

TOOMBS & CREIGHTON, architects, have moved to their newly acquired building at 127 Walton St., NW, Atlanta, Ga.

WESTON BLAKE, architect, announces the removal of his office to 210 Pennsylvania Bldg., Wilmington 50, Del.

LAWRENCE SINGER, industrial design, is now at 22 W. 46th St., New York 19, N. Y.

JO SINEL DESIGN FOR INDUSTRY CO. is now located at 561 Clay St., San Francisco 11, Calif. (Continued on page 134)



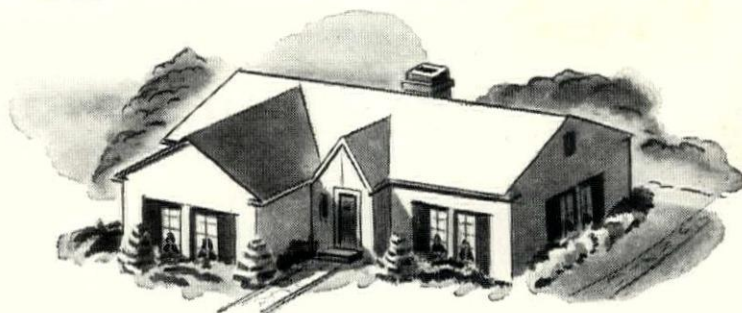
Where, oh where, is the right color? You'll find a quick answer in the Moletta COLOR GUIDE. This handsome COLOR GUIDE gives a selection of 150 beautiful colors to show your clients...each tint displayed on a large page (9" x 15") and shown in true-life, right-on-the-wall effect...every tint from the palest to the darkest. And on the reverse of each sheet is given the exact mixing formula.

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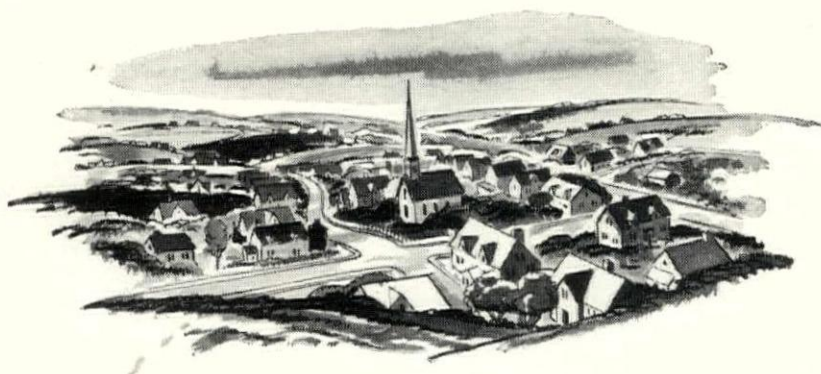
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• Then a Timken Street



• Then a Timken Town



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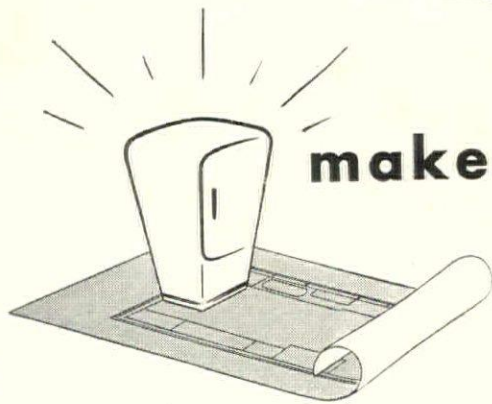


OIL
FURNACES



WATER
HEATERS

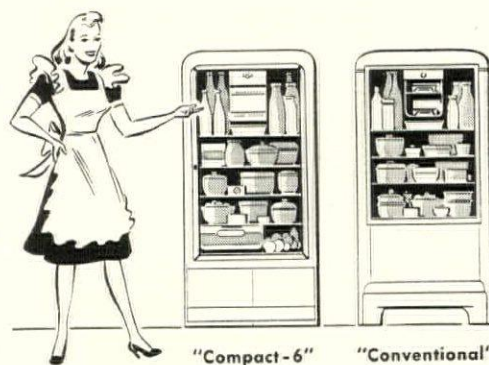
New Frigidaire "Compact-Six"



**makes same floor area yield
50% more storage space!**



HERE is a refrigerator that combines *capacity* with *compactness* . . . a refrigerator that provides adequate storage space even where kitchen area is severely limited, as in many of today's small homes.



Entirely new design does it — creates a refrigerator that's "a 4-footer on the outside, a 6-footer on the inside." Note all the *extra* storage space, gained without sacrifice of floor area!

See all these other reasons why this new Model SJ-6 Frigidaire Refrigerator helps architects and builders make the most of small-home plans —

Flat top serves as extra kitchen shelf.

Big freezer holds 15 lbs. of frozen foods. *Two* fast-freezing shelves. Attractive freezer door.

Instant ice service. Two generous-size Quickube Trays.

Large Hydrator for fresh fruits, vegetables.

Meter-Miser is simplest cold-making mechanism ever built: uses less current than ordinary light bulb.

Also — one-piece, all-steel cabinet,

Dulux finish, porcelain-on-steel food compartment with acid-resisting floor, rust-resisting shelves, aluminum cold-storage tray, Cold-Control.

Cabinet dimensions: height, 51 11/16"; width, excluding hinges, 24"; depth, including hardware and rear ventilating space, 26 3/4".

Capacity: 6.0 cu. ft. storage space; 11.6 sq. ft. shelf area. (NEMA standards.)

See your nearest Frigidaire dealer or write Frigidaire Division, General Motors Corporation, Dayton 1, Ohio (or Leaside 12, Ontario) for the address of your nearest district office.

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COMMERCIAL REFRIGERATION AND AIR CONDITIONING EQUIPMENT



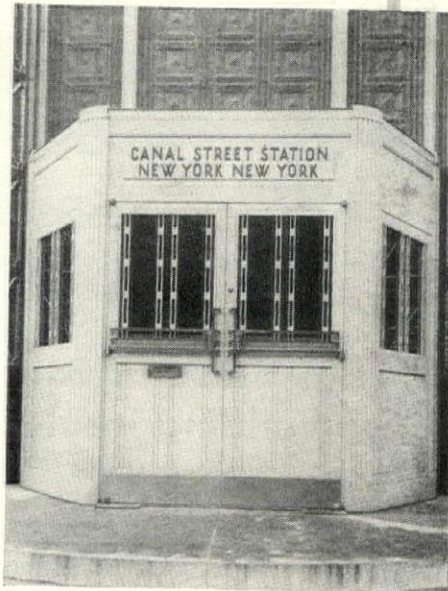
BLOOMFIELD MUNICIPAL BUILDING, Bloomfield, N. J.



CRIMINAL COURT BUILDING, New York City

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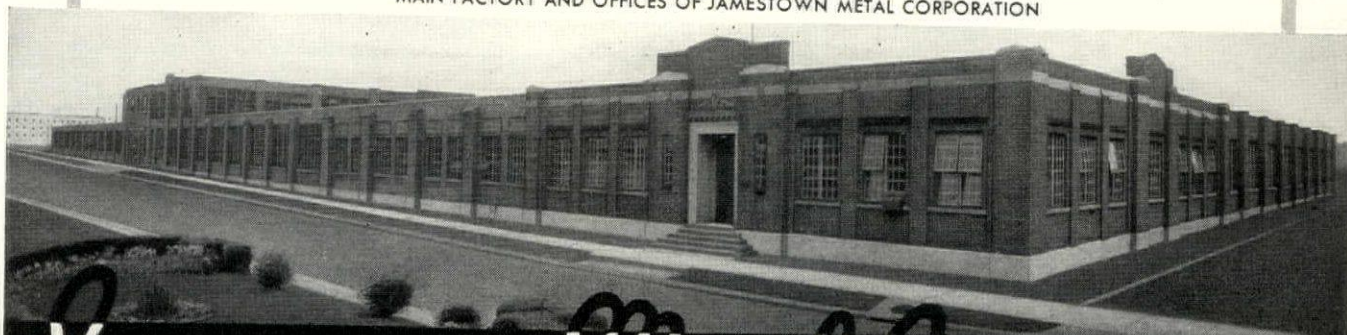


BUFFALO CITY HALL, Buffalo, N. Y.



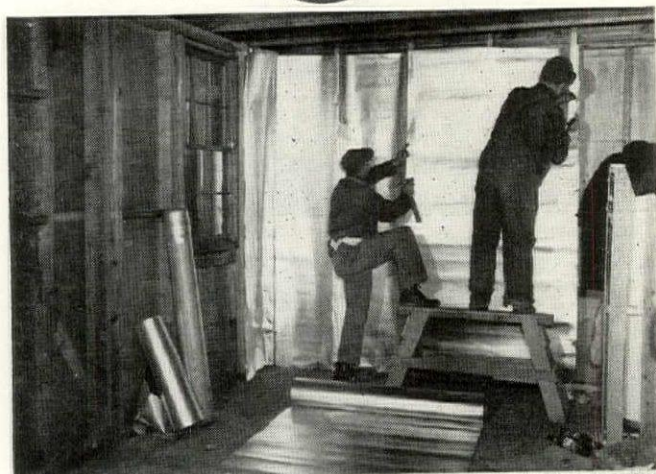
DAUPHIN COUNTY COURT HOUSE, Harrisburg, Pa.

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Silvercote Reflective Insulation combines excellent insulation qualities with long, effective life and ease of installation to provide ideal protection for modern homes, industrial and commercial buildings and refrigerated spaces.

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THE NATIONAL FOUNDATION FOR LATHING AND PLASTERING INC. has moved its headquarters from Washington, D. C. to 173 West Madison St., Chicago, Ill.

F. A. RIPLEY ASSOCIATES, specializing in store remodeling and equipment, have moved to 2712 N. 9th Ave., Billings, Mont. LOUIS FROMM, maker of architectural scale models, is now at 207 E. 32nd St., New York 16, N. Y.

ARCHITECTURAL MODEL SERVICE has moved to 343 SW North River Drive, Miami, Fla.

APPOINTMENTS

JOSEPH PALMA, JR. has been appointed as critic to the Senior Group in Industrial Design at the Art Institute of Chicago. He will, however, continue private practice.

W. FRANK BOWER, JR. and BEN SMALL are now associates of Alfred Hopkin & Assoc., architects, New York.

JAN RUHTENBERG AIA has been appointed Design Instructor during Summer Session at the School of Architecture, University of Denver.

HAROLD SCHAFER is in charge of the Store Planning Division of Raymond Loewy Associates' Chicago office.

CHARLES BAULSIR is now associated with H. W. Lochner & Co., engineers and architects, of Chicago, Ill.

NEMBARD CULIN has returned to the firm of Frederick Frost, architects, New York, as associate member of the staff.

CORRECTION

The use of TUF-FLEX, a tempered plate glass produced by Libbey-Owens-Ford Glass Co., for stair panels and railings, should have been credited in our presentation of T.W.A. Ticket Office (March 1947).



North or South small or large

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ELECTRIC HEATER**

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RIGHT: Model LR for master bathrooms. Height 48"; width 9". Operates on either 120 or 230 volts.



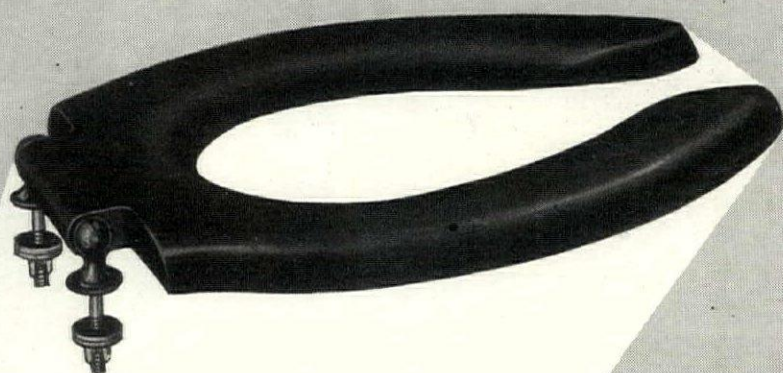
LEFT: Model RB for small baths and dressing rooms. Height 19"; width 11 1/4". Operates on 120 volts.

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THE ONLY WALL HEATERS
WITH SWITCH AT THE TOP!**

THERMADOR ELECTRICAL MANUFACTURING COMPANY
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Bathrooms

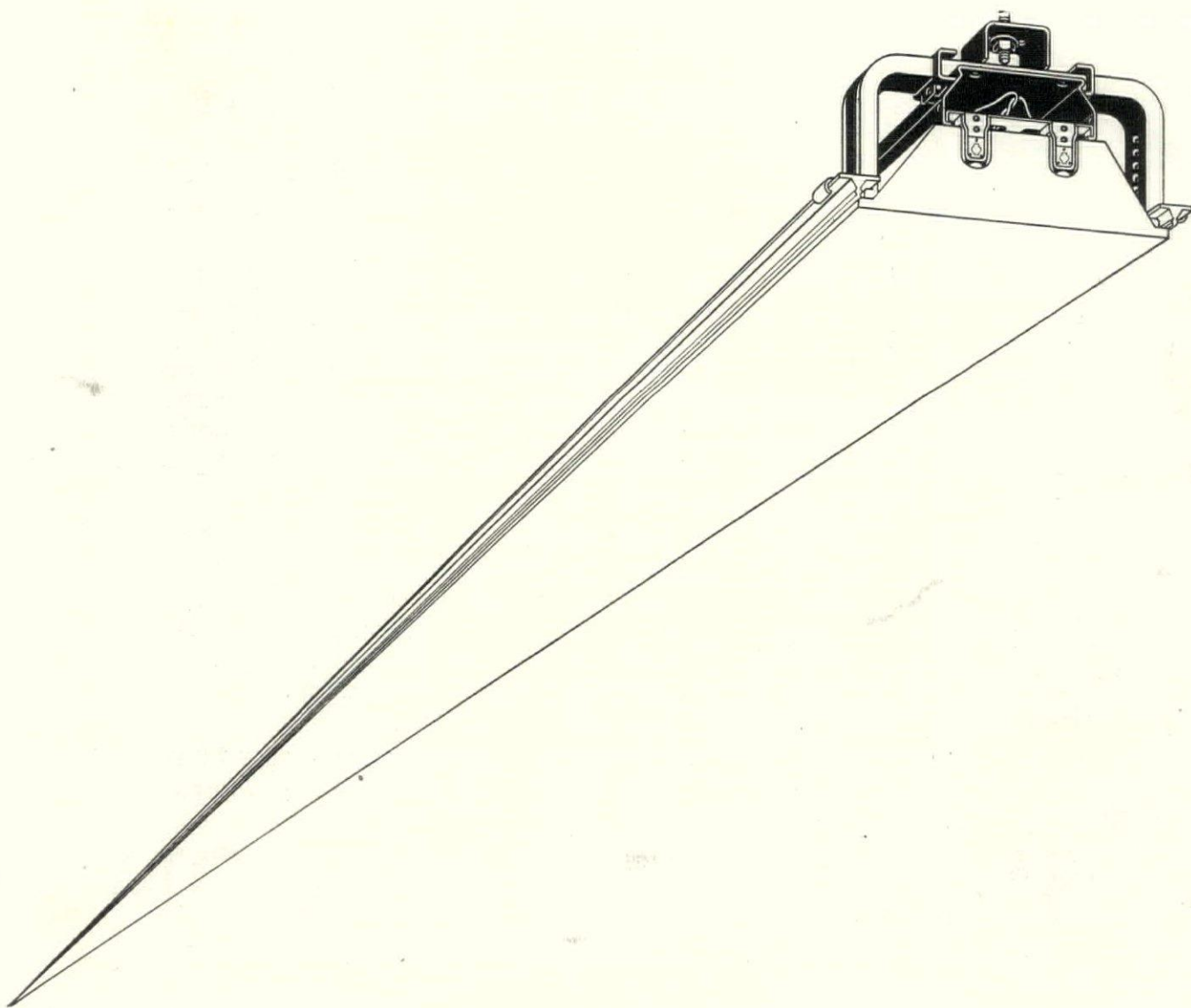
With "Twin-Duty" bathrooms, Case helps you answer the demand that every foot of space be made to *count*. These smart new bathrooms add livability and salability to a home. They provide the convenience and privacy of *two* bathrooms at approximately the economy in space and installation cost of *one*. The sketch shows the famous one-piece Case T/N* water-closet, a quiet, free-standing fixture with positive *non-overflow*, and the Winston, one of the most popular Case vitreous china lavatories. Case plumbing fixtures are distributed nationally—see your Classified Telephone Directory.

W. A. Case & Son Mfg. Co., Buffalo 3, N. Y. Founded 1853.

Case

Vitreous China Plumbing Fixtures

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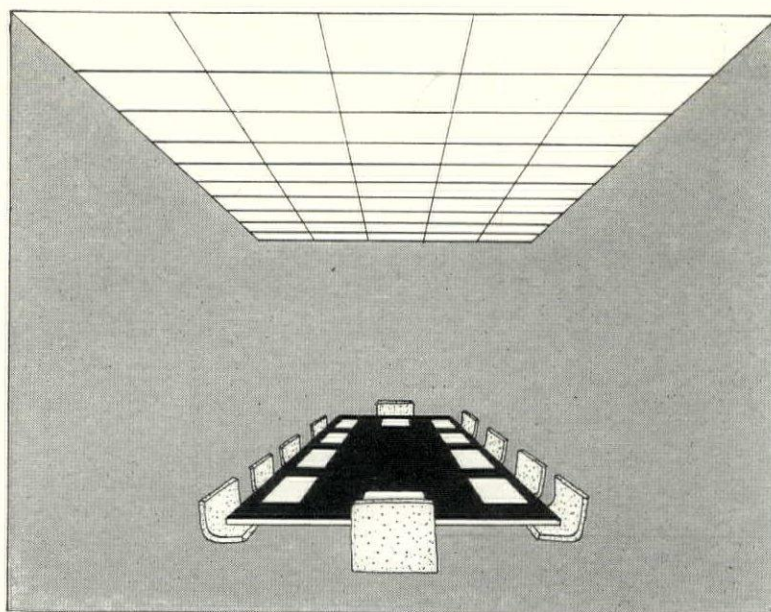


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Miller lighting service, developed over 103 years' pioneering in good lighting, is all-inclusive. Its 50 and 100 FOOT CANDLERS (Continuous Wireway Fluorescent Lighting Systems) have been established as standard for general factory lighting. And its Incandescent and Mercury Vapor reflector equipment have broad factory and commercial application.

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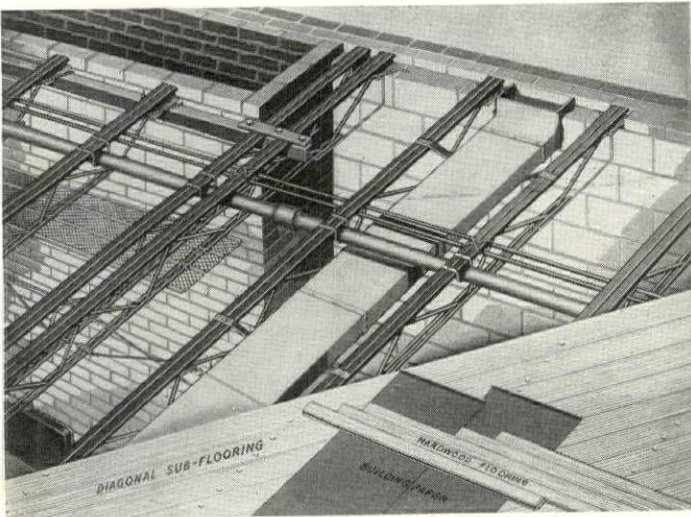


THE MILLER COMPANY
Illuminating Division, Meriden, Connecticut

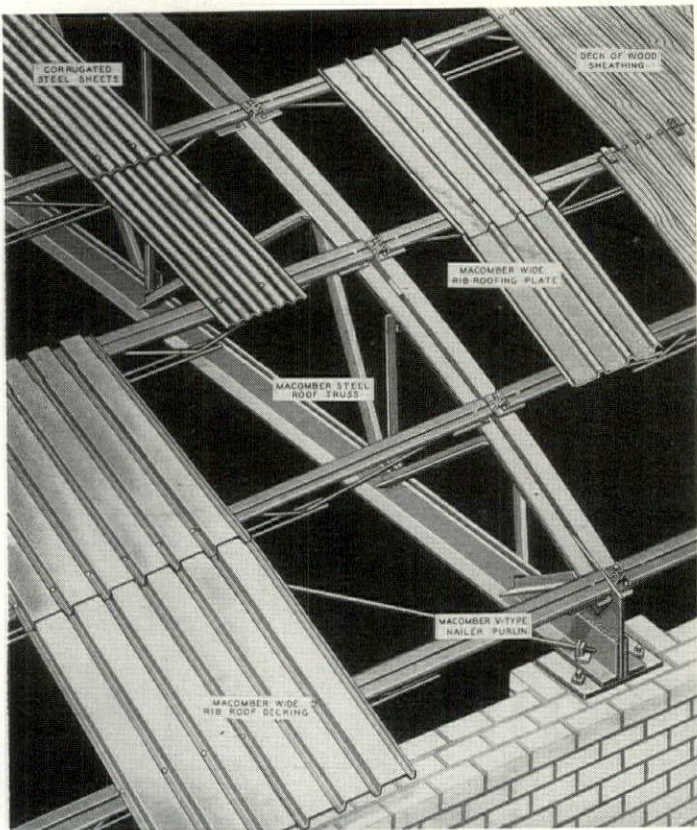
ILLUMINATING DIVISION
 Fluorescent, Incandescent
 Mercury Lighting Equipment

HEATING PRODUCTS DIVISION
 Domestic Oil Burners
 and Liquid Fuel Devices

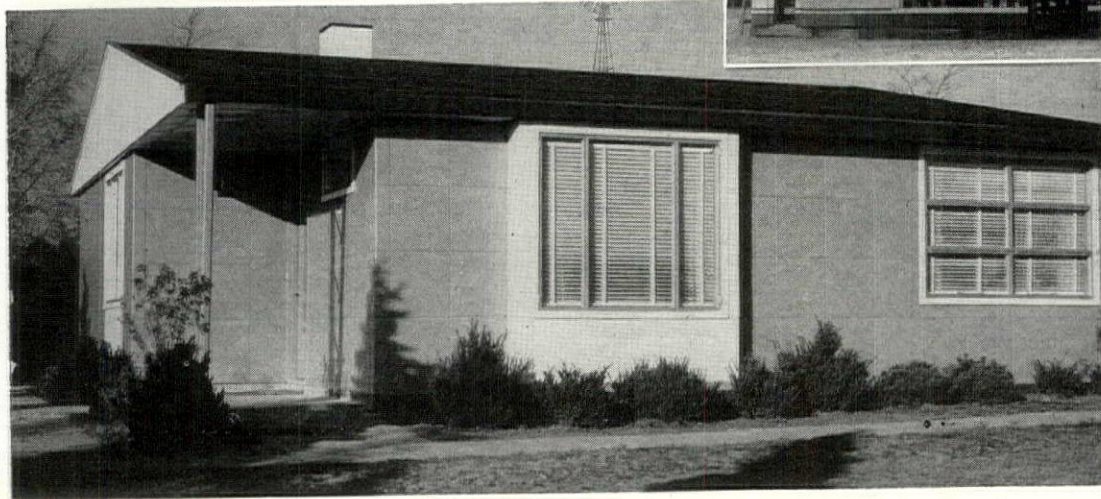
ROLLING MILL DIVISION
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 in sheets, strips and rolls



No. 1. AS FLOOR JOISTS with flooring nailed directly to the V Section now used as the top chord of Macomber Bar Joists.



No. 2 AS ROOF PURLINS providing secure attachment for any type of deck direct to the steel purlins.



No. 3 AS STUDS AND ROOF TRUSSES for prefabricated houses as used in the LUSTRON HOUSE. Porcelain enameled plates are attached to Macomber V Studs with metal screws. At right, bolting Macomber V Stud panels to LUSTRON HOUSE foundation.

THE MACOMBER V SECTION FOR THE DESIGNERS AND BUILDERS OF ENGINEERED *Construction*

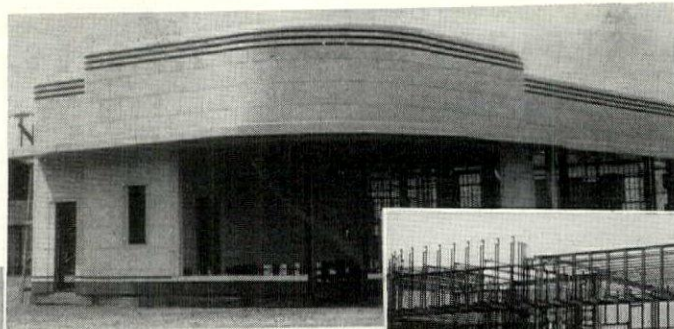
Some of the universal applications of V Sections are demonstrated on this page. These sections have been designed to conform with the load bearing requirements of a wide range of light occupancy needs. The nailing feature and open construction of all units whether Joists, Purlins, Stud Partitions or Trusses provide the designer and builder with practical structural members.

These steel sections are going into important, large scale housing and commercial projects. Building craftsmen weave their service lines through these units with greater ease than has ever been known with nailable steel sections. Catalog information will be forwarded without obligation.

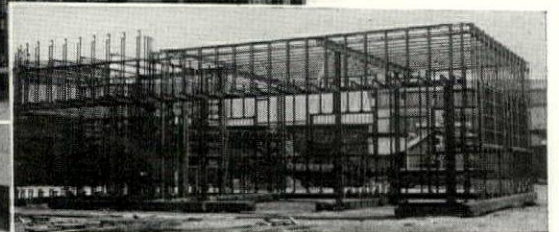


STEEL JOISTS ROOF TRUSSES ROOF DECKING
ROOF PURLINS LONGSPANS STEEL SIDING

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Its extreme light weight greatly reduces dead load, thereby making possible lower construction costs. Zonolite brand vermiculite aggregates weigh about seven pounds per cubic foot as compared to 100 pounds for sand and can be mixed with gypsum or Portland cement to make insulating plaster or insulating concrete.

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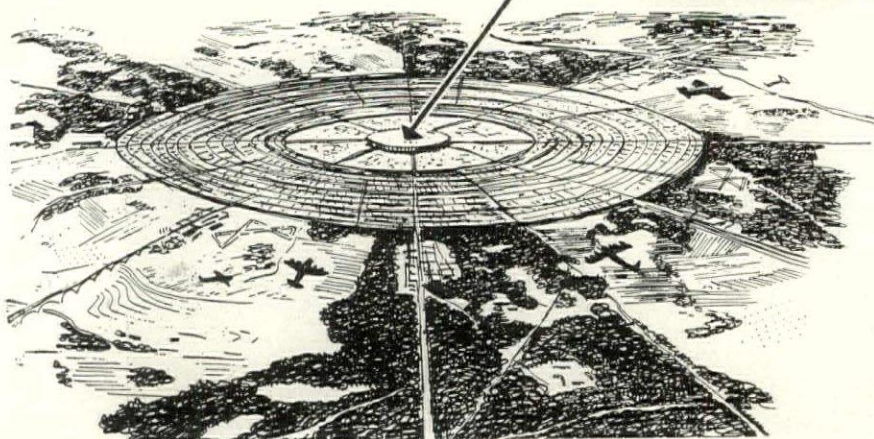
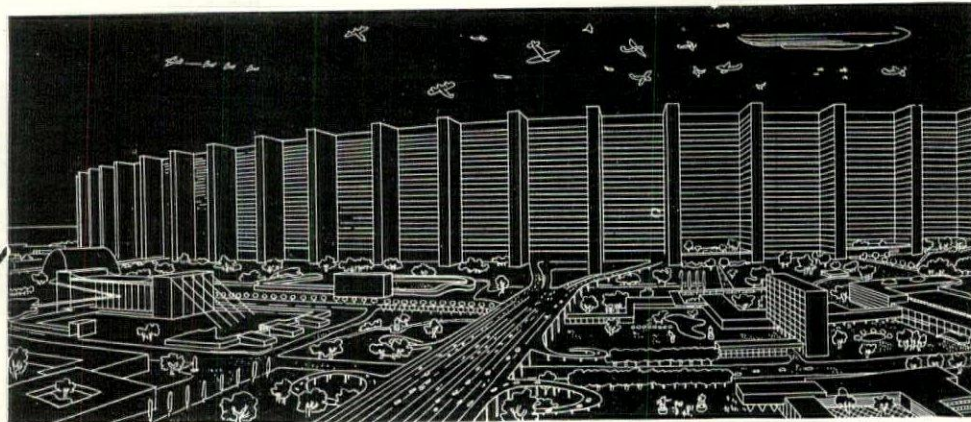
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City.....Zone.....State.....

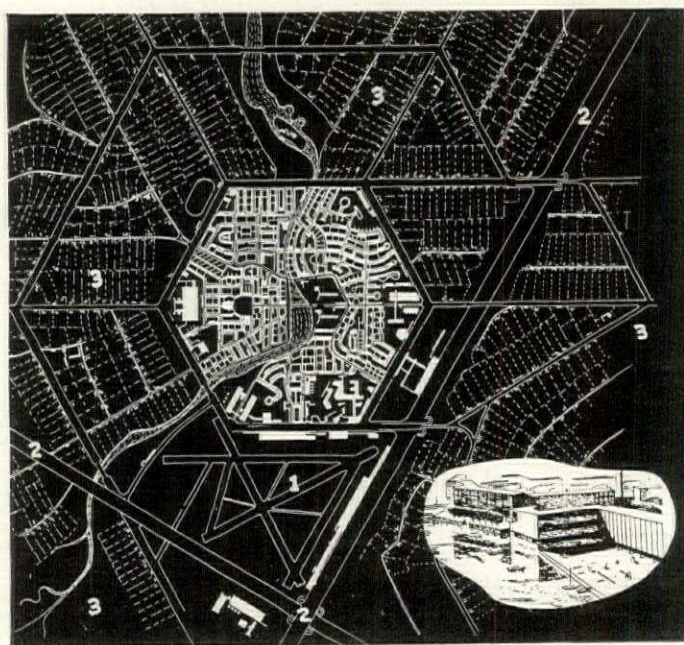
Please check: ☐ Architect ☐ Engineer ☐ Draftsman ☐ Contractor

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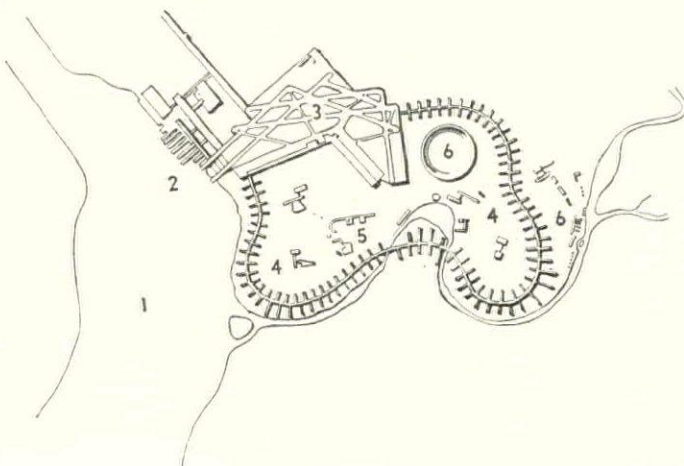
Since the modern American city is often merely a huge department store, the Goodmans suggest housing the entire downtown district in a huge, multi-story air conditioned cylinder. Cultural, recreational and housing belts surround the center ...



But a more satisfactory social unit would be a smaller town whose industry, commerce and recreation are at its center (1) and all housing within bicycle range. Main residential areas would be four-acre farms (2 & 3).



For production centers in backward or undeveloped areas (e.g., colonies) the city would be a self-contained unit around docks (2), airport and factory (3). Housing is a ribbon (4) around community buildings and sports areas (5 and 6).



COMMUNITAS: Means of Livelihood and Ways of Life.
Percy and Paul Goodman. University of Chicago Press, Chicago 37, Ill. 142 pp. 11 x 8 3/4 in. Illustrated. \$6.

The literature on housing and city planning has grown considerably in this country during the last decade. Studies such as those of Bauer, Churchill and Abrams on housing, or of Sert, Hilberseimer and Saarinen on city planning, have put a foundation of factual analysis under a field which was—in this country, at least—new and shaky. This underpinning was necessary work. By now, however, two things are clear: (1) the specialists have indexed pretty thoroughly the many theories; and the too few examples which the modern world affords; and (2) what the specialists now need is some real, honest-to-goodness housing and town planning to sink their teeth in. No field can subsist indefinitely on theory alone.

The Goodman brothers are no doubt prepared to admit this larger fact. At the same time, they insist that a smaller one merits attention—namely, that much of this valuable writing on city planning has been descriptive rather than analytical, reportage rather than criticism. This is an error of omission, the Goodmans feel, which should be corrected before planners plan anything else. Their point is not without merit and they make the most of it.

Despite a style which is always difficult and at times downright foxy, the Goodmans' new book has much to recommend it. Written with a sort of sarcastic eclecticism, it is nevertheless the work of men with a real interest in and no little knowledge of their subject. Substantially, it consists of a critique of recent trends in planning theory; a set of hypothetical solutions ("paradigms" as the authors exasperatingly call them) embodying what seems to them the best aspects of the different theories; and a concluding section dealing with the economic organization of the community. This latter part merely picks a cautious and obscure path through Bellamy, Veblen, Henry George and Borsodi—to tell us that our economic system is out of balance and that the physical structure of our communities reflects this fact. It is the first portions of the book which afford the most interest.

The authors carry us through a brief and intelligent resumé of Sitte, Ebenezer Howard, Corbusier, Wright and the Soviet city planners. They find something to be said for all of them, but in all of them they find a tendency toward compartmentalization which they deplore. Their concept of a successful city plan is one which reintegrates every aspect of social life. This conviction leads them to deal with the garden suburb or dormitory town with special sharpness. Such communities, the Goodmans feel, are romantic, middle-class panaceas which solve nothing. Insulated against business and industry, their landscapes may be pleasant to look at but the way of life they produce is artificial, divorced from social reality. The children may get fresh air, the mother a fairly satisfactory

(Continued on page 142)



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"Blonde"
 WOOD FINISH.....

for homes, stores, offices

Immediately available in ten modern tints, Pen-Chrome "Blonde" Wood Finishes enable you to achieve natural woodwork interiors of unusual beauty. This unusually wide range in tints gives you a choice to complement practically any decorative motif for home, store or office. Pen-Chrome may be applied to any unfinished wood surface.

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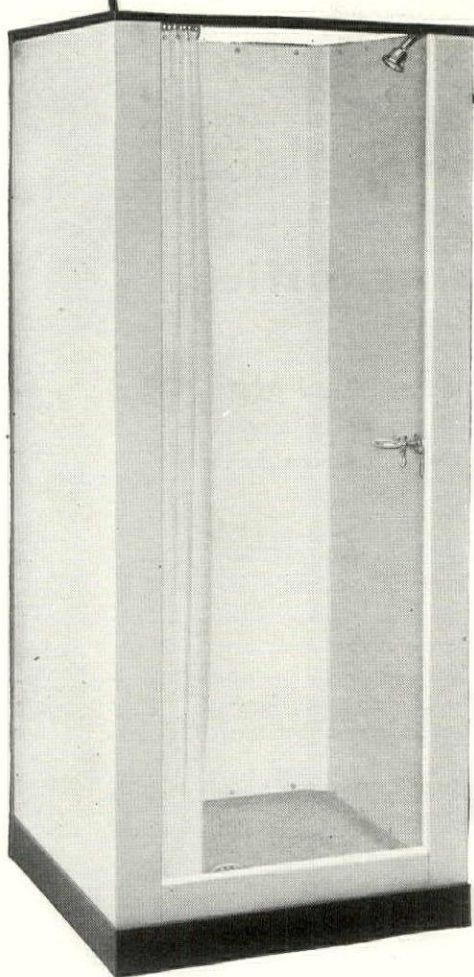


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RECEPTOR—Semi-flat standard type Stonetex; slip-proof, leak-proof, non-absorbent. Brass drain for 2" waste connection cast integral with receptor.

VALVES—Combination hot and cold compression valves with shower head and arm.

ACCESSORIES—Curtain rod and curtain.



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21-45 Borden Ave., Long Island City 1, N. Y. • 3419 Fowler St., Los Angeles 33, Calif.

social life, and the father a garden for weekend puttering: but such communities will never generate a real civilization. "Though art is cultivated (in the garden suburb), no works of art can be made; though science is studied, no new propositions are advanced; and though living is central, there is no social invention." Here the Goodmans recognize the importance of that cultural climate which the city—and apparently only the city, whatever its other shortcomings—can produce.

At the same time, they are by no means starry-eyed lovers of the metropolis. They not only agree with all corners that the city as it exists today is atrocious. They also find that many of its inherent structural faults are being perpetuated by would-be reformers. In this connection, Corbusier's *Ville Radieuse* (1925) comes in for a dissection which might well have been performed a decade ago. It is not a plan for a real, flesh-and-blood society, the brothers Goodman find, but only for a portion of it—roughly, the white-collar class and managerial aristocracy. "It is a paper city, its motion is the activity of draftsmen, typists, accountants, and board meetings." Messages move smoothly but what are their contents? Who does the real productive work and where do they do it? Admittedly, Corbusier has successfully integrated architecture and city plan. The city is beautiful to look at but, other than a demoniac efficiency, what is its purpose? "In the end, the great machine of the *Ville Radieuse*, with all its constructivist beauty, is a machine. It is not a city at all."

If not Greenbelt nor Manhattan nor Paris-Corbusier, then it may well be asked: what *do* the Goodmans want? Their answer is multiple. We have to decide, they feel, what type of society we want before we can satisfactorily house it. If it is to be a department store civilization, then let us at least make the city an efficient marketplace. Replace the center with a great air conditioned cylinder, twenty stories high and a mile in diameter. Here concentrate the retail outlets, the offices, the light manufacturing and assembly industries, vehicular transportation in the basement, aerial transport on the roof and a network of vertical, horizontal and diagonal transport for people and goods within the cylinder. Around this center put a mile-wide belt of theaters, museums, universities and churches. Beyond this place the housing—modern apartment houses arranged in super-blocks, with nurseries, grade schools and shopping centers. Outside this lies the open country. Heavy industry and large-scale agriculture are elsewhere—everything which this town consumes or fabricates comes already processed from field and factory.

If this is not a satisfactory way of life, the Goodmans have another paradigm to offer. This time, it is a much smaller community based on a minimum of segregation. The town's big industries (using electric or perhaps atomic power) are located right on the town square, thus expressing physically their central importance to the town's economy. Around the square also are the stores, trade schools, movies and cafes—in short, the whole adult life of the community is focussed here. The central portion of the town is given over to apartment housing, for what few bachelors or childless couples may appear. But the real dwelling section of the town is designed especially for the child population. It consists of a belt of four-acre homesites which encircle the town, all within bicycle distance of the town square. Here, after school hours, the children can work and play. Here, instead of the pluperfect lawns and perennial borders of suburbia, they will find real workaday, small-scale agriculture in which to whet their appetites and develop their faculties.

"Communitas" presents still other ideas for other patterns of living, in case none of these meets the tastes or needs of

(Continued on page 144)

*A Matter
of
Good Taste*



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the perfect Venetian Blind is made of

• Now available—"A Matter of Good Taste"—a colorful, fully illustrated, 24-page booklet describing all the uses and beauties of FLEXALUM Venetian Blinds. You'll find it a valuable aid to your clients—and to yourself. Here are page after page of beautiful four-color photographs of decorator-planned room styles and window treatments. Here is an interest-arousing book you'll be proud to keep in your reception room. See it, and see for yourself how FLEXALUM, the warp-proof, rust-proof Venetian Blind slat material, made of special formula aluminum, matches its smooth, lifetime beauty to every type of architecture... in rooms of any period or style.

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Out of some cold figures, came a story to warm merica's heart

NOT LONG AGO, the Secretary of the United States Treasury studied a figure-covered sheet of paper.

The figures revealed a steady, powerful upswing in the sale of U. S. Savings Bonds, and an equally steady decrease in Bond redemptions.

But to the Secretary, they revealed a good deal more than that, and Mr. Snyder spoke his mind:

"After the Victory Loan, sales of U. S. Savings Bonds went down—redemptions went up. And that was only natural and human.

"It was natural and human—but it was also dangerous. For suppose this trend had continued. Suppose that, in this period of reconversion, some 80 million Americans had decided not only to stop saving, but to spend the \$40 billion which they had *already* put aside in Series E, F & G Savings Bonds. The picture which *that* conjures up is not a pretty one!

"But the trend did NOT continue.

"Early last fall, the magazines of this country—nearly a thousand of them, acting together—started an advertising campaign on Bonds.

"This, added to the continuing support of other media and advertisers, gave the American people the facts . . . told them why it was important to buy and hold U. S. Savings Bonds.

"The figures on this sheet tell how the American people responded—and mighty good reading it makes.

"Once more, it has been clearly proved that when you give Americans the facts, you can then ask them for action—and you'll get it!"

What do the figures show?

On Mr. Snyder's sheet were some very interesting figures.

They showed that sales of Savings Bonds went from \$494 million in last September to \$519 million in October and kept climbing steadily until, in January of this year, they reached a new postwar high:

In January, 1947, Americans put nearly a billion dollars in Savings Bonds. And that trend is continuing.

In the same way, redemptions have been going just as steadily downward. Here, too, the trend continues.

Moreover, there has been, since the first of the year, an increase not only in the volume of Bonds bought through Payroll Savings, but in the number of buyers.

How about you?

The figures show that millions of Americans have realized this fact: there is no safer, surer way on earth to get the things you want than by buying U. S. Savings Bonds regularly.

They are the safest investment in the world. They pay you \$4 for every \$3 at the end of 10 years. And you can buy them automatically, almost painlessly today, through either of two plans:

If you are eligible for the Payroll Plan, for your own sake and your family's sake, get on it . . . and watch your savings mount up.

If you are not eligible for the Payroll Plan, but have a checking account, see your banker and get him to tell you about the new Bond-a-Month Plan.

Either of them will set you on the road to financial security, and the happiness that comes with it.

Save the easy, automatic way
—with U.S. Savings Bonds

Contributed by this magazine in co-operation
with the Magazine Publishers of America as a public service.



the readers: for industrial cities in unsettled territory, for production centers in existing cities, for transient or seasonal communities. There are even some lively hints on home furnishings. Whatever else it lacks, the Goodmans' book is chock full of ideas. One could only wish that their text matched their drawings in coherent and witty exposition. Experimental writing like this is best displayed in the "little" magazines, just as foxes show to best advantage in the zoo.—J.M.F.

CAPITALIZATION TABLE. by Joseph B. Buwen, Joseph B. Buwen Co., Realtors, 55 W. 42nd St., New York City 18. 14 pp. 6 in. x 9 in. \$1.00. (Complimentary copies are available to FORUM subscribers.)

The capitalization method of converting a property's net income into its real estate value entails considerable mathematical maneuvering. For example, assume that a property shows a net return of \$8,000 on a free and clear basis, that a lending institution will place a 75 per cent mortgage at 4 per cent interest and 2 per cent amortization (a total of 6 per cent) and that the prospective purchaser wants his 25 per cent cash investment returned in 5 years (20 per cent per year). Derivation of this property's real estate or market value by the usual capitalization method involves multiplying 75 per cent by 6 per cent and 25 per cent by 20 per cent, adding the two products and dividing the resultant 9.5 per cent (capitalization rate) into \$8,000 times 100. The same answer, \$84,210, is obtained more quickly and with less opportunity for error by referring to the 75 per cent mortgage table in Realtor Buwen's booklet, reading down the interest and amortization column to 6 per cent, going across to the 5 year (20 per cent) equity return column where the figure 10.5263 appears and simply multiplying this figure by the \$8,000 net income.

The booklet's nine tables cover 50 to 90 per cent mortgages (in 5 per cent increments) with 1 to 10 per cent interest and amortization rates (in $\frac{1}{4}$ of 1 per cent increments) and equity return periods ranging from 2 to 10 years (in 1 year increments). They thus should prove useful to any realtor, builder and banker dealing in the purchase, sale or finance of income-producing properties.—J.H.

GOOD DESIGN IS YOUR BUSINESS. Published by The Buffalo Fine Arts Academy, Albright Art Gallery, Buffalo 9, N. Y. 98 pp. Illustrated. $8\frac{1}{2}$ in. x $10\frac{1}{2}$ in. \$.95.

Another instance of good design selected, promoted and made available to the general public by the grant of industry is evidenced by this monograph, and the exhibition drawn from it, which was held at Buffalo's Albright Gallery. Their sponsor: the Gaylord Container Corporation of St. Louis, Mo.

In addition to a selection of outstanding consumer objects ranging from fishing rods to automobiles, the book contains three brief, hardheaded articles: *Industrial Design, What It Is and What It Does* by Walter Dorwin Teague; *The Education of the Industrial Designer* by Richard Marsh Bennett; and *The Manufacturer's Position* by Edward S. Evans, Jr. Although the initiate may question the choice of one or two objects chosen for excellence, on the whole the standard is as good if not superior to that of the annual Christmas show at New York's Museum of Modern Art. Appearing in book form, there is besides the possibility of wide popular circulation which this reviewer sincerely hopes will materialize. The selection was made with a maximum and minimum consumer pocketbook in mind, and only objects currently in production were eligible—a restriction which accounts for a few obvious admissions. Mr. Charles P. Parkhurst's commentary text con-

(Continued on page 148)



MODERN DESIGN. Note Kentile's remarkable design flexibility. Both these interiors use the same two Kentile colors—Griotte (B-246) and Languedoc (C-257).

now... floors are **MODERN**

Looking for a *real* floor improvement? The Kentile story is astonishing. Just check a few of its advantages. **CUSTOM DESIGNED!** Laid tile by tile (not sheets)—you can have a special color combination and pattern to suit every room. In stores, Kentile directs traffic, encircles displays, highlights important centers. In homes, Kentile means distinctive foyers, spirit-lifting kitchens,



playrooms with games right in the floor. **PRACTICAL!** Fast and easy mopping keeps Kentile clean; an occasional waxing always renews its luster. **ENDURING!** Kentile is super-tough (all the way through); lasts for

decades. Always looks good because stains and scars are practically unknown. **ECONOMICAL!** Unbeaten for low cost, for inexpensive maintenance—and you just add extra tiles when you remodel or enlarge. Yes, Kentile is astounding architects, decorators, homeowners. Get the facts yourself from your department store or flooring firm. David E. Kennedy, Inc., fine flooring since 1899.

now... it's service **PLUS**

*Memo
for
architects
and
builders*

modern builders know Kentile, of course. You building people have long preferred this asphalt tile—for better performance and smarter coloration. Now your public, too, will know the name of this long-time quality leader. Powerful full color ads like this one—in the Saturday Evening Post, American Home, House Beautiful—are making Kentile a valuable selling name for you. It's just another Kennedy **plus**

DAVID E. KENNEDY, INC.
58 Second Ave., Brooklyn, N. Y.



Specify cleaner, purer automatic hot water—



Hot Water

"Packaged-in-Glass"

This new discovery spells the end of tank rust that ruins clean laundry, of corrosion dirt that soils the bath and stains the fixtures. Your clients will feel like cheering the

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SMITHway WATER HEATER

It **CANNOT** rust! Under *any* water condition, the tank of this truly modern automatic water heater will not rust or corrode. The reason is simple: It's glass-fused-to-steel . . . mirror-smooth and sparkling blue!

Yet this is only *one* feature of many—including a smooth, beautiful design that has set the new postwar style.

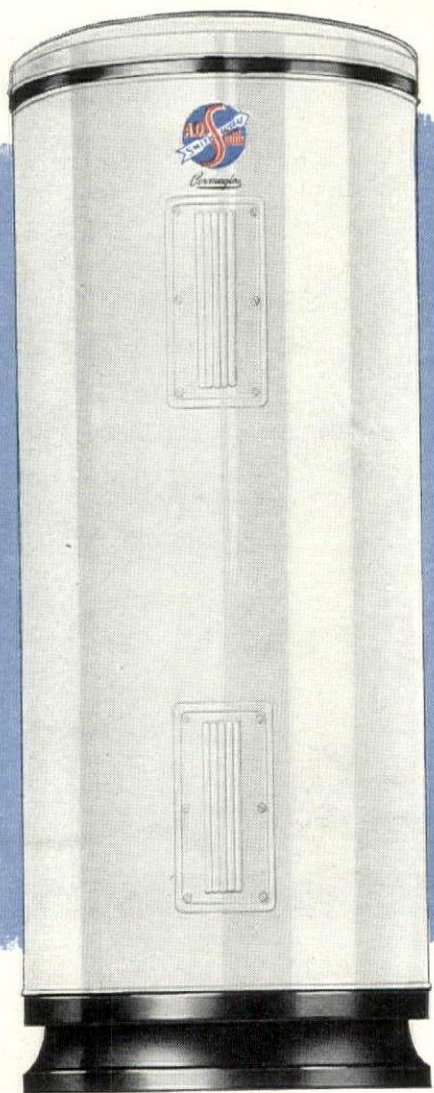
**THE ONE WATER HEATER
THAT MEETS ALL MODERN DEMANDS**

The *Permaglas* Water Heater has a rust-resistant tank of mirror-smooth glass-fused-to-steel. And only the "*Permaglas*" gives you *all* the features every homeowner wants in an all-modern water heater. Gas or electric. Capacities to fit all home needs.

Discover all the facts today. Ask the A. O. Smith office nearest you for "The Inside Story of Permaglas."

HOT WATER "Packaged-in-Glass"

Guardian of the Nation's Health



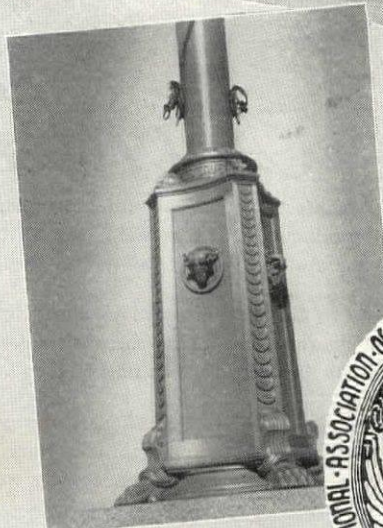
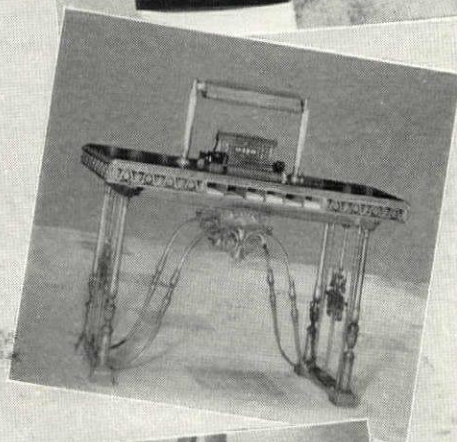
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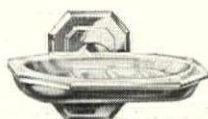
TOILET PAPER
HOLDER No. 370
Chrome Roller



TUMBLER AND
TOOTHBRUSH
HOLDER No. 330



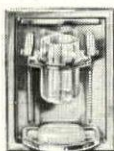
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No. 322—With Un-
breakable Crystal Tray



ROBE HOOK
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BAR No. 394—3/4"
Square Bar. Lengths:
18", 24", 30", 36"



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No. 338—OPEN
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exposed for use.



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Toothbrushes, Soap
and Tumbler hidden
from sight.

ARISTOCROME accessories are made of solid brass, nickel plated and then heavily chromium plated to add distinction to the finest bathroom.

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tains a wealth of shrewd guidance in the fewest possible phrases. In the words of Andrew C. Richie, Director of the Albright Art Gallery, the book is "a peculiarly happy example of what can be achieved when an American business seeks to promote the public welfare on a high plane".—M.S.

THE WAY BEYOND 'ART'—the Work of Herbert Bayer.
By Alexander Dörner. Wittenborn & Co., New York. 244 pp. Illustrated. 7 1/2 in. by 10 in. \$5.50.

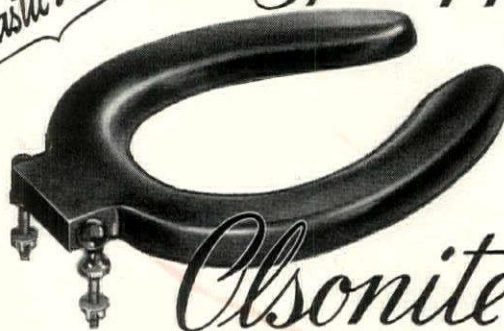
Excellent illustrations of Bayer's work in graphic presentation—montages, paintings, posters, ads, magazine covers, museum displays—and of others in this field make up the latter and better part of this book. Dörner uses Bayer as a springboard for a theory of the new art: "Bayer's imagination escapes less and less into the freedom of Romanticist novelty, and it also gives up more and more the traditional self-sufficiency that is still inherent in Abstract art . . . The new picture . . . is no longer the ultimate, the 'work of art' above the mantel-piece. The picture is now only a transition. It transcends 'art' by becoming a concrete life-changing force, a 'working element' of practical life."

The first part of the book is certainly abstruse. It is reminiscent of those deep metaphysical generalities so beloved of the 19th century Germanic philosophers, whose mystical word-complexities sometimes read like gobbledygook. Untranslatability of these demonic-magic concepts may make the reading hard: "The constant supra-spatial self-changeability has become the new dynamic truth of reality, replacing the traditional immutable truth of spatial relations and turning that truth into a crude and superficial image of secondary value." "The sinister treacherous power of the daemonic object has been rendered innocuous by the deeper magic of form."—E.B.

(Continued on page 150)



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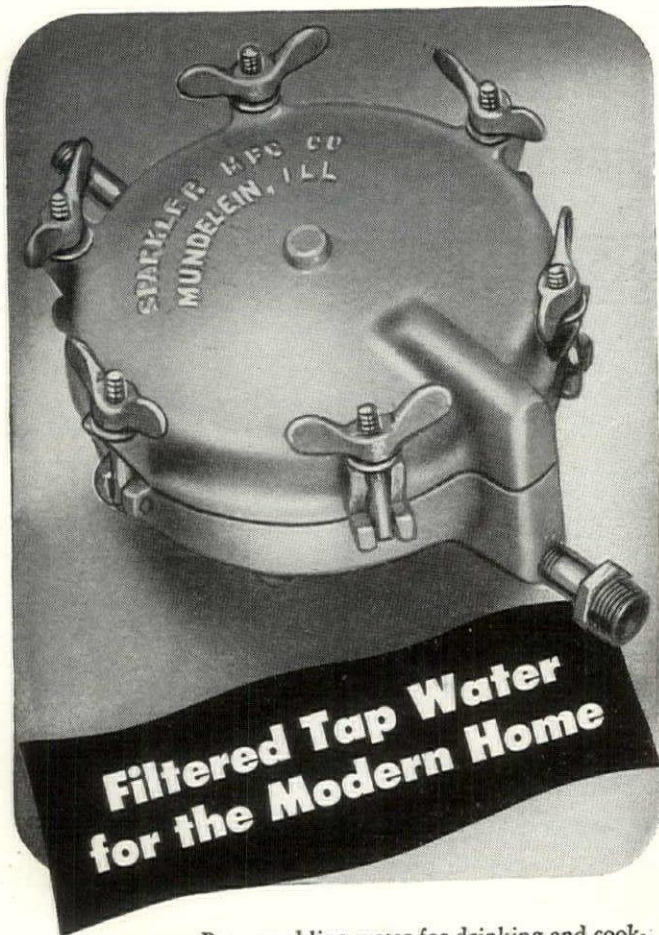
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Pure sparkling water for drinking and cooking has moved from the "luxury" to the near necessity class for the modern kitchen. Sparkler home type filters provide continuous-flow filtered water at low cost, and are easily installed in either new or old construction.

Sparkler filters completely remove all chlorine and other off-tastes and odors, all sediment, color, pipe rust, algae, etc., and deliver clear, sparkling, pure water for drinking and cooking.



Simple construction; easy to change filter pad.

The Sparkler W-8 and W-5 units, should be installed by tapping the supply pipe at the kitchen or utility sink or laundry and delivering the filtered water through a separate faucet. In this way filtered water is available with the greatest convenience and, by restricting filtration to drinking and cooking, a longer period of continuous flow is possible between filter pad changes. For the average family, a filter pad will last from four to six weeks and replacement can easily be made by any home owner.

The five models listed below are the filters usually selected for home installation; larger sizes up to 10,000 gal. per hr. are available for institutions, hospitals, or commercial requirements.

Model	Filter Area in Sq. in.	Capacity GPH	Height	Diam.	Shpg. Wt.
W-8	100	120	6"	9"	20 lbs.
W-5	19 1/2	60	4"	6"	11 lbs.
SPA	7	30	3"	4"	3 1/2 lbs.

Construction: Solid bronze; SPA is chromium-plated. Filter Media: Low cost preformed pads.

SPARKLER HORIZONTAL PLATE TYPE WATER FILTERS

Model	Area Sq. Ft.	CAPACITY GPH	OVERALL DIMENSIONS Height	Width	Length	SHIPPING WT. (approx.)
14-W-4	3.2	200	38"	21"	21"	250 lbs.
14-W-8	6.4	400	42"	21"	21"	350 lbs.

Construction: Galvanized steel or unpolished stainless steel tank; hard rubber or stainless steel plates.

Write for special file bulletin on home water filtration. Gives complete information.

SPARKLER MANUFACTURING CO.
MUNDELEIN, ILLINOIS



The chemical war on weeds

EDUCATIONAL FILM ON WEED CONTROL

It has been estimated that weed growth on the producing lands of the U. S. causes a loss in potential crops of something near \$3 billion annually. And, although science has made great strides in devising methods for the prevention and destruction of weed growth, the need for practical education in applying the proper remedies is felt by the average home-owner as well as the farmers of the nation.

Dissemination of information on this subject has been going on for years under the auspices of the federal government, state and private agencies. However, a new means of education is now available in the form of a sound motion picture entitled "Death to Weeds," which will be lent to interested groups without charge. The film covers the entire range of weed pests tending to infest farms, gardens and ranches. By means of motion photography and animated technical drawings, most of the weeds which choke the cultivated areas are identified and the best means of control suggested.

The film, available for 16 mm. projectors, is in full color, has a screen time of about twenty minutes and is accompanied by a running commentary. It may be obtained on loan by interested groups by applying to Millard Hooker, the Dow Chemical Co., Midland, Mich.—L. S. M.

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- Permanent — can't rust
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- Easier installation — handles like cloth, cuts with scissors
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- One-fifth the weight of metal
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Velon screening resists more impact — without denting, bulging or breaking.

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Cannot corrode or rust . . . no upkeep, never needs painting . . . cannot "bleed" and stain building . . . easier installation: handles like cloth, cuts with scissors . . . safer installation: no jagged edges or sharp splinters . . . one-fifth the weight of metal.

Specify *Velon* . . . now available in standard widths and gauges. For full-color booklet on *Velon* and free samples, write Firestone, Akron.

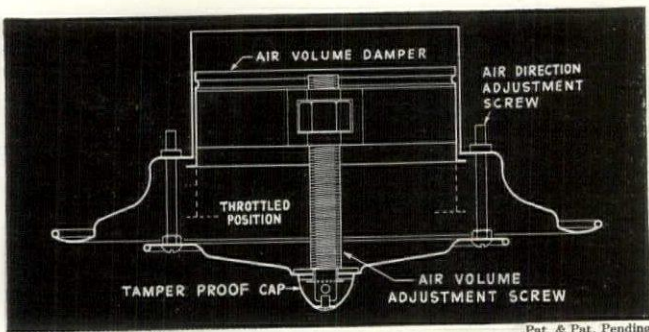


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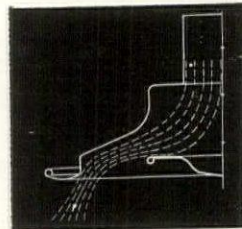
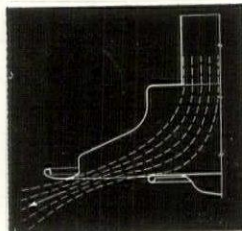
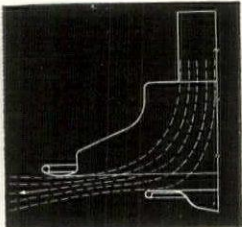
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quotient of drinks, his ideas became more and more inspired until he reached the height of his genius on Saturday evening. The last crit before he left on Sunday usually took place at Otto's own roost on the outskirts of New Haven where he and his students could relax and give themselves over to the true creative spirit.

In coaching students for the Beaux Arts competitions, Faelton and Morgan had an intuitive knack of guessing what would hit the judges. One year they knocked them cold with flamboyant tempera renderings. The next year, when other colleges had turned knowingly to tempera, Otto and Lloyd would tell their students: "Nothing but India ink." The judges, loth to reward Yale so conspicuously, would bypass the colorful drawings, choosing instead chaste black and white designs, only to discover that they had unerringly picked Yale winners again.

When students were *en charette* Morgan and Faelton adopted a practice which made the strongest of undergraduate blood run cold. At the beginning of the last weekend before a problem was due they would approach one unlucky fellow, bend over his almost finished design and proceed to tear it apart. "This railing doesn't look quite right, does it?" Otto would say, pointing with his lighted cigarette so close that the paper began to char. "Gee, I don't see anything wrong with that, Otto," Morgan would reply, "but this tree . . ." And he would grab a sponge from the student's tempera-loaded water, smearing the offending portion of the design into a muddy pool. By the time they were through, the drawing had been changed from a neat, precise rendering into an almost incredible mess and the misunderstood genius who had produced it was ready to cut his throat. Morgan would end the lesson by saying airily: "Well, after all, it's only a piece of paper."

Pushed by the approaching deadline, the frantic student was now forced to take his ruined masterpiece and, in the space of a weekend, make something out of it. His capacities were pushed to their limits and the victim of this bizarre schooling often crashed through with the best drawing of his career. However, the two critics kept an eye on their poor wretch all weekend and, if he obviously wasn't going to make it, at the last minute would whip out a splendid rendering for him to hand in.

Faelton and Morgan were indeed a fabulous pair, bringing to staid New Haven a taste of Beaux Arts *joie de vivre*. Their inspired nocturnal doings, growing perhaps in the retelling, have provided an unequalled example for campus roisterers from that day to this. Dean Meeks is revered by students of this era, not only for

bringing Otto's lusty influence to Yale, but for protecting his unfettered genius while he was there. When stuffy faculty members complained to the Dean about Faelton's Herculean exploits, Meeks would utter a few tut tuts, gravely sympathize with their outraged feelings and nothing more would be heard of the affair.

According to legend, however, Faelton at last outdid himself. Around this series of incidents on an unfortunate morning-after hangs the pall of academic censorship. But apparently these exploits were uninhibited enough to shock the most liberal of college heads, and Dean Meeks was forced to ask Otto for his resignation.

Faelton's ardent disciples believe that this marked the end of the great era at Yale. They will admit, when pressed, that Yale did win a few prizes after the master's withdrawal. They will even grudgingly grant that Raymond Hood, a subsequent critic, had a modicum of talent. But Faelton's period is colored with the nostalgia of folk legend and none can dispute his place.

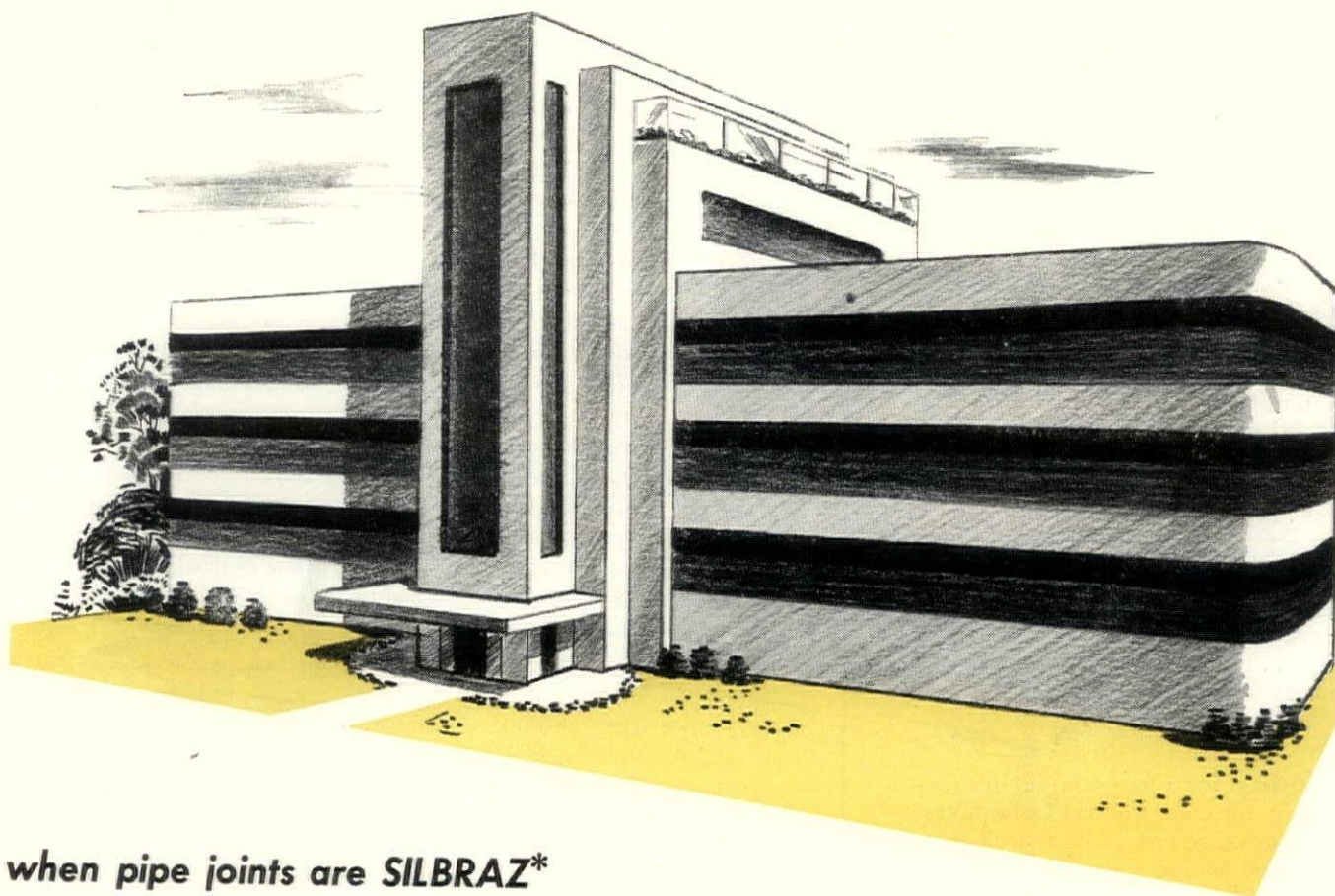
During this part of Meeks' regime New Haven awoke to its first inkling that a degraded segment of humanity known as engineers was producing a new American building idiom under their esthetic noses. As an outgrowth of an academic art school, Yale's architectural department had proved particularly fallow soil for the philosophy which placed esthetics apart from structure. Prior to 1930, any Yale student wishing to take engineering courses had to pick them up at Sheffield Scientific School. It is to Dean Meeks' credit that he bowed gracefully (and more quickly than many college heads) to the inevitable, making engineering an integral part of the architectural curriculum. From that time on, he could no more resist the tide of change than King Canute, and, unlike that stubborn gentleman, preferred to ride with it rather than attempt a fruitless last stand. By 1932 he had swung to an already sympathetic view as shown in a *Register* article of that date:

"Out of the confusion of eclecticism, young radical designers are trying to develop a style which shall be truly expressive not only of 20th century building methods, but of the modern conception of living as well." Referring to the new radical movement in architecture, Meeks declared that "the movement is young and style crystallizes slowly. In Europe this modernistic movement has become decidedly startling."

However, in the midst of shifting attitudes toward architecture, Meeks did not alter his respect for the great achievements of the past. In 1933 he instituted a new

(Continued on page 154)

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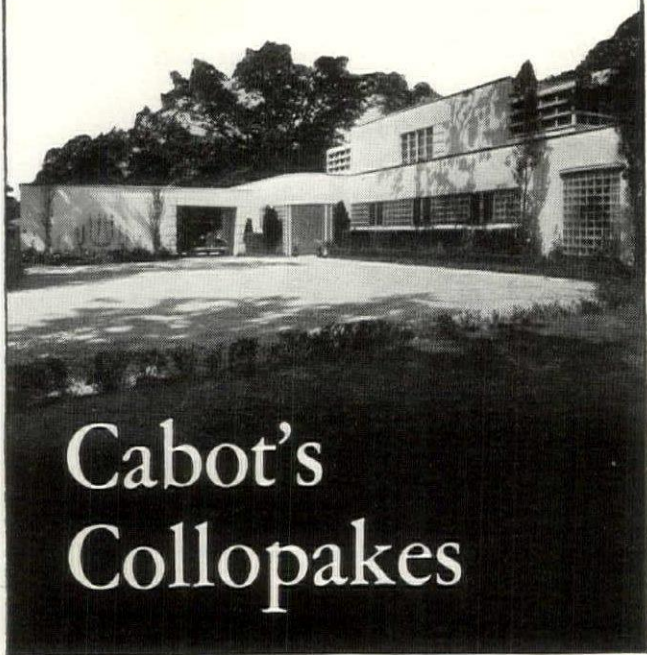
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department of the history of art (which has been recognized as one of the most outstanding of its kind in the country) by bringing from Paris two distinguished French art historians, Marcel Aubert, now *conservateur en chef de Louvre* and Henri Focillon.

But it was Meeks' realization that something new was brewing that made him, at the same time, choose Raymond Hood as his next chief design critic. By this time Hood had completed the Daily News Building and was, for his time, one of the most advanced architects in America. "Raymond Hood was an imp," recalls Dean Meeks. "He used to stride around the drafting room with his hat on the back of his head, so interested in the work that he forgot to take it off. The students loved his whimsical approach." Meeks also brought in John Holabird, who had broken with tradition in his Forest Products Laboratory and George Howe, both as visiting lecturers. In one famous year, 1937, he boasted a succession of speakers, representing the greatest artistic and architectural minds throughout the entire world. When Meeks crashed through with Frank Lloyd Wright, interest in the new architectural trends had mounted to such a degree that eager students overflowed the regular lecture room and had to move in a body to the main auditorium in Sterling Hall.

This record of brilliant critics and lecturers, culled from the ranks of the most successful practising architects, Meeks has maintained up to the moment of his departure. After Hood he brought in Wallace K. Harrison and partner Max Abramowitz; during the past seven years he also cornered the expert services of Richard Bennett, Morris Ketchum and William Wilson Wurster, now Dean of M.I.T.'s vigorous Department of Architecture. Current star at Yale is New York's Edward Stone, famed as co-designer of the Museum of Modern Art. When Alvaar Aalto returned to America recently, one of the first places he visited was Yale because, as he explained, he has a warm feeling for the school where he first met American architectural students.

Unlike the recent design revolution at Harvard under Walter Gropius, Yale's switch to contemporary thinking was a gradual evolution, gaining impetus a decade ago and changing over the years to its present strictly modern curriculum. To critics who, at the present day, still accuse Dean Meeks of being reactionary, he replies: "I'm nothing of the kind. I'm all in favor of modern design." But he does feel that the Beaux Arts tradition has been unjustly maligned. "Organic architecture was taught in Paris," he scolds. "Our projects were judged according to the logic of scheme and

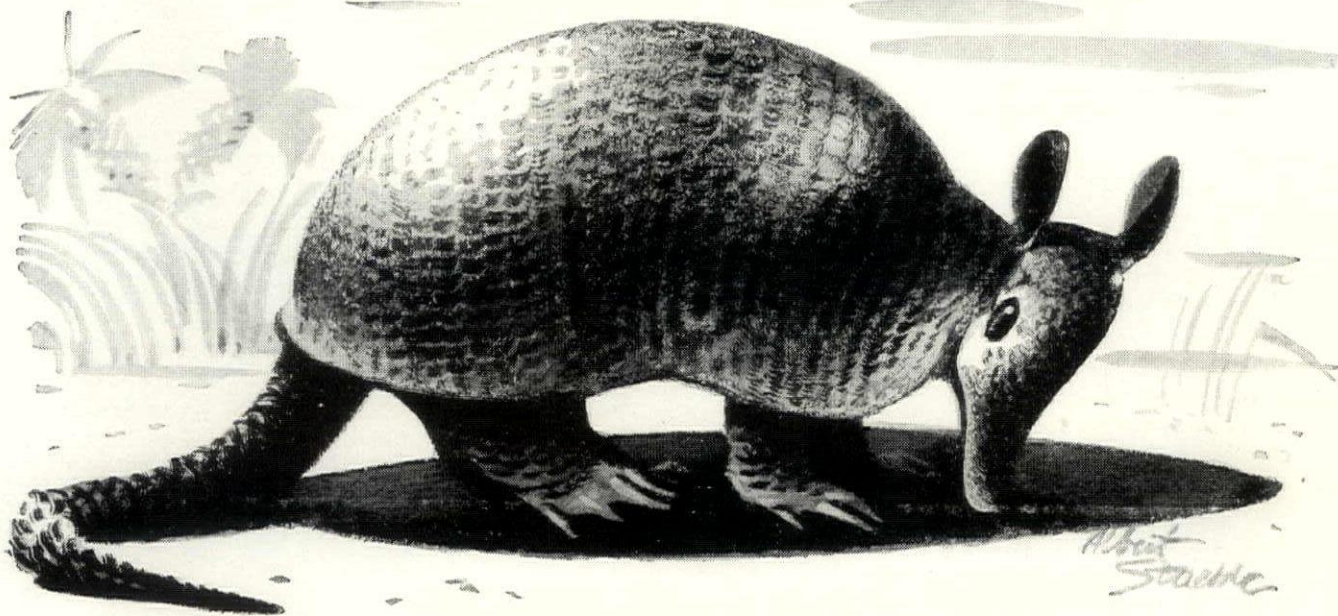
plan. Now they change the exterior and call it a change to organic architecture. That's ridiculous!"

Frank Lloyd Wright might have a word to say about that, but Dean Meeks sees no contradiction between Beaux Arts bi-axial symmetry and the free organization found in contemporary design. He feels that the early modernists sacrificed something in their adherence to strict functionalism and that there is a world-wide movement to bring back the architectural esthetic—a quality, he adds, which men like Wright never lost.

The esthetic quality is obviously one which Meeks never lost either. He kept what he considered the enduring principles of the Beaux Arts tradition even during the explosive thirties and, among the dangerous shoals of change, carefully avoided extremism. Throughout his tenure at Yale he has maintained an itinerant architectural practice, acting as consultant for Cornell's campus plan and the Irving Trust Company, seasoning these meaty jobs with designs for elegant residences in Spuyten Duyvil, Coldspring-On-Hudson and similar spots. On retirement he intends, first, to make trips to South America, Australia and New Zealand, parts of the world which he has so far overlooked; afterwards to continue his practice as a consultant.

Just as Meeks has through the years maintained his individuality against the pressure of change, so Yale's School of Fine Arts has held on to a quality essentially its own. While other colleges imported famous modernists from Europe, recklessly embraced a purely functional design philosophy or dropped out of the running altogether, Yale managed to retain, in spite of the times, something of her old artistic approach. Today, a general uneasiness regarding the Puritan severity of modern architecture is overtaking the profession and, appropriately, this unrest is most evident at Yale. Having stripped our buildings down to the bare essentials, designers are now beginning to wonder if some form of enrichment appropriate to the 20th century is not in order. Yale's continued emphasis on the integration of architecture, painting and sculpture may prove productive as modern design enters this new phase. If so, Meeks' rounded regime will have been responsible for Yale's prescience of a turning tide. At the moment, of course, the severe, dedicated high priests of the modern movement, who have dominated architectural philosophy for the past fifteen years, show no signs of relinquishing their ascetic disciplines. However, it might not hurt them to relax now and then and savor the richness of living which Dean Meeks has never foresworn.

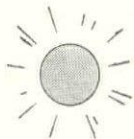
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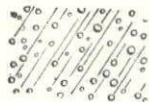
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the books of corporations, but in the final ledger of our own democratic enterprise.

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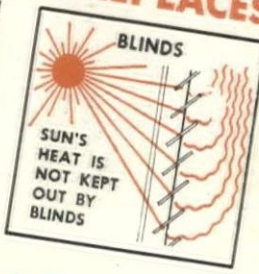
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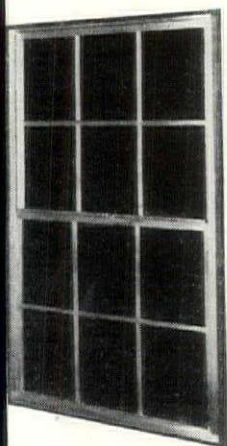
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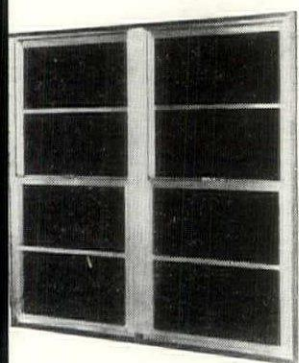
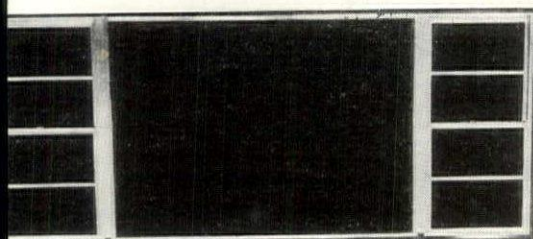
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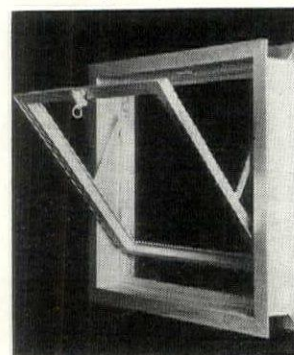
different muntin arrangements. Multiple units are formed in either straight runs or at angles with one of 3 standard mullions. Combination aluminum screens and storm sash, easily removable from the inside, are furnished to fit all A-100 double-hung units. Screens are wired with either plastic or aluminum screen cloth, are furnished in half or full length, or as a 3-piece combination in conjunction with the storm sash. Storm sash comes ready glazed with double strength glass. The Cupples picture window is available in 12 stock sizes, taking either single or double sealed glass. The units are shipped knocked down in 4 pieces with the aluminum extrusions carefully finished and joined to the wood sub-frame. Glazing beads are attached to the correct piece. The sub-frame piece has a tight slip joint for automatically lining up the unit. The builder has only to slip the pieces together, apply waterproof resin at the joints (furnished), drive one sash nail into each corner and the unit is ready for installation. *Manufacturer:* Cupples Products Corp., 2650 South Hanley Rd., Maplewood, St. Louis 17, Mo.

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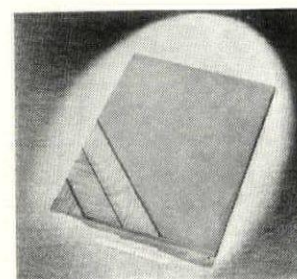
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into the room. The unit for glass block construction, Series 950, carries the weight of glass blocks without the use of lintels. It is constructed with a complete extruded glass block frame and sash member which gives additional rigidity. Window also incorporates the usual advantages of aluminum construction. It requires no painting or maintenance, does not rattle, swell or warp out of alignment. Both types of units are manufactured in sizes to coordinate with the modular system. *Manufacturer:* Albert Storms & Co., 101 Park Ave., New York, N. Y.

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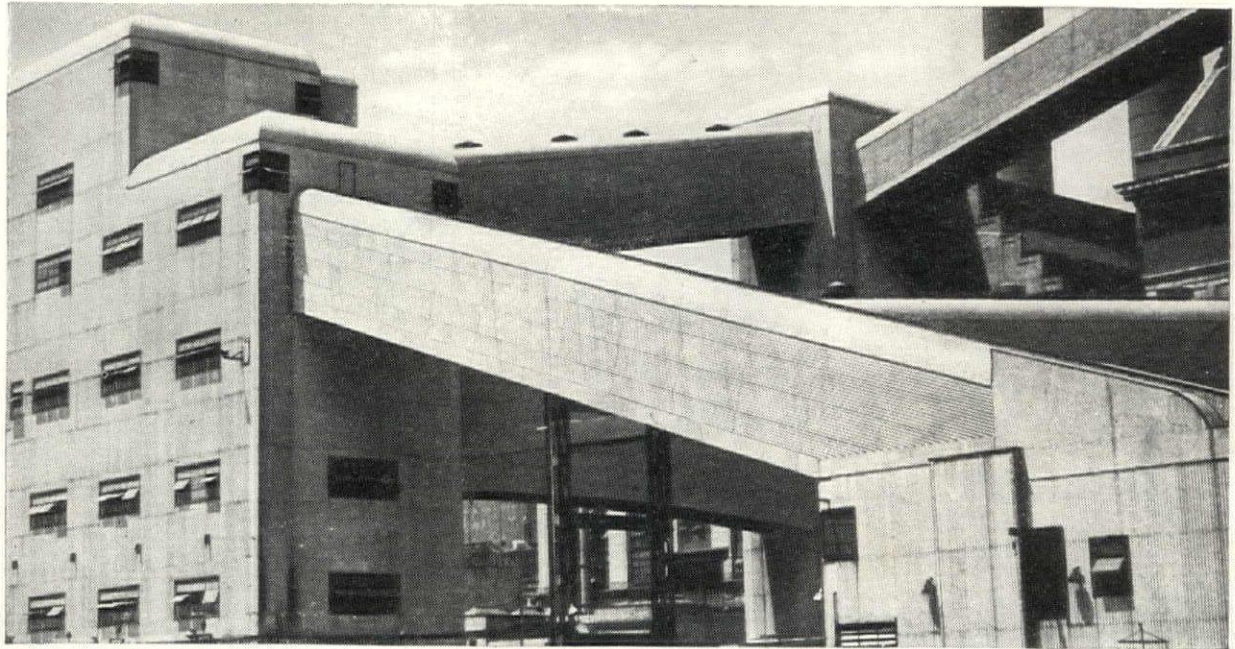
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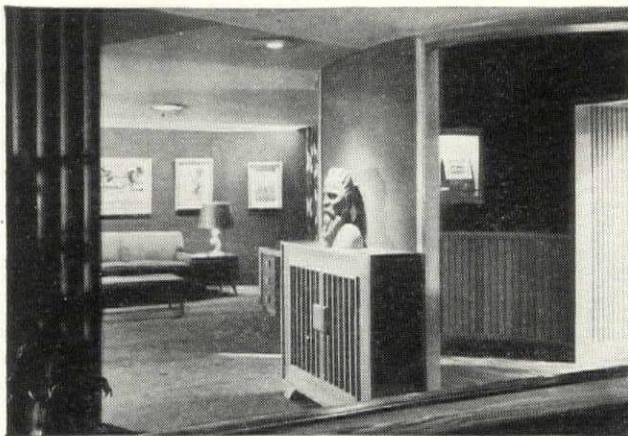
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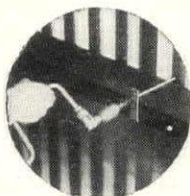
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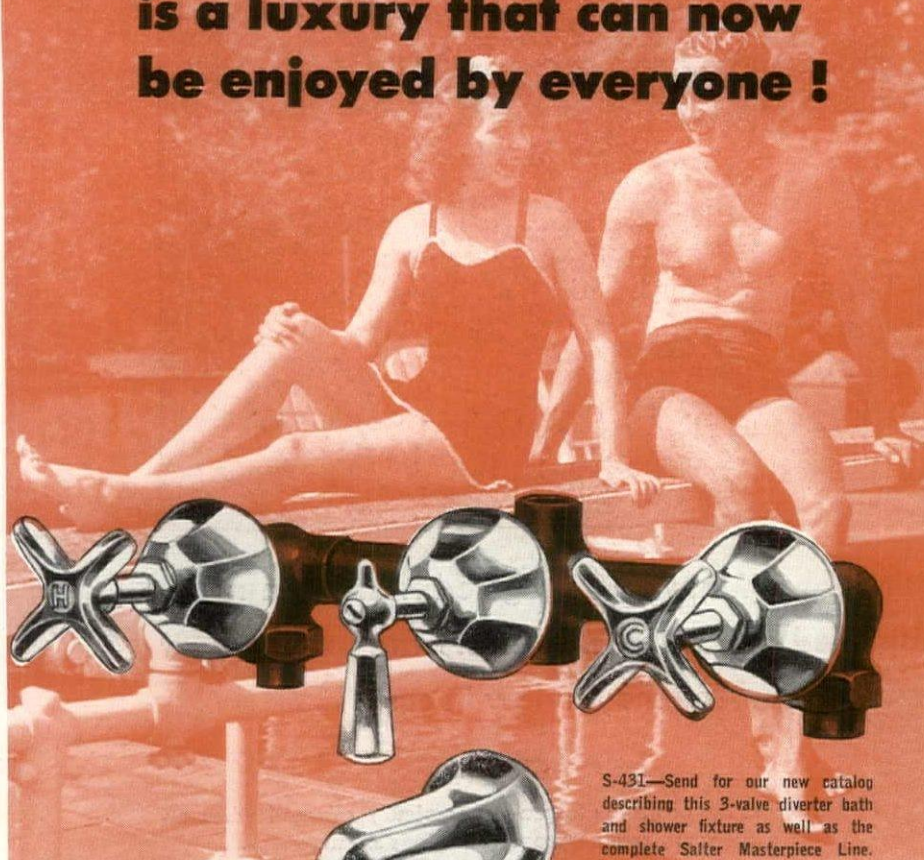
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MASTERPIECES IN BRASS

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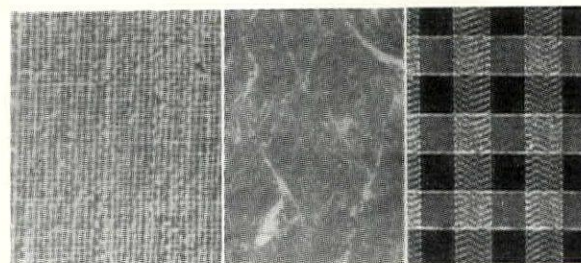
and division THE GLAUBER BRASS MFG. CO., Kinsman, Ohio

It provides a double shingle thickness over the entire roof deck which cannot slip apart or blow off. Each shingle is fastened to the roof at four points by concealed nails. It is further secured by being interlocked at four points to the adjacent shingle. General appearance of the shingles in place is that of a basket weave design, while the surface texture resembles wood grain. Dubl-Coverage Tite-On shingles come in a number of soft color tones, can be applied to new roofs or over old ones. Fire resistant, they carry a Class C label of the National Board of Fire Underwriters. *Manufacturer: The Ruberoid Co., 500 5th Ave., New York, N. Y.*



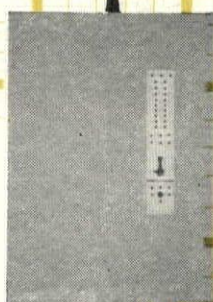
PLASTIC WALL TILE is lightweight, easily installed in new or existing structures.

A wall material for home, commercial or industrial application, these thin, colorful plastic tiles can be easily installed on new or existing walls. They are applied with mastic cement and installation is rapid. Light in weight (one sq. ft. weighing about 1/2 lb.), the tiles measure 4 1/4 in. by 4 1/4 in., are made of Dow Chemical Co.'s Styron plastic. They are non-warping, will not crack, chip, peel, break, rust, sweat, etc. They can be easily cleaned with a damp cloth and will retain their lustrous appearance throughout normal use. If desired, a higher gloss can be achieved by polishing. Tiles come in black and white and five modeled colors: yellow, green, blue, peach and wine. Strip corner and border tiles are available to complete installations. According to the manufacturer, the new tiles cost less than conventional ceramic units. *Manufacturer: Hardy Plastics, 1 Junius St., Brooklyn, N. Y.*



LAMINATED PLASTIC PANEL for walls, cabinets, table tops, store and restaurant fixtures.

Neutron is a reinforced laminated plastic panel, a decorative building material for residential, commercial and industrial application. In the home it can be used for kitchen and nursery walls, drainboards, cabinets, table tops, showers, baths, etc. Commercial and industrial applications include walls and corridors of hospitals, hotels, schools and offices; store and restaurant fixtures; furniture, etc. Featuring unusual resistance to water, alcohol, stains and heat, it is also impervious to grease, fruit juices, bleaching agents, alkaline cleaners, etc. It comes in a wide range of colors, patterns and designs, and in a variety of finishes including high gloss, satin and burlap. *(Continued on page 164)*



SOLVED:

ELEVATOR RUSH HOUR PROBLEMS WITH... WESTINGHOUSE

Selectomatic

The only supervisory system that matches elevator service with demand... automatically!

Five o'clock no longer need be a critical "zero" hour in office buildings when the homeward rush of tenants begins... when trains are missed and tempers easily frayed by long, needless waits for elevators in congested corridors.

Now you can relieve this strain on elevator service, keep tenants satisfied, and solve a major building management problem... with Westinghouse Selectomatic!

Selectomatic is the only supervisory control system that, at the push of a button,

establishes fully automatic patterns of operation that solve the three major types of elevator demand—up peak, down peak, and off peak traffic. Each elevator car is given "eyes" to see the demand for service and answer it promptly—not only at five o'clock, but all through the day.

Selectomatic—another original Westinghouse development—minimizes lower floor waiting time, provides more efficient service to every floor, and increases passenger carrying capacity up to 30%.



Write to Westinghouse for your copy of "Push A Button—Solve a Problem," the story of Selectomatic. Address the Westinghouse Electric Corp., Elevator Division, 150 Pacific Avenue, Jersey City 4, N. J., on your letterhead please.

Westinghouse

ELEVATOR



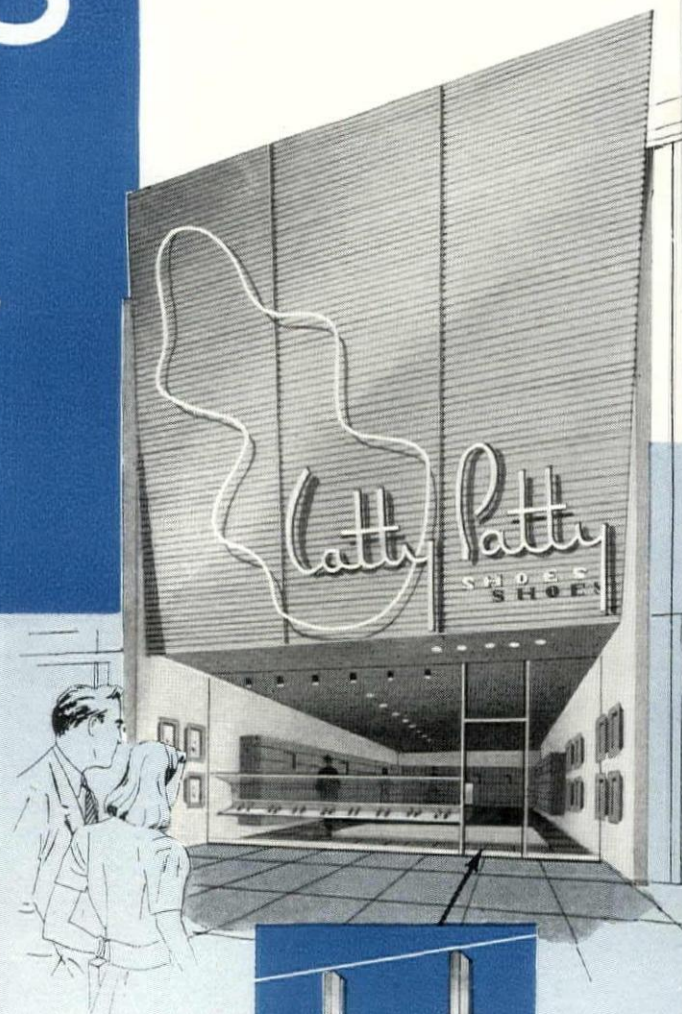
DIVISION

J-98502

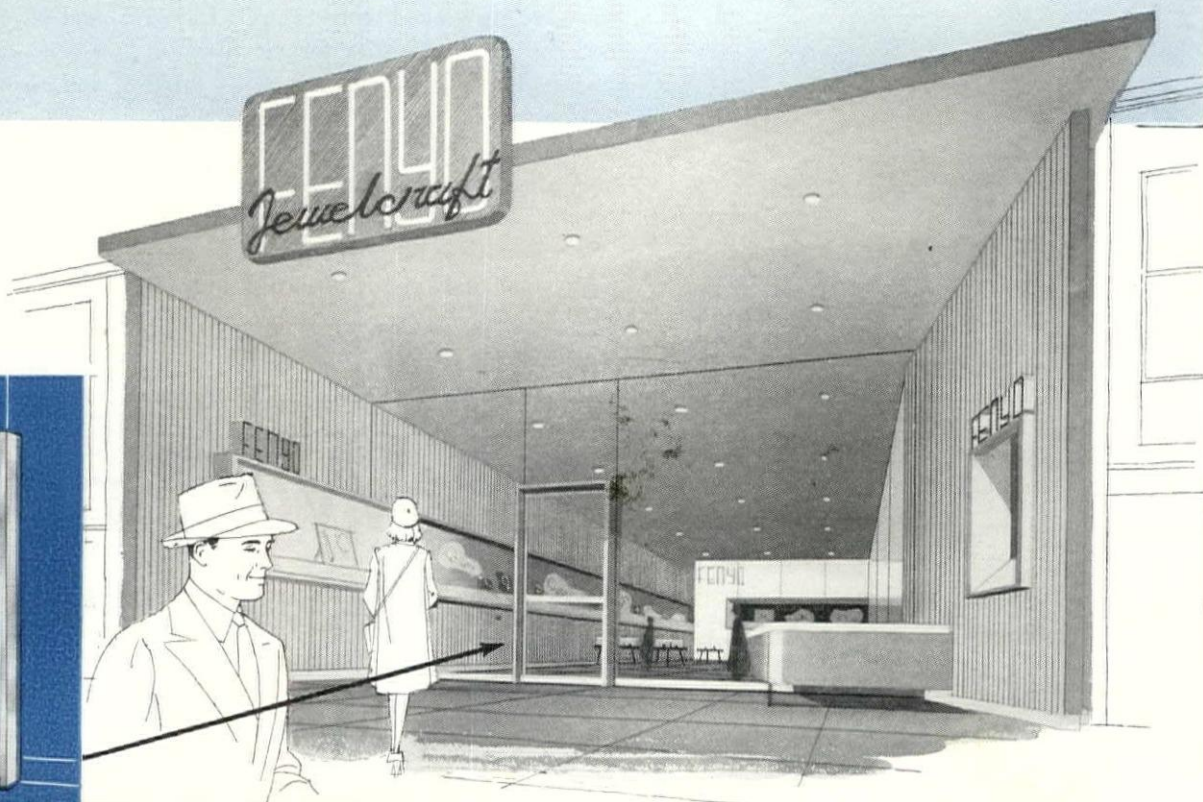
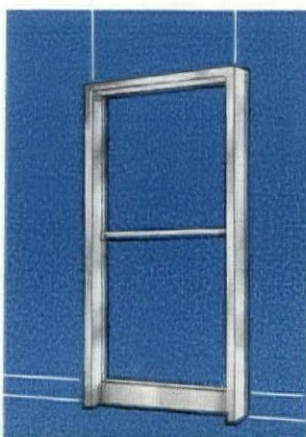
entrances that say "Come In"

Shopper's eyes are drawn to the script sign on its striking aluminum backing—then to the interior which is fully displayed by floor-to-ceiling glazing and by the stream-lined Full Vision Entrance.

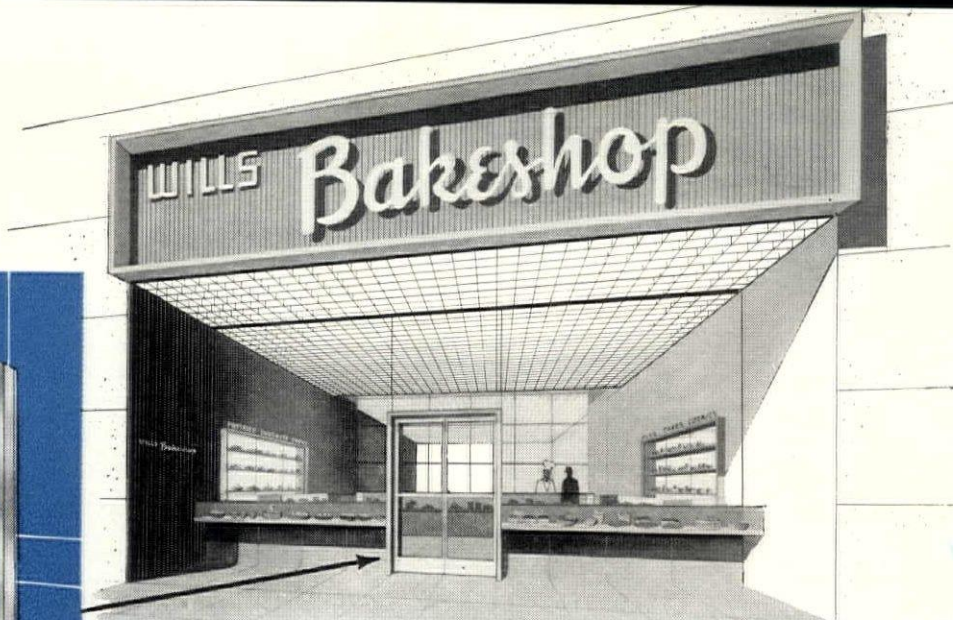
**KAWNEER OFFERS A COMPLETE LINE
OF DOORS, FRAMES, AND TRIM FOR
STORES, SHOPS, THEATRES, AND
COMMERCIAL BUILDINGS OF ALL TYPES**



Doors should make people want to enter—and this Kawneer Free Standing Entrance fulfills this function. It draws attention because of its location and because it is completely surrounded with glass.



This Free Standing double-door offers a compelling and friendly invitation to enter. The entire front—sign, showcases, and walls—were designed to bring out the entrance as the main point of interest.



The Fenyo, Catty Patty, and Gregory Stores were designed by Ketchum, Giná and Sharp, Architects, New York City. The Bakeshop was designed by the Design Department of the Kawneer Company.

To handle Gregory's large volume of traffic, two Full Vision double-doors are placed in a prominent location where they are quickly seen, yet they do not interfere with the internal operation of the store.



PROMPT SHIPMENT OF STOCK UNITS!

Four different styles of entrances—Full-Vision, Free Standing, Narrow Line, and Standard—are included in Kawneer's complete new line of entrance doors, frames and trim.

The popular Narrow Line Entrances are now carried in stock sizes and are immediately available. They are shipped as complete units, factory-fitted, with overhead checks and hardware applied.

Kawneer Entrances bring maximum display of the interior—along with the many advantages of metal-glass construction. The close, precision fit between doors and jambs protects interiors against drafts, dust, soot,

and rain. It also helps prevent the escape of warmed air in the winter and cooled air in the summer.

Kawneer Entrances have been styled and engineered to meet the highest standards of modern architecture. Write today for the construction details of this outstanding new line.

The Kawneer Company, 752 North Front St., Niles, Mich.

Kawneer
SALES-BUILDING
STORE-FRONTS

Patterns include gingham, crash cloth, marble and various wood grain reproductions. Available in standard size sheets up to 4 ft. x 8 ft., in several thicknesses, panels can be easily and smoothly cut with a standard abrasive wheel or a fine-tooth saw. They are applied with waterproof, high strength adhesives. In addition to flat panels, molded inside and outside corners and unique practical joint effects have been worked out.

Manufacturer: Macrolyn, Inc., 410 Holmes Rd., Houston, Tex.

CREOSOTE PRESERVATIVE PAINT for country residences, warehouses, gas stations, barns, fences.

Country Estate Creosote is a white paint which is said to combine the preservative qualities of creosote with the attractiveness of quality oil paint. It has exceptional hiding qualities, one coat coverage on average jobs and a soft, satiny,

extra-white finish. It will not yellow with age, is nonpoisonous to animals. Suitable for use on wood, concrete, brick or stucco, one gallon covers approximately 250 to 300 sq. ft. on rough surfaces. On smooth surfaces coverage is about 350 to 400 sq. ft.

Manufacturer: Harrison Paint & Varnish Co., Clinton, Ohio.

PACKAGED BOILER BURNER for home heating and domestic hot water.

Whirl-O-Magic is a low cost, prefabricated, packaged boiler-burner heating and hot water unit for heating 6- to 12-room homes. Compact in size and easily hooked up, it supplies both heat and hot water, eliminates the old-fashioned hot water tank. As the crux of its heating principle the unit incorporates a patented Catalytic Combustion Tube. Atomized oil is sprayed through combustion head which mixes a double charge of air with fuel oil to produce instantaneous combustion. A small aluminum nozzle

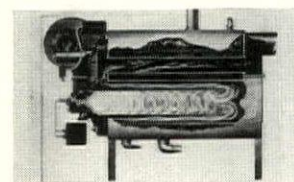


plate affixed to the combustion head is the oil burning device. The flame whirls through the stainless steel combustion tube, 5 in. in diameter and 26½ in. long, instantly bringing it up to a radiant temperature of 1,800° F. On leaving the combustion tube, the flame's direction is reversed to pass through the annular space between the outside of the tube and the inside of the water-backed stainless steel "boiler flue." Gases passing along this flue transfer heat to the boiler water and become cooled. At the same time, counter-current gas flow cools the combustion tube, maintaining it at a constant operating temperature. The hot gases then pass into the head casting chamber and upward to stainless steel fire tubes. Fitted with extended heating fins, these tubes extract the last possible heat from the flue gases before they reach the chimney. The new heater, according to the manufacturer, requires only 1¾ oz. of the cheapest grade of fuel oil per minute, fully heats a 6-room house on a normal cold day within 5 minutes of operation. It is further claimed that the heater requires only 2¼ to 2½ hrs. of intermittent operation per day to heat a 6-room house, or a fuel cost of approximately 15 cents a day. The new heater can be used with steam, vapor or hot water systems, is available in three sizes. The smallest model, measures 32 in. high, 24 in. wide, 42 in. long.

Manufacturer: Persiro Manufacturing Corp., 275 Jefferson St., Newark 5, N. J.

ELECTRIC WATER HEATERS added to Norge line of major household appliances.

Norge Division of the Borg-Warner Corp. has added a completely automatic, electric water heater to its line of major household appliances. Of the round, upright type, it is equipped with thermostat, has a finger-tip control for simple temperature adjustment. A diffusion baffle prevents the mixing of inflowing cold water with that already heated. The unit is completely insulated with 5 in. of glass wool and is finished in high gloss, baked white enamel. It is being manufactured in 80, 66, 52, 40 and 30 gallon capacities. A single or double heating element of "nichrome" is available dependent on local utility practices.

Manufacturer: Norge Division, Borg-Warner Corp., 670 E. Woodbridge St., Detroit, Mich. (Tech. Literature, p. 168)



Introducing...DECORATIVE FLEXGLASS...



A new Creative Medium in crystal and color

A decorator's dream... this exciting new form of glass offers decorators and architects unlimited opportunities for distinctive and original effects.

It's real Flexglass... genuine glass cut

into rectangles and mounted on flexible fabric backing...with designs in silvered crystal and fired ceramic colors.

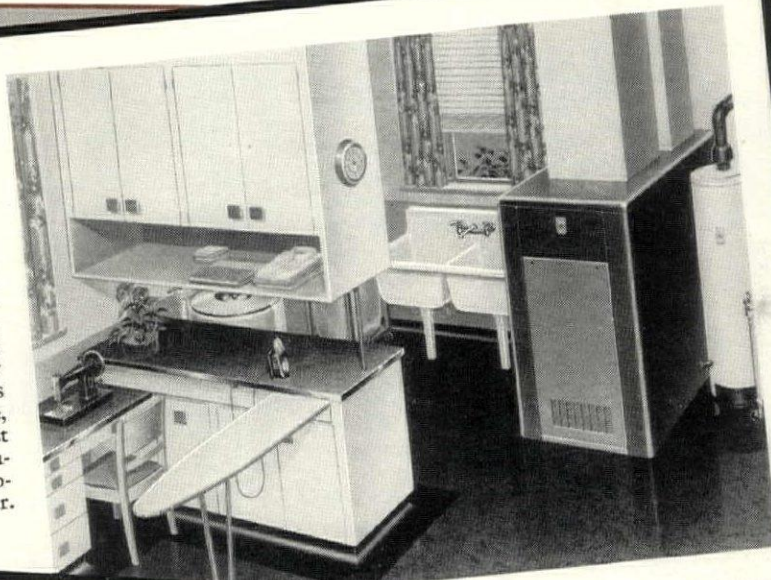
Available in three standard designs... "Vintage," "Mimosa," "Clusters"... each in various color combinations, or custom patterns to your own design.

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UNITED STATES PLYWOOD CORPORATION Dept. F, 55 West 44th Street, New York 18, N. Y.

Helpful Design Ideas from **AMERICAN-Standard**

UTILITY ROOM—Center of interest in this attractive first-floor Utility Room is the **SARATOGA** Winter Air Conditioner, a low priced, oil fired unit especially designed for small homes. Compact jacket encloses both blower-filter unit and heating element. Also provides space for concealed Arco-flame or any other standard oil burner. The laundry tray shown under the window is the **ALDEN**, made of durable, easily cleaned enameled cast iron. Also shown is the popular **BUDGET** Gas Fired Automatic Storage Water Heater.



MODERN KITCHEN—What a picture the trim, efficient **ROYAL HOSTESS** Sink makes under this window. Designed for maximum cleanliness and convenience, this 6-foot double compartment, double drainboard sink is made in one piece . . . of rigid cast iron with a heavy coating of acid-resisting enamel. Fittings are finished in non-tarnishing Chromard for easy cleaning and lasting beauty. Roomy cabinet provides abundant storage space beneath.



■ American-Standard Heating Equipment and Plumbing Fixtures have long been the first choice of homeowners. No products are better known for quality, efficiency, long life. No line is more complete. Yet, American-Standard products cost no more than others . . . and can be purchased on a convenient Time Payment Plan for modernization. For details, contact your Heating and Plumbing Contractor. **American Radiator & Standard Sanitary Corporation**, P. O. Box 1226, Pittsburgh 30, Pa.

Serving the Nations' Health and Comfort

LOOK FOR THIS MARK OF MERIT—It identifies the world's largest line of Heating and Plumbing Products for every use . . . including Boilers, Warm Air Furnaces, Winter Air Conditioners, Water Heaters, for all fuels—Radiators, Convectors, Enclosures—Gas and Oil Burners—Heating Accessories—Bathtubs, Water Closets, Lavatories, Kitchen Sinks, Laundry Trays, Brass Trim—and specialized products for Hospitals, Hotels, Schools, Ships, and Railroads.

First choice for Rental Housing... MODULAR BRICK AND TILE



THESE PRODUCTS, first choice before the war, are first choice now.

Architects, builders, investors—all who have to do with the selection of building materials—long have shown a decided preference for brick and tile for apartment houses and multi-unit housing structures.

For proof—note the great number of brick-constructed apartment houses. There's *real* acceptance! No doubt you have planned or built some of these, yourself.

Today—with modular sizes—you have more reasons for specifying and building with brick and tile. You simplify planning and estimating. You reduce costly chipping and fitting on the site. You speed up construction time—get earlier occupancy. And modular brick and tile fit perfectly with other modular materials such as doors and windows.

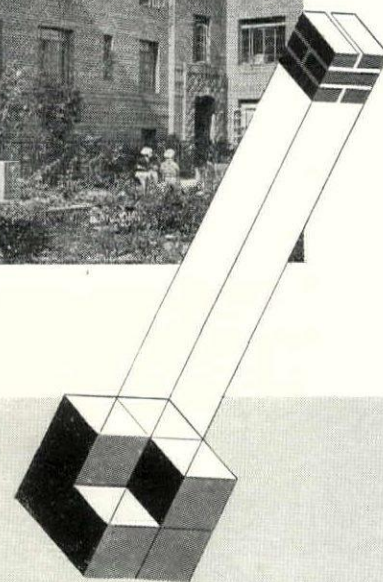
To this, add *availability, durability, beauty, adaptability, fire-safety* and *long range economy* through lower repair and maintenance charges—and it's easy to see why so much rental housing is being built with modular brick and tile.

Two FREE booklets are available to architects: "The ABC of Modular Masonry," for architects interested in the development of coordinated dimensions; and "Modular Sizes of Brick and Tile," an aid to current design. Address the Structural Clay Products Institute, Dept. AF-6, 1756 K Street, N. W., Washington 6, D. C.



NOW IT WILL BE BUILT WITH MODULAR-DESIGNED

BRICK AND TILE



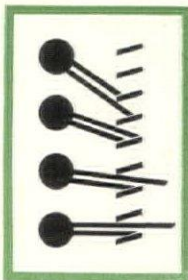


**Things Go
More Smoothly
in the Shade!**

**PRODUCTION INCREASES, EMPLOYEES WORK BETTER
IN ROOMS KEPT COOLER AND SHADED WITH**

KOOLSHADE *Sun Screen*

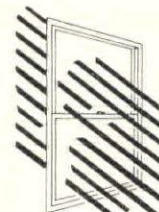
Production lines, office work—and life in general—go along more smoothly in rooms shaded from the heat and glare of direct sunlight. With KoolShade Sun Screen any room is kept cooler, more liveable, no matter how hot and scorching the sun. For KoolShade blocks up to 90 percent of the heat-producing sun rays, *outside* the window. It gives complete visibility, lets in plenty of clear, diffused light; will not rust, rot or rattle. Requires no painting, no maintenance; is fire-proof, easy to install, and what is more, makes a perfect insect screen.



KoolShade is in effect a miniature venetian blind—its paper-thin bronze "slats" permanently set at the proper angle to block the hot sun rays *outside* the window.

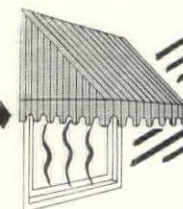
KoolShade Proved Most Efficient of All Shading Devices!

Comparative tests with other shading devices prove conclusively that KoolShade Sun Screen is by far the most effective in cutting temperatures in rooms exposed to the sun. In KoolShade-protected rooms, only 12.5% to 18.2% of sun-ray heat enters the room. That's 81.8% to 87.5% efficiency! And there's still complete visibility and plenty of glareless, diffused light. (Comparative figures from the American Society of Heating and Ventilating Engineers and Pittsburgh Testing Laboratories.)

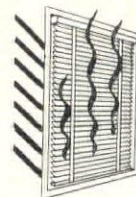


UNSHADED WINDOW—
100 percent of direct sun-ray heat enters. Affords complete visibility but rates zero in heat-stopping efficiency.

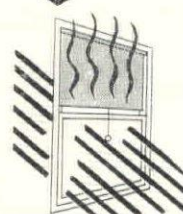
CANVAS AWNING—
plain. 28 percent of sun-ray heat enters. Light and visibility much reduced. 72 percent efficiency.



INSIDE WINDOW SHADE—
buff, half-drawn. 68 percent of sun-ray heat enters. Reduced visibility. 32 percent heat stopping efficiency.



INSIDE VENETIAN BLIND—
covering full window, slats at 45 degrees. 58 percent of sun-ray heat enters. Almost no visibility.



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Please send free sample and literature, also the name of my nearest KoolShade distributor.

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**BORG-
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KOOLSHADE **SUN SCREEN**

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DAYLIGHT



IN SCHOOL CLASSROOMS

HUGH PAUL

FENESTRATION. Daylight in School Classrooms by Hugh Paul. Insulux Products Division, Owens Illinois Glass Co., Ohio Building, Toledo, Ohio. 74 pp. 8½ in. x 11 in.

This book on planned daylight for school classrooms, emphasizing daylight distribution as contrasted with light transmission, sets forth design data for a daylight-transmitting construction utilizing glass blocks. Based on research developed at the University of Michigan, the book has a twofold purpose: to promote a better understanding of the use of daylight and to prescribe methods for introducing daylight into classrooms to obtain maximum efficiency with minimum brightness contrasts regardless of weather conditions and building orientation. To achieve this end, the book includes detailed performance data on a light-directional fenestration for school classrooms. It offers a simple formula and tables for

calculating task brightness in any part of the room for any hour and any sky condition, for any of the four principal room orientations and for any location in the U.S. Most of the data is developed around a classroom 12 ft. high, 24 ft. wide, 32 ft. long, lighted by a vision strip and glass block panel.

INSULATION. Thermal Insulation of Buildings by Paul Dunham Close. Reinhold Publishing Corp., 330 West 42d St., New York, 104 pp. 6¼ in. x 9 in. Price \$1.75.

Semi-technical in nature and generously illustrated with tables and charts, this book is a treatise on the principles of thermal building insulation for dwellings and other structures. It provides information and data on various aspects of thermal insulating materials—cost, comfort, construction—considers the various types of insulation used and explains how they are applied. Specific sections discuss: theory and basic principles of insulation, heat loss coefficients, how to calculate heat losses, estimating fuel saving, preventing surface condensation, preventing condensation within walls and ceilings, summer and winter comfort due to insulation, etc. The chapter devoted to types of manufactured insulations gives properties, forms, sizes, thicknesses, uses, etc., of each. Following chapter presents detailed installation procedures. Book concludes with an interesting discussion of insulating farm structures. The economic benefits derived, amount of insulation required, application, etc., are described and illustrated. Reference list of insulation manufacturers and their products is included.

INSULATED WALL PANELS. Robertson Q-Panels for Modern Insulated Sidewall Construction. H. H. Robertson Co., 2400 Farmers Bank Building, Pittsburgh, Pa. 12 pp. 8½ in. x 11 in.

The advantages and applications of Robertson Q-Panel sections for quick, dry, insulated wall construction are described in this brochure. General information includes data on materials, colors and textures in which panels are available, specifications and erection facts. Booklet also features numerous large-scale details of the system at parapet, corner, base, end, eave, etc.

RADIANT HEATING. Enjoy Better Living With Radiant Sunny Warmth. The Institute of Boiler and Radiator Manufacturers, 60 East 42nd St., New York, N. Y. 22 pp. 8½ in. x 11 in.

Illustrated in four colors, *Enjoy Better Living With Radiant Sunny Warmth* is a non-technical treatise on radiant heating. Discussing the essentials of good heating and the factors involved in comfort balance, the booklet explains how radiant heating best fulfills those comfort requirements. It also supplies information on the choice of equipment for this type of heating. The adaptability of radiant heating to any type of fuel and how its benefits are obtainable with radiators, radiant baseboards, radiant panels and convectors are elaborated upon. Following sections include data on the use of indirect water-heating methods, control systems, chimney and house construction and the research activities of the I-B-R.

ORGANS. A Practical Approach to the Church Organ Problem. The Rudolph Wurlitzer Co., Organ Division, North Tonawanda, N. Y. 27 pp. 5⅞ in. x 8⅞ in.

This booklet treats three major factors in the selection of a church organ: tone, space and cost. Text describes how the Wurlitzer tone is achieved, discusses the organ's low initial cost and maintenance. Illustrations compare small space requirements of the Wurlitzer with those of conventional pipe organs. The engineered installation for proper sound distribution is briefly outlined and three typical church plans are offered as examples of installation flexibility. Several Wurlitzer models, auxiliary equipment and dimensioned scale drawings of the organ are also illustrated. (Continued on page 172)

From the cradle to the grave...

HERMAN NELSON PRODUCTS
SERVE MILLIONS IN AMERICA



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Architect: Keffer & Jones—Des Moines, Iowa
Engineer: B. E. Landes—Des Moines, Iowa
Heating Contractor: Sanitary Plumbing & Heating Co.—Muscatine, Iowa

In grade schools, high schools, colleges and universities all over the country, comfortable and healthy air conditions are maintained by Herman Nelson Heating and Ventilating Products.

Because the average man spends about 80 per cent of his entire lifetime indoors, it is important that all buildings in which he goes to school, works and plays be properly heated and ventilated.

For over 40 years, The Herman Nelson Corporation has been building quality heating and ventilating equipment for public, industrial and commercial buildings. Leading Architects, Engineers and Contractors, as well as Owners, know that the use of Herman Nelson Products will assure maintenance of desired air conditions.

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MOLINE, ILLINOIS

Miraplas PLASTIC WALL TILE



16 marbled and solid colors

Miraplas—an entirely new beauty treatment in tiled walls. Not a wallboard—not an imitation, but individual solid plastic tiles of conventional size.

Miraplas plastic wall tile increases the value of new construction and it is a "natural" for remodeling. It may be installed over old plaster walls or any smooth surface without costly wall preparation because it is so light in weight. It will not crack, check, peel, warp or rust—and the beautiful colors go all the way through the tile!

Miraplas is setting a new high standard of lifetime tile beauty at a cost well within the reach of the modest budget.

Send for folder showing the 16 Miraplas colors.
A YARDLEY PLASTIC PRODUCT



S & W MOULDING CO.

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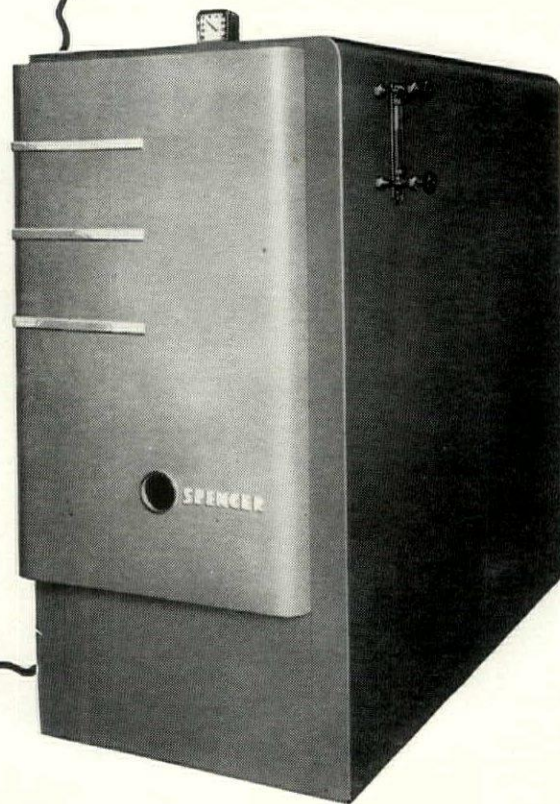


quick facts—

- Individual solid plastic tiles
- 16 Marbled and solid colors
- Sanitary—cleans with a damp cloth
- Will not check, warp, crack, peel, chip or rust
- Unaffected by common acids and alkalis
- Lightweight—less than one-half pound per square foot
- Lasts a lifetime
- Moderate cost

DISTRIBUTED IN CANADA BY DAYMOND COMPANY, LTD., 309 KING STREET W., CHATHAM, ONTARIO BB

Specify Spencer and protect the Home Owner

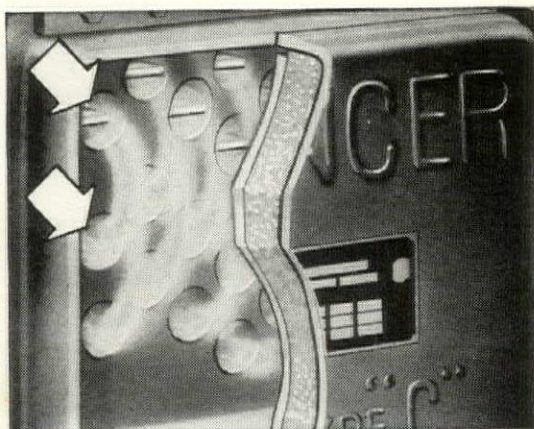


Since 1890 Spencer has manufactured the Premium Boilers

For 57 years people who "know" heating have specified Spencer. "Be in the know" and investigate Spencer. There is a modern precision-built Spencer for every heating requirement—for every fuel type. You will really enjoy Spencer's quick, economical heating comfort plus an abundance of (year-round) hot water. Write or wire us today for catalog and for the name of your nearest Spencer Heating Engineer.

There is a size and type for every heating requirement

Spencer C Boiler—jacketed type (above) dresses up the basement. Jacket-enclosed boilers combine with any standard oil burner, rotary or gun type or it forms a complete unit with any standard stoker. There is plenty of room for installation of ash removal equipment.



One of many SPENCER FEATURES

Note the staggered location of the boiler tubes which induces rapid water circulation. Water flows completely around the tubes for quick absorption. Spencer's modern design also assures full heat absorption, thus operates more efficiently at less cost.

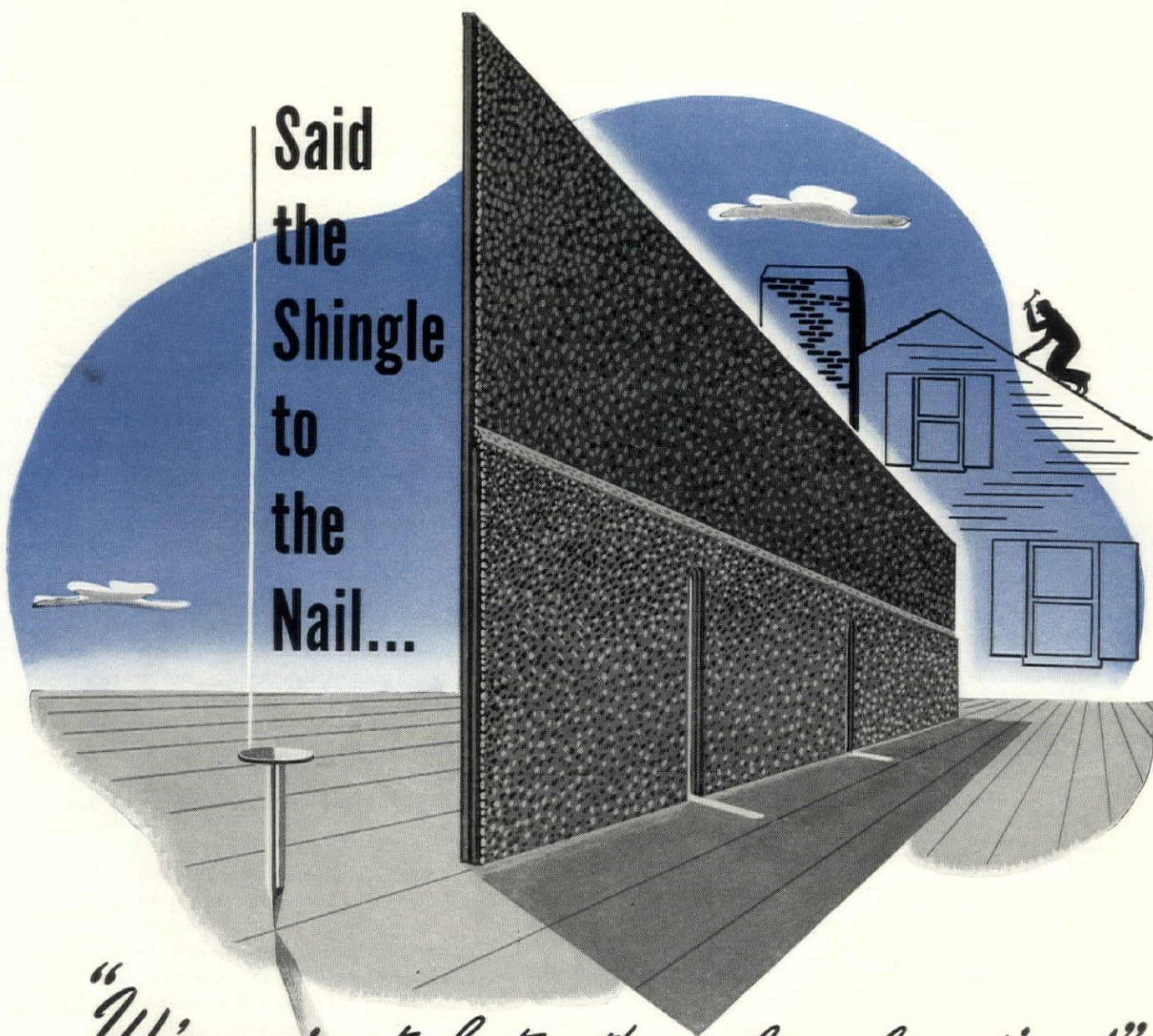
High Quality Steel Tubes ... Easy to Clean

There is no dismantling of parts when you clean your Spencer Boiler. It is quick-easy. All that is necessary to clean the tubes is to open the flue door and run a flue brush through the tubes to give them a thorough cleaning. The High Quality 2½" steel tubes used in manufacturing the Spencer C Boiler give you peak performance, long life and money saving operation.

SPENCER HEATER



Division—AVCO Manufacturing Corp.
Dept. AA-5, Williamsport, Pa.



Said
the
Shingle
to
the
Nail...

...*"We're going to be together a long, long time!"*

Chances are they'll celebrate a silver wedding... since it's a Flintkote Thikbut Shingle speaking. These sturdy shingles are built for extra years of service.

You get all the well-known advantages of a standard Flintkote Shingle... super-saturated quality felt... "4 to 1" stabilized asphalt coating... durable, fireproof, color-fast mineral surfacing.

And you get more. Much more.



Over the tabs we add an extra layer of stabilized asphalt coating, *plus* a second layer of fireproof mineral granules. The result gives your customers virtually two shingles for the price of one... with extra years of service built right into the tab exposed to wind and weather.

So, when you think of roofing... for repair, re-roofing or new construction... think of Flintkote. Extra years of service mean satisfied home owners... satisfied

customers for dealers and builders.

The Flintkote Company, Building Materials Division, 30 Rockefeller Plaza, New York 20, N. Y. Offices in principal cities.

*the extra years of service
cost no more!*

FLINTKOTE

FLINTKOTE QUALITY BUILDING MATERIALS FOR MANY PURPOSES



• Durable Flintkote Cold-Process Built-up Roofs offer fast, safe, economical application by brush or spray.



• Flintkote Asbestos-Cement Shingles and Sidings... for new construction or economical modernization.



• Flintkote helps make homes comfortable with a complete line of durable thermal insulating materials.



• A new \$1,000,000 research laboratory is part of a nation-wide plant expansion program now under way.

RANGES. Roper Gas Ranges Give a New Lift to Living. Roper "America's Finest Gas Range." Geo. D. Roper Corp., Rockford, Ill. 33 pp. 64 pp. 8 3/8 in. x 11 1/8 in.

Both of these booklets illustrate and describe the features of Roper Gas Ranges: economy, speed, convenience, beauty, construction, cooking features, etc. The former is an elaborate presentation of these numerous features. The latter, in addition to discussing advantages, illustrates and describes the various Roper range models. Among the many units catalogued is a full description of the new Town and Country model, an 8-burner, 3-oven unit.

KITCHEN PLANNING. Kitchen Cupboards That Simplify Storage by Mary Koll Heiner and Helen E. McCullough. New York State College of Home Economics, Cornell University, Ithaca, N. Y. 32 pp. 5 7/8 in. x 9 in.

This monograph is a detailed study of the space and motion

problems involved in kitchen planning (FORUM, Feb. & Mar. '46). Heiner and McCullough, developers as well as authors of this research, have analyzed the problems of storage and use in relation to four important criteria: physical limitations of the housewife, organization of storage in terms of first use, clear visibility and easy accessibility. Conclusions are formulated into new and unusual storage planning. Classified in terms of first use, supplies and utensils are stored at various work centers: mix, range, serve, sink. Visibility and accessibility are achieved by use of shallow, adjustable and cut back shelves, vertical, horizontal and slanting files, etc. Desirable sizes as revealed by actual research are included. Illustrations show results in the form of prototype storage units.

LAUNDRY PLANNING. Architects Handbook. Bendix Home Appliances, Inc. South Bend 24, Indiana. 40 pp. 8 3/4 in. x 11 1/2 in. Price \$2.00.

A reference manual on home laundry planning, this handbook features 11 plans for step-saving laundries by Architect L. Morgan Yost. Each arrangement, designed around the Bendix automatic washer, is lithographed in four colors and is presented with its corresponding floor plan. Laundry types illustrated include: combination first-floor utility room-laundry, kitchen-laundry, sewing room-laundry, farm work-room-laundry; basement, minimum space, garage, service and porch laundries. Text outlines five steps in planning: consideration of available space, work cycle, laundering equipment, built-in conveniences and supplementary equipment. Wiring, plumbing, lighting and installation of equipment are discussed in detail. Other sections are devoted to services of the Bendix Home Laundry Institute, specifications, etc.

LANDSCAPING. Industry Need Not Be Ugly. National Landscape Nurserymen's Assn., P. O. Box 313, Niles, Mich. 12 pp. 11 in. x 8 9/16 in.

Prepared to promote the beautification of industrial buildings by the use of lawns, trees and shrubs, this booklet is a pictorial presentation of attractive industrial landscape planting. Stressing the fact that industrial beautification is an asset to any business, it includes many examples of well landscaped industrial buildings and invites the discussion of industrial beautification plans with a qualified landscape designer and nurseryman.

REQUESTS FOR LITERATURE

HAROLD H. CROST, architect, Room 840, 410 S. Michigan Ave., Chicago, Ill.

ELLIS L. JACOBS, designer, 142 South 10th St., Richmond, Calif.

MACILL, EVANS LTD., contractors, 11 Hanover St., Liverpool, England.

McFARLAND & BROWN, engineers, 172 Washington St., Binghamton, N. Y.

JONATHAN WOODNER Co., Room 621, 1028 Connecticut Ave., N.W., Washington 6, D. C.

REQUESTS FOR INFORMATION

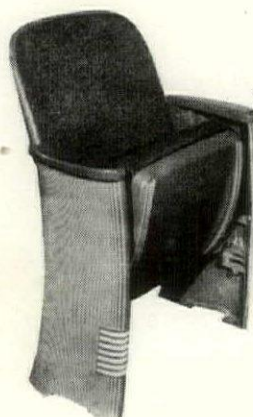
ROBERT A. KENNEDY, mechanical engineer, 14 W. Second St., Moorestown, N. J. requests information on restaurant design, including wall designs, flooring, tables, chairs, kitchen equipment, etc.

OTTO W. LUDWIG, architect, Merano, V.S. Caterina 73, Italy, desires information from manufacturers of foam concrete and gas concrete blocks, interior and exterior insulating boards, with view to sales representation.

PORT WENTWORTH CORPORATION, Port Wentworth, Georgia requests information on building materials, equipment and appliances suitable for two hundred 5- and 6-room bungalows.

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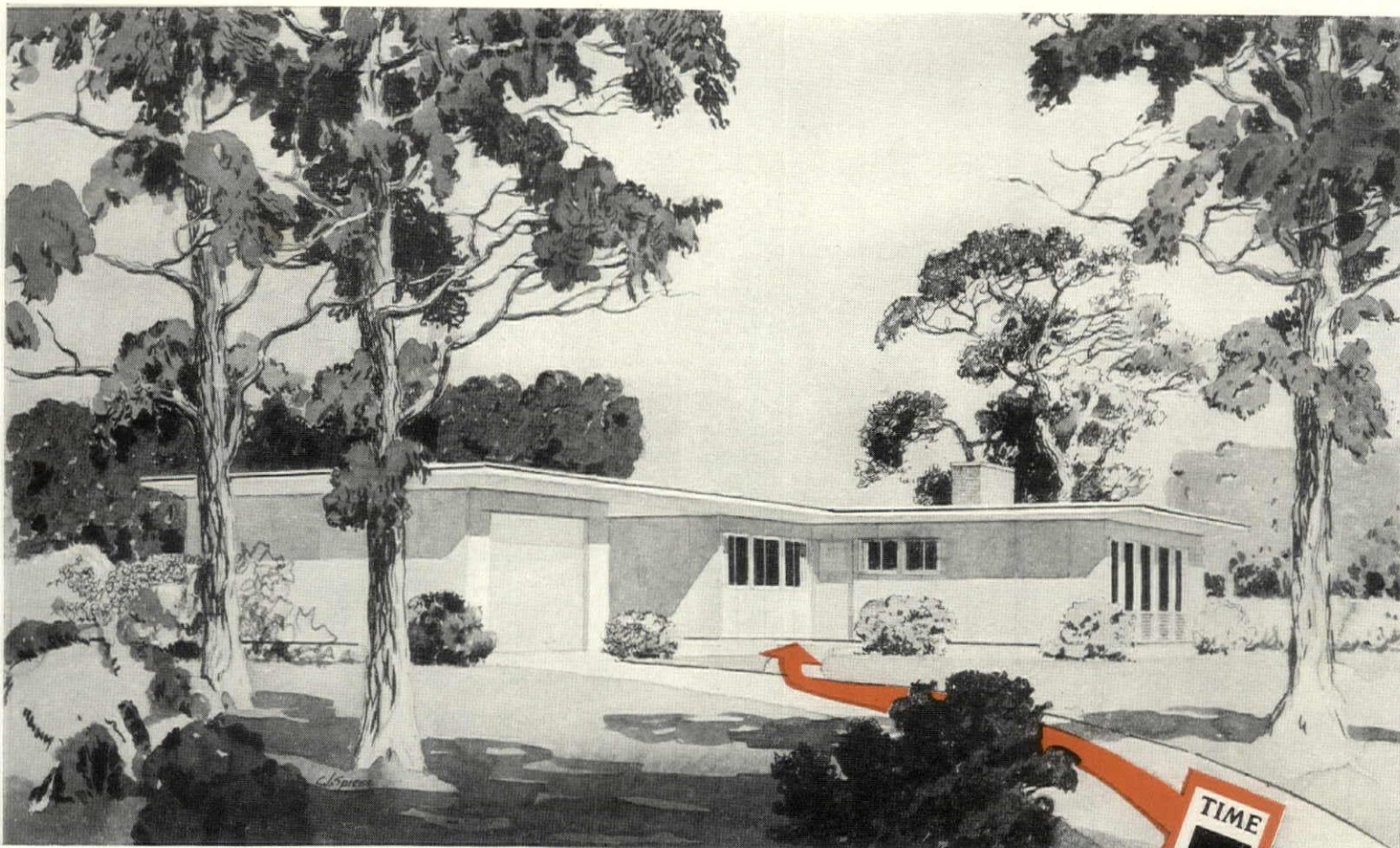
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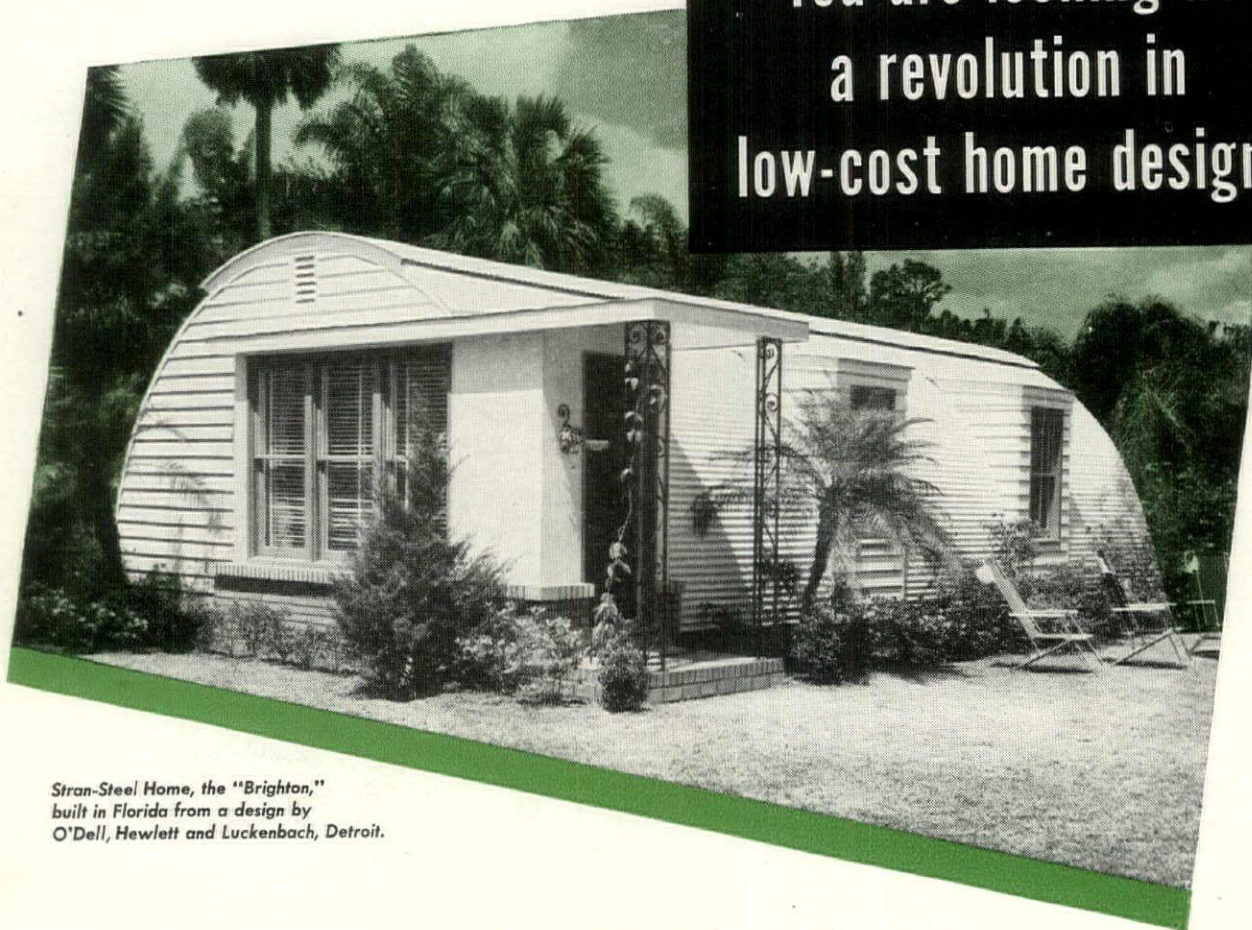
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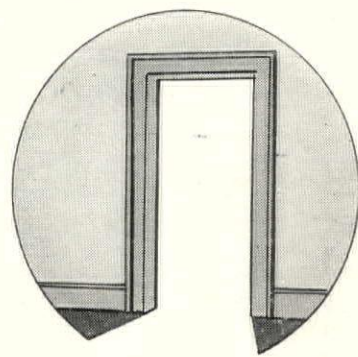
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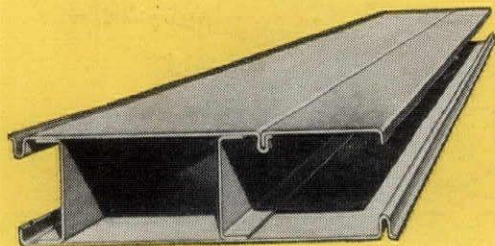
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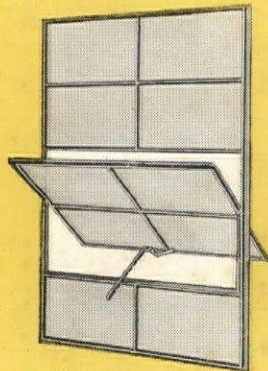
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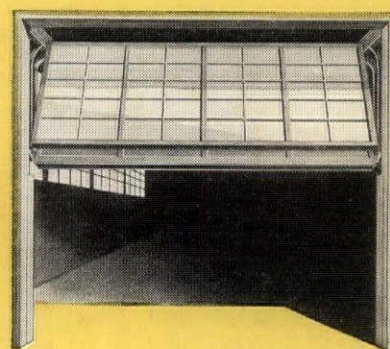
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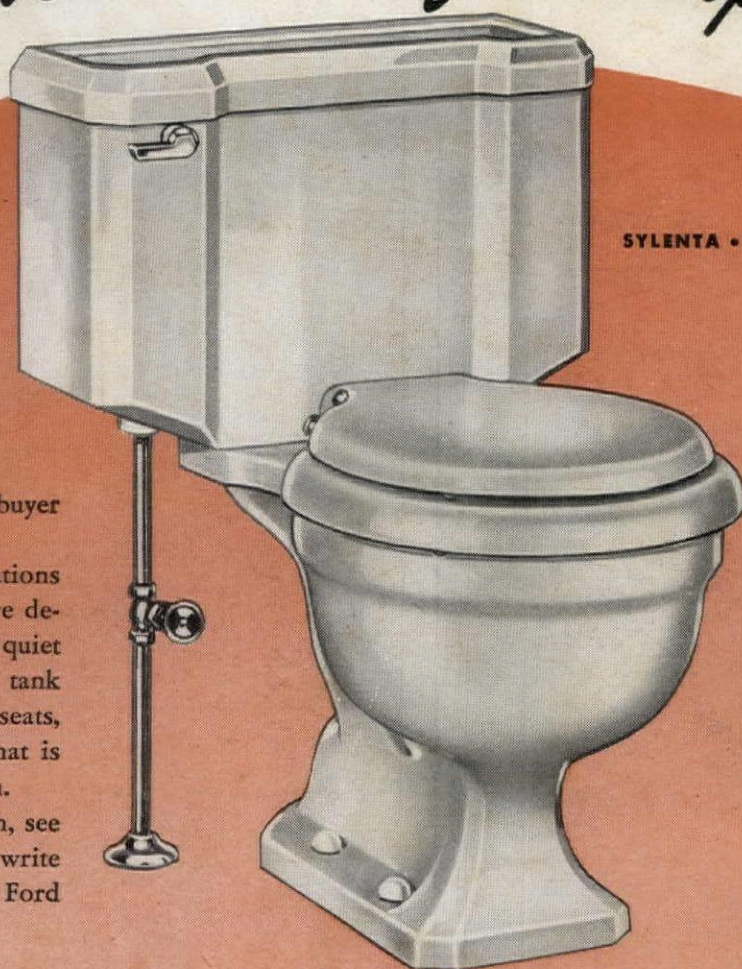
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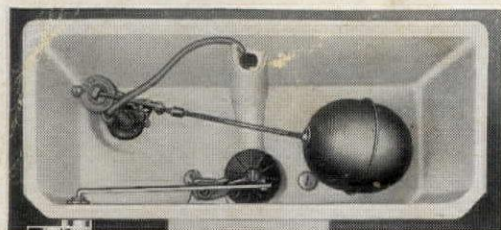


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