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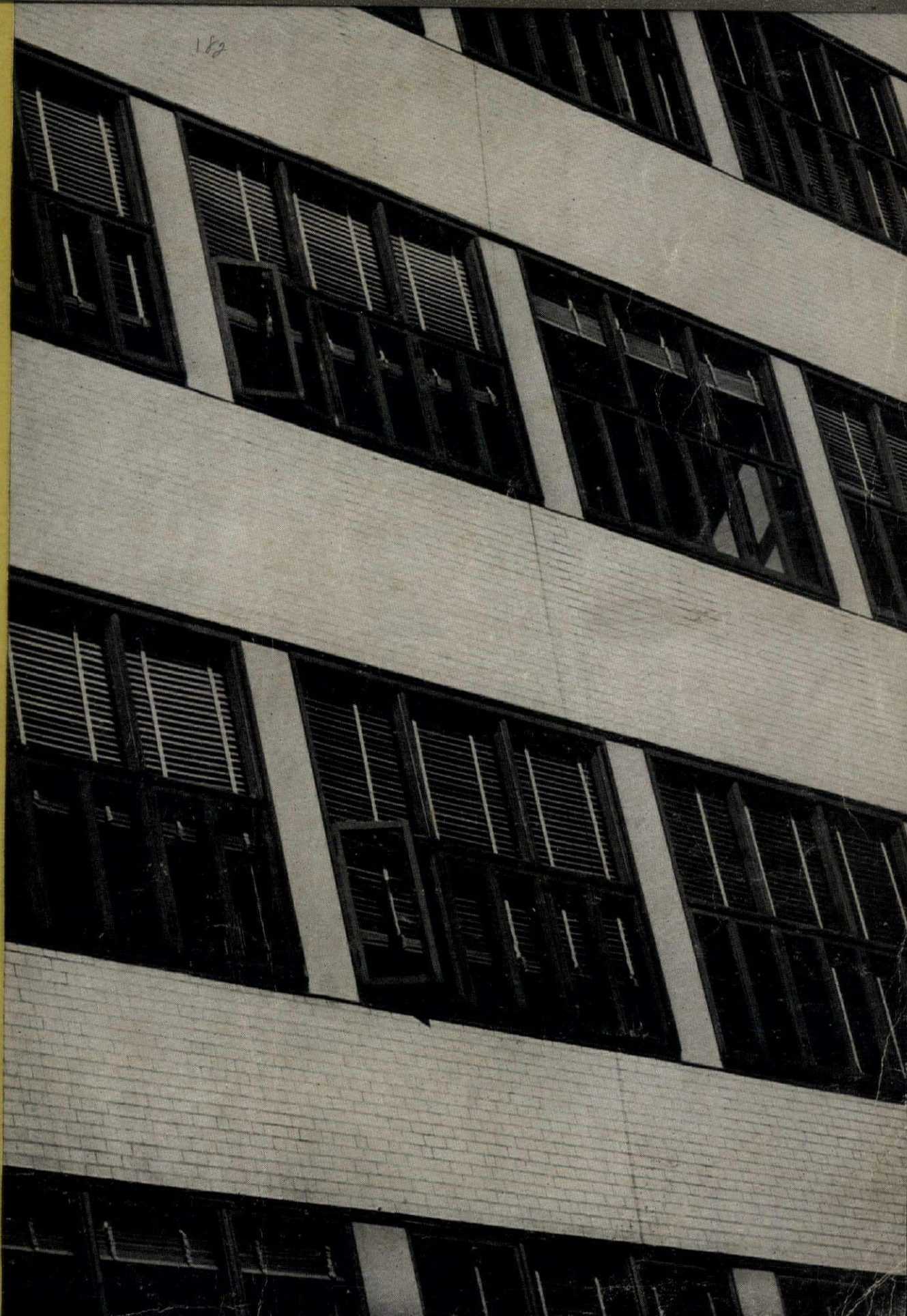
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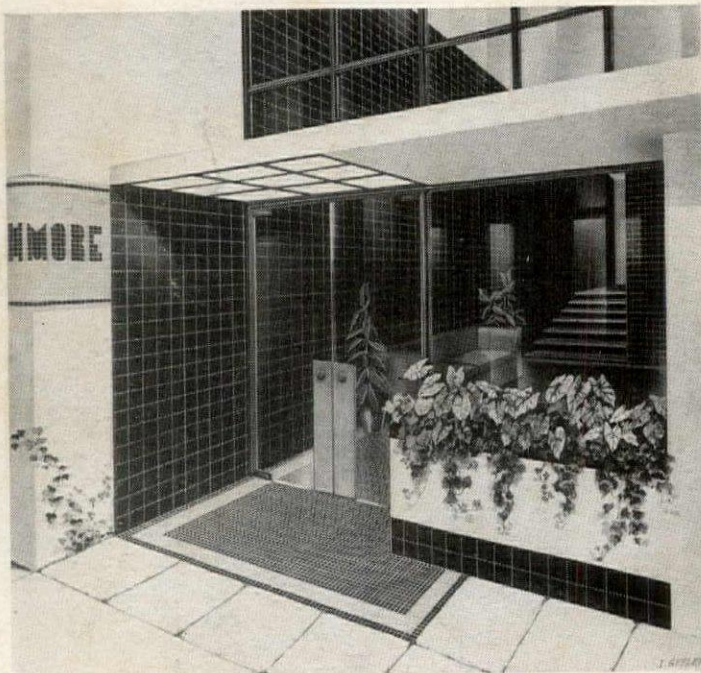


July 1947

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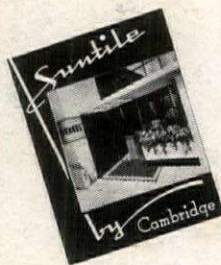
1947

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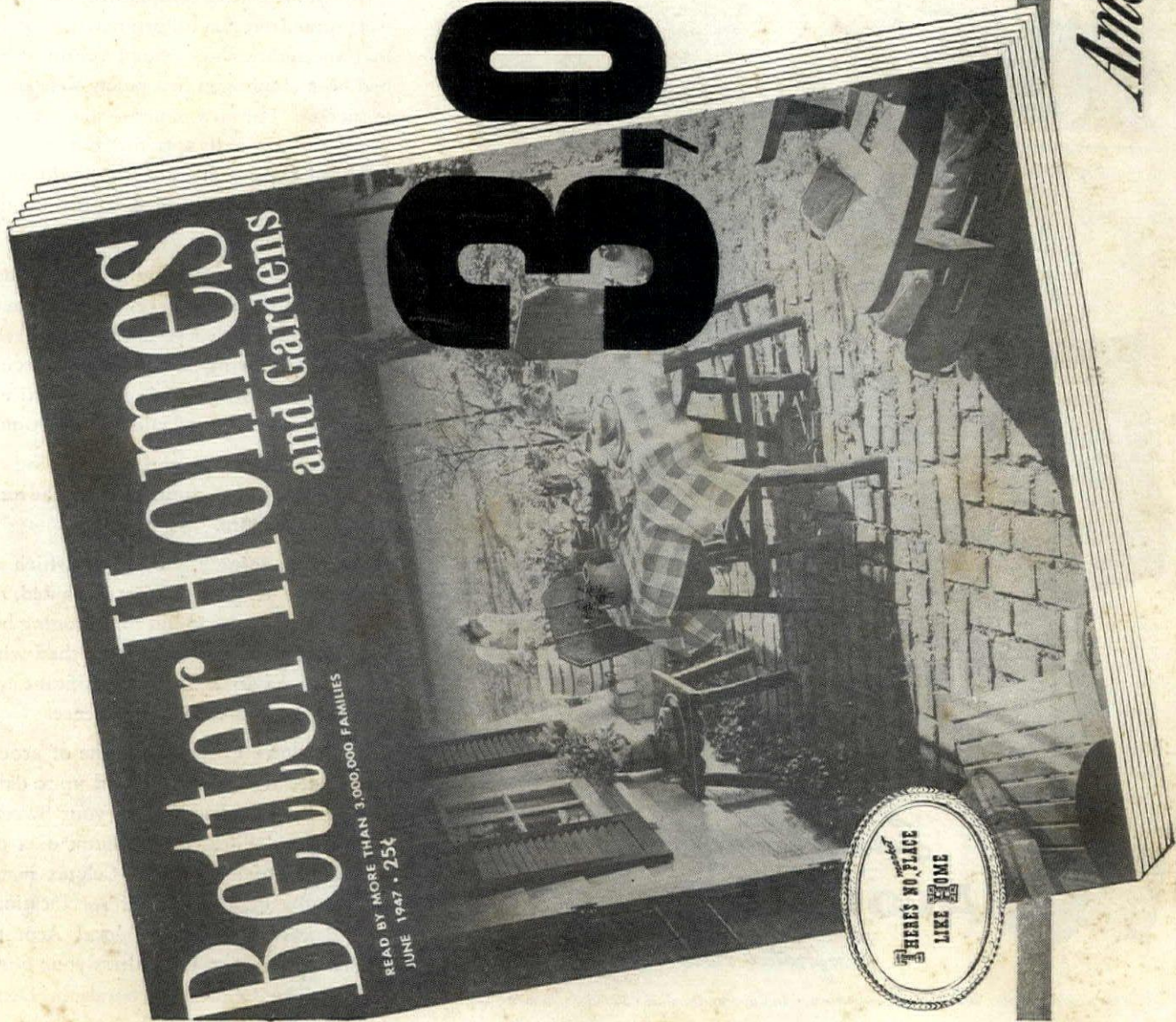
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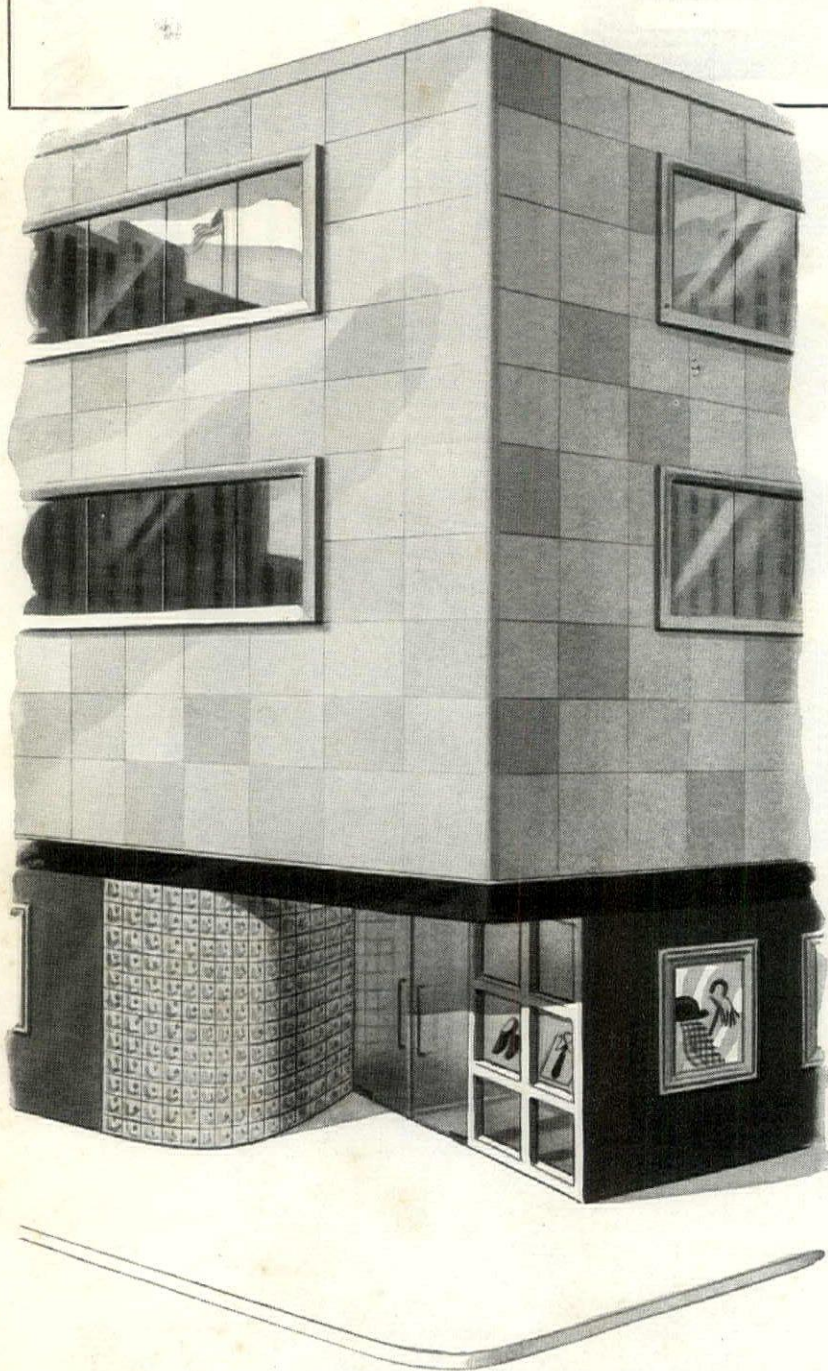
Yes, 3,000,000. Three million. Husbands and wives — heads of families — 3,000,000 of them — with good incomes — pore over Better Homes & Gardens for the help it gives them in living better in a better home. (Cover to cover, ads and all.) It's 100% service that screens out casual readers, and gives you this active homemaking market that spends billions every year.

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FORUM

MAGAZINE OF BUILDING

JULY 1947

Published by TIME Incorporated

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The Architectural FORUM is published monthly by TIME Inc., 350 Fifth Ave., N. Y. 1, N. Y. Subscription may be sent to publisher's office or to 540 North Michigan Avenue, Chicago 11, Ill. Address all editorial correspondence to 350 Fifth Ave., N. Y. 1, N. Y. Yearly subscription payable in advance. To Firms and Government, their supervisory employees and design staffs, engaged in building design, construction, management, finance, materials manufacture or distribution: U.S.A., Possessions and Canada, \$5.50; Pan American Union, \$6.50; Overseas Countries, \$10.00. To all others: U.S.A., Possessions and Canada, \$8.50; Pan American Union, \$9.50; Overseas countries, \$10.00. When available, single issues, including Reference Numbers, \$1.00. All copies mailed flat. Copyright under International Copyright Convention. All rights reserved under the Pan American Copyright Convention. Entered as Second Class Matter July 17, 1944 at the Post Office at New York, N. Y., under the act of March 3, 1879. Copyright 1947 by TIME Inc.

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KAISER ALUMINUM

HOW PERMANENTE METALS—IN A SINGLE YEAR—HAS BECOME A KEY FACTOR IN AMERICAN INDUSTRY—PRODUCING 175 MILLION POUNDS OF KAISER ALUMINUM!

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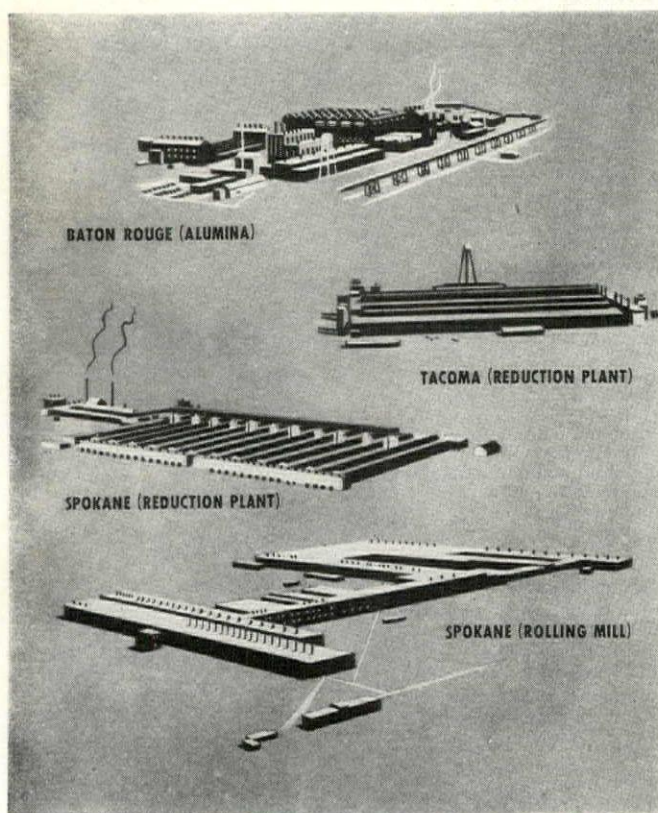
That this objective was achieved . . . and surpassed . . . is revealed by one statistic—175 million pounds of

plate, sheet, and strip aluminum in the first year. Almost as much as the entire industry produced in the most productive year before the war!

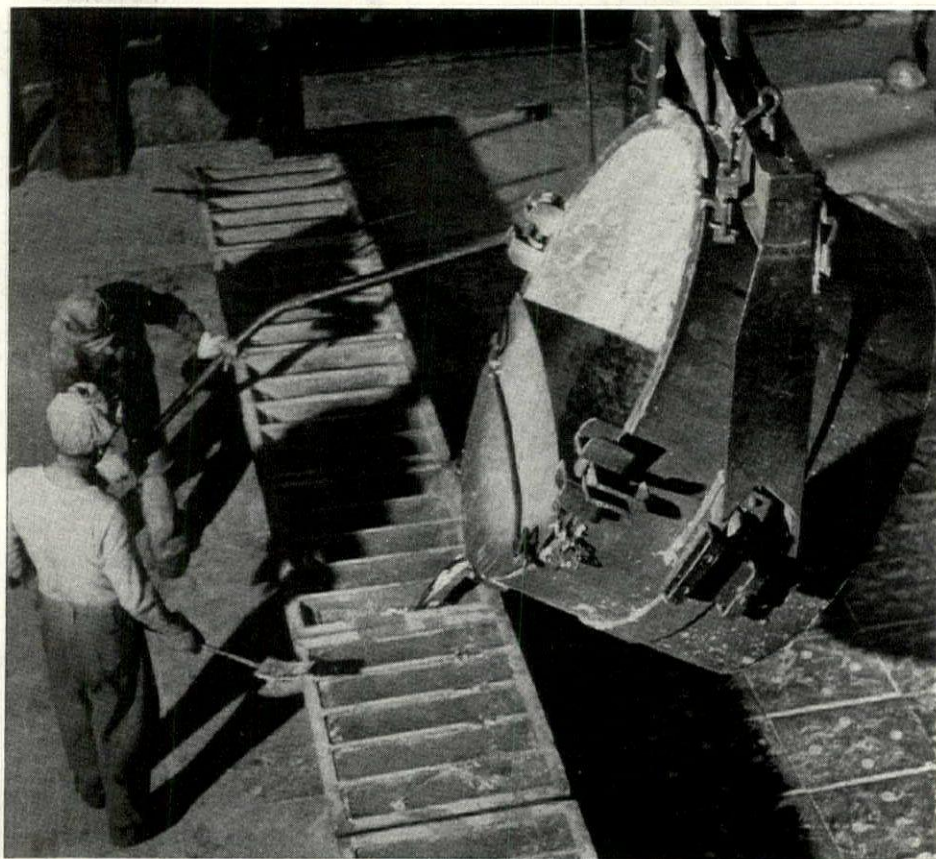
The pictures and text on these pages *partially* reveal how this was done.

What they cannot hope to portray is how administrative vision, technical skill, and a completely coordinated operation made such production possible.

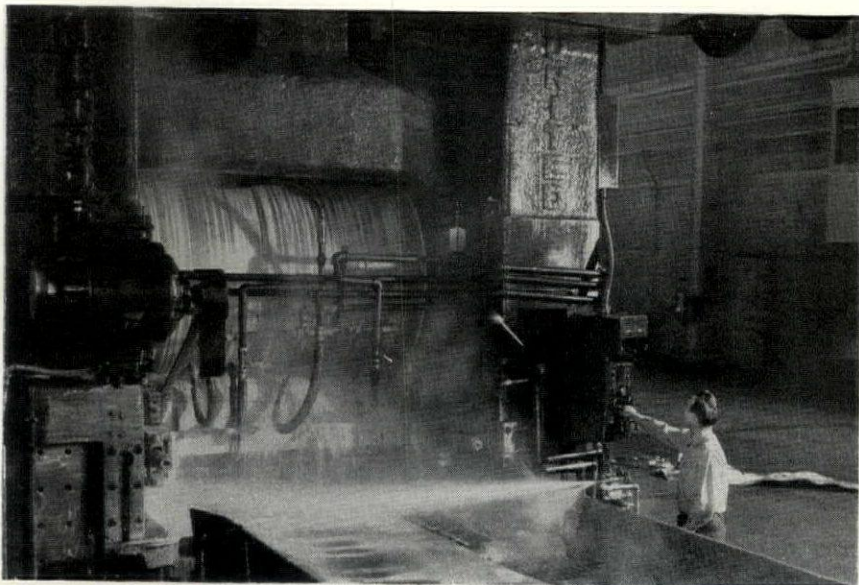
This same combination is now achieving Permanente Metals' second objective—to make Kaiser Aluminum, already second to none, the finest in the land!



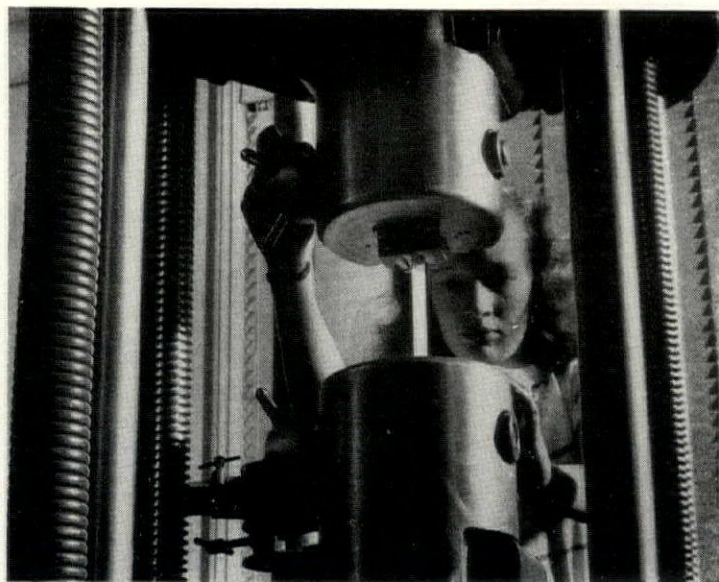
1. From bauxite processing to finished product—This chart gives a step-by-step picture of Permanente Metals' aluminum operation . . . which controls the production of quality aluminum from its huge bauxite processing plant at Baton Rouge, Louisiana . . . through its mammoth reduction and finishing plants at Spokane and Tacoma, Washington. Such integration assures fast, reliable service.



2. Preparing the "pig"—Operating eight modern pot lines, Permanente's reduction plants at Spokane and Tacoma, Washington, can turn out over 700,000 pounds of pure pig aluminum daily. This pig aluminum is then sent to the rolling mill, also in Spokane, where it is converted into alloyed ingots and then rolled into plate, sheet and strip.



3. Down the "hot line"—Permanente Metals' 53-acre Spokane rolling mill is one of the largest, most modern plants of its kind in the world. An example of its up-to-the-minute equipment is the "hot line," the giant rolls which convert alloyed aluminum ingots into sheet. This rolling mill can produce 288 million pounds of Kaiser Aluminum a year.



4. Quality first—With production soaring, Permanente Metals is now concentrating on producing the highest quality aluminum ever offered to manufacturers. Constant chemical and physical tests plus infinite care in handling assure that customer requirements are not only met, but exceeded.



5. Ready to go—Here is the result of just one day's rolling mill production of Kaiser Aluminum. Crated, tagged, and ready to ship, it will go into aircraft, buses, building materials, house trailers, appliances, garage doors, kitchen utensils . . . will be

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Ready to serve you—today...

Kaiser Aluminum

a Permanente Metals product

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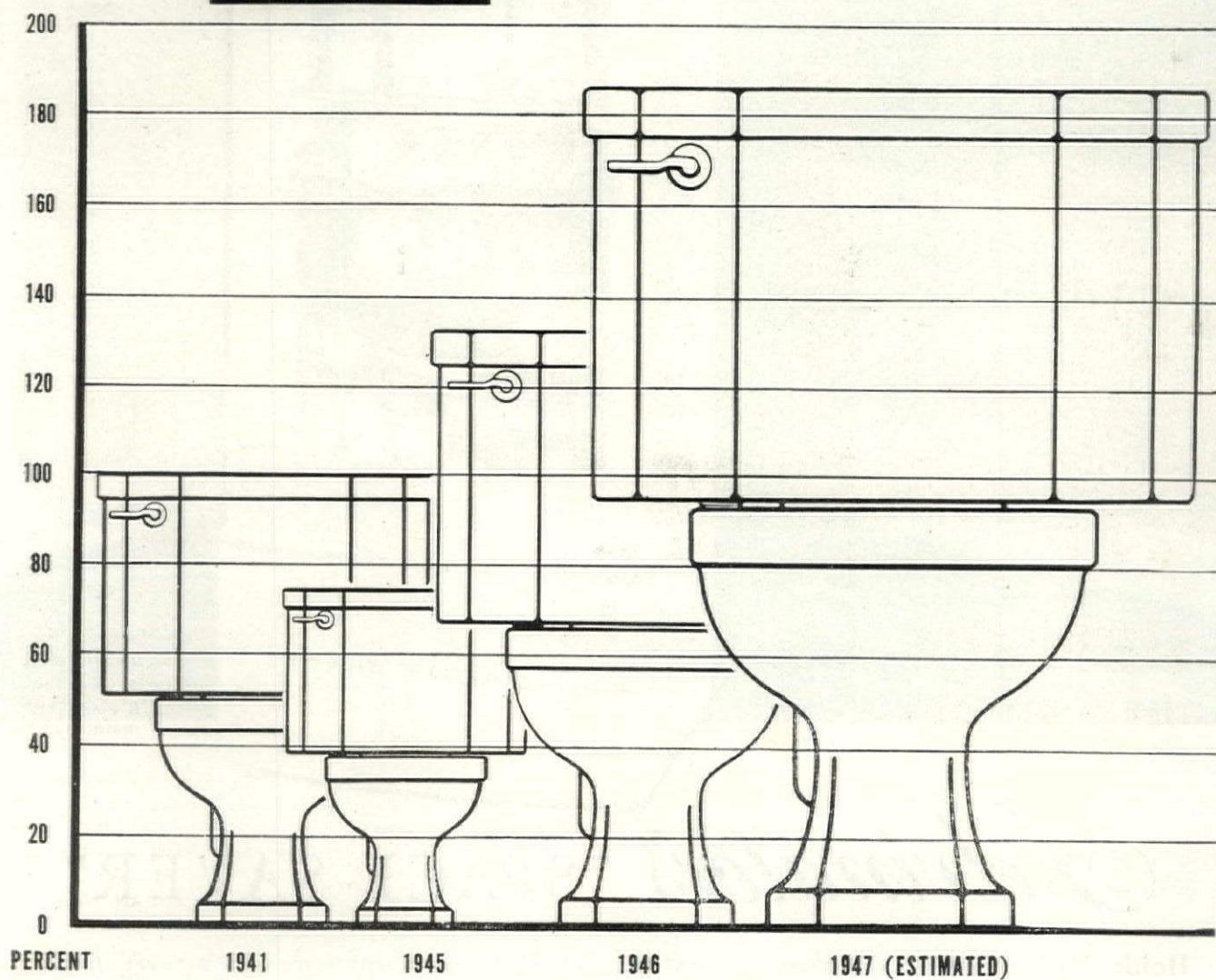


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Blower Unit

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"CAMELS" for a
WHALE of a lot
of houses.*



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NEWS

HOUSES

Housebuilding rate up over last year, but still can't dent backlog of need p. 9

WASHINGTON

Big upsurge of nonresidential building not expected as last controls die p. 10

Congress chops down government housing p. 10

Subsidy for private rental building proposed p. 11

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LABOR

Bricklayers turn down wage boost in Michigan p. 16

BUILDING MONTH. Whether or not Building is ailing seems to depend mostly on who takes its temperature. The press had convinced the U. S. that residential construction, most sensitive index of the Building industry's general health, was lagging badly behind last year's pace. Last month the AP added one more headline. Hastily counting up, AP found that 40 per cent fewer homes had been started this spring than last. The count: 61,795 houses started in 157 cities in the first quarter of last year; only 37,514 in the same period this year. Not clear at a glance was the fact that AP had counted in all the temporary houses put up last year by the government.

The private housebuilding industry's record so far this year shows a very different picture. Housebuilding Expediter Frank Creedon announced the official figures: During the first five months of this year, 280,300 privately financed permanent homes and apartments were started and 300,000 completed. During the first five months of last year, 276,000 such homes and apartments were started and only 98,000 completed.

What's more, this housebuilding gallop shows no sign of slowing down. May starts (about 70,000) were 3,000 above the number for May last year. Other promising signs noted by BLS clockers: Cancellation of building permits is showing a decided drop; more permits are being translated into actual work. Time lag between issuance of permits and start of construction is shortening.

Housebuilding money was flowing faster, too. The U. S. Savings and Loan League said its members had loaned more for construction this year than last. The Veterans' Administration reported that vets' mortgage loans, declining since last fall, were soaring again. The FHA approved last month more mortgage applications covering big rental developments than at any time in its history. With rent controls on new residential building lifted, big housebuilding money would show up even faster in the market.

All this added up to something quite different from a shut-down in residential building. But it was still far from a rate that would soon meet U. S. housing needs (see below). The plain fact was that Building had expanded about as much as it could in a hurry, and simply needed more time to push its output any higher.

Few realized how fast Building had already leaped ahead. The industry had boosted its output in 1946 by 75 per cent over the previous year—biggest volume increase in its history. If this incredible rate of expansion had continued this year, Building would have rocked dangerously on a price inflation much worse than the one it presently feels. Government economists predicted last month that the mild price readjustment now going on will give Building a good basis for a continued high level of activity for the years ahead.

One more promising sign that price stability is at hand showed up in the outlook for steel, backbone of construction. Steel is in fairly short supply and will be so as long as the U. S. maintains a high level of employment. But engineers meeting at an American Institute of Steel Construction conference in New York last month said they expect firm prices and firm delivery schedules from mills by at least the beginning of 1948. This means that steel fabricators will be able to quote firm

prices and firm deliveries to Building. A few, in fact, are already doing so: local fabricators in the Southwest are giving the State of California firm prices to shore up its public works program.

HOUSES

GENTLEMEN'S AGREEMENT

Cooperative effort may cut costs and get housebuilding started.

There will be 900,000 new families this year, the Census Bureau said. Some 2,000,000 families are already doubled up, according to government estimates. But not even the most optimistic expect more than 800,000 new houses to be built this year. At this rate, housebuilding will scarcely keep pace with new demand, cannot even touch the back-log of deferred demand that is the Great Housing Shortage.

Last month Congress by officially burying the battered remains of the Veterans' Emergency Housing Program (see p. 10) made it clear that the government will from now on take no responsibility for housebuilding production. As it does at any crisis, Congress next thought of setting up a committee to see what's the matter in housebuilding. This newest scrutiny, no doubt intended for myopic Congressmen who had missed the billboard-size indictments of several dozen other private and public investigations, is proposed by Representative J. K. Javits of New York.

Building men, whose eyes have been turned toward Washington for nearly two decades, now looked more hopefully at what was happening in their own home towns. In New York, Cardinal Spellman set the nation an example. The Cardinal said he thought that the delay of Building customers hoping for a price break would "lead to the stalling of the wheels of our domestic economy, stagnation and depression." To show what he meant, the Cardinal promised to start \$25 million worth of Diocesan building and called on labor to cooperate in keeping the jobs going. A few weeks later, in an effort to stabilize building costs, New York unions agreed to eliminate jurisdictional strikes and limitations on workers' output.

In San Francisco, building contractors organized to wipe out the gray market in materials and to push through updating of outmoded building codes. In Denver, a 15-man committee was drawing up a plan for city-industry cooperation in "rent-



CARDINAL SPELLMAN: co-operation

option" housebuilding for veterans. The National Association of Real Estate Boards urged its members to "try out conferences with building labor in 30 or 40 cities to see whether we can get a gentlemen's agreement on what we could all do to hold down costs."

These were only a few examples of what seemed to be happening all over the U. S. Almost everybody now knew that, as the National City Bank of New York crisply put it, "unless excessive housing costs are lowered by the cooperation and harder work of all concerned, they will be lowered by the route—less agreeable both for the building trades and for the country as a whole—of unemployment and depression."

WASHINGTON

DECONTROL

Building men expect gradual rise in volume, no more pressure on prices.

What the Building industry had sought ever since the obvious collapse of the government's Veterans Emergency Housing Program last January was now a fact. Congress had decided to give Building its head. From now on, anybody in the U. S. can build anything he pleases (except recreation or amusement structures) at any size, price or rent. Only remaining requirement: builders must hold houses for 30 days for sale or rent to veterans.

Would the go-ahead for nonresidential construction up demand for materials, shove high costs higher still? Most Building men thought not. Practically all building materials are now in fairly good supply, and producers said that output could keep pace with increased demand. Price, not materials supply or the now-dead government ban, is the big factor holding up commercial building. A FORUM check last month of leading architects who handle a big volume of nonresidential building revealed that:

► Customers for commercial and industrial

construction who could not afford to wait have, for the most part, been able to get federal permits to build and already have construction underway.

► Customers who can afford to wait will continue to do so for at least six months, with expectation of a moderate cost drop.
► The general wait for stability in building costs will prevent any sudden upsurge in the Building market and, therefore, any further pressure on prices.

The decontrol bill ends the Housing Expediter's power to allocate and channel materials for housebuilding, to make premium payments to increase materials production, to sign any more guaranteed market contracts for prefab houses or new materials or equipment (like the in-line bath unit, p. 13). Already signed market contracts will, of course, be honored until their expiration date of December 31, 1947. As a substitute for the market guarantee plan, the bill provides for FHA insurance of production loans to prefabers—a more direct protection which bankers are expected to applaud. The bill also extends FHA's Title VI insuring authority until March 31, 1948.

A general feeling, both within and without the Building industry, that it was high time to scrap government controls on new building was somewhat obscured by public and press dissatisfaction with the rent section of the decontrol bill. Last month few editorial writers reproved Congress for lifting the ban on nonresidential construction or the rent ceiling on new residential building. But most of them got out their fiercest adjectives to denounce the loosening of rent controls on existing accommodations, as approved by a substantial majority of both Houses of Congress.

What riled the editors was what the *Washington Post* called Congressional "subterfuge" in extending residential rent controls through February 29, 1948 with one hand while handing landlords a club with which to exact "voluntary" 15 per cent rent increases with the other. Even the *Christian Science Monitor*, which has never been accused of being in PM's corner, said severely: "Its approach is neither honest nor courageous."

Congressional apology for the provision for a 15 per cent "voluntary" increase on a lease extending through 1948 is that some tenants may wish to gamble against much higher boosts when federal rent control expires as scheduled in February. But a half-dozen states (N. Y., N. J., Minn., Va., R. I., Mass.) already have rent control laws protecting tenants against the end of federal rent control, while such legislation is pending in a dozen more.

Biggest danger in the 15 per cent boost on a long-term lease is that it puts a tremendous premium on evictions where present tenants do not wish to take such a lease.

The bill ends federal control of evictions as it ends almost all federal rent control enforcement procedure. Tenants will have only the protection of the civil courts against the eviction notices now expected to appear in increasing numbers.

Columnist Drew Pearson dredged up a Chicago Real Estate Board letter, full of "confidential" rent control evasion advice to members. Samples: "The only possibility for relief now seems to lie in the direction of deliberate disregard for the regulations . . . Tenants in possession will enforce their rent ceilings. But new tenancy arrangements will be made in increasing numbers at illegal rates . . ."

SMALL POTATOES

Congress cuts away funds of federal housing agencies.

Like careless housewives peeling potatoes, the House hastily pared away the federal budget last month. When the Representatives had finished, the federal housing agencies were very small potatoes indeed.

Only the Federal Housing Administration—which supports itself and antagonizes no Congressmen by its job of backstopping private building money—came through with something like its former size. The House said FHA can spend about three-fourths of what it had asked for the 1948 fiscal year.

Elsewhere the cuts were sharper, and plainly showed that the House is impatient to kill off practically all the government's housing operations. The National Housing Agency had asked \$1,215,000 to wind up its job as wartime supervisor of all government housing functions. The House said it could get along with a mere \$100,000, also decisively turned down the President's plan for a permanent "Housing and Home Finance Agency" to replace NHA.

"The program of trying to expedite the construction of residential housing has not been successful," the House Appropriations Committee said bluntly, slashing the Housing Expediter's budget by more than one-third. Most serious effect of this cut is that the Housing Expediter will have no money to supervise the rent control program just turned over to him (see above). The *Washington Post* feared that this would make "evasion virtually inevitable."

Public housers said that irreparable damage may have been done to the marketability of public housing bonds by the Committee's decision to reduce annual subsidies due local housing authorities from \$7,200,000 to \$2,200,000 and to require the authorities to cut their reserves in half. These long-term public credit agreements are the security which has put Wall Street financing back of public housing. Charging the Federal Public Housing Authority with "poor administration" and bad book-keeping, the House also slashed FPHA's administrative budget by one-third.

But the Senate had yet to act on both the budget requests and the President's plan to set up a permanent agency to co-

Carl M. Mydans



WOLCOTT: decontrol

Lloyds



JAVITS: probe

ordinate federal housing operations. The Senate is expected to treat the President's "Housing and Home Finance Agency" less summarily than the House. More leeway on budgets—especially funds for rent control supervision—is also in prospect.

BARGAIN COUNTER

Permanent war housing goes on market for quick cash sale.

In one way or another, Congress seemed bent on putting the Federal Public Housing Authority out of business for good. With one hand, it was about to cut the agency off by refusing it any more money (see above). With the other, it was cutting FPHA's job away.

Last month the House approved Representative Wolcott's bill to take away FPHA's job of disposing of the permanent war (Lanham Act) housing and give it to the Federal Works Agency (as predicted by June FORUM). The bill also:

- Requires sale of all permanent war housing by December 31, 1948.
- Requires cash down on all sales.
- Provides FHA insurance to encourage mortgage financing by private lenders.

The Senate was considering an even more drastic bill which would not only relieve FPHA of jurisdiction over permanent war housing but also transfer to FWA responsibility for 1) temporary war housing; 2) the existing low-rent housing program (see below); 3) unsold Greenbelt towns and subsistence homestead projects.

While Congress considered legislation which some feared would force the government to dump permanent war projects at "distress" prices, an unexpected disposal snag appeared in Bridgeport, Conn. Some 130 of the 150 one- and two-family houses in Bridgeport's Lincoln Terrace war project had been sold, mostly to their occupants. The First National Bank and several building and loan associations had agreed to make mortgage loans. But the Bridgeport People's Savings Bank refused. Reason: the war-built houses do not comply with city building and zoning requirements, gas and electric installations in some cases run through adjacent property under easement granted to the government.

Since there were other ready lenders, it was not likely that the hesitancy of the Bridgeport People's Bank would seriously inconvenience purchasers. But because many permanent war houses were built under emergency federal specifications overriding local codes and zoning, the Bridgeport case might be echoed elsewhere.

MORE PUBLIC HOUSING?

New formula for private enterprise rent subsidies may win friends.

Would federal housebuilding dollars boost Building volume this year? There was small prospect. A number of bills were before Congress which would, in various ways, make federal assistance available for housing. There was almost no chance that Congress would act on any of them

(Continued on page 12)

WHAT'S HOLDING UP HOUSEBUILDING?

Some people wished the housebuilding industry could be redesigned like a precision tool and switched on like a dynamo. Some wished the government would stop minding housebuilding's business. Others wished the government would start housebuilding itself.

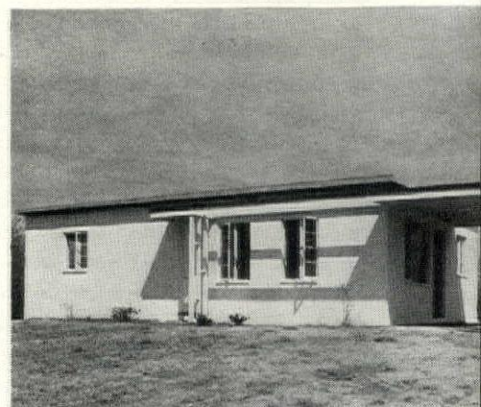
But, although almost everybody had one, there was no single answer to the many old problems of the industry that is not an industry. Housebuilding is not, as everybody knows, a precision tool—or even an industrial process. It is done in a hundred different ways, from a thousand different products, under conditions which vary as widely as the geography and local politics of the U. S. Recently a lot of people have come to think that, important as it is to look for big answers that affect all building, it is just as important to look for smaller ones—the kind of fences that can be torn down in your own backyard. Some examples:

NEW HOUSE CONSTRUCTION SYSTEM, based on precast, reinforced concrete elements and rapid site fabrication, has been tried in North Beverly, Mass. But these houses can't qualify for GI home loans at builder's price. Reason: the local board of appraisers depreciated its estimate of house value by 25 per cent because of "unconventional architecture and experimental construction." Architect Arthur H. Brooks says system has approval of FHA's technical division. Good measure of its market appeal: in a single week-end, 15,000 persons went through inspection house.

ALUMINUM HOUSE made by Butler Bros. is the kind of industrialized product looked to by many for substantial cost reduction. But any producer of a factory-built house or preassembled house part confronts union labor blockades which vary widely in different localities. Butler spent a great deal of time perfecting a patented locking key which can be driven home by a hammer. This avoids jurisdictional disputes between carpenters and metal workers. Few labor disputes permit such a pat solution, but much progress is being made by local agreements.

VETERANS HOUSING PROJECT, financed by New York State, is blocked in snooty New Rochelle neighborhood. Owners of property bordering the proposed 23-acre site successfully blocked a rezoning measure which would have permitted construction of the 300-unit garden apartment development. Such zoning controversies are legion over the country and block private enterprise ranging from big insurance projects to prefab houses as effectively as New Rochelle stopped the public housing project. Restrictive covenants also help to limit Building's market.

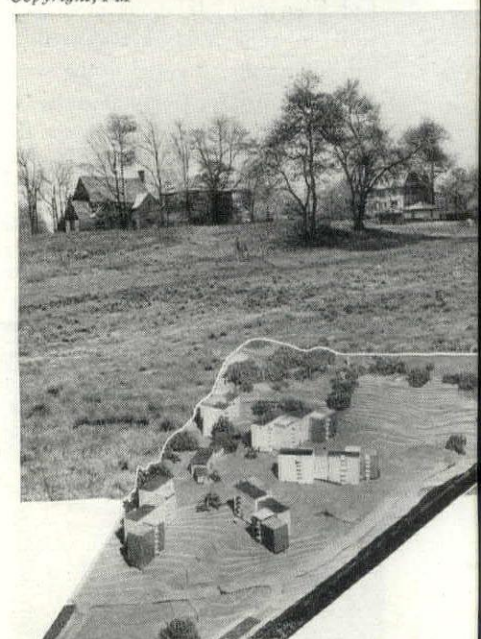
GREEN READY-BUILT HOUSE, designed by famed architect George Fred Keck of Chicago, can't be erected in New Jersey, although several Jersey builders are interested in distributing it. Architect Keck is not registered in the State of New Jersey, and states do not extend reciprocal registration privileges.



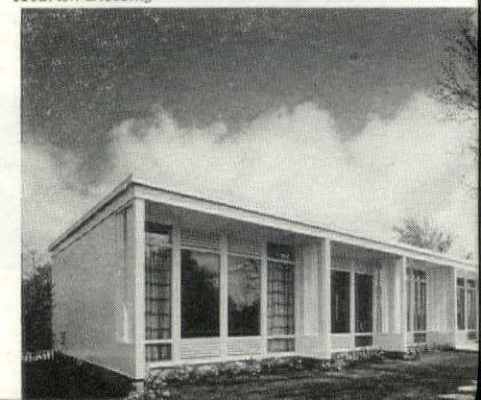
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Hedrich-Blessing



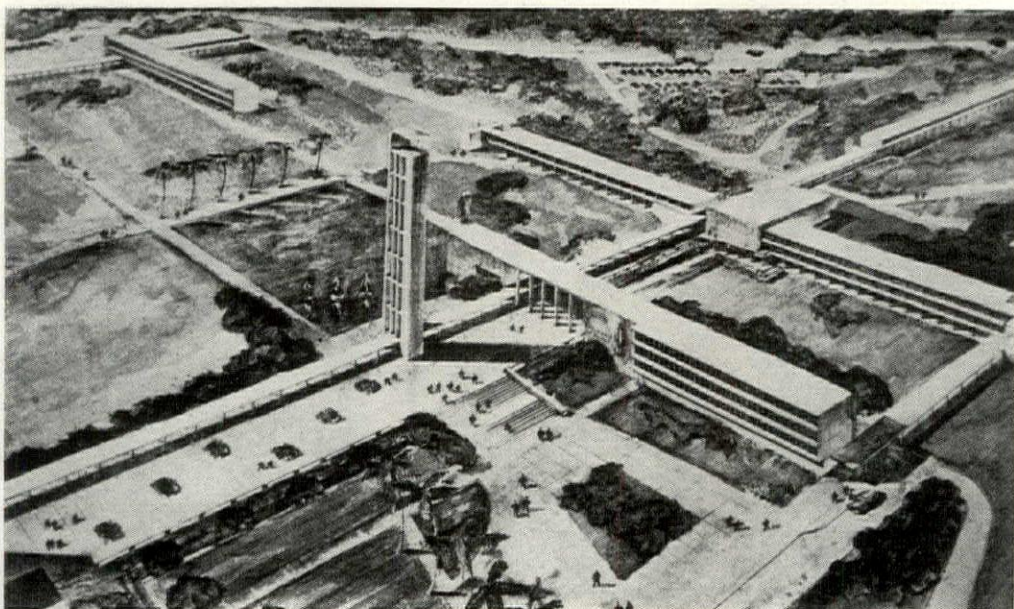
before it goes home for the summer. Among them:

T-E-W Bill (S. 866). Senator Taft still optimistically hoped he could get Senate approval of this long-pending omnibus housing bill before adjournment, but it could not possibly reach the House floor this session.

McCarthy Bill (S. 923). Last month the Senate Banking Committee approved a bill intended to unfreeze \$90 million worth of public housing delayed by the war. This is the last batch of public housing approved under the old U. S. Housing Act. It amounts to 13,317 urban housing units and 10,000 units in rural sections. Local housing authorities have been unable to start construction at present prices under the Act's cost limits: \$5,000 per unit in cities over 400,000; \$4,000 per unit in smaller cities. Senator McCarthy's bill would authorize cities to go ahead if they were willing to make up added costs out of their own pockets. Since few cities would be able to do this, the bill, even if approved by Congress, would probably not get much of the delayed public housing started.

Donohue Bill (H. R. 1754). Representative Donohue (Dem., Mass.) has proposed a new approach to low-rent housing for veterans, which Congress may like better than the T-E-W plan. His bill calls for government "subsidy loans" to absorb the difference between what veterans can afford to pay in rent and present cost of building rental housing. Loans would be made both to local housing authorities and to private building sponsors—banks, building and loans, veterans' cooperatives, insurance companies, developers. Loans would not have to be repaid until all other charges had been met. If sponsors find it impossible to repay, the loans would become subsidy grants. Steered to the sympathetic Veterans' Affairs Committee, the bill may gather considerable steam by the time Congress comes back next January.

UNIVERSITY OF MIAMI plans a giant building program, for which plans have been completed by Robert Law Weed. Last month the University said that construction will start immediately on the first project: a \$5 million student residential community of 537 apartments in 27 buildings. The Trust Co. of New Jersey is advancing a \$4,969,100 FHA-insured loan, one of the biggest ever approved by FHA.



MATERIAL

RISE OF RADIANT HEATING

Some 10,000 U. S. buildings now have it compared to three a decade ago.

When Frank Lloyd Wright embedded wrought iron heating coils in the floor of the Johnson Wax Co. building at Racine, Wis. in 1937, there were about three other radiant heating installations in the U. S. Last month the A. M. Byers Co., Pittsburgh, counted up and happily reported that now more than 10,000 buildings are equipped with radiant heating. Moreover, new installations are being made at the rate of 1,000 each month.

Byers, which makes wrought iron pipe, single-handedly began the promotion of radiant heating in 1937 (joined shortly by the FORUM, Jan. '39). Now Byers is glad to note that radiant heating is in use everywhere in the country, and in practically every kind of building. Making a cross-section check of 1,000 typical installations in 45 states, Byers found them distributed like this: residential, 47 per cent; commercial, 28 per cent; industrial, 16 per cent; institutional, 8 per cent; miscellaneous (hangars, farm buildings, etc.), 1 per cent.

Analysis showed that 93 per cent of these installations use floor-type radiant heating coils. A few have supplementary wall panel heating elements. Multi-story structures tend to have floor coils on the first floor, ceiling coils in other stories. Some 55 per cent of the installations are sinuous coils; 45 per cent are grid coils, generally used in large areas.

LUMBER PRICE SLIDE

Big price cuts in cheaper grades.

In the South, the expected slide in lumber prices (see FORUM, June '47) was threatening to become an avalanche. Some 250 sawmills in Alabama and Georgia had shut down in a fruitless effort to halt a price

decline they figured at more than 30 per cent. In Macon, for example, lumber selling a month ago at \$80 per thousand feet, f.o.b. mills had dropped to \$55, with the market weak and no bottom in sight. So far, the big price plunge was limited to low-grade stocks. But select grade flooring and good quality dimension lumber were showing small price drops in Western markets. Softening prices were apparent not only in actual market quotations, but also in manufacturers' efforts to obtain some easement of government export controls on lumber. Opposing any relaxation in export controls as a sure-fire way to keep lumber scarce and dear in the U. S., the National Retail Lumber Dealers Association thought export controls would stick and predicted a further moderate price drop in construction lumber.

From the American Lumber Congress last month in Chicago also came good news for Building—and Building's market. Lumbermen said confidently that they will produce enough over this year and next to keep pace with a greatly stepped-up housebuilding volume. Only plywood, for which demand has multiplied ten times over prewar level, will be short of meeting need.

DESIGN

UNIVERSITY MARKET

Everybody hopes to turn Quonsets into permanent buildings soon.

American universities need at least 186,000,000 additional sq. ft. of building—and they need it immediately. With enrollment at an all-time high (55 per cent above the prewar peak) and expected to go much higher before the veterans' educational program is finished, the universities need to double the building plant they now have. Against their urgent need for more space and better facilities looms the blockade that confronts the whole building market. Until building costs level off, many universities say they will have to stay in the Quonset huts and tarpaper prefabs that now dot every campus in the country.

Last month the urban universities invited several dozen top-rank architects to meet with them in Cleveland and talk about their building problems. The conference marked the first step the universities have made to initiate the kind of continuous collaboration between architects and educators which has already produced notable advances in grammar and high school design.

Gothic Cracking. The schoolmen's long affection for Gothic and Georgian seems to be cracking under the tremendous pressure for better and cheaper space. They also have new kinds of building requirements: apartment accommodations for that campus newcomer—the married student with children; space for increasing adult education; facilities that will give day students a sense of belonging to the university.

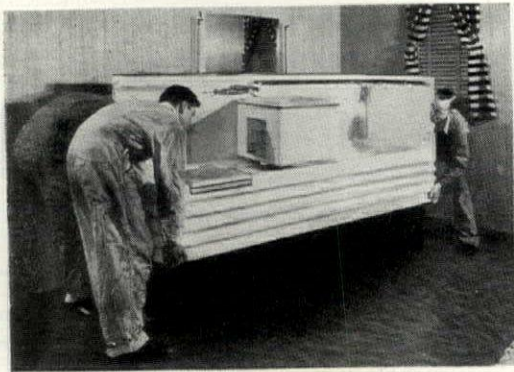
Emergency need has turned the univer-
(Continued on page 14)

PREFABRICATED BATHROOM

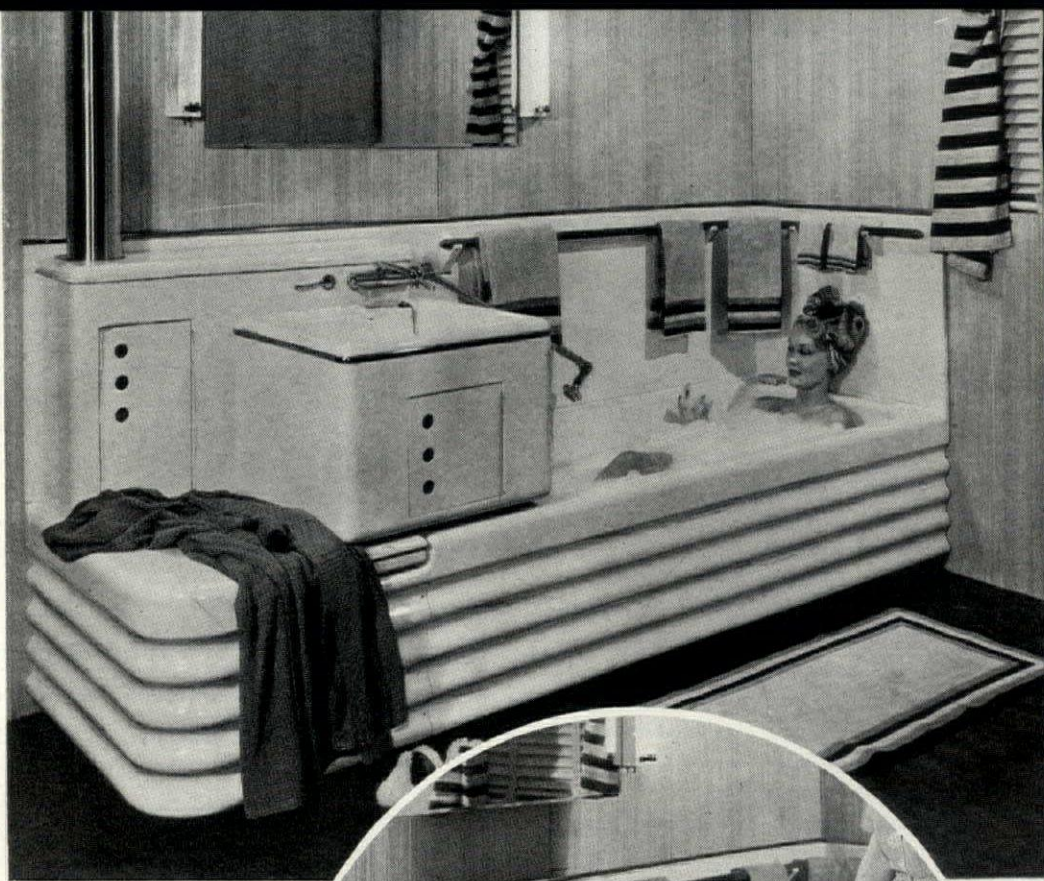
This all-in-one unit promises big saving in space and installation cost.

The first completely prefabricated, in-line bathroom unit went into production last month in Chicago, backed by a government guaranteed market contract covering 25,000 units. Architect Bertrand Goldberg, who designed the unit and organized Standard Fabrications, Inc. to produce it, says he will soon be turning out 20 units a day. Present plant capacity is 100 a day.

This light-weight, in-line unit can be carried through any door opening by three men and installed in about four hours. Compared to 13 conventional installation operations involving six trades, the unit requires only four connections: sewer, vent, hot and cold water. All pipes are

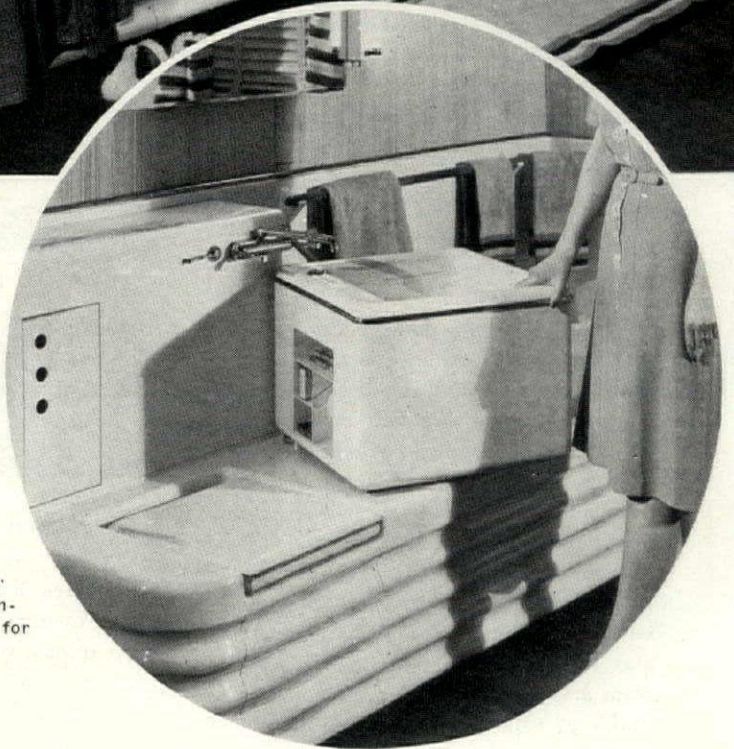


built in. Because the completely integrated unit requires no special wall finishes and no partition changes, it can be dropped into any room in the house. Says Goldberg: "We have made an appliance out of the bathroom and have freed small house planning from the necessity of revolving around the mechanical core." Units are produced under an AFL plumbers' label and will be sold and installed by master plumbers throughout the U. S.



IN-LINE BATH UNIT is 7½ x 2½ ft., with 4-ft.-high, water-tight enamel wall protector. Adjustable shoulder-high shower arm also fills tub. Ample towel rod is also grab bar. Weight of complete enameled steel unit is 550 pounds.

DEEP LAVATORY is mounted on concealed pivot to swing over toilet or over end of tub, automatically locking in either position. Linen storage compartment is in front, space for other conveniences in back.



Hedrich-Blessing Studio



MEDICINE CABINET is built in over toilet seat. Two years of careful engineering covered such details as space in cabinet for tall bottle storage, combination air holes and opening device in cabinet doors.



TOILET SEAT has no exposed fittings, can be easily removed for cleaning. Pipes are easily accessible by removing flush tank cover or front apron. Construction is flush to floor with recessed "toe-space."

(Continued from page 12)

sities into almost the best real estate customers in the present market. Wayne (Detroit), Carnegie Tech (Pittsburgh), Denver have all bought high-priced apartment properties for student and faculty residences. Syracuse and Western Reserve (Cleveland) are buying single-family houses for the same purpose. Emory is one of the few who have already started construction of permanent residential accommodations; their efficiency apartments for married students will cost \$5,000 per unit as against an estimate of \$2,900 a year ago.

Packed-up Plant. The jam-packed universities are showing plenty of ingenuity in making use of war surplus buildings. Syracuse bought an \$8 million war plant five miles out of town at a 70 per cent discount, will convert it to an engineering school. Emory is converting an airplane hangar into a field house. Rutgers bought a steel factory building, all packed and crated for lend-lease shipment to the U.S.S.R., will set it up for a field house and cafeteria.

Like everybody else in cities, urban universities are suffering from two painful headaches: high land costs and lack of parking facilities. Many are debating whether to stay in town or flee to the suburbs. Some are doing both: Syracuse and Denver, for instance, are establishing both downtown and suburban campuses. But most thought they were in the cities to stay and would simply have to be reconciled to high land costs. Many are private institutions who cannot use the power of eminent domain to reduce market price. Some may follow the lead of Illinois Tech, which is assembling a hundred-acre campus by buying up blighted land in Chicago. Others may turn to vertical building: Minnesota plans a 19-story, \$5 million Mayo Memorial Building; Chancellor R. W. Fitzgerald of Pittsburgh's famed Gothic Temple of Learning reported that after nine years he is entirely satisfied with his 47-stories.

Where to Park? Parking has become an acute problem for the urban universities. Michigan, Indiana and Cincinnati have dodged it by banning all cars from their campuses (exempting only handicapped students), but all agreed that this merely pushes the congestion back into already-complaining peripheral residential areas. Denver has a full city block for a parking lot, with round-the-clock student attendants, and charges \$5 a month for parking. Wayne plans an 800-car parking lot served by a five-cent, five-minute shuttle service to the campus. Only Minnesota owns any parking garages, but not nearly enough for its needs.

JEFFERSON WOULD APPROVE

St. Louis will build 80-acre memorial.

Architect Thomas Jefferson, who believed that the bulwark of democracy is "to illuminate . . . the minds of the people at large", would have liked architect George Howe's competition program. The center of the

Ben Schnall



HOWE

St. Louis' living memorial to the negotiator of the Louisiana Purchase will rise from a spectacular site: 80 acres in the heart of the business section. No other U. S. city can look forward to such a massive nucleus for redevelopment (pre-war cost to the federal government: \$9 million). The land where the city and the federal government will match dollars to build a \$30 million national park and memorial development is already cleared.

Jefferson National Expansion Memorial will be "activities designed to instruct and to disseminate information . . . by every means known to the science of education and culture . . . concerning the interests of humanity."

Competition director Howe's program suggests that there will be museums, an open-air theater, floating restaurants and entertainment centers, a few reproductions of pioneer buildings, sculptural groups—or whatever else the winner may suggest—on the bank of the Mississippi where in 1764 Frenchmen stepped from their canoes to found a fur trading post. The first prize winner will get \$40,000 and be recommended to the Department of the Interior for employment in the execution of his design.

Competition judges are: Herbert Hare, city planner and landscape architect, Kansas City, Mo.; Fiske Kimball, historian of Jeffersonian architecture and director, Philadelphia Museum of Art; Charles Nagel Jr., director, Brooklyn Museum of Art; Louis LaBeaume, former vice-president, A.I.A. St. Louis; Richard J. Neutra, chairman, California State Planning Board; Ronald A. Wank, consulting chief architect, TVA; William W. Wurster, dean, school of architecture, M.I.T.

BUILDING MONEY

BILLION DOLLAR SMILE

HOLC loses no money for taxpayers.

Back of old John Fahey's diplomatic Van Dyke could be seen something pretty close to a broad grin. The Commissioner was entitled to it. He was a man who had been expected by a large number of well-informed people to lose U. S. taxpayers about \$3½ billion dollars. It was now apparent that he had earned about \$11 million for them instead.

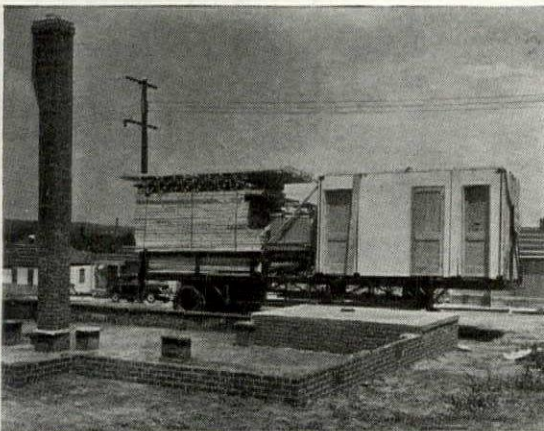
Harris & Ewing



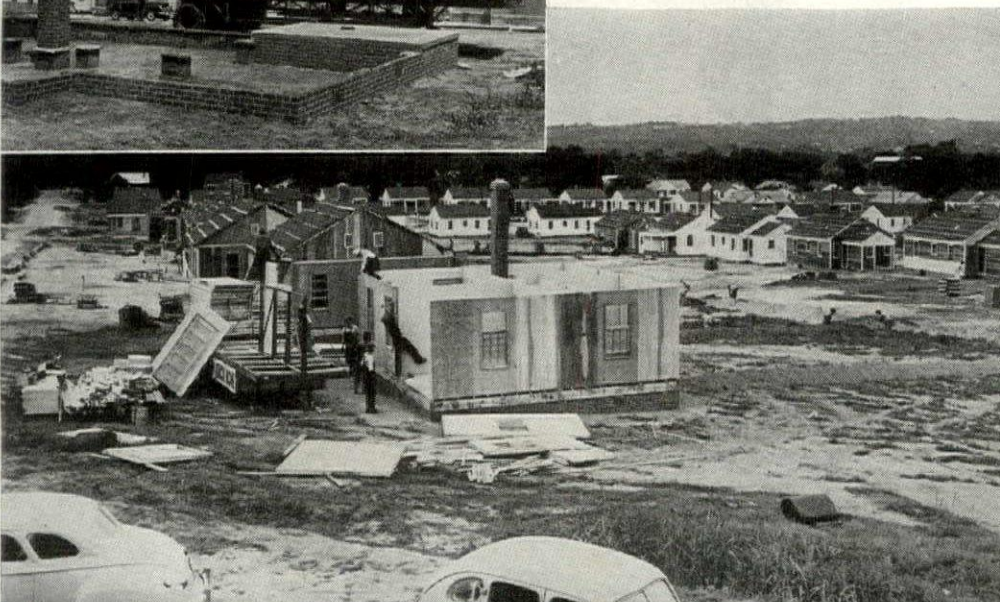
FAHEY

Dignified Fahey, who clips most business conversations to under 4½ minutes, is nevertheless an Irishman who enjoys a joke. Last month, checking over the newest figures on the Home Owners Loan Corp. (which expects to wind up most of its affairs by next year), he had reason for more than a chuckle.

He might, for instance, have recalled how even the liberal *Nation* greeted the HOLC in the black year of 1933, when President Roosevelt set up this agency to save U. S. home ownership and stop the avalanche of tottering residential real estate values. After a scholarly examination of the government's plan for unprecedented 15-year loans at 5 per cent (later reduced to 4½) to home owners facing foreclosure, the *Nation's* expert asked: "Does anyone think that 100 per cent will be realized on the assets of the Corporation? Once an owner's equity in the property is a mere 20 per cent, there is little incentive to continue to increase that equity, especially when the money is owed to good old Uncle Sam . . . When a final reckoning is made, the gov-



KNOX CORP. of Georgia took longer than most established prefabricators to make its bid for the present lush market, but now promises to take a substantial slice of it in five Southeastern states. Knox launched its panelized frame houses last month with a 50-house show in Augusta, Ga., where a house-hungry crowd turned out to watch three of them go up. Knox promises 6,000 houses a year, to sell for \$5,000-\$7,500.



ernment will be fortunate if it realizes more than 25 cents on the dollar."

This was mild compared to the prophecies of that part of U. S. financing not confronting bankruptcy because of the collapsing home mortgages. Not even HOLC sponsors expected the agency to break even, let alone earn money. It was admittedly a rescue agency, set up to help the U. S. climb out of depression by pouring cash into the nation's frozen credit structure.

By refinancing \$3½ billion worth of distressed home loans, the HOLC saved nearly one million families from loss of their homes. It averted national panic by supplying savings and loans and banks with the cash to pay off clamoring depositors. It turned over cash on back taxes to hard-up cities and counties. In reconditioning the houses on which it made loans, it gave the paralyzed Building industry its first job in three years of depression shut-down.

All this might have been worth some loss to the U. S. Treasury. That HOLC will actually make money instead is due to, more than anything else, the sure hand of 74-year-old scholar and business man John Fahey, who steered the agency on a careful course between Shylock and Santa Claus.

Fahey had gone to Washington, not as a starry-eyed reformer, but as a successful executive who had bought and sold several newspapers, who had been instrumental in organizing the First International Trade Congress, who had founded the U. S. Chamber of Commerce. As head of what he calls "the only financial institution in history ever organized to make bad loans at doubtful risks," he had turned in a phenomenal record.

Of the \$3½ billion worth of home loans HOLC made, 82 per cent have been liquidated. Of the 388,000 HOLC borrowers left, 70 per cent owe less than \$2,000. Of the 1,017,000 families who borrowed from Uncle Sam, only 198,000 failed to pay their obligations and lost their homes by government foreclosure. HOLC has sold all but 106 of these foreclosed properties.

VET'S LOAN SNAG

RFC secondary market may dry up.

One more sock for housebuilding is threatened by a bill to extend the RFC just passed by Congress. The bill, while extending RFC for two years beyond its present June 30 expiration date, would abolish the RFC Mortgage Co. and the secondary market it has been providing for veterans' home loans.

To make banks feel easier about tying up large investments in the government-guaranteed home loans, the RFC Mortgage Co. had offered to buy these mortgages whenever the banks might want cash instead. (The secondary market is not important to savings and loans, who can borrow from the Federal Home Loan Bank System on their mortgage collateral when they need cash.) Now House Banking

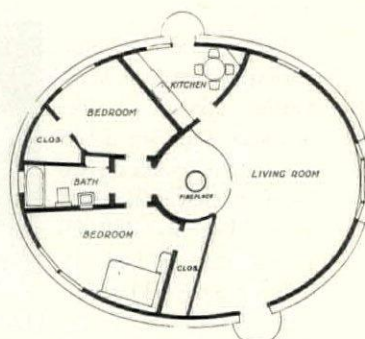


AIRFORM HOUSE is improved for U. S. market, also going overseas

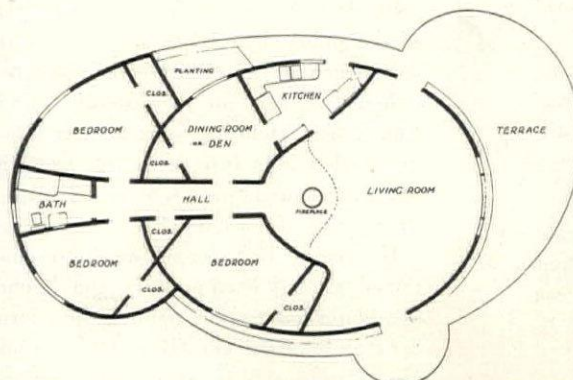
California architect Wallace Neff's balloon house has been substantially improved since it got its first push from RFC at the start of the war housing job (FORUM, Dec. '41). The Pasadena house above shows how the original small igloo-shaped concrete structure has been expanded to an elliptical shell.

The Airform house is an amazingly fast and cheap method of reinforced concrete construction. A balloon is laced to a concrete floor slab and inflated. Door and window assemblies are placed in position against the balloon, and a first layer of concrete is shot from a gun. Steel mesh is laid on as reinforcement, followed by a second layer of gun-shot concrete.

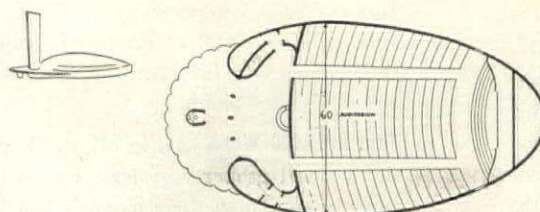
Some 1,000 of these Airform houses are now under construction in Brazil, while construction is planned in India, China, Africa, Mexico.



TWO-BEDROOM HOUSE IS 42 x 32 FT., 12 FT. HIGH



TWO BALLOONS USED TO EXPAND BASIC SHELL



SYSTEM USED FOR SOUTH AMERICAN THEATERS
Hal Heaston Photos



FIREPLACE DRAMATIZES PLAN

WALL CURVES ARE MODERATE



Chairman Wolcott said that a secondary market was no longer needed: the banks could find plenty of private customers ready to buy up the veteran loans at a premium.

Experienced mortgage men disagreed. The RFC secondary market, they argued, is a cushion, not for the present, but for the future. Right now Building money is abundant and cheap, and few banks want to sell their veterans' mortgages. But what the banks need is reassurance about some possible lean year ahead. The RFC market means that, even if private Building money were to dry up, the banks could still quickly turn the veterans' mortgages into cash.

Housebuilders and housebuyers not anxious to see any more hurdles appear between the veteran and a home hoped that the banks would not decide to shut their doors entirely to the heavy traffic of GI mortgages.

POLITICS

LITTLE MAN

Realtors want Third Party for property owners but first try is a dud.

Herbert U. Nelson, spokesman for the National Association of Real Estate Boards for the last two decades, seemed about to become a man without a party. Not for many a Democratic year has Nelson been welcome at the White House. But now it was depressingly plain that a Republican year might not make much difference.

Nelson and the realtors had found it hard to understand how so many of their Republican friends in Congress could vote for rent control—in the face of NAREB's repeated warnings that rent control was a disguised attempt on the part of the Democrats to confiscate private property rights. But when Senator Robert A. Taft, the brains of the Republican party, joined Democratic liberals in sponsoring a public housing bill, the realtors thought the world had turned upside down to stay.

For a while the realtors hoped that Senator Taft was just bluffing and would change his mind. Then Taft re-introduced the bill for the third time, in the current Congressional session.

Not a Common Man. To Nelson it was a case of nobody left in Washington to look out for the "little man." The "little man" was somebody quite different from Henry Wallace's "common man" (obviously a shiftless creature found mostly in public housing) but his effect on Nelson was about the same. After considerable meditation on the sins of the G.O.P., Nelson began to think about a third party.

Said Nelson, in *Headlines*, his weekly tract for the real estate brotherhood: "Big business, big labor, and big government find no real opposition in either the Democratic or Republican leadership. The little man must organize if he is to survive."

The little man, it soon turned out, was

anybody who owns property—but especially anybody who owns property suffering from the rent freeze. Only a week later Nelson made it clear that organizing the little man meant more than just another trade association.

"How can our people get back the powers which our government has tyrannically seized from them?" he thundered. "Only if 16 million home owners and the 8 million small owners of rental property and the 4 million farm owners organize . . . They are the overwhelming majority."

Acme



NELSON

now about a Home Owners' party to restore the Constitution and the rights of home and farm ownership. If such a party is ever organized, it will sweep everything before it."

Governors and Stars Rolled In. Nelson had already laid a possible ground work for such organization. Persuading a dozen or so realty tycoons to undertake some of the heavy underwriting, he had formed the National Home and Property Foundation. Philadelphia realtor Arthur Binns, nationally known for his vigorous opposition to public housing, got things off to a rousing start as president. From every state in the union, applications for membership came rolling in.

For a while, the Foundation seemed to be high-balling along. Almost anybody could see it had reason to congratulate itself on a successful first year. For its 100,000 membership, it had tallied the score: 1) Housing Expediter Wilson Wyatt had been sacked; 2) public housing legislation had been throttled; 3) price controls had been dropped; 4) "attempts of the public housers to set up returning servicemen as a special class" had been halted (i.e. most of the federal Veterans Emergency Housing program had been dismantled). Only rent control had withstood the Foundation's batteries, but it was showing plenty of holes.

If Senator Taft's name was never mentioned around headquarters, the Foundation could boast other political luminaries. Senator John Bricker (Rep., Ohio), who is also a director of a savings and loan association, had become an enthusiastic member. There was also Senator Albert W. Hawkes and Governor Driscoll of New Jersey, Representative Frederick Smith of Ohio, and even, for good measure, screen star C. Aubrey Smith.

That \$100,000 Word. All in all, the Foundation's small property owners seemed to be getting more than their money's worth for their yearly \$5.00 dues. Even its core of "contributing" members—realtors who put

up \$25 or more—seemed satisfied.

But last month the Foundation ran into several kinds of trouble. Fiorello LaGuardia, whose fight for continued rent control had brought him a great deal of editorial attention in Foundation publications, filed suit for \$100,000 against the group on charges of having been called Communist. This is an adjective which the Foundation, judging from its past statements, will find it hard to do without.

Next Housing Expediter Frank Creedon, who enjoys considerable respect among housebuilders and real estate men, issued a reproof sharp enough to discredit this conspicuously maladroit lobby. "Utter nonsense," steamed Creedon, after a look at a Foundation blast against the federal guaranteed market program for prefabricated houses. The property owners had charged that the program is being "turned into a WPA for prefabricated manufacturers" and that the "government is glutting the market with standardized small houses." This, Creedon said, is "grossly inaccurate." Unlike the Foundation, he offered facts and figures:

▶ 3,000 prefabricated houses have been produced under government market guarantees, about one per cent of total housebuilding volume.

▶ Not one house has so far been tendered to the government for purchase.

▶ No guarantee contract has been approved without FHA's technical OK on the house, under the same mortgage insurance standards set up for conventionally built houses.

Veteran Washington lobbyists, who know that it is better to attack with facts than with fiction, cast an uneasy eye at this noisy newcomer. Even Nelson was pointing out that his parental function had not extended to bringing up the child. It was clear that the Foundation would have to get its facts and its adjectives straight if it were to hold the interest of either its little or its big men.

Steinmetz



BINNS

LABOR

JOBS WANTED

More paint for New York, more bricks for Michigan.

In New York landlords, who thought they had more than enough rent control troubles, got another. They looked sourly at newspaper ads and throwaways, listened glumly to radio spot announcements—all urging tenants to demand the painting required every two years under federal rent rules. This relentless advice came from the Brotherhood of Painters, Decorators and Paper Hangers, District Council No. 9, which is plunking down dollars for a two-week advertising campaign because 1,500 of its 10,000 membership are out of work.

But in Port Huron, Mich. contractors could scarcely believe their ears. They had settled with bricklayers for a 25 cents hourly wage increase. Then the union went away and thought things over. The bricklayers came right back. They had decided, they said, to turn down the pay boost, hoped their move would step-up building volume.



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that provides
"Packaged-in-Glass"
Hot Water

No Rusting! No Corroding! Under *any* water condition, the all-modern *Permaglas* Water Heater **CANNOT** rust or corrode! It's ever ready with all the hot water needed, for even the newest homes, pure and clean as the source itself.

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SMITHway WATER HEATER

The *Permaglas* Water Heater has the tank of glass-fused-to-steel—mirror-smooth and sparkling blue. Rust that ruins clean laundry . . . and corrosion dirt that stains both water and porcelain . . . *are banished.*

NOW YOU CAN SPECIFY CLEAN HOT WATER

Only A. O. Smith makes this truly modern water heater, engineered to match in service and convenience the finest new homes. Its complete protection against rust and corrosion is only one feature of many—including a sleek, beautiful design that has set the new postwar style.

Let us send you all the facts on gas and electric models. 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



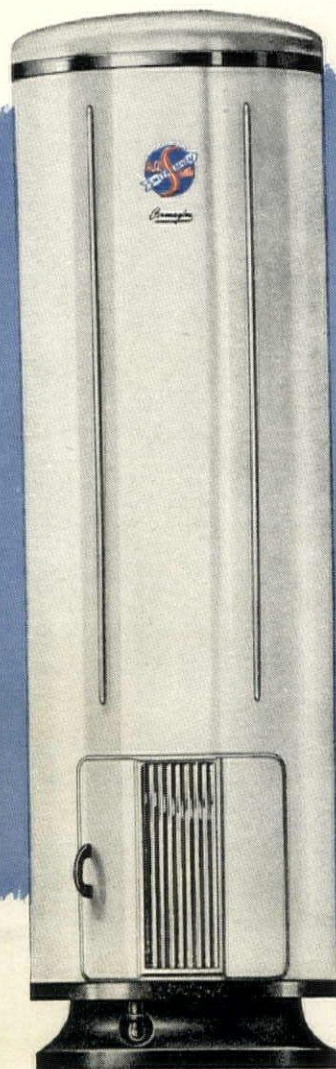
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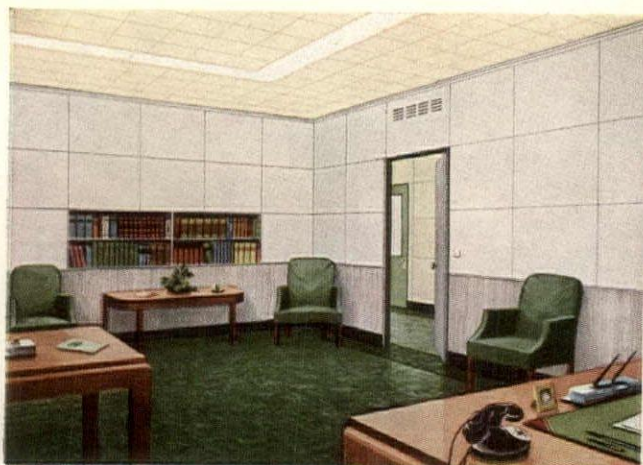


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... for Laboratories

For colorful... quieter

1. J-M ACOUSTICAL CEILINGS*—noise-quieting, economical, attractive

There's a Johns-Manville sound-absorbing ceiling for *every* kind of interior, whether it's a school or a hospital, an office or a restaurant, a large auditorium or a noisy factory.

To assure you the maximum in noise-quieting, Johns-Manville not only provides the correct acoustical materials for each specific condition, but follows through by *installing* the materials *properly* with its own construction crews. In other words,

you get "J-M materials installed by Johns-Manville for best results.

That's the all-inclusive service... the *undivided responsibility* Johns-Manville gives every project.

For further details, send for brochure entitled "J-M Sound Control." Describes such J-M acoustical products as Sanacoustic, Fibracoustic, Fibrete, and Fibretone, Transite Acoustical Panels and special materials for Broadcasting Studios.

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Rooms when and where you want them... that's the magic of Johns-Manville Transite Walls—the attractive and sturdy asbestos walls that are *movable*. Now you'll never again need to send partition walls to the dump every time space changes are required!

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They're colorful! They're more resilient! More restful to walk on! And they're extra long-wearing—reinforced with fibers of indestructible asbestos. Even a carelessly dropped lighted cigarette won't mar their built-in beauty.

Johns-Manville Asphalt Tile is the modern flooring that can take *heaviest* foot traffic, yet stay fresh and unmarred with practically no maintenance.

And you'll *like* the unlimited range of possible color combinations—from striking patterns with strong contrasts to solid fields of marbleized colors. Easy on the eyes, J-M Asphalt Tile Floors are easy on the budget, too!

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ADDRESS: BOX 290, NEW YORK 16, N.Y.

To provide for ever-changing space needs, give your interiors *complete flexibility* with J-M Unit Construction. This new method combines movable Transite Walls, demountable Acoustical Ceilings, Asphalt Tile Floors—in other words, the *complete interior*, under *one* specification, *one* manufacturer's responsibility. Write for brochure on J-M *Unit Construction*.

Because of unprecedented demands, there may be times when we cannot make immediate delivery of materials. So please anticipate your needs.



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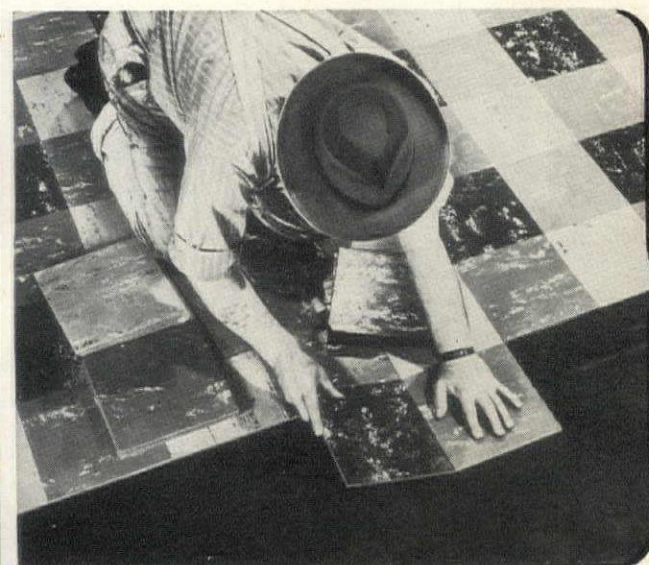
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Typical example of Johns-Manville Unit Construction — a beautiful, completely flexible interior ... with movable Transite Walls, Asphalt Tile Flooring, and a demountable Sanacoustic Ceiling to absorb noise.



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Speed construction, reduce costs by including windows of Alcoa Aluminum in your specifications. Attractive, rustproof, they require no painting. Light in weight, delivered complete, they are easily handled with a minimum of labor.

Corrosion-resistant, they withstand industrial

atmospheres; will give years of economical, trouble-free service.

For detailed information on windows of Alcoa Aluminum for every type of installation, write to ALUMINUM COMPANY OF AMERICA, 1866 Gulf Bldg., Pittsburgh 19, Pa. Sales offices in leading cities.

MORE people want **MORE** aluminum for **MORE** uses than ever

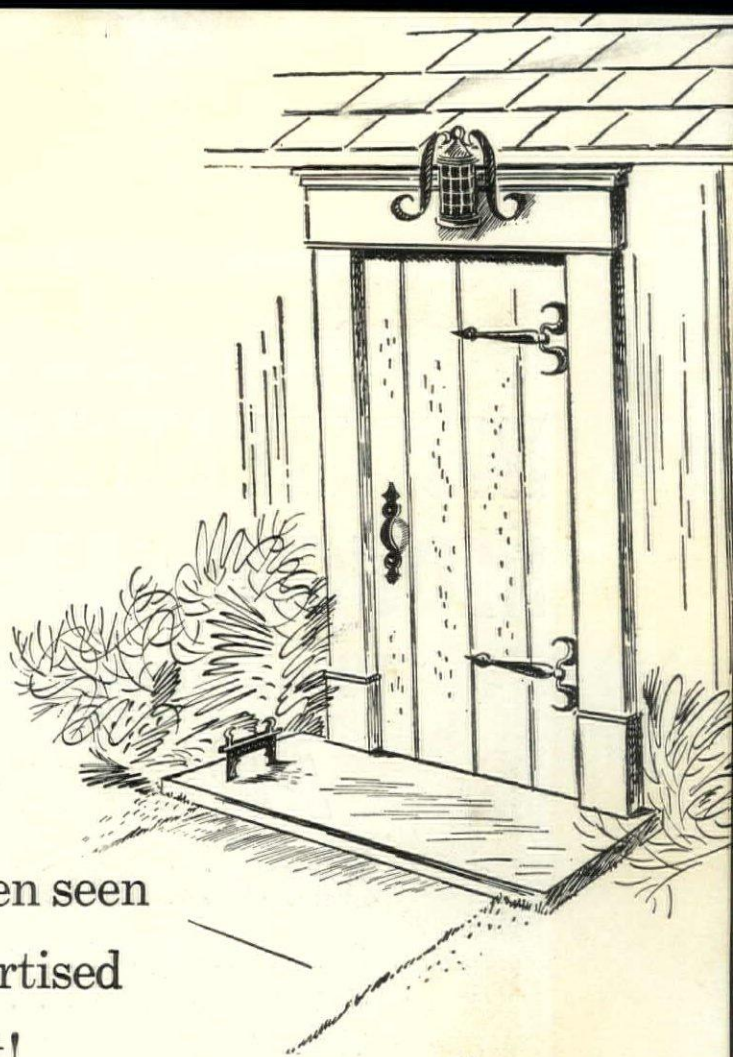
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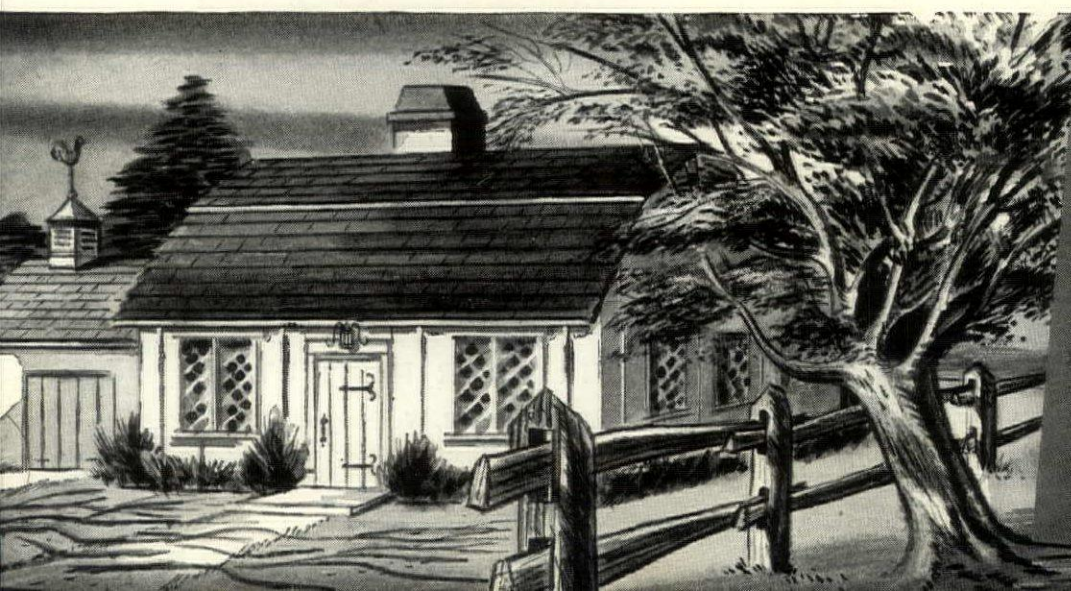


Does it have
good locks
and hinges?

Of course!
You've often seen
them advertised
in the Post!



IF QUALITY IS THE QUESTION— "IT'S POST-ADVERTISED" IS THE ANSWER!



PEOPLE KNOW AND PREFER
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INSTALLATION TIME REDUCED 50% to 80%

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PRE-FIT

Stock Doors

Save Time—Save Labor—and
Get a Better Job . . . with
These Improved Fir Doors!

ONE BUILDER reports as many as seven installations in the time previously required for a single door! Savings of from 50% to 80% are common.

That's because Douglas fir stock doors are *pre-fit* to exact size at the factory. They reach the job trimmed and squared, ready to hang. No sawing or planing is required. Precious time is saved—and there's far less danger of on-the-job marring, "butchering" and poor alignment due to unskilled help or improper tools. Corners are clean, trim, true—scuff-stripped for protection. The result: a better, as well as a faster, job!

and PRE-SEALED, too,

for Protection and Better Finish

Douglas fir stock doors—featured in definite, plainly marked grades and a wide range of designs, including modern 3-panel layouts adaptable to all types of building—are also *pre-sealed* at the factory. They reach the job fully prepared for a better finish. They're protected against moisture and checking, with resulting improvement in dimensional stability.

MORE FIR DOORS SOON!

It is a fact that Douglas fir doors may continue in short supply for a number of months. Two factors make this true: the present overwhelming demand—and the shortage of essential raw materials. But production IS stepping up. Warehouse and dealer stock should soon reflect this increased production. We suggest that you keep in touch with your regular source of supply.



**For Even Greater On-the-Job
Economies, Specify Fir Doors**

"FACTRI-FIT"

Durable, attractive Douglas fir doors may also be ordered completely precision-machined—not only pre-fit and pre-sealed, but gained for hinges and mortised or bored for locks as well. Here again, cleaner, trimmer jobs are assured, because all work is done at the factory by high-speed precision tools. Time savings more than offset the slight additional cost.



*No on-the-job
mortising or boring
required!*



*The National
Association
of Fir Door
Manufacturers*

For Better, Faster Installations, Specify:

**Douglas Fir
DOORS**

FIR DOOR INSTITUTE

Tacoma 2, Washington

FOR PLASTER BASE

DOUBLE DUTY
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Double

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Here are the facts: Double-duty INSULITE SEALED LOK-JOINT LATH performs *two* functions for inside walls—

(1st) *Plaster Base*

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Two values for the price of one. A distinct advantage, quickly understood and appreciated by your clients. The reasons—You need a plaster base anyway—so why not have one that *insulates* at the same time . . . in addition it provides vapor control. Double for the money! This is smart, modern, progressive construction procedure—functional and economical. Specify double-duty Insulite Sealed Lok-Joint Lath.

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

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MINNESOTA & ONTARIO
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"From sea to shining sea..."

America is one!

Not just a coalition of states but a union of land and people. Speaking with one tongue, standing for one ideal. Free to go anywhere over three million square miles of beloved land, without a barrier, from sea to shining sea.

And go we do, on business or pleasure bent, over countless ribbons of railways, highways, waterways, and skyways . . . the most mobile nation under the sun.

Transportation has forged our unity.

A southern drawl in Boston or a New England twang in Seattle is

no more unusual than California oranges on Maine breakfast tables, or Florida strawberries in Indiana shortcakes. Each is the result of more and better transportation facilities.

Contributing immeasurably to our advanced development of transportation has been the plentiful production of durable, reliable *steel pipe*. Pipe to convey liquid or gaseous fuels, steam, water, compressed air, electric wiring . . . the motivating forces of all transportation.

It is no coincidence that the amazing progress of all forms of

transportation in this century parallels the no less astonishing growth of steel pipe production. For, with transportation, as in so many other developments of American life, *steel pipe makes it possible!*

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

*Committee on
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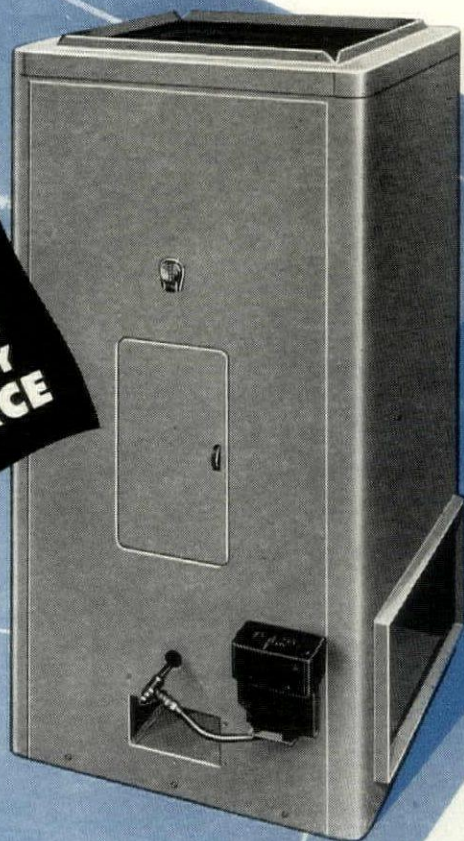


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EVANS engineers have developed a simple and ingenious pocket-size Heat Loss Calculator which you will find use for often in figuring heat requirements for various sizes of buildings. You're welcome to one and we hope you'll ask for a copy.

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DELIGHT AND DISMAY

Forum:

I wish to take time out to express my very highest compliments regarding your May issue. This must be the best ever. Your desert house by Loewy, the Schweikher brick-and-timber perfection, the California house (including my favorite Siamese cats)—you really have everything in this number. Needless to say, Eric Mendelsohn towers high over many, many others. Thanks for the treat!

H. SCHAEFFER

Hialeah, Fla.

Forum:

I recently became a new subscriber to your magazine and Lo and Behold! upon opening the May issue to page 15, what do I find but an article, which on its face appears to encourage the prostitution of the professional side of the practice of architecture. The article is captioned: "Five Dollar Plans."

The parties guilty of this transgression propose to merchandise plans for small houses, sell them over the counter like so much cheese, butter, eggs, etc., all for \$5 per set, plus a little sideline at an extra of \$1.50. How in the name of common sense can that sort of thing be truthfully called architectural service?

In the first place, the article starts off with an alibi to the effect that: "Because architects skim off only the cream of the design market and do not even try to serve the family of modest means, an alert newcomer has moved into the building industry to lap up the milk."

This is an untruth on the face of it. There are many architects who are glad to plan small houses and also complete the service by supervising their construction and rendering applicable professional advice. This is the particular field of the young architect just starting in.

Then again, those suburban architects long in practice also carry on in this field. The practice of the experienced suburban architect usually brings a few large paying jobs each year with idle intervals between, and while the small house work may not produce a profit to an expensively operated office, it nevertheless covers the interim periods and keeps the organization intact between larger operations.

The article continues by saying that "the firm has no part in any building operations." This, of course, means that the so-called Home Planners Inc. does not produce the most important part of archi-

tectural service: the supervision and administration of the work. In short, their method is like that of a boat builder who sells a boat without a rudder.

As to those *tiny* clouds the article mentions, I quote: "Some states require that registered architects prepare all house plans—but a small fee will usually get a local registrant's signature on the firm's plans."

If this is not a deliberate invitation to the public to evade a state law, please inform me what else it might be. The laws of the state of New Jersey look upon this sort of thing as a deliberate fraud, likewise those of several other states . . .

I am not a little astonished that a publication of your standing should, to any degree, appear to sponsor a scheme such as this, and I am very much disappointed.

C. GODFREY POGGI, Architect

Elizabeth, N. J.

FORUM reported facts, has never sponsored mail order plans. But let's drop the fiction that architects have served the small home buyer. In any normal decade, individual architecturally designed houses are found only in the upper brackets. In any year the percentage of houses constructed with architectural service is minuscule. Newly elected President Douglas Orr of the American Institute of Architects has recently announced a study to explore means of bringing architect and small house builder together.—Ed.

AGRICULTURAL FORUM

Forum:

Would your magazine, the AGRICULTURAL forum, publish an article about a horse reared and lived on an Indiana farm for THIRTY years? His dam and sire were Kentucky thoroughbreds.

This is not a story of the "Wild West" type, nor was he a "Race Horse." Just a high spirited midwest farm horse, who was master of the pastures, and teased—sometimes annoyed—those who came into contact with him.

R. P. COPELAND

Martinsville, Ind.

Sounds like our managing editor—Ed.

UNDAMPENED WRIGHT

Forum:

I noticed with interest the reference to my family's house in your "Letters" column over the signature Jan Sholta. It would be kind of you to assure him that Falling Water is not, and never has been, so damp as to be even uncomfortable, despite its location near the water and deep down in a heavily wooded ravine. The house has not been free from leaks which we have been able to fix successfully. But we have always found that the trouble was due to the con-

tractor rather than the architect. There is certainly nothing that Mr. Wright's buildings require to make them practical other than common sense and an experienced eye to watch over the construction. Where he himself has been able to supervise his structures, they do not give trouble . . .

EDGAR KAUFMAN, JR.

Museum of Modern Art

New York, N. Y.

Forum:

I can extend an invitation to Jan Sholta of Chicago to visit our house at his convenience and see for himself if Frank Lloyd Wright houses are "livable." We have lived in one for six years and love it. We enjoyed building it and would do it again.

I believe that some kind soul told me of every mistake in every Frank Lloyd Wright building ever constructed, but this is the first I have heard of the Kaufman house being damp or uninhabitable. I know that Edgar Kaufman has been back to Taliesin for more designs and I do not think he is a "glutton for punishment."

. . . The only bad things about Frank Lloyd Wright houses are that people swarm all over the place while the house is being built and after it is completed . . .

GEORGE S. AFFLECK

Bloomfield Hills, Mich.

CENSORSHIP DEBATE

Last month FORUM presented the first reactions to its May Publisher's Letter which scored the quasi-classical design of the new Best & Co. store, but also came out strongly against architectural censorship as embodied in a possible Board of Experts to pass on Fifth Avenue's building design. In this issue our readers carry on the controversy.

Forum:

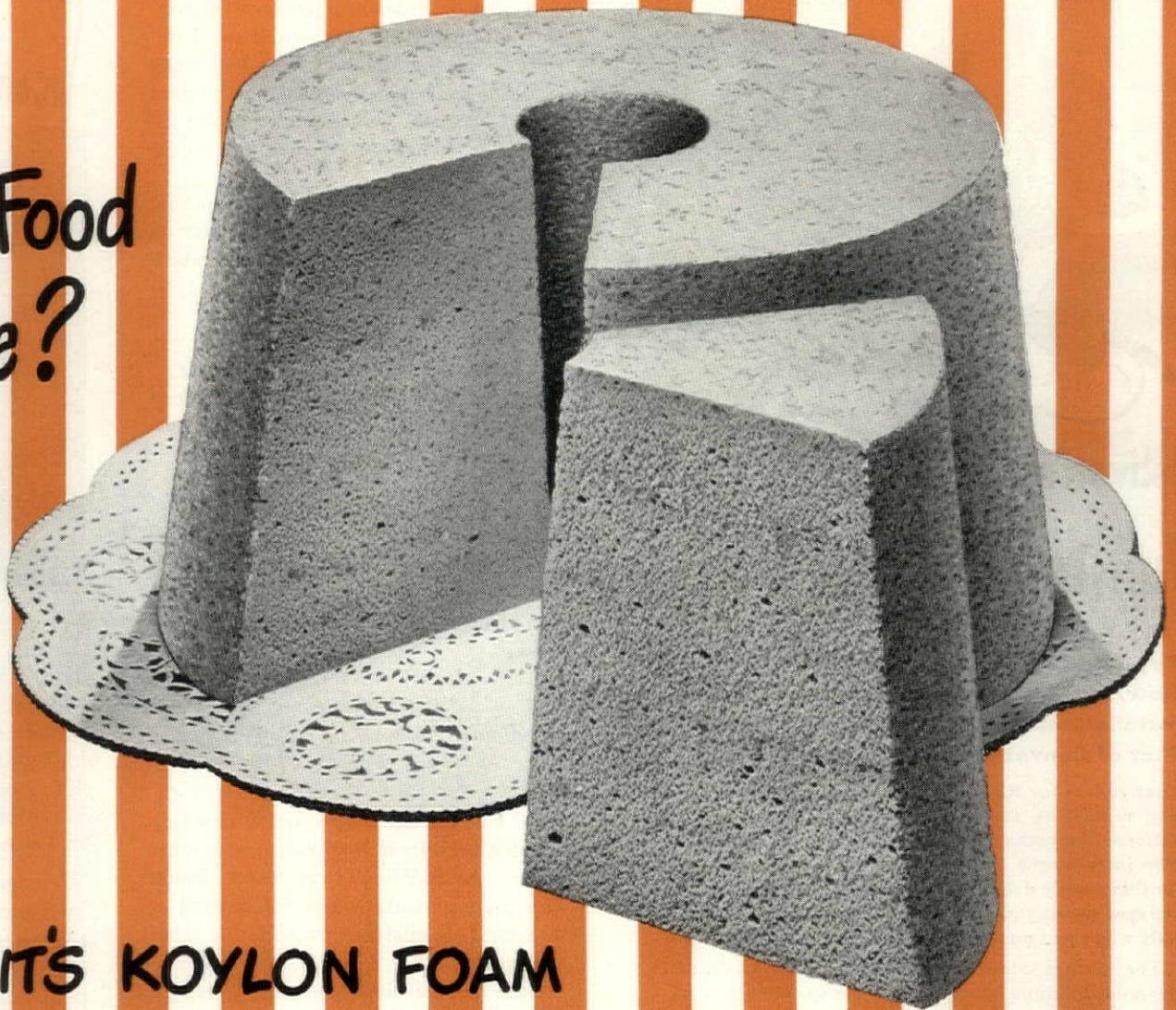
. . . I would emphasize and re-emphasize my agreement with your words stating the need for complete architectural freedom. The dead hand of control would level and retard. Such ideas as this always bring my thoughts to the Harvard Yard with its group of historical buildings, many of them the most beautiful of their building year—University Hall by Bulfinch, Memorial Hall by Ware and Van Brunt, the Gothic Revival dormitories by Peabody and Stearns, Seaver Hall by H. H. Richardson; one could name more. The beauty here is not their similarity but their reflection of history which, mellowed by time, brings them into

(Continued on page 24)

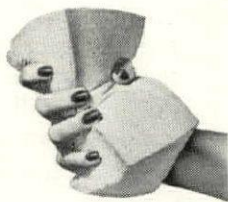
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Angel Food
Cake?



NO, IT'S KOYLON FOAM



IT means *good comfort* instead of good eating, but there's a lot about Koylon that compares with a piece of fluffy cake. This amazing cushioning and mattress material is *light-as-a-feather*. (So easy to handle!) Koylon is *porous*. (Keeps cool because of air circulation!) And, Koylon is made up of *millions of tiny cells* containing cap-

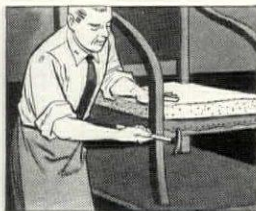
tured air. (So resilient—yet gently buoyant!)

But, while the comfort of Koylon is gentle—depend on this wonder material to be tough! It has been wear-tested in use for over 12 years. Wherever you provide the comfort of Koylon you know it's there to stay—another good reason why *it pays to specify Koylon Foam*.

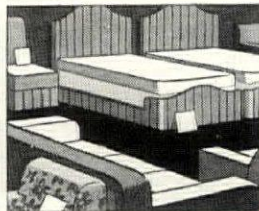
WHEREVER COMFORT COUNTS, PUT



How easy to upholster with Koylon! Cuts to shape with a knife or a pair of shears!



No stuffings! And Koylon stays trim and smooth . . . never sags or mats!



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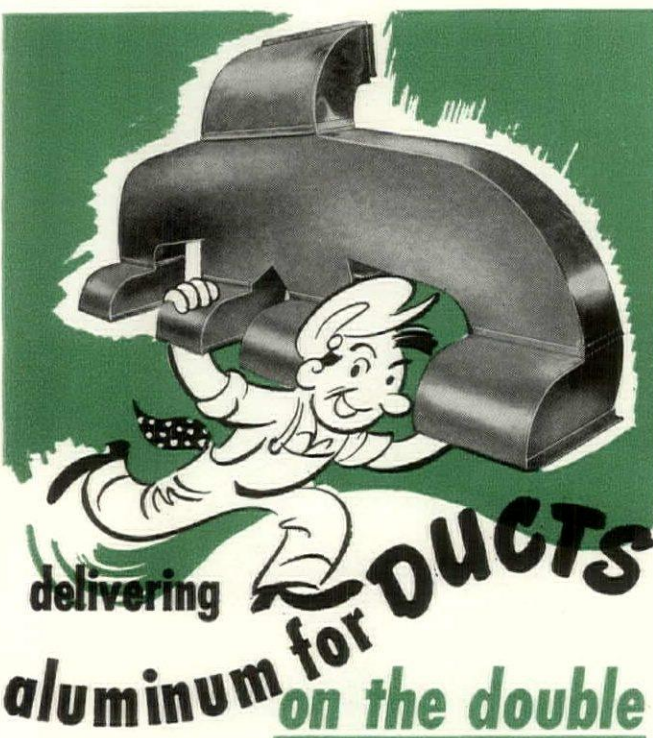
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FOAM

Comfort Engineered



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LETTERS



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Your orders for Reynolds Lifetime Aluminum for heating, ventilating and air conditioning ducts are being delivered immediately. This means you can make profitable installations right now. Yet you pay no premium for this speedy delivery . . . nor does this superior material cost you or your customer any more than usual materials when you measure costs by complete installations.

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For deliveries *on the double*, and for more than *double* satisfaction, install duct work of Reynolds Lifetime Aluminum. For complete information, contact your nearest jobber, Reynolds Sales Office or write Reynolds Metals Company, Aluminum Division, 2528, South Third Street, Louisville 1, Ky.

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YOU KNOW IT'S
NOT ALUMINUM**



**REYNOLDS
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harmony. The Harvard Business School or the houses by the Charles River, which are dedicated to a doubtful unity, will never have the reality of the group in the Yard. Or take the buildings of Yale University which, during a certain period, were pressed into "Collegiate Gothic" unity and you see what fate befalls those buildings under control.

NO, let us have freedom, and hope that innate taste and judgment will not play up differences but create the harmony which comes when there is deference but no obsequiousness.

WILLIAM W. WURSTER, Dean
School of Architecture & Planning
Massachusetts Institute of Technology
Cambridge, Mass.

Forum:

I think your Publisher's Letter is the neatest editorial trick of the week. I've never before heard anyone censor a design and blast censorship in the same breath! I applaud your sentiments in both directions . . .

JOHN NORMILE, Building Editor
Better Homes & Gardens
Des Moines, Iowa

Forum:

. . . I do not agree with you. I have long felt that not only in New York, but in other cities, the Building Department should exercise some esthetic function as well as structural, sanitation, stupidity or what have you.

Such function should be limited perhaps to "scale" if nothing else. The architectural cacophony of Fifth Avenue is due to scale more than anything else.

As I have always understood it, the Paris censorship is so limited. They do not require bandcourses—or cornices—or fenestration *but* if you have them they must bear some relation to adjoining structures.

Santa Barbara, California, is one of the most pleasant places on earth, and it is due no little to the esthetic restrictions that have been maintained since the earthquake . . .

ROI L. MORIN, Architect
Portland, Ore.

Forum:

. . . There is one thing we are sure of—that without any architectural control we get—well, just look out of any window . . . Take a look at the main stem of any rapidly growing community and you will find each building is trying to step up into higher key than its recently built neighbor. The last lot in the block always has the busiest, tallest, most colorful and awful edifice.

All of this adds up to the fact that no
(Continued on page 26)

Celebrating a Centennial of Service



THE PENN MUTUAL LIFE INSURANCE CO.
Home Office, Philadelphia, Pa. 10-story building at
right built 1914. 20-story addition built 1933.

This is a year of celebration at Penn Mutual—their 100th year of satisfactory service to thousands of policy-owners. It also represents the 40th year of satisfactory service by Webster Steam Heating Equipment in Penn Mutual buildings.

Webster Equipment was first used by Penn Mutual in 1907. In 1933 the present home was completed with a 20-story addition, and equipped with a Webster Vacuum Heating System.

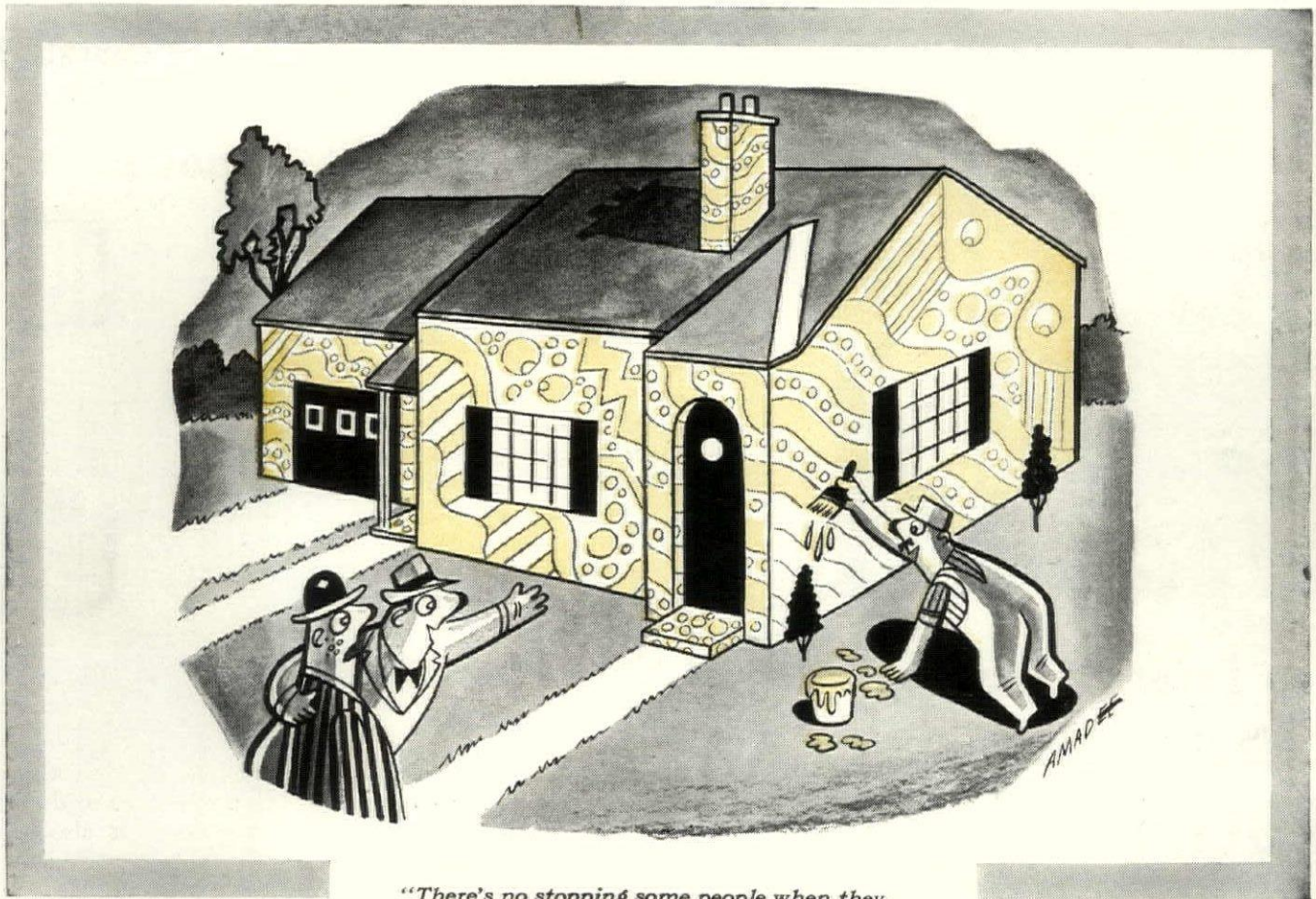
In 1941, a 6-zone Webster Moderator System was installed.

"Our records show a 10 per cent reduction in oil consumption with the Webster Moderator System," says LeRoy E. Varner, Company Engineer. "All sections of the building heat evenly and rapidly."

Much of the success of the Penn Mutual heating installation has resulted from the effective cooperation of the building management and the Webster Philadelphia Representative. The materials and service that produced these results for Penn Mutual are available now to help you obtain similar results in your building.

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"There's no stopping some people when they style their homes with Bondex colors."

To build pride of ownership . . . "exterior decorate" with **BONDEX** colors

It works like magic! Take a new house that seems drab and commonplace. Color style it with Bondex Cement Paint. Presto, you have a home that's individual, desirable and saleable.

Bondex has become world famous because

it gives a double service—checks dampness by bonding with the surface, adds color. Specify Bondex to "mellow" concrete block, to beautify stucco, brick and masonry.

*For outside walls, for basements
For swimming pools
For foundations*

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LETTERS



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HYDROCID Colorless is not affected by extremes of temperature . . . remains fluid at low temperatures and will not show separation and precipitation. It is free of resins, wax, and other non-penetrating matter.

Since HYDROCID Colorless forms a transparent film, it does not mar the original beauty and appearance of the surface. Absorption of dust, soot and stains is checked. Application is easy — by brush or spray.

Two types: HYDROCID Colorless "G" for relatively dense surfaces — HYDROCID Colorless "D" for porous light colored surfaces.

WRITE FOR FREE FOLDER on
extending life of exterior building walls.

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IT'S
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matter how grim the control may be there should definitely be some sort of control if such is politically possible . . .

As a member of the Planning Commission here in San Francisco we have been able to squelch (through zoning power) some of the most God-awful things that were ever put on paper. Unfortunately, the city was mostly built before our Planning Commission came into being, but we have been able to improve the skyline by nipping off a few fifty-foot towers on the top of one-story movies and in other ways forcing too imaginative speculative builders to quiet down their facades. This does not happen often, but we do believe that in the rebuilding or remodeling of facades, architecture should have a Czar, such as baseball and the cinema, to eliminate some of the obscene expressions and excrescences which are suddenly blossoming out without anyone suspecting.

GARDNER A. DAILEY, Architect
San Francisco, Calif.

Forum:

. . . From what I have seen in various professional societies, those who rise to advocate such standards always presume they are perfectly competent "protectors" —and their work is usually the dullest . . .

J. GORDON CARR, Architect
New York, N. Y.

Forum:

In 1924, the Lord Mayor of Berlin—on behalf of his Art Commission—rejected my design for a new department store, swearing that as long as he lived this "swinishness" will not be built. Years later, when the new owner wanted to "neon" my building, the new Mayor rejected this as an injury to a "piece of art."

My little story, I think, is a good proof that Art Commissions are the crutches for a dead past or a crippled present.

ERIC MENDELSON, Architect
San Francisco, Calif.

Forum:

. . . It is the well-known habit of censors to entrench themselves securely in the safe middle ground of the taste of the times and to strike down with impartiality any deviation from that median line, whether it be a work of dazzling beauty in an unaccustomed form, or a work of the sheerest vulgarity and incompetence. To the censor, anything that fails to conform to the established canons of taste shall be prohibited.

. . . But there is another aspect to the censor problem that is perhaps even more dangerous. A healthy growing art is constantly sending out exploratory feelers in all directions, like a growing plant. If

(Continued on page 30)

Gulf Spray

SHOWER DOORS



Whether you're building a home, planning a home, or remodeling a home, you owe it to yourself and your client to specify GULFSpray Shower Doors.

Gulfspray Shower Doors enhance the appearance of all bathrooms, are moderately priced . . . save hours of cleaning time . . . and eliminate the laundering, splitting, or mildewing of curtains.

The GULFSpray Grille Top Shower Door illustrated is just one of the complete line of shower units available. It combines utility and economy to make the shower stall a feature point of the bath, please the most discriminating. It comes in Satin Aluminum, Brite Aluminum, or Chrome Plated Bronze, with 7/32" thick clear or patterned glass optional.

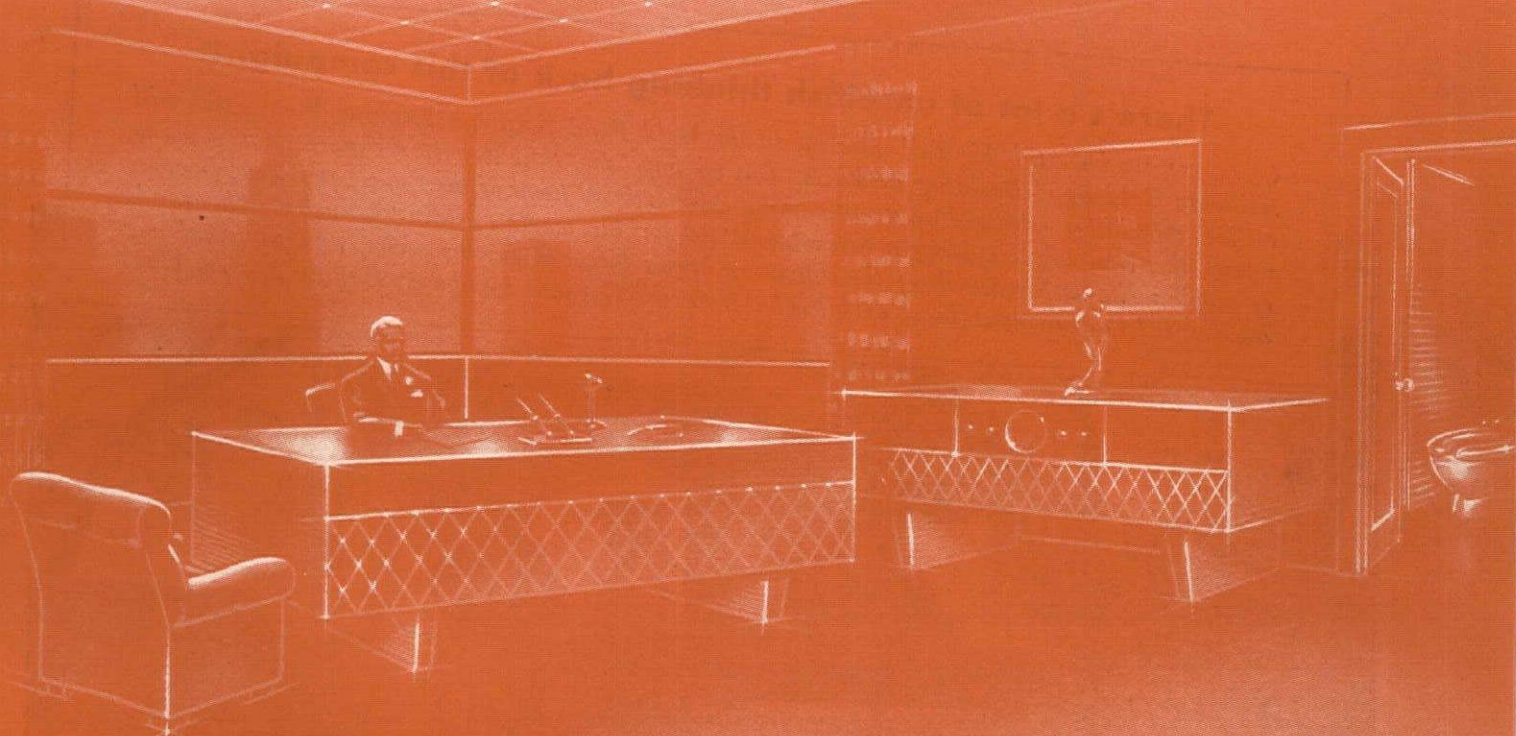
For a complete catalog, showing the entire line of GULFSpray Shower Doors and Tub Enclosures, their specifications, installation details, and prices, write:

BINSWANGER & CO.
OF TEXAS

GULFSpray DIVISION

P. O. Box 3051 Houston 1, Texas

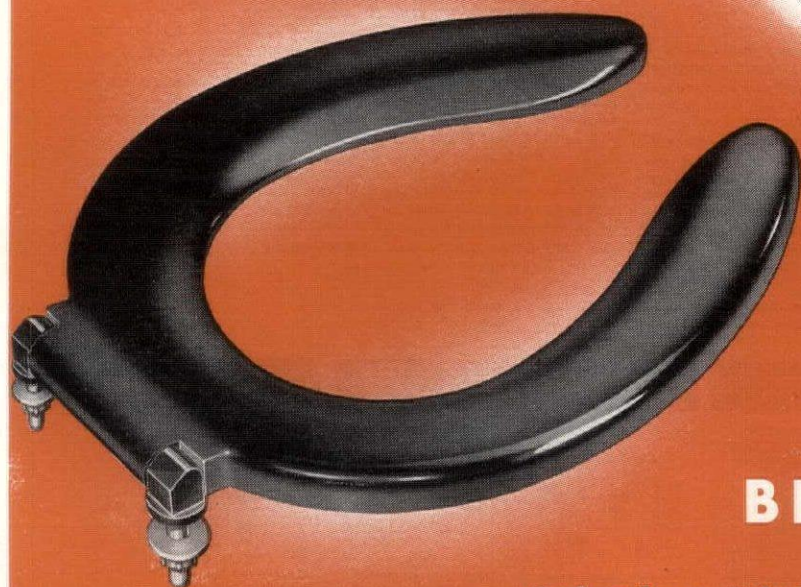
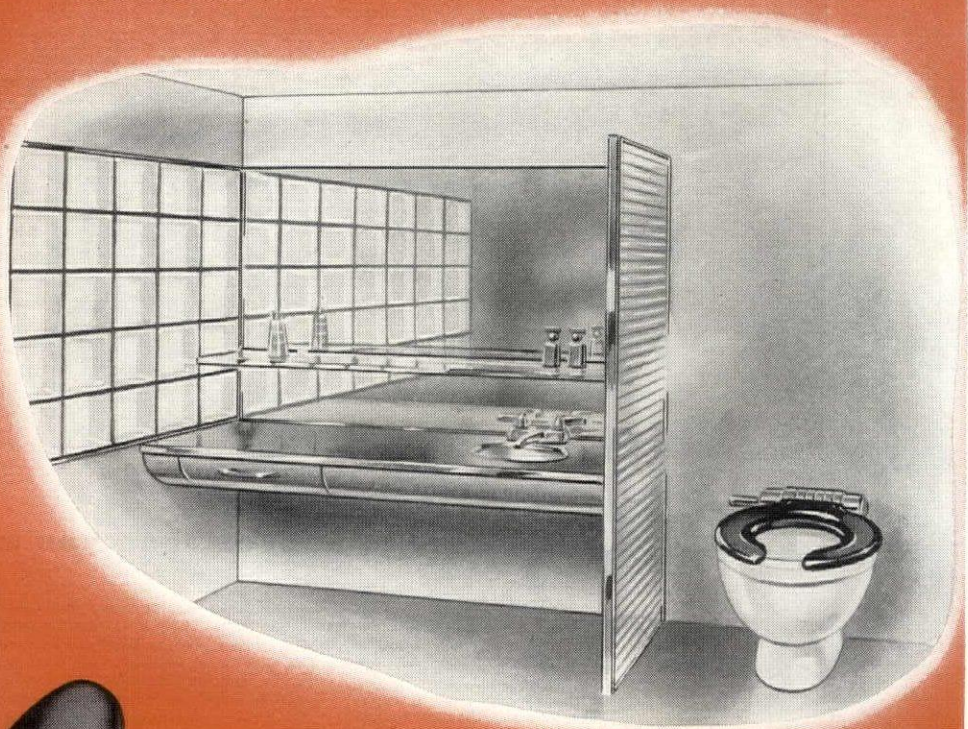
Conforming to Rigid Specifications—



BENEKE PLASTIX

Illustrated below

Style 523-B Beneke Plastix Seat



BENEKE CORPORATION

Columbus, Mississippi, U.S.A. • Offices in Principal Cities

There's a lot of unselfish thinking back of this campaign!

Of course, we hope this big full-color ad in the Gold Bond Saturday Evening Post series will sell more Gold Bond Building Products. But we hope, too, that it will get more folks—young couples especially—steamed up about owning a better-built home of their own, and soon! In other words, this campaign is doing a promotional job for the whole building industry. Thousands of people write us for details of the charming homes pictured in this series, and as usual our answer is "Consult your local architect!" National Gypsum Company, Buffalo 2, New York.



You'll build or
remodel better with
Gold Bond

You can start building sooner if you start planning now. See your local Gold Bond Dealer!

Closer to heaven than you may think...

"Through all the long hard war years, when Ted was overseas, we dreamed about a heaven all our own. Our own house in our own yard. With a funny little garden out back... and a funny little toddler out in front selling mud pies..."

That's more or less the way thousands of couples have felt and we know from our mail that it's been hard at times keeping your chin up. But if a home of your own is your idea of heaven we can assure you that you are a lot closer to it now.

Materials are flowing again. Not all you want, but more and better materials than have been available for years. Products developed by research to make

your new house superior to any you could have built before. You'll say it was worth waiting for!

For instance, you can build sturdier, weather-proof, more firesafe walls with Gold Bond gypsum sheathing under the clapboards, brick or other outside finish. Costs no more than old-style sheathing!

You can keep summer heat out and furnace heat in with National Gypsum Company's new high efficiency, fireproof home insulation... Gold Bond Rock Wool. Pays for itself by cutting fuel bills as much as 40%. If you own your home now, you can have this same modern efficient insulation "blown" right into outside walls and top floor ceiling.

You'll have inside walls of lasting beauty if your architect specifies Gold Bond gypsum lath and plaster. And you'll have something new and beautiful in room decoration if you use quick-drying Gold Bond Sunflex paint. Comes in a wide range of colors.

Your Gold Bond lumber and building material dealer is headquarters for over 150 Gold Bond building products, each researched and engineered by National Gypsum Company, to build better value into your new home or to make your remodeling job easier. For suggestions see your Gold Bond dealer.

NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK

Over 150 tested Gold Bond Building Products for new construction or remodeling add greater permanency, beauty and fire protection. These include wallboard, lath, plaster, lime, sheathing, wall paint, insulation, metal and sound control products.

**DEMAND
THESE SIX
GOLD BOND
FEATURES
IN YOUR
NEW HOUSE**

**GOLD BOND FIREPROOF
GYPSUM SHEATHING**



Big, weatherproofed panels of Gold Bond Storm Sealed Gypsum Sheathing add structural strength and built-in fire protection. Costs less than old-style sheathing.

**GOLD BOND FIREPROOF
GYPSUM LATH**



Gold Bond Gypsum Lath is the perfect plaster base. Can't warp, expand or contract. Adds fire protection and structural strength for better wall and ceiling construction.

**GOLD BOND FIREPROOF
GYPSUM PLASTER**



Gold Bond Gypsum Plaster is especially processed to bond perfectly with gypsum lath. Builds firesafe, rock-like walls and ceilings with greater durability and beauty.

**GOLD BOND FIREPROOF
FINISH LIME**



Over the plaster, goes a coat of Gold Bond Finish Lime. This is the smooth white finish that you see in a new house before the wallpaper or paint is applied.

**GOLD BOND FIREPROOF
ROCK WOOL INSULATION**



Builds a fireproof blanket of insulation around the house for greater year 'round comfort, family health, and fuel savings up to 40%. Available for new or old homes.

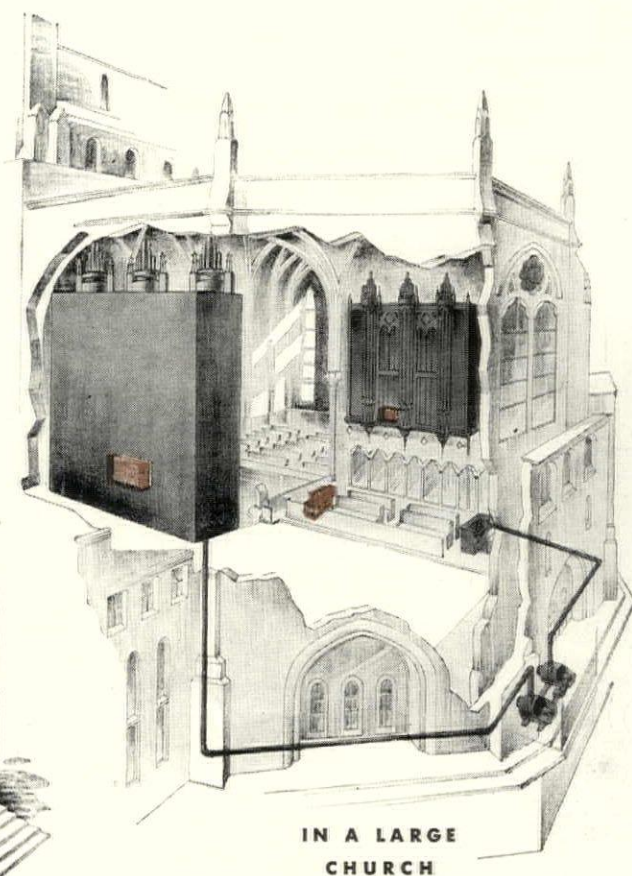
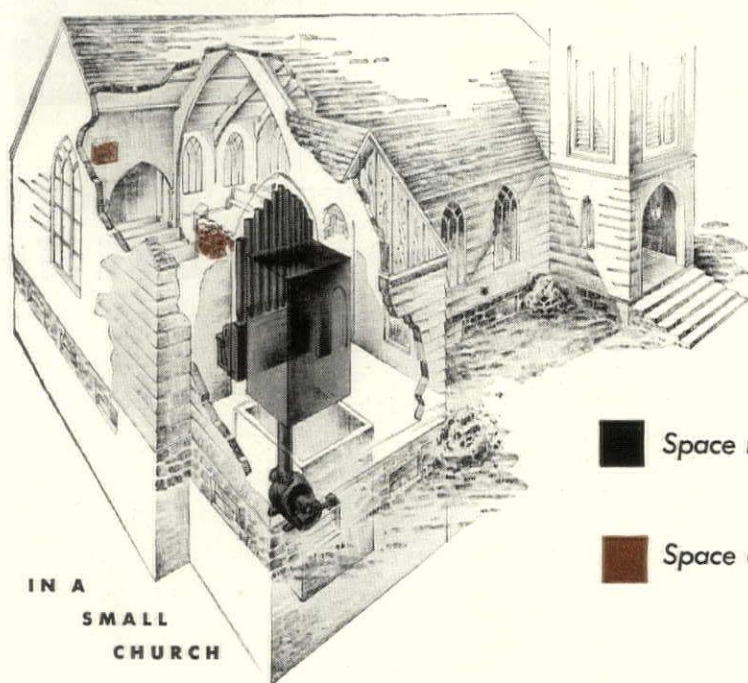
**GOLD BOND SUNFLEX
1-HOUR WALL PAINTS**



Dries in one hour with no objectional painty, after-odor. Easier to apply. This modern decoration is now available at your dealer's in a full range of colorful tones.

The **WURLITZER ORGAN**

*saves valuable space
and still provides
true church tone*



■ Space required for a pipe organ

■ Space occupied by the WURLITZER electronic organ

THE comparisons pictured above are startling. The moral is simple and obvious. When a Wurlitzer Organ is chosen, both space and funds are saved for other wanted decorations and facilities. Yet, thanks to Wurlitzer's electronic genius, not one bit of musical beauty is lost. This superb instrument, employing a tone-producing principle used for centuries in pipe organs, creates the exact, rich, vibrant, family of organ voices traditionally associated with the worship service. Inquiries are invited, addressed to Dept. AR 7.

Organ Division

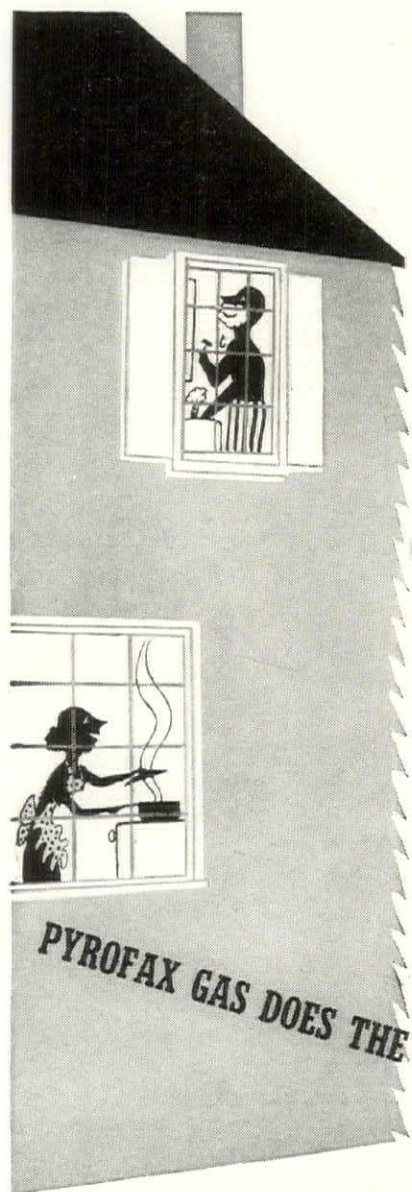
THE RUDOLPH WURLITZER CO.

North Tonawanda, New York

Series 20
TWO-MANUAL



LETTERS



Upstairs . .
downstairs . .
.. all around
the house . .



HOUSES beyond the gas mains can be as modern as 1947. Give your clients the best—specify "Pyrofax" gas service. With this superior bottled gas service, a home can be equipped with the famous Magic Chef range—a silent Servel refrigerator—and an automatic water heater.

"Pyrofax" gas service is economical—completely automatic—and the above-ground system provides uninterrupted service. For complete details see our catalog in Sweet's or write to "Pyrofax" Gas Division, Dept. A-2, Carbide and Carbon Chemicals Corporation, 30 East 42nd Street, New York 17, N. Y.



Pyrofax
TRADE MARK

SUPERIOR BOTTLED GAS SERVICE

Product of a Unit of Union Carbide and Carbon Corporation.

these new shoots are nipped off by the censors as fast as they appear, the plant ceases to grow and begins to decline, and will eventually die. These exploratory works are, of course, very different looking, from the generally accepted taste of the day, and are just the sort of thing that censors ban as being "freakish." Even if these startling new departures are not great masterpieces in themselves, they should not be prohibited, but rather encouraged as the evidence of a vigorous growing art, and necessary to its continued vitality.

JOHN HANCOCK CALLENDER, Architect
New York, N. Y.

Forum:

It is not a simple problem with a simple answer. The question of "freedom" versus "control" is one that can be answered only by defining the levels upon which they operate. Variety is one thing, chaos is something else. Unity is a virtue, monotony a vice. When "control" is represented by a narrow group of real estate people, interested only in preserving what they consider the value of their property, then obviously one must be against "control." They are basically protecting something that had no plan or order from the beginning and by seeing to it that nothing of vitality interrupts their consistent monotony, their interests are served.

At the same time, if in the interest of "freedom" one is allowed to strew buildings from one end of the country to the other without giving one damn as to what is next to it, that is something else.

Frankly, I believe in "control" but operating on a very different level from the real estate association. I think that a deep-seated conviction that areas larger than the single building must be controlled is implicit in any true understanding of the aims of modern architecture. I honestly do not think this country will produce much in the way of important architecture until units much larger than the single building are considered . . .

ALVIN LUSTIG

Beverly Hills, Calif.

Forum:

. . . It doesn't take much of a vulgar minority to ruin the whole. If the latter threat develops, is there any recourse other than collective action through commissions, etc.? Education is the answer, but gosh!—it's so slow.

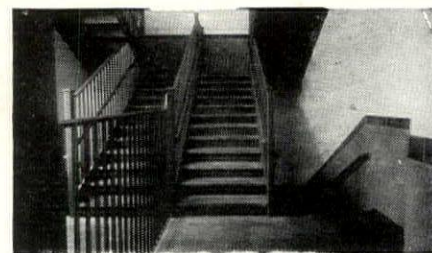
JOHN GAW MEEM, Architect
Santa Fe, N. M.

Forum:

. . . If we could arrive at the point where city planning could be done on a scale large

(Continued on page 34)

A SAFE FOOTING



Alberene Stone Treads and Landings, Woodrow Wilson High School, Washington, D. C., Nathan W'yetb, Architect.

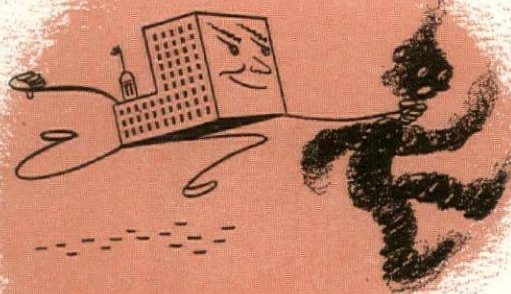
ALBERENE STONE TREADS

For more than 40 years Alberene Stone has been the choice for treads, platforms and floors subject to severe daily use in schools, hospitals and public buildings. Its natural highly-toothed surface is safe, wet or dry. The selected, extremely hard Tread Stock meets every requirement of durability, upkeep and appearance.

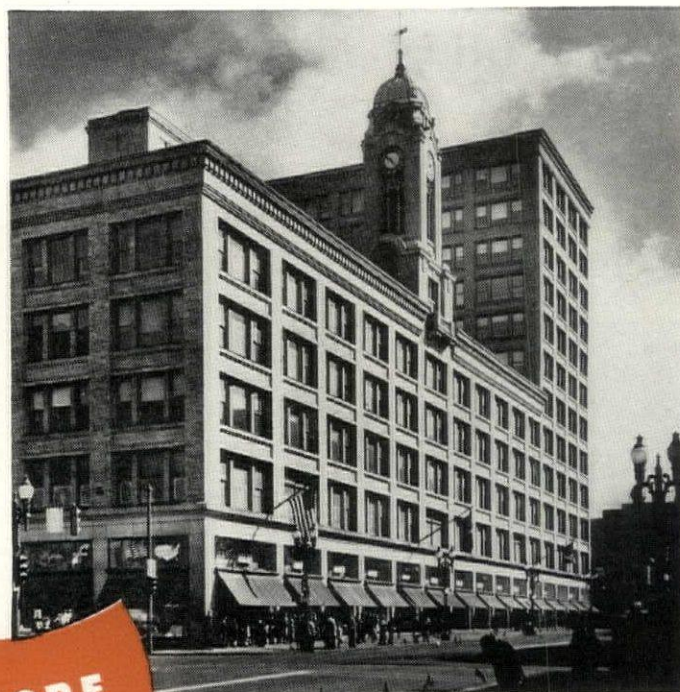
The regular grade Alberene Stone is equally popular for toilet and shower compartments. Tongue-and-groove interlocking construction produces liquid-tight joints. Its light, blue-gray color is harmonious and the stone is close-grained and practically non-absorbent and non-staining. For complete data and samples please address Alberene Stone Corporation of Virginia, 419—4th Ave., New York 16, N. Y. Quarries and Mills at Schuyler, Virginia. Sales Offices in principal cities.

ALBERENE STONE

THE NATURAL STONE
OF DIVERSIFIED UTILITY



THIS DEPARTMENT STORE
STOPPED A *Thief!*

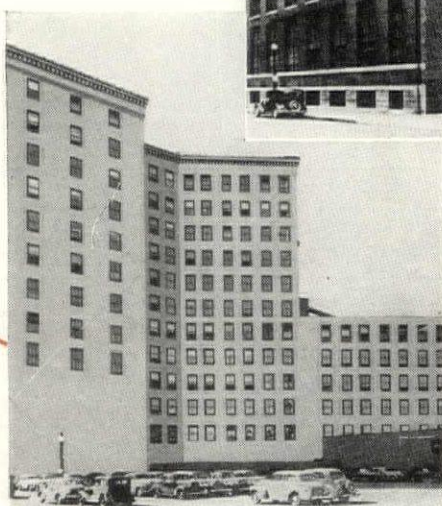


AND GAVE ITS CUSTOMERS
CLEANER, MORE EVEN HEAT

Central Heating

MADE IT POSSIBLE!

BEFORE... An out-grown power plant occupied valuable space, produced smoke and dirt right at the store site.



AFTER... Complete elimination of power plant frees space for efficient use, frees management of the smoke problem.

Smoke was stealing selling space from Sibley, Lindsay & Curr Company, of Rochester, N. Y. until this progressive institution began obtaining all power and steam from the central distribution system of the Rochester Gas & Electric Corp. Now it is a cleaner, lighter department store, now a new economy of space has been achieved.

When expansion proved too much for the store's own power plant, the changeover to central heating, made without interference to store operation, resulted in many advantages of interest to architects. Comparing favorably in dollar cost, purchased service eliminated a source of noise and dirt, freed valuable space for further use. To meet increased demands upon its system by other companies recognizing these benefits, the Rochester Gas & Electric Corporation has constructed a tie-line which provides the city's business district with 200,000 lbs. additional steam per hour. In this tie-line, as in hundreds of other major central heating systems, the steam travels underground through Ric-wil prefabricated insulated conduit, specified for economy, for thermal efficiency.

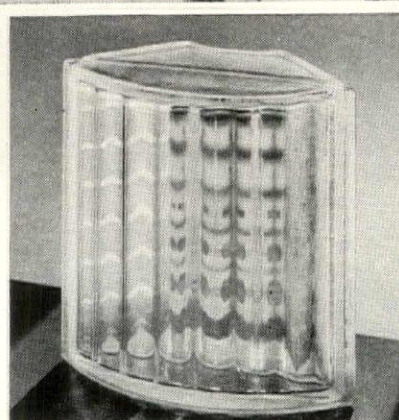
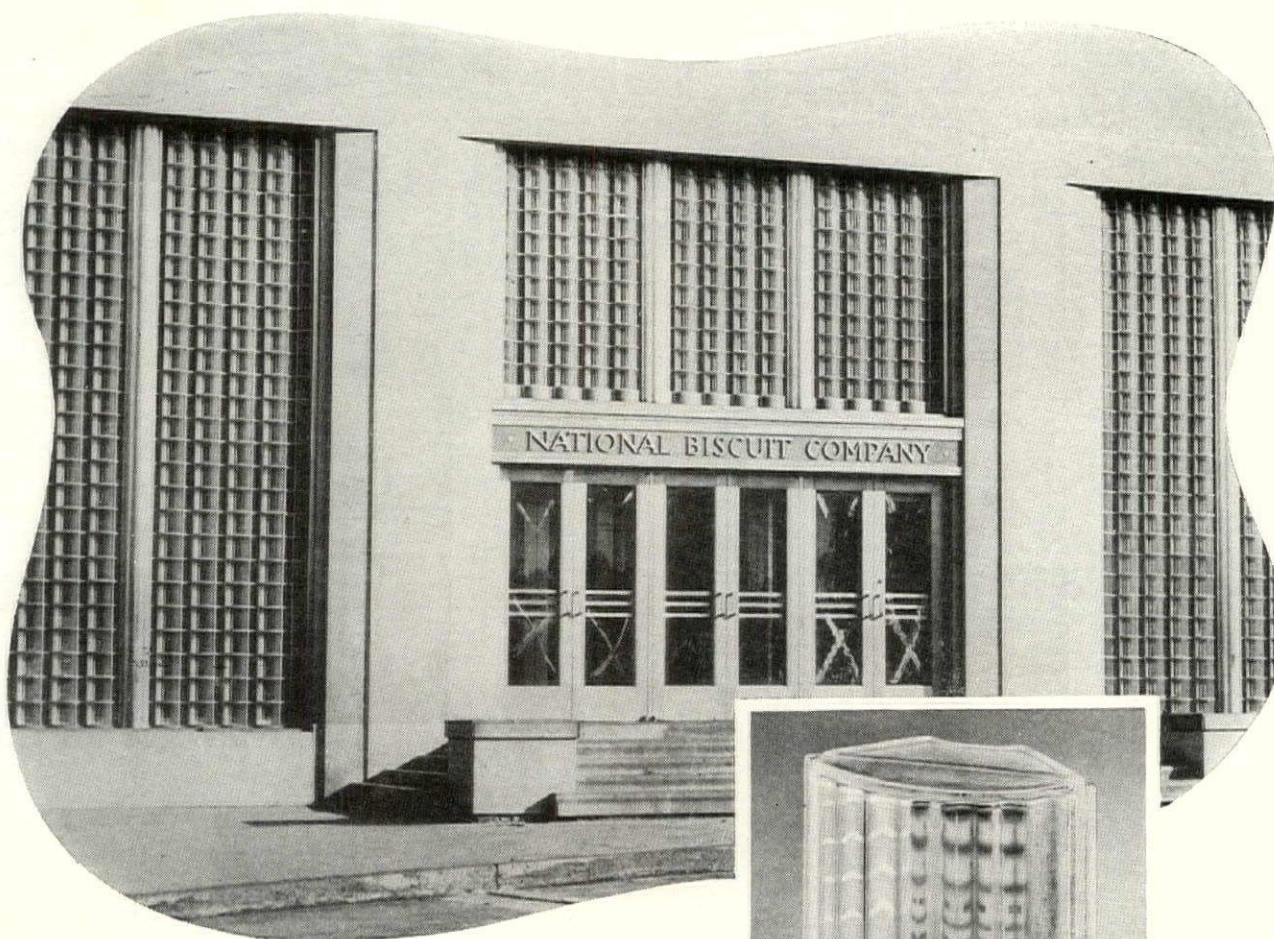
RIC-WIL

INSULATED PIPE CONDUIT SYSTEMS

THE RIC-WIL COMPANY • CLEVELAND, OHIO

CABLE ADDRESS: RICWIL, BENTLEY'S CODE

THE MARK OF A MODERN BUILDING



It's not surprising that PC Glass Blocks should be regarded by many people today as the mark of a modern building. These blocks are so modern, in both appearance and function, that any building which includes them just naturally seems modern, too.

PC Glass Blocks have won the favor of architects largely for one reason: they do so many things so well.

They add to the appearance of any structure ... because they form bright, neat translucent panels very appealing to the eye.

They transmit daylight generously into building interiors, and can even direct the daylight to where it is most needed.

Their excellent insulating properties mean greatly reduced heat loss through light areas, and consequent savings in heating and air conditioning costs. They prevent infiltration of dust and dirt, deaden outside sound, clean easily. They can be combined with transparent glass sash construction. And they harmonize perfectly with any architectural style.

When you are designing new buildings or modernizing old, you can recommend and specify PC Glass Blocks with confidence. They're the mark of a modern building. We invite you to send the coupon for complete information on PC Glass Blocks. Pittsburgh Corning Corporation, 632 Duquesne Way, Pittsburgh 22, Pennsylvania.

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Distributed by PITTSBURGH PLATE GLASS COMPANY
by W. P. Fuller & Co. on the Pacific Coast and
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*a modern building
is truly modern...*

when pipe joints are SILBRAZ*

Silbraz joints are leakproof, vibration-proof, and corrosion-resistant. They make the ideal connection for all piping systems where "B" copper tubing or brass pipe is used.

Threadless, Silbraz joints are permanent . . . will not creep or pull apart . . . save trouble and cost by eliminating leaks . . . literally join with the pipe for form a "one-piece pipe line." No properly made Silbraz joint has ever been known to fail under any condition which the pipe itself can withstand. If you are looking for maintenance-free pipe lines — for either new construction or remodeling — specify Silbraz joints.

Walseal* Valves and Fittings for Making Silbraz Joints

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

*Patented — Reg. U. S. Pat. Off.

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

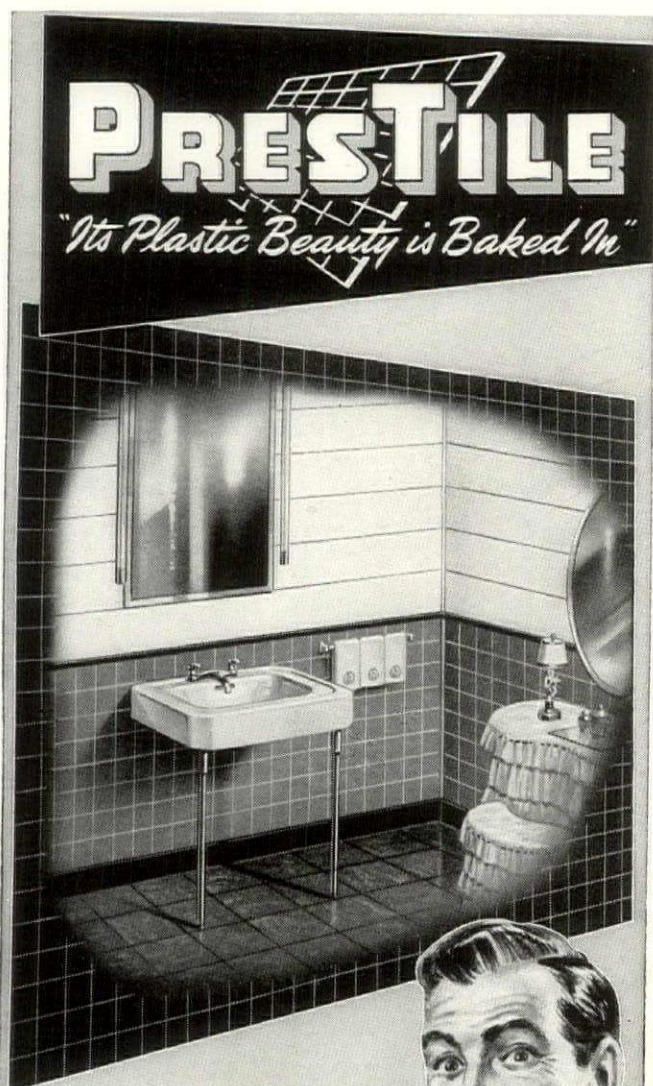


WALWORTH
valves and fittings

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DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD



Eleven Million PresTile "Salesmen"!

TO MILLIONS of homes all over America — 11,674,703, to be exact — PresTile brings its message of beautiful, practical walls, quickly and inexpensively set up.

PresTile advertising appears in *Better Homes & Gardens*, *American Home*, *House & Garden* and *Small Homes Guide*. All of it is designed to make prospective home builders and remodelers familiar with PresTile advantages.

This means ready acceptance when you specify this tileboard of recognized quality!

To our Dealers: Much as we'd like to hurry up production of PresTile to meet the overwhelming demand, we will not skimp on quality and care needed to produce a better tileboard. However little you may receive, be assured it's the best that can be made.

Prestile Manufacturing Company
2860 Lincoln Avenue • Chicago 13, Illinois

enough to allow the parts to be developed individually, I think the architecture would have a much fresher and freer feeling.

The work of a board of review must necessarily be guided by compromise, and I think that virility is much more to be desired than too much uniformity. There will be, of course, good buildings and bad buildings, but that seems to be inevitable.

DOUGLAS ORR, Architect

New Haven, Conn.

Forum:

... Down with art commissions—all art commissions.

Prefer common to commonplace, coarse to flat, vulgar to banal—better spit than drool...

SCHWEIKHER & ELTING, Architects

Roselle, Ill.

Forum:

I heartily concur in your letter *against* boards of experts to protect the esthetics of our culture, whether it be on Fifth, Pennsylvania or Michigan Avenues—or Main Street.

On the other hand, it does help to have agreement on the area and mass of buildings. The control of projecting signs, cornice heights, fire-escapes, etc., is a proper concern for merchants and commissions; but within these intelligent physical limits, there should be absolute freedom to express our culture—good or bad—modern, eclectic, classic, or da-da.

Having served on a Municipal Fine Arts Commission, I know that profit-making eyesores are often beyond any control, and the commission gets its feeling of power by insisting on serifs or the omission of a "commercial" flavor even if honest.

When experts are set up to pontificate on what is good taste and to set up their prejudices as law, the throbbing pulse of beauty is in danger of a dose of embalming fluid.

RICHARD M. BENNET, Architect
Loebl, Schlossman & Bennett

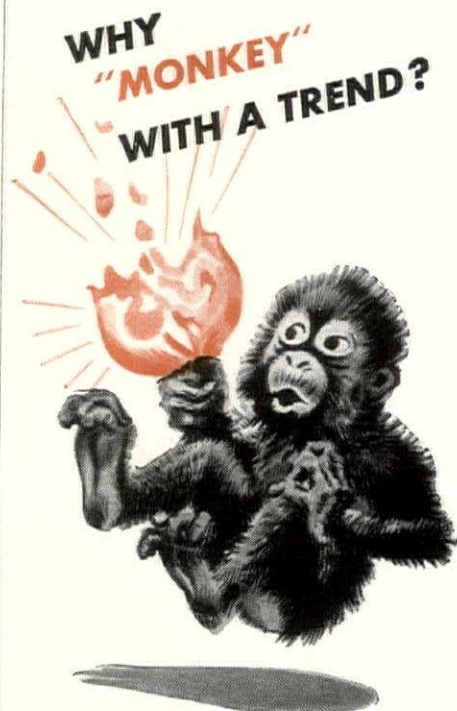
Chicago, Ill.

Forum:

I feel that to set up any kind of architectural censorship in New York today would be dangerous from many points of view and especially damaging to progress in the development of new kinds of design to fit new materials and new problems. I should limit this objection... to New York or any similar large city, because of my realization that the kind of people who would be likely to do the judging would be basically conservative...

Architectural control *per se* is another question, for it can be handled creatively

(Continued on page 38)



Home Buyers Want **ELECTRIC** WATER HEATERS

Surveys* show that women want Electric Water Heaters because of the following advantages: (1) **SAFE** (fumeless, flameless); (2) **CLEAN** (smokeless, sootless); (3) **ADAPT-ABLE** (short hot water lines; no flue or vent); (4) **TROUBLE FREE** (as electric light); (5) **ECONOMICAL** (plenty of hot water all the time at low cost).

Be sure the water heating equipment in homes you build offers all these advantages—install modern Electric Water Heaters.

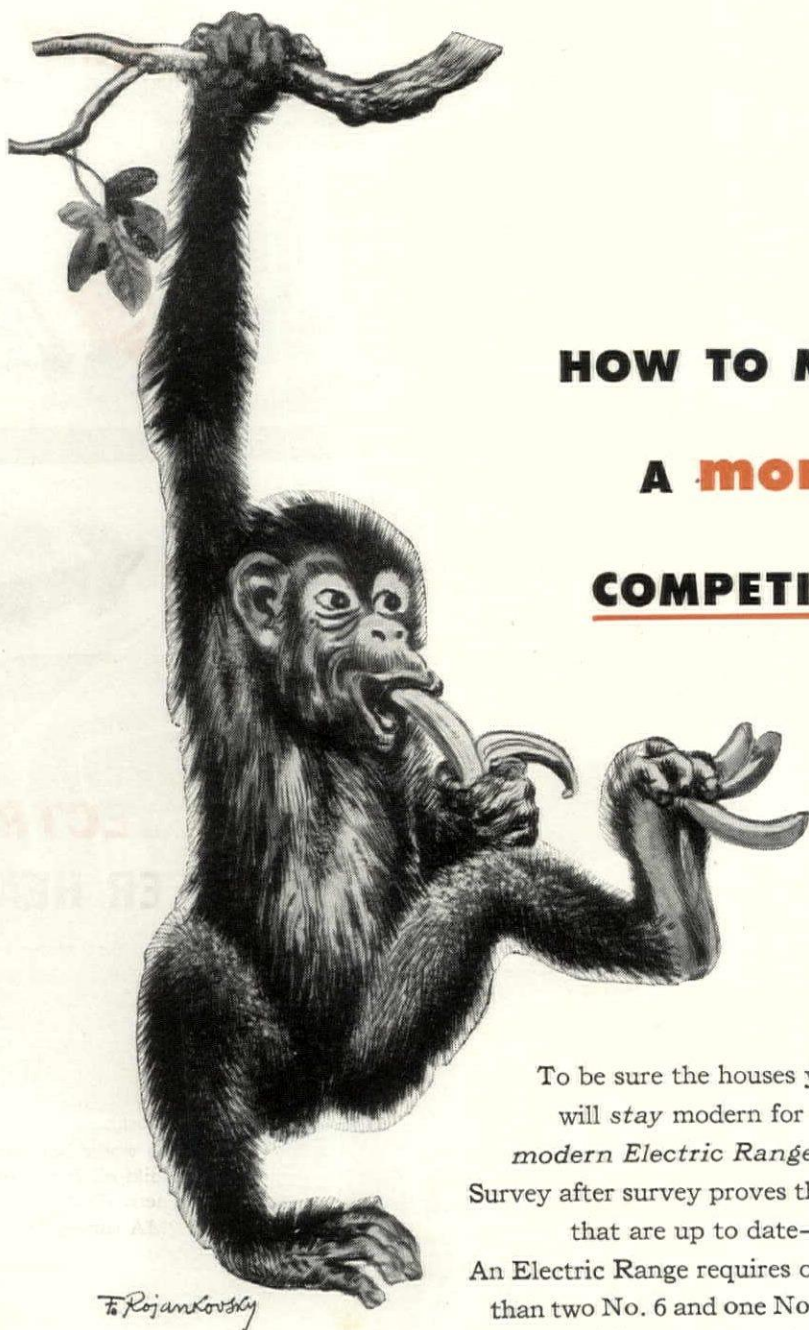
*1944 NEMA survey revealed 3 times as many women preferring Electric Water Heaters as owned them at that time!

Electric Water Heater Section
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
155 E. 44th Street, New York 17, N. Y.

B & F • CLARK • ELECTROMATIC • FOWLER
FRIGIDAIRE • GENERAL ELECTRIC • HOTPOINT
HOTSTREAM • JUD WHITEHEAD • KELVINATOR
MONARCH • NORGE • PEMCO • REX • RHEEM
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WESTINGHOUSE

IN A HOUSE WIRED FOR
AN ELECTRIC RANGE IT'S

EASY TO INSTALL
AN **Electric**
WATER HEATER!



HOW TO MAKE A **monkey** OUT OF COMPETITION!

To be sure the houses you build today are modern, and will stay modern for years to come, *wire them for modern Electric Ranges!*

Survey after survey proves that Mr. and Mrs. America want homes that are up to date—homes with Electric Ranges.

An Electric Range requires only: 3-wire service entrance no smaller than two No. 6 and one No. 8 wires from the point of termination of the power supply company's wires to the distribution panel; a 60-amp. switch with overload protection and a three-wire circuit from the distribution panel to a range outlet in the kitchen. Make this your minimum wiring specification.



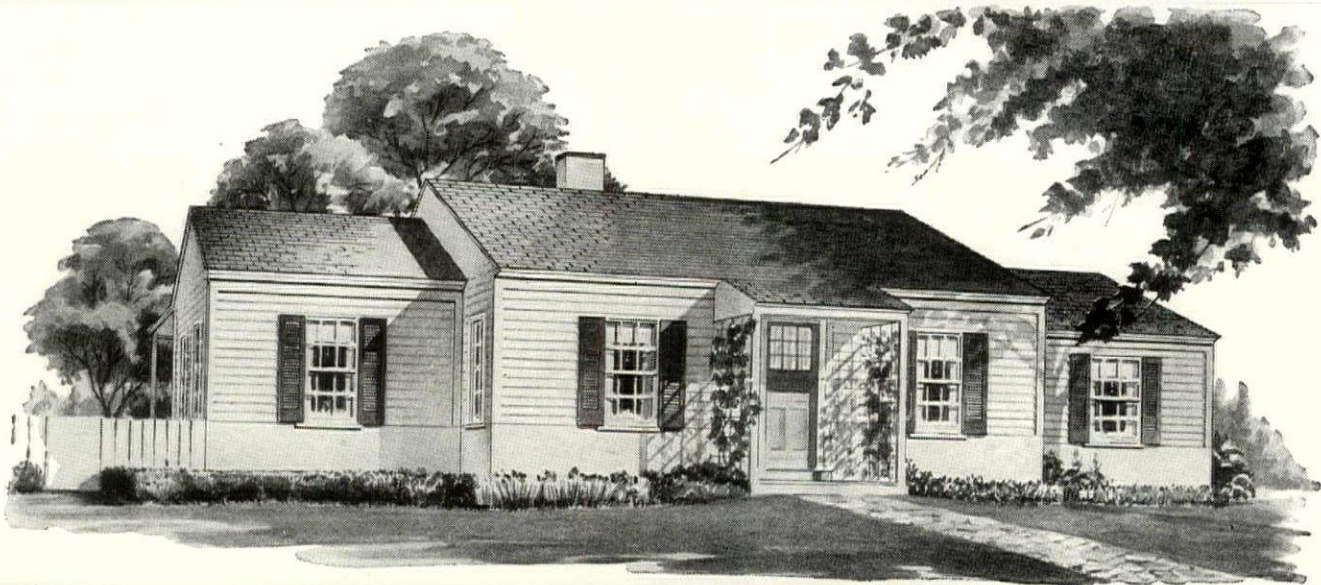
Electric Range Section NATIONAL ELECTRICAL MANUFACTURERS ASS'N., 155 E. 44th St., N.Y. 17, N.Y.

A-B STOVES • ADMIRAL • CROSLEY • ESTATE HEATROLA
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TO KEEP THEM MODERN...

**Wire your houses
FOR ELECTRIC RANGES**





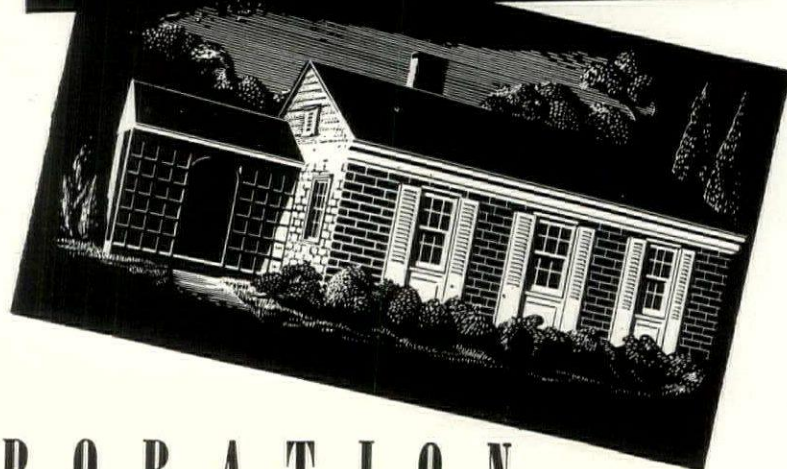
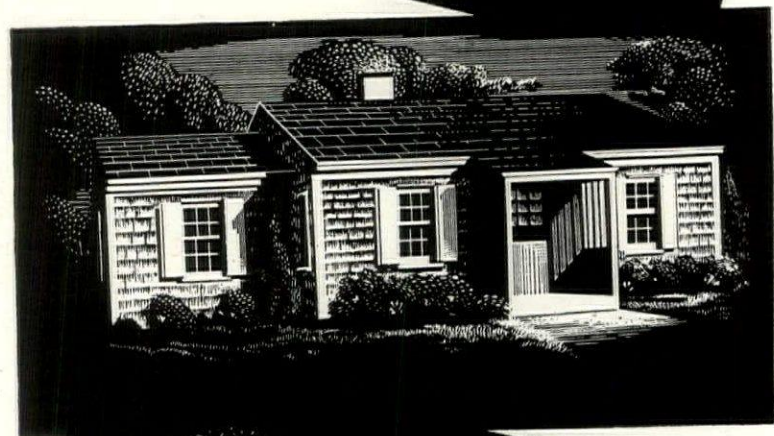
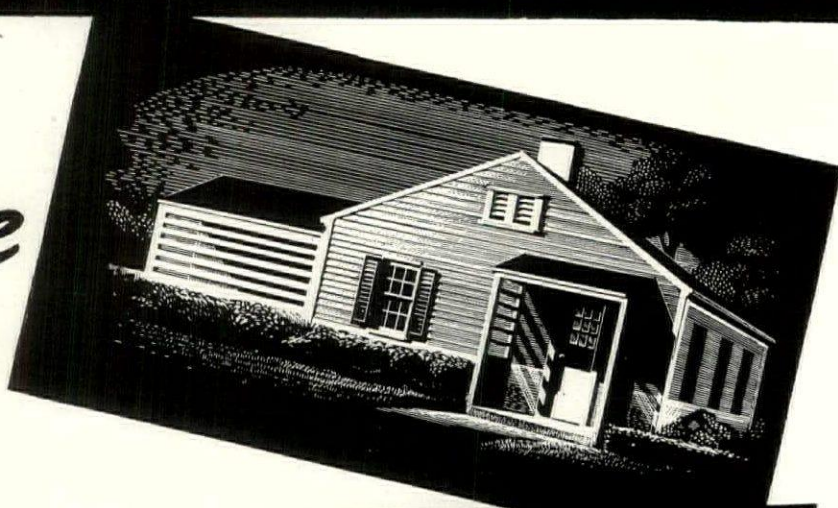
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ALL Operations

In aiding America solve her most drastic housing problem, KNOX—builders of good homes for 50 years—leaves nothing to chance; each operation from the selection of raw materials to final assembly is performed with the same skill . . . and precise workmanship which has been characteristic of Knox operations for half a century. Constructed in Knox's modern plant with *quality* materials throughout, all operations are precise, accurate, dependable. Knox builds modern homes that *will* endure.

TODAY'S KNOX HOMES ARE PLANNED BY CHAPMAN AND EVANS, NEW YORK ARCHITECTS. DESIGN VARIATIONS ARE MANY AND ATTRACTIVE.

For complete information and data on Sales Representation in your area, write Knox Corporation, Thomson, Georgia. Learn about advantageous marketing of Knox Homes still open to arrangement in many parts of the country.



KNOX CORPORATION

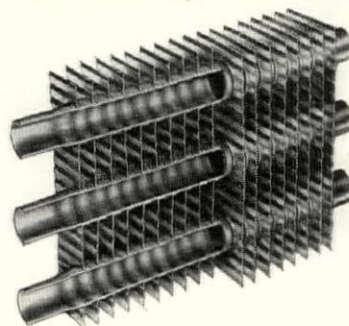
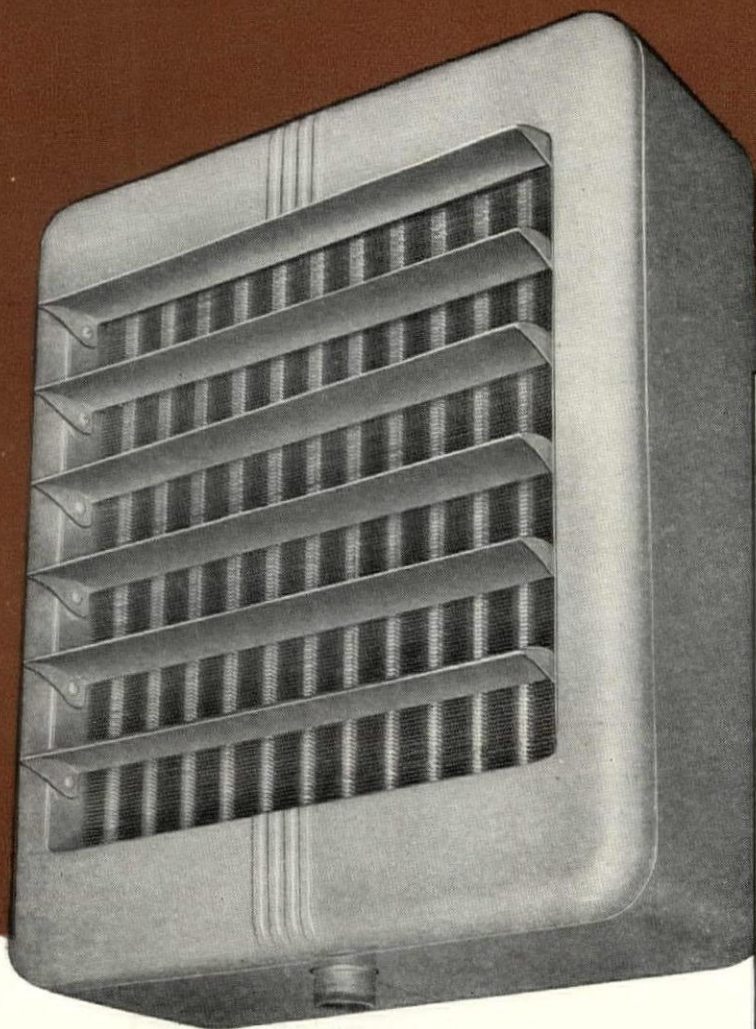
THOMSON,

GEORGIA

Redesigned-Re-engineered

TO INCLUDE THE FAMOUS

McQuay **RIPPLE FIN COIL**



Ripple Fin coils mean better heat transfer because tubes are hydraulically expanded into fin collars locking them together in a permanent mechanical bond. Wide fin collars give greater area of metal-to-metal contact. Spun collar surfaces give smoother quality of contact.

A greater unit heater...a greater value...than ever!

That's what McQuay, Inc. offers in its newly styled line of unit heaters. Redesigned to include all the advantages of exclusive Ripple Fin coil construction. Restyled for new beauty of line. Only Ripple Fin construction gives you maximum heat transfer surface... positive air wiping action. Only Ripple Tube design gives you the internal turbulence that means more heat... faster. And, included of course, are McQuay's famous elliptical copper headers to compensate for unequal expansion during the critical warm-up period.

Combined with Ripple Fin coils, McQuay unit heaters feature new silent operation, die-formed cabinet and fan ring, mountings to fit piping or overhead brackets, a model range of from 16,000 to 300,000 BTU's output. See the McQuay representative in your area today or write: McQuay, Inc., 1609 Broadway Street Northeast, Minneapolis 13, Minnesota. Representatives in principal cities.



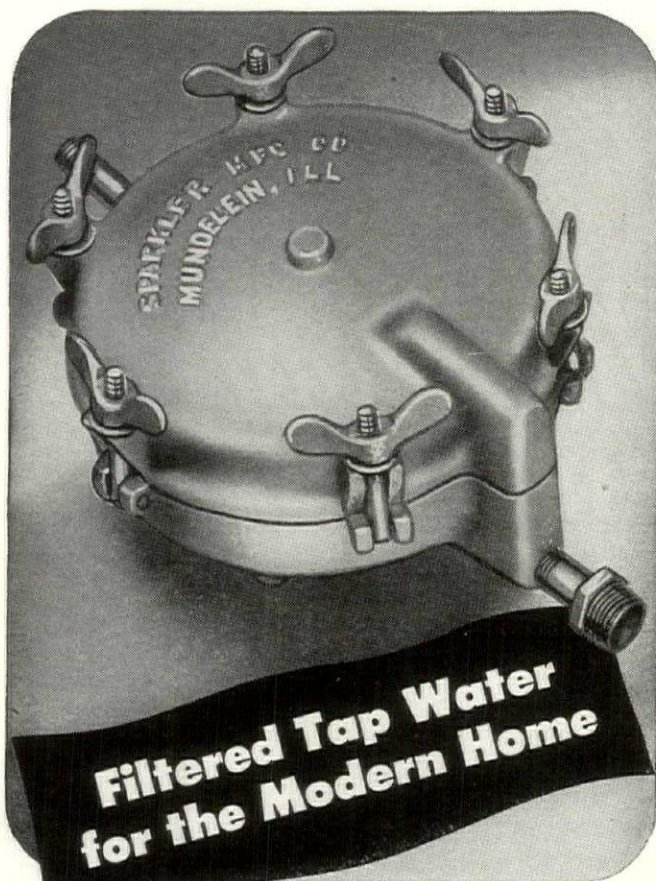
DOWN FLOW HEATER

McQuay **INC.**

EVERY PHASE OF AIR CONDITIONING



LETTERS



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			SHIPPING WT. (approx.)
			Height	Width	Length	
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

and flexibly. Many English communities have had powers of control, and in some, at least, this has not meant the barring of fresh and modern designs. Holland has had municipal architectural control for years, yet Holland has produced some of the most brilliant examples of contemporary architecture, and the basic harmony of many Dutch communities evidences the good which may possibly flow from some type of control. In Holland the committees are set up on a constantly changing basis with a heavy representation of architects. Each member can serve only one term of two or three years at a time and can never succeed himself. This means a constantly changing body of architectural idealism and keeps the system of control sensitive to new ideas.

But in the hands of the Fifth Avenue Association or any other self-constituted board—No, No, a thousand times No!

TALBOT HAMLIN
School of Architecture,
Columbia University

New York, N. Y.

NEXT TO SULLIVAN

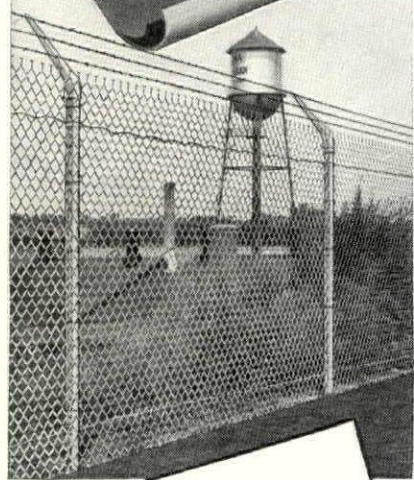
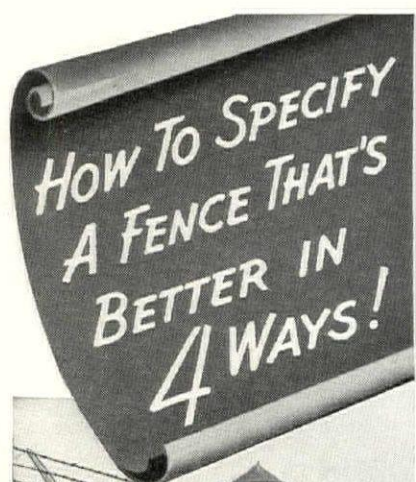
Forum:

In the death of Ernest Flagg, American architects and architecture have lost one of the most valuable and original creative artists that this country has produced. Although a very energetic and forceful personality, he did not seek notoriety and therefore is not as well known as some practitioners in "modern" architecture whose work is brought to the attention of the lay public much more insistently.

I think it may well be said that with Louis Sullivan, and even superior to him, Ernest Flagg expressed the American steel building problem better than anyone had done before or has since. Some of the finest examples of this may be seen in the Singer Sewing Machine office building on the west side of Broadway near Houston Street, in the Scribner Building on Fifth Avenue below Fiftieth Street and the Scribner printing plant in the Sixties further north and west of Broadway, as well as the Automobile Club of America in the Fifties west of Broadway.

These buildings are all expressions of Mr. Flagg's thorough understanding of the relationship between the steel structure and the masking of this skeleton with covering material that does not hide the structure and does not imitate other methods of building where steel was not employed. The use of decorative terra cotta as a filling material between structural steel members was a much greater contribution to modern architecture than either the terra cotta treatments of Otto Wagner in Vienna or the

(Continued on page 42)



- 1 Deep-Driven Anchors hold the fence permanently erect and in line, yet can easily be relocated.
- 2 Square Frame Gates remain free from sagging and warping.
- 3 U-Bar Line Posts are rust-free, rigid and self-draining.
- 4 Square Terminal Posts improve strength, durability and appearance.

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FENCE rates a top spot on your "spec list for features like these! To your clients, they mean extra years of all-out protection. And they are your assurance of specifying the best in fencing for factory, institution and home alike.

WRITE TODAY for your copy of "Anchor Protective Fences." It's both a catalog and specification manual for your A.I.A. File 14-K. Contains structural diagrams and specification tables, installation photos, many types and uses of Anchor Chain Link Fence. Just ask for Book No. 110. Address: ANCHOR POST FENCE DIV., Anchor Post Products, Inc., 6635 Eastern Ave., Baltimore 24, Maryland.

Anchor Fence
Nation-wide Sales and Erecting Service

Amazing New Radiant Heating



**RADIANT PANEL REPLACES BASEBOARD
... IS PRACTICALLY INVISIBLE**

You will scarcely notice this Baseboard Radiant Panel, yet it's right in front of your eyes! It's American-Standard's latest development in home heating. Only 8" high, it fits snugly against the wall, looks exactly like the baseboard—and can be painted any color to match the wood trim.

Decorator's dream. Nothing to interfere with drapes or decorations. This Baseboard Radiant Panel gives you full use of every foot of wall and floor space. Permits complete freedom in furniture arrangement.



No cold spots. From floor to ceiling, the new Baseboard Radiant Panel provides sun-like warmth throughout the room.

Write for more information about this amazing new Baseboard Radiant Panel Heating. And also ask for our new Home Book. It illustrates and describes American-Standard Heating Equipment and Plumbing Fixtures. Sold through Wholesale Distributors to your Heating and Plumbing Contractor. Available on easy time payments for remodeling. American Radiator & Standard Sanitary Corporation, Dept. P77, Pittsburgh 30, Pa.



Look for this

Mark of Merit

AMERICAN-STANDARD

HEATING PLUMBING

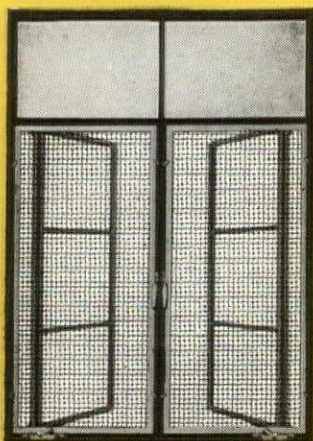
Serving the Nations' Health and Comfort

TO ARCHITECTS:

Complete details of this new Baseboard Radiant Panel are now available. Just write American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pa.

This advertisement in full color appears in leading national magazines read by millions, many of whom will eagerly accept American-Standard's new Baseboard Radiant Panel as the most modern advancement in residential heating.

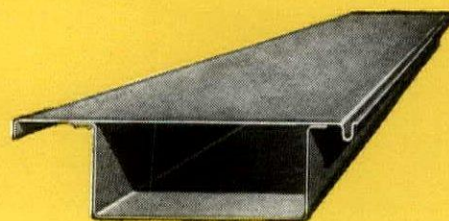
LOOK FOR THE MARK OF MERIT—It identifies the world's largest line of Heating and Plumbing Products for every use . . . including Boilers, Warm Air Furnaces, Winter Air Conditioners, Water Heaters, for all fuels—Radiators, Convectors, Enclosures—Gas and Oil Burners—Heating Accessories—Bathtubs, Water Closets, Lavatories, Kitchen Sinks, Laundry Trays, Brass Trim—and specialized products for Hospitals, Hotels, Schools, Ships, and Railroads.



WINDOWS—many kinds, including casements, projected, combination and pivoted types—in a wide range of sizes and vent arrangements, providing a *right* window for every daylighting and ventilating need. Most are standardized to fit modular construction. Durable, easy-operating, weather-tight and designed for neat appearance.



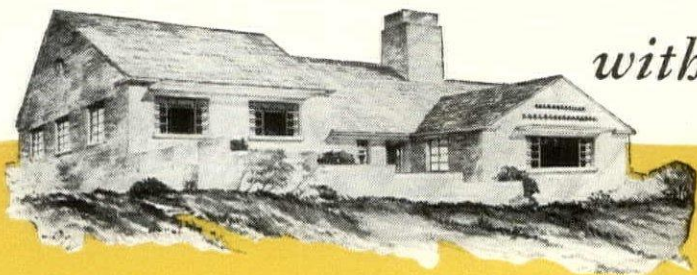
DOORS—standardized in size for savings in first cost, plus marked savings in installation time, labor and materials. Swing and slide types in single and double widths. Swing-type doors come complete with hardware and frames. Suitable for many practical uses in buildings of all kinds. Also turnover and vertical lift doors.



PANELS—Fenestra Type D Panel (illustrated here) provides joist and subflooring in a single unit. Other types also for walls, floors, roofs and partitions. Ready for paint, plaster, linoleum or other material of your choice. Type C Panels, widely used for walls and partitions, may be obtained already-filled with insulation.

keep ON-THE-SITE WORK at a minimum

with these 3 ready-to-install units



Here is standardization to a degree that permits important savings in time and money—but to a degree that doesn't limit design individuality.

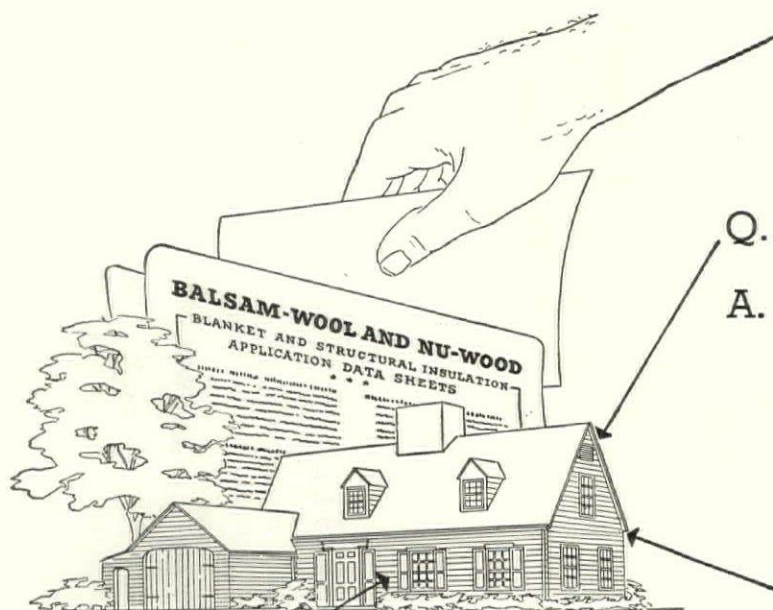
Fenestra Windows, Panels and Doors have their place in plans for any kind of building. The units shown here are merely typical units. Complete families of windows, several types of panels and varied sizes and styles of

doors are designed to co-ordinate with standard modular dimensions of modern masonry practice. You know before construction starts that these units will fit right.

Fenestra craftsmen are old hands at steel fabrication. This experience has been combined with standardization to bring you top-quality building materials that are designed right—and made right—for use in America's finest buildings. For details, see Sweet's Architectural File for 1947 (Sections 16a-9 and 3c-1). Better yet, write or call us.

Fenestra BUILDING PRODUCTS

DETROIT STEEL PRODUCTS COMPANY • Dept. AF-7, 2251 East Grand Blvd., Detroit 11, Michigan



Q. What is the proper way to mount an attic ventilating fan?

A. See Balsam-Wool Data Sheet Section F No. 2.

Q. What are the advantages of the eleven ways of preventing excessive condensation within a house?

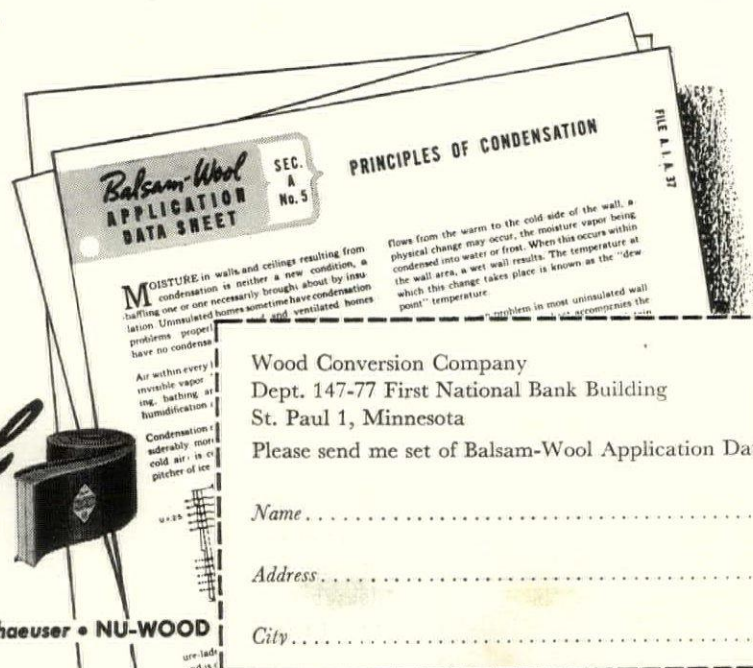
A. See Balsam-Wool Data Sheet Section A No. 6.

Q. What is an efficient but inexpensive way of reducing sound transmission through walls and floor?

A. See Balsam-Wool Data Sheet Section G No. 2.

Keep the right answers handy with Balsam-Wool Data Sheets

Balsam-Wool Data Sheets—
sized for your A. I. A. file—
provide many answers to a
thousand questions on
insulation. A complete
set of these sheets is
yours for the asking—
mail the coupon!



***Balsam-Wool**

SEALED INSULATION

*REG. U. S. PAT. OFF.

BALSAM-WOOL • Products of Weyerhaeuser • NU-WOOD

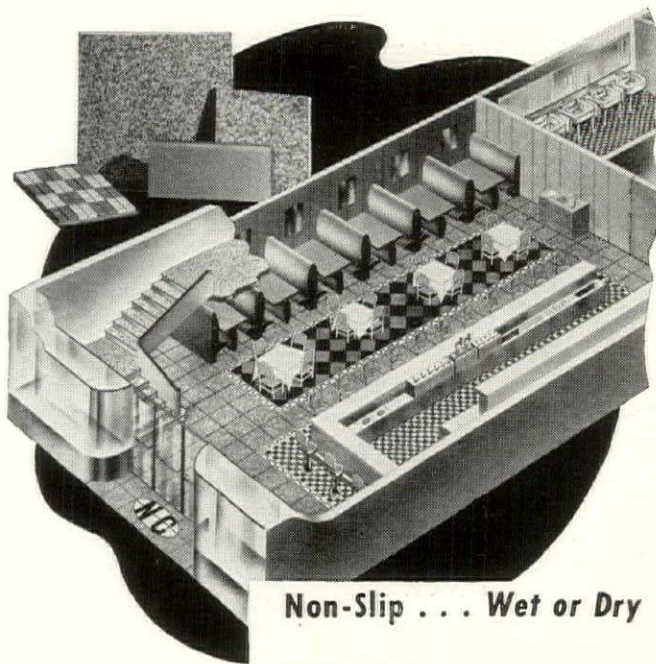
Wood Conversion Company
Dept. 147-77 First National Bank Building
St. Paul 1, Minnesota
Please send me set of Balsam-Wool Application Data Sheets.

Name

Address

City State

Walk with *Safety* ON NORTON FLOORS



Non-Slip . . . Wet or Dry

STORES
RESTAURANTS
OFFICE BUILDINGS
INDUSTRIAL PLANTS
HOSPITALS
SCHOOLS
RAILROAD AND BUS STATIONS
AIRPORT TERMINALS

THE same characteristics of hardness and toughness which make Alundum abrasive so useful in grinding wheels, also give it valuable properties as a wear-resistant and non-slip flooring material.

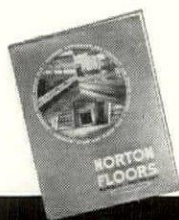
Alundum Stair and Floor Tiles, for example, provide a flat, smooth surface that is non-slip even when wet. And they will not wear slippery from foot traffic. There are also Alundum Mosaics for use where small tiles are desired and Alundum Aggregates to add safety and durability to terrazo and cement floors and stairs.

You will find NORTON FLOORS providing safe walk-ways in thousands of buildings the country over. Catalog 1935-C gives the full story including sizes and colors. Write for a copy—no obligation.

NORTON COMPANY
WORCESTER 6, MASS.

Behr-Manning, Troy, N. Y., is a Norton Division

See this catalog in Sweet's.



NORTON

reinforced concrete basic design forms, even where executed in brick or finer materials . . .

Without in any way wishing to deprecate the contemporary design of my colleagues, I feel that too little attention has been given to integrating the construction form with its ornamentation and that too great a striving for painful plainness and the bizarre has been responsible for weakness and indecision with respect to the full implication of new art forms.

EUGENE SCHOEN

New York, N. Y.

Reader Schoen's tribute to a pioneer architect is well-deserved. Flagg will also be remembered for his contributions to modular design and low-cost housing—Ed.

FILING FURORE

Forum:

Having subscribed to the FORUM for the past twelve years (first subscription—age ten), I have finally decided to have all my back issues put into nice neat volumes so the weight of all the advertising will stop making my poor shelves bend.

Now I have never complained about a thing your fine magazine has been doing, but in preparing to have the magazines put in book form I find an unpardonable sin on your part: mixing reading matter with the advertisements. On the back of the index page I find either a sewer ad or some badly drawn nude stepping out from under the new Zippo shower. Poor Mr. Blandings' Castle is all chopped up in the back of the May 1946 issue as are William, the Conqueror and Boss Carpenter. The book reviews, Building Reporter, News, Letters and all the rest are in exactly the same fix.

Gosh, I read the ads. You sure don't need to put all those interesting little tidbits through one hundred and eighty odd pages . . . How about a little thought in getting the subject matter into nice clumps?

KIRK WHITE, JR.

Manhattan Beach, Calif.

If Reader White will persuade the several thousand magazines competing for U. S. advertising dollars to do likewise, FORUM will effect this separation immediately—Ed.

INVISIBLE BOOM

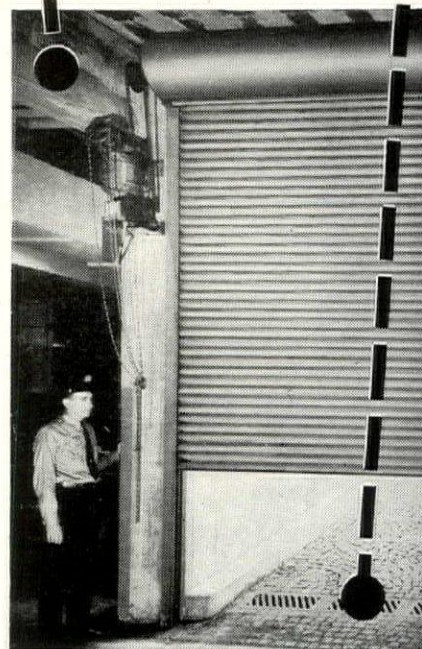
Forum:

Your building boom forecast is invisible. I am returning your forecast and have noted thereon an adjustment to the 1946 "Volume" based on quantities of work, not dollar value. This could be expressed in cubic or square foot areas available under present day costs. The adjusted volume does not include any consideration of a recent new low in quality of work.

(Continued on page 46)

KINNEAR Rolling Doors

**GREATER
EFFICIENCY
from TOP to
BOTTOM**



OPENED OR CLOSED—or in action—Kinneare Rolling Doors offer greater efficiency "from top to bottom."

They open straight upward, coiling compactly above the doorway out of reach of damage by wind or vehicles. They clear the entire doorway, leaving all surrounding space fully usable at all times.

When closed, Kinneare Rolling Doors offer the extra protection of all-steel construction—against wind and storm damage . . . theft or intrusion . . . fire or explosion.

The rugged Kinneare Motor Operator can be added to any Kinneare Rolling Door for maximum speed and ease of operation, with push button controls at any desired point.

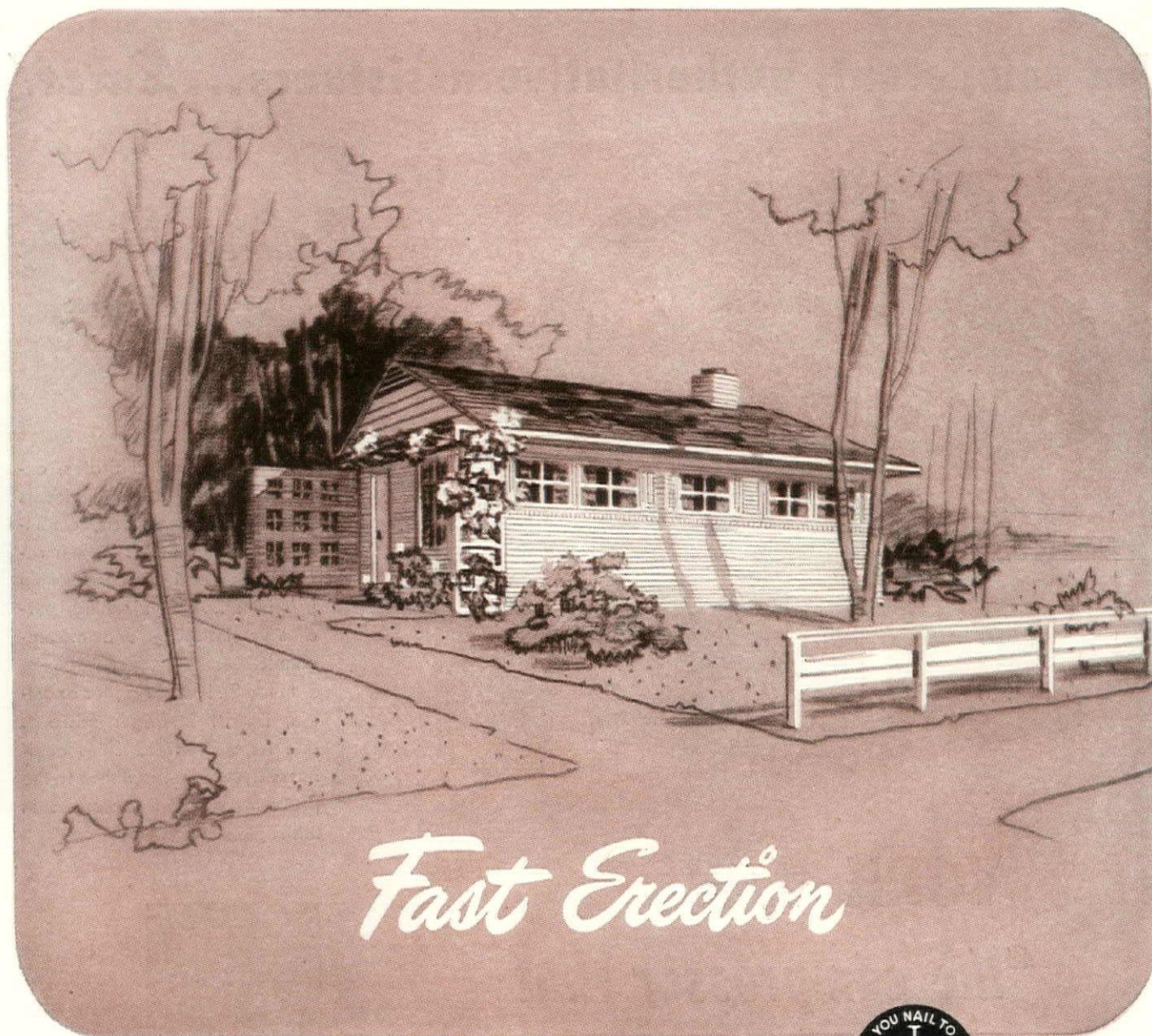
Kinneare Rolling Doors are built in any size, for new or old buildings. Write for new catalog.

The KINNEAR Manufacturing Co.

1640-60 Fields Avenue • Columbus 16, Ohio
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Saving Ways in Doorways
KINNEAR
ROLLING DOORS



Stran-Steel framing is a building product of Great Lakes Steel Corporation



Stran-Steel achieves its construction speed through unique engineering features. An efficient, simplified framing system, it requires only a few basic members and fittings. Members are delivered *pre-cut* to blueprint specifications, ready for assembly. Joining is accomplished with self-threading screws or by welding. Collaterals are attached simply by *nailing* them directly to the patented nailing groove, an exclusive feature of Stran-Steel. Joists and studs are ready-punched at convenient intervals to admit pipes and conduits. With the members in place, the punched holes are always in alignment.

Stran-Steel appeals to prospective owners, since the advantages of a durable, non-sagging, fire-resistant frame are almost self-apparent. It appeals to architects and builders because it provides the strength of steel without curtailing freedom of design. For complete information on Stran-Steel framing, see

Sweet's File, Architectural, Sweet's File for Builders, or the January Issue of Building Supply News.

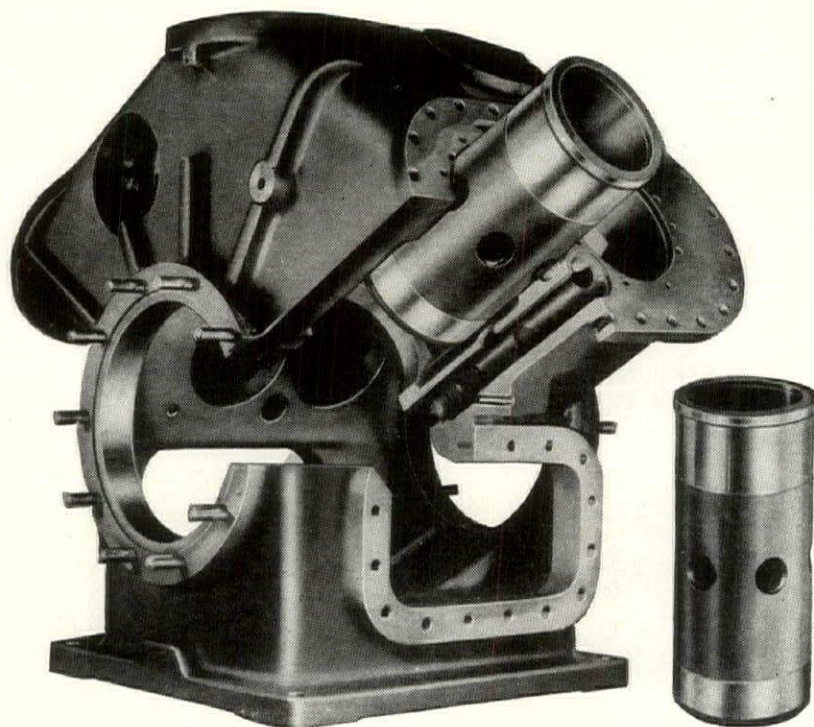
BUILD WITH



GREAT LAKES STEEL CORPORATION

Stran-Steel Division • Dept. 35 • Penobscot Building • Detroit 26, Michigan
UNIT OF NATIONAL STEEL CORPORATION

For competent, authoritative assistance... *Quick!*



YORK V/W

***“the compressor that
never wears out”***

York V/W Compressors are so constructed that all parts which may be subjected to wear can be removed easily for inspection or replacement. Hence, it may truly be said that York V/W Compressors for air conditioning and refrigeration applications, as units, will never wear out.

Cylinder liners, for example, may be readily removed and replaced . . . after long, efficient service. Liners are centri-

fugally cast of nickel iron and honed to a mirror finish. Drilled ports provide for suction and unloading.

The cylinder liner is but one of the many exclusive design features of the York V/W Compressor and is representative of the thoroughness of York engineering throughout its complete line of refrigeration and air conditioning equipment.

York Corporation, York, Penna.

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 St. Louis area, for example, District Manager Edwards and his staff of 12 sales engineers devote their full time to the problems of York customers in this region.



E. F. EDWARDS
District Manager

C. S. McDORMAN
Sales Manager

Assisted by
Fred Downs
E. A. Froese
J. C. McDonald
H. W. Meinholtz
H. E. Miller
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W. Wilder

Leader FLUORESCENT LUMINAIRES

Meet the Challenge of EDUCATION



An interesting, informative sound film on lighting trends, sales methods, potential markets. Make a date soon with the friendly Leader representative in your area to see and hear this new film.

EDUCATORS EVERYWHERE agree that in all branches of education—the vocational schools, the halls of learning in prominent universities, even in the little red school-houses—there is a crying need for better classroom lighting.

Leader has met this challenge to the lighting industry by extensive research and careful design of fluorescent fixtures for educational use. For better lighting to safeguard the sight of America's youth—for fixtures with lower surface brightness that raise the level of light above the students' eyes—Look to Leader.

Only better electrical wholesalers and contractors distribute and install Leader fluorescent fixtures.

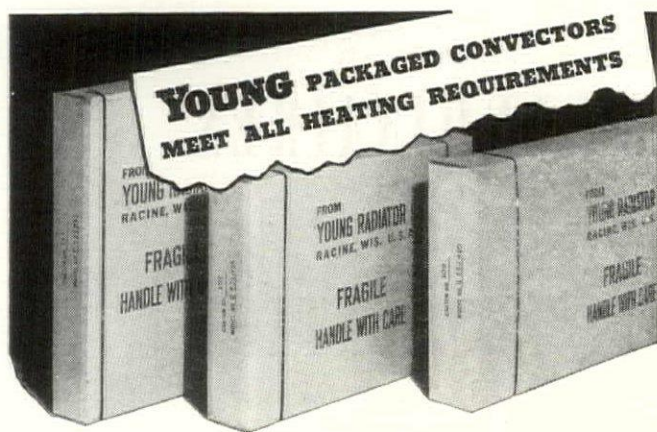


LEADER ELECTRIC COMPANY

6125 NORTH BROADWAY • CHICAGO 40, ILLINOIS

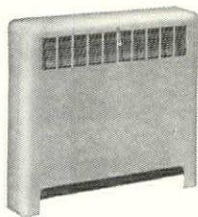
WEST COAST FACTORY • 2040 LIVINGSTON ST., OAKLAND 6, CALIFORNIA

LETTERS



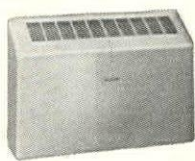
● Architects and contractors are specifying more "STREAMAIRE" Convector than ever before because of their simplicity of installation and heating efficiency. "STREAMAIRE" Convector have been standardized in four basic types. You can offer smart styling plus heating comfort. Young-built convectors are packaged for protection against damage in storage and transit, plus this added time-saving feature—cartons are clearly marked for quick, positive size and type identification. Assure satisfaction—specify "STREAMAIRE" Convector by Young. Send for free "STREAMAIRE" Catalog No. 4046 today!

STANDARDIZED IN FOUR BASIC DESIGNS



FREE-STANDING TYPE "C"

Saves on installation costs; ideal for remodeling or new construction.



WALL-HUNG TYPE "WS"

Sloping top grille prevents careless blocking of air circulation.



WALL-HUNG TYPE "W"

Off-floor installation makes routine floor cleaning easy.



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Special "Z" Bars permit installation before or after plastering.

YOUNG

HEAT TRANSFER PRODUCTS



YOUNG RADIATOR CO.
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Sales and Engineering Offices in all Principal Cities

AUTOMOTIVE AND INDUSTRIAL PRODUCTS

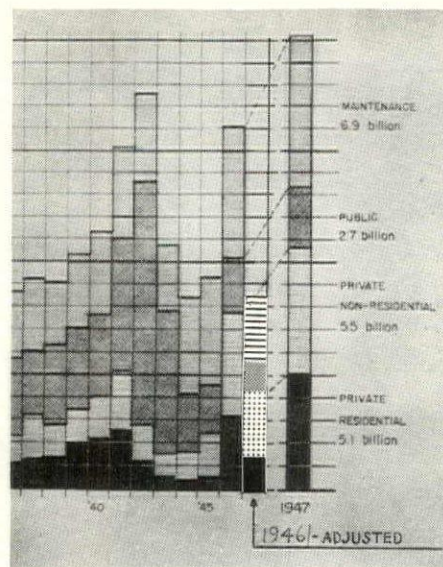
Gas, gasoline, Diesel engine cooling, radiators • Jacket water coolers • Heat exchangers • Intercoolers • Condensers • Evaporating coolers • Oil coolers • Gas coolers • Atmospheric cooling and condensing units • Supercharger inter-coolers • Aircraft heat transfer equipment

HEATING, COOLING AND AIR CONDITIONING PRODUCTS

Convectors • Unit Heaters • Heating coils • Cooling coils • Evaporators • Air conditioning units •

From such an analysis it will be noted that for at least ten prewar years this country produced much more in the way of building materials and construction than in the past year . . . In my opinion, a dollar value analysis creates the illusion that we are at an all-time high and unable to improve our position.

Building Forecast—1947: \$20.2 Billion



Perhaps the public should know the whole story, and perhaps we should admit that "convenient shortages" go well with inflated prices, high profits, high-priced real estate, hoarding of materials, sales of inferior products, political manipulation, junkpot G.I. houses, and a selfishly indolent building industry.

THOMAS B. MULVIN, Architect
San Francisco, Calif.

FORUM stated: "Measured in uninflated 1939 building dollars, worth only about 67 cents each today, this total 1947 building activity amounts to \$13,554 million, about 30 per cent more than in 1939"—Ed.

COST CALCULATIONS

Forum:

On page 9, May issue, you state that housebuilding costs are up 68 per cent. How do you arrive at such a percentage?

If it costs \$20,000 to build a five-room house here and before the war only \$800 a room, my arithmetic shows that this is a 96 per cent increase—more than any sane person should be asked to pay.

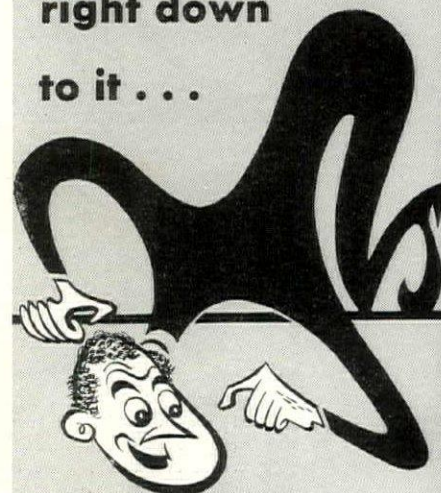
HARRY JENSEN

Oakland, Calif.

FORUM's percentages were taken from the Federal Home Loan Bank's national index of the cost of building a six-room house. This is a national average and costs obviously vary in different localities. According to FORUM arithmetic, Reader Jensen's figures show a 400 per cent increase rather than 96 per cent—Ed.

(Publisher's Letter on page 50)

When you get
right down
to it . . .



there's
nothing like

KENTILE
Asphalt Tile



ATTRACTIVE OPPORTUNITY FOR EXCEPTIONAL SALESMAN WITH IMAGINATION AND INITIATIVE

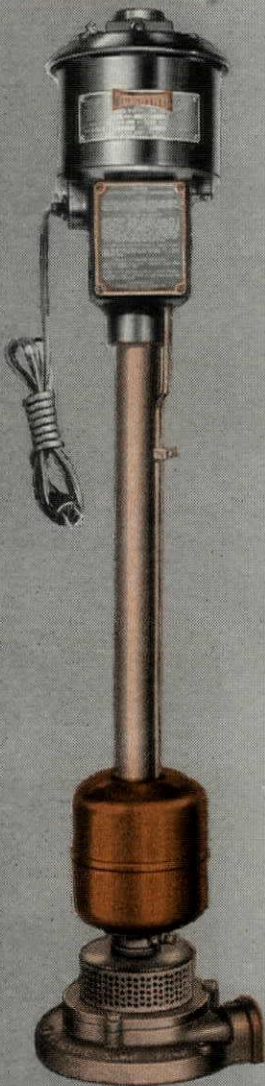
Manufacturer, pioneer and leader in field, national distribution through selected wholesalers of building specialties, now rebuilding sales force, offers attractive opportunity with real future for several out-standing salesmen who enjoy creative selling.

Commodity is wide line essential fabricated metal building products currently in strong demand in both new construction and modernization of commercial building, stores, shops, restaurants, theatres, showrooms, service stations, etc. To qualify, must have exceptional personal sales record, be between 28 and 40 years of age, able to read architects drawings and construction details, know from experience how to do business with architects, contractors, material jobbers and their salesmen. Familiarity with such lines as metal trim, doors, shelving, fixtures, partition work, store front construction, cabinet work, insulation or acoustical materials helpful.

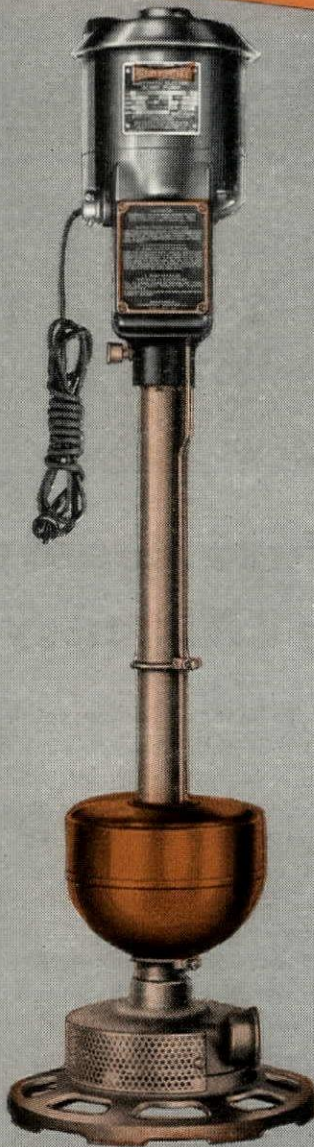
Compensation includes salary, expenses, bonus, car allowance, opportunity for advancement to sales executive position. Give age, marital status, address, phone number, education, experience and earning record covering past ten years and references. Box K-7.

PENBERTHY AUTOMATIC ELECTRIC SUMP PUMPS

CONSTRUCTED OF COPPER and BRONZE THROUGHOUT



MODEL 46



MODEL M
*Made for 5 Different
Sump Depths*

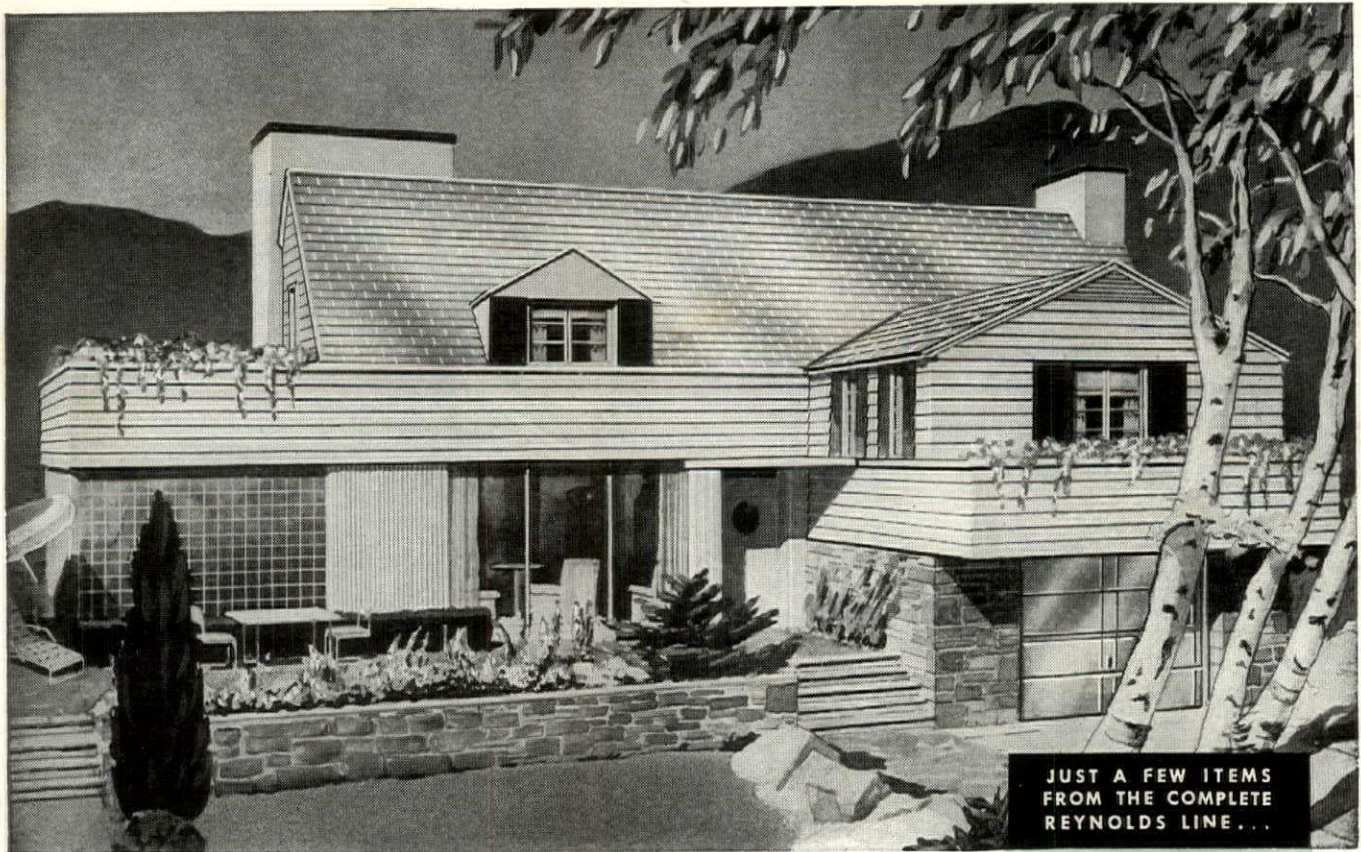


MODEL 45

PENBERTHY INJECTOR COMPANY

Canadian Plant—Windsor, Ont. (Manufacturers of Quality Products Since 1886) DETROIT 2, MICH.





For Varied Surface Beauty And Unvarying Efficiency!

THE above design, sixth of a series, will appear in full-color in the July 12 "Saturday Evening Post." Note the effect of Reynolds Lifetime Aluminum Clapboard Siding, the contrast of naturally weathered aluminum shingles, the use of corrugated sheet between ground floor windows. The window frames and the roll-up garage door are also Reynolds Lifetime Aluminum Products.

Now add to these design advantages the lifetime permanence of fire-proof, rust-proof, termite-proof aluminum...and you can see why more architects specify it. And there's radiant heat reflection! Right now, aluminum is keeping new homes amazingly cooler. It throws off the sun-load—won't

store heat as do other metals and wood. And it reflects heat back inside—for more warmth with less fuel in winter.

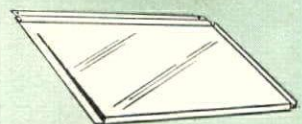
Best of all, this modern material is immediately available. Its easy application appeals to builders. So it means quick action and satisfaction all the way from designer to consumer. See Sweets or write for A. I. A. File brochures. Offices in principal cities. Reynolds Metals Company, Building Products Division, Louisville 1, Kentucky.



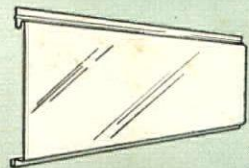
Today the base price of aluminum is 30% lower than pre-war!

REYNOLDS *Lifetime* ALUMINUM BUILDING PRODUCTS

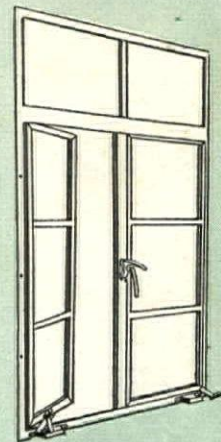
ALUMINUM SHINGLES • CLAPBOARD SIDING • SHEET ROOFING & SIDING • STUBS • TRUSSES • WINDOWS • GARAGE DOORS • REFLECTIVE INSULATION • UTILITY BLDGS. • HOUSES



Shingles. Interlocking, weather tight, covering all nails. Two sizes: 8 x 14½ and 5½ x 18½.



Clapboard Siding. Fitting together, covering all nails. 8" exposed surface, 12' lengths.



Casement windows. Under-screen roto-operators. Standard lights, all usual combinations.

Handsome "Realwood" Counters . . .



FORMICA

REG. U.S. PAT. OFF.



THERE is a rich simplicity about Formica Realwood counters that is genuinely satisfying to the designer. These counters are adaptable to soda fountains, bars, stores, ticket offices, hotels — everywhere a really good looking counter is an asset.

A wide range of fine wood grains is available. The material is produced by introducing a genuine veneer of mahogany, prima vera, lacewood, or what you wish into the Formica sheet, so a tone effect harmonizing with any desired effect is possible.

The material is protected by a completely colorless—and permanently colorless—film of plastic which protects it from staining, armors it against the most severe wear, makes it brilliant and very easy to clean with soap and water or other cleansers.

And nothing is handsomer or more distinguished. Color charts and construction details on request.

THE FORMICA INSULATION COMPANY, 4613 SPRING GROVE AVENUE, CINCINNATI 32, OHIO

LEADING BALTIMORE CONTRACTOR INSTALLS BASE-RAY IN HIS NEW OFFICE BUILDING

Lloyd E. Mitchell, Inc. is one of the most prominent engineering and contracting firms identified with heating and plumbing design and installation. It is highly significant that the choice of heating equipment for their new Baltimore headquarters is BASE-RAY* radiant heating. This is indeed authoritative endorsement. But it is only natural that BASE-RAY should be used for it is radiant heating at its best. Its popularity is growing by leaps and bounds by reason of its simplicity, effectiveness and unobtrusiveness.

National advertising has created a tremendous interest. Be sure you have all the facts on this newest development in radiant heating. Mail the coupon today.

*Reg. U.S. Pat. Off.



▲ The new Lloyd E. Mitchell, Inc. headquarters, Baltimore, Maryland—heated throughout with BASE-RAY radiant baseboards. They report highly satisfactory results.

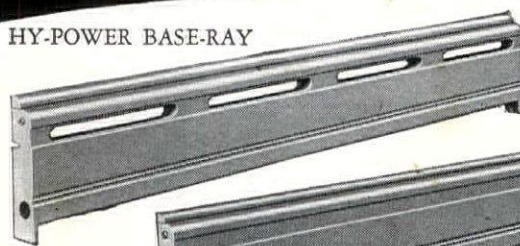
◀ One of the attractive main offices in the Mitchell establishment.

Architect—Mr. Harry Moulton
General Contractors—Consolidated Engineering Co.

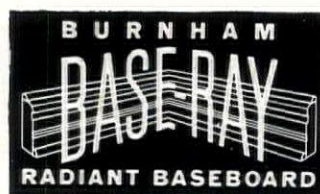
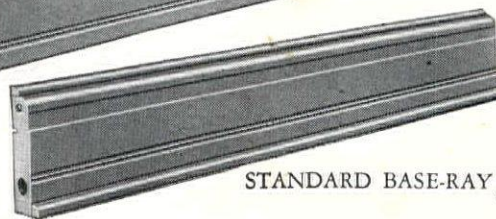
Over 1500 BASE-RAY Installations to Date!

Despite shortages of labor and materials more than 1500 installations are now in operation and delivering ideal heating comfort. This represents only a small portion of the great demand for BASE-RAY installations. Production of BASE-RAY is being increased substantially to meet this heavy demand.

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Get your copy of this FREE Booklet giving ratings and installation data on BASE-RAY Radiant Baseboards.



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WORLD'S LARGEST INDIVIDUAL PLANT
FOR MANUFACTURING ASPHALT TILE



MA·TI·CO
Mastic Tile

YOU can depend on the Mastic Tile Corporation of America to fill your orders promptly—to serve you dependably, because with the addition of the new third production line—Mastic Tile is geared for mass production! Yes, this mammoth $5\frac{1}{4}$ acre plant with matchless facilities for shipping by rail or water is literally "Three Plants In One"—produces more asphalt flooring tile than any other single plant in the world!

And because MA·TI·CO Mastic Tile now enjoys ever increasing demand due to its estab-

lished reputation for uniform high quality and durability through continuous "Quality-Control"—this huge plant at Newburgh operates continuously 24 hours a day, 6 days a week!


Small wonder the name MA·TI·CO now means quality asphalt flooring tile at its beautiful, durable best. It ought to be—manufactured in the world's largest, best equipped plant! If it's guaranteed delivery you want and not promises for the future, the next time you order flooring tile, be sure it's MA·TI·CO!

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OF AMERICA

Foot of North Montgomery Street • Newburgh, N. Y.

*Fresh new
Beauty*

**ALREADY IN 100,000
POSTWAR BATHROOMS!**



Specify
LIFETIME CHROME
by
Gerity

Gerity styling and durability get the enthusiastic O. K. of architects, builders, dealers, and the public! Gerity accessories smartly blend into modern bathrooms of any color scheme. It's *Lifetime Chrome*—won't break, crack, peel, check or tarnish. Write for catalog. Gerity-Michigan Die Casting Co., Adrian, Mich. Plants at Detroit and Adrian.



A LETTER FROM THE PUBLISHER

Dear Reader:

We have come to expect to find the words "housing" and "problem" paired. If you can gather any small comfort from the fact that this situation is worldwide and not just domestic, here it is. When Aneurin Bevan was criticized in Parliament for failure of England's housing program, he pointed defensively to the failure of even the U. S. housing program. Throughout the world it is the same story. Even when well-meaning and powerful governments take a hand, the results have been to slow rather than to speed activity. Yesterday Congressman Javits of New York proposed a full-dress Congressional investigation of the housing failure. What new facts are to be gained from another Congressional housing study? There have been tons of reports, proposals, and investigations. Some of the present difficulties (which were also the former difficulties) would probably yield to legislation. Certainly federal financial aid to support research and to subsidize the struggling industrialized house industry would pay dividends. But any approach which attempts to deal with housing as one might deal with such tightly knit industries as automobiles or railroads ignores the essentially local character of building. One suggestion now being made is that each community set up its own housing program, with agreement among local real estate and financial interests, architects, engineers, contractors, labor and government as its aim. This plan would not work uniformly in all communities, but it might produce more important results than anything tried to date. Greatly in its favor is the possibility of fixing responsibilities locally. If the plan were tried in Lancaster, Pa., and flopped, the people of Lancaster would know where the blame belonged; if it succeeded, they would know to whom credit was due.

* * *

George Howe, our most cynical and devastating observer of the architectural scene, in speaking of housing recently crunched out the following: "There are just two kinds of low-cost housing—the



authentically gloomy and the spuriously cheerful."

* * *

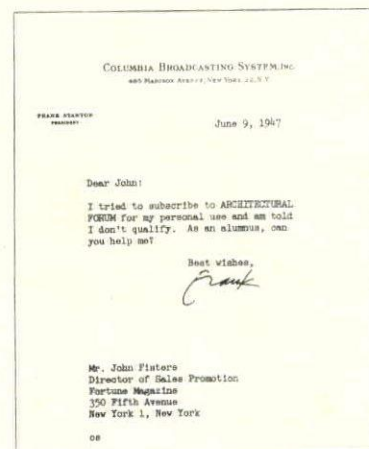
When the tobacco auctioneer turns public benefactor, the choice of architectural idiom for the favored institu-

tion is a foregone conclusion. Duke, one of our great and most heavily endowed universities, succeeds in presenting an awesome sight to the eager young student. Today Duke is bursting its



buttresses trying to accommodate the army of ex-GIs. A visitor to the campus, knowing that all U. S. colleges are victims of the same housing crisis, wondered at the absence of trailers. He got the answer from Peter Maas, one of the editors of the Duke "Duke n' Duchess," who ventured that university officials evidently had been unable to find any trailers of Gothic design.

* * *



Well, Mr. President, we don't want you to think we have any funny ideas about radio or even television. As for CBS, we've loved your network ever since Bill Lescaze made you that dandy building in Hollywood, followed by that Fellheimer & Wagner slicker on 52nd Street. And we don't mind even a weeny bit your asking our mutual—oops, our joint friend, John Fistere, to intercede for you. But it's like this: As President of the great Columbia System which puts up building after building, you're as welcome on the FORUM subscription list as "Information Please" on Wednesday night. In fact, Mr. Stanton, the only time the FORUM quits being interested in you is when you ring our bell as Private Citizen Stanton who maybe sometime is going to remodel a Connecticut farmhouse. When you charge advertisers \$15 a thousand, you have to deliver corporation executives and no Blandings. So you see it's nothing personal—just business. P. S. Suggest you look over the Copenhagen Broadcasting Center on page 69 in your June issue.—H.M.

Roddiscraft

The architect's door and plywood



Identified with architects for 50 years

Roddiscraft quality has been recognized by the architectural profession for more than fifty years. The Roddiscraft hardwood doors and plywood installed in buildings from coast to coast in accordance with architects specifications is a testimony to the reputation of Roddiscraft.

Roddiscraft has earned its reputation — by putting quality first — by never permitting production needs to become paramount.

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DEALERS IN ALL PRINCIPAL CITIES

"LET THERE BE LIGHT"



FORD Sales and Service, Detroit, Michigan

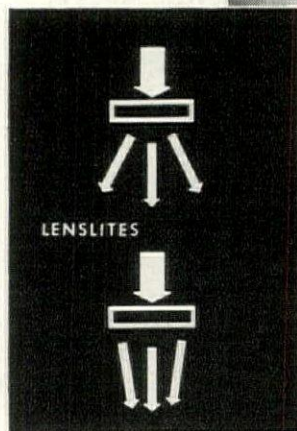
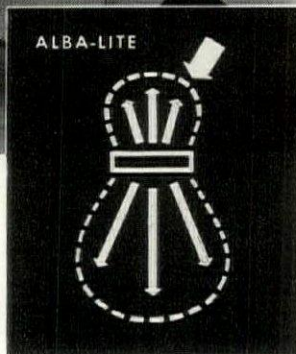
Architect: O'Dell, Hewlett & Lukenbach

Electrical Contractor: Wayne Electric Co.

Fixture Manufacturer: Kirlin Company

Corning Lightingware: ALBA-LITE Panels

Foot Candles Delivered: 40 to 55



Western Air Lines, Los Angeles, California

Architect: H. Roy Kelley

Contractor: Golden State Electric Company

Fixture Manufacturer: Wagner-Woodruff Company

Corning Lightingware: PYREX brand Lenslites

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delivered the way you need it!

CORNING ENGINEERED LIGHTINGWARE IS AVAILABLE FOR EVERY LIGHTING NEED

Planning a home, showroom, office building, school, hotel or apartment? If so, "let there be light" . . . delivered the way you need it. Corning lighting experts will gladly assist you in selecting the lightingware that best meets your requirements. Corning products are scientifically made to provide proper diffusion or direction for both fluorescent and incandescent applications.

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ALBA-LITE Lightingware provides high transmission, low reflection. It is a light opal glass available in rolled sheet form and may be bent to specification.

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BALANCED LIGHTING: Used separately or in combination, ALBA-LITE and MONA-LITE provide maximum flexibility in fixture design. Light diffusion is secured through glass composition rather than through surface treatment.

FLUR-O-GUIDE LENS PANELS in a wide range of lengths and widths provide light control with low panel brightness and permit maximum flexibility in fixture design.

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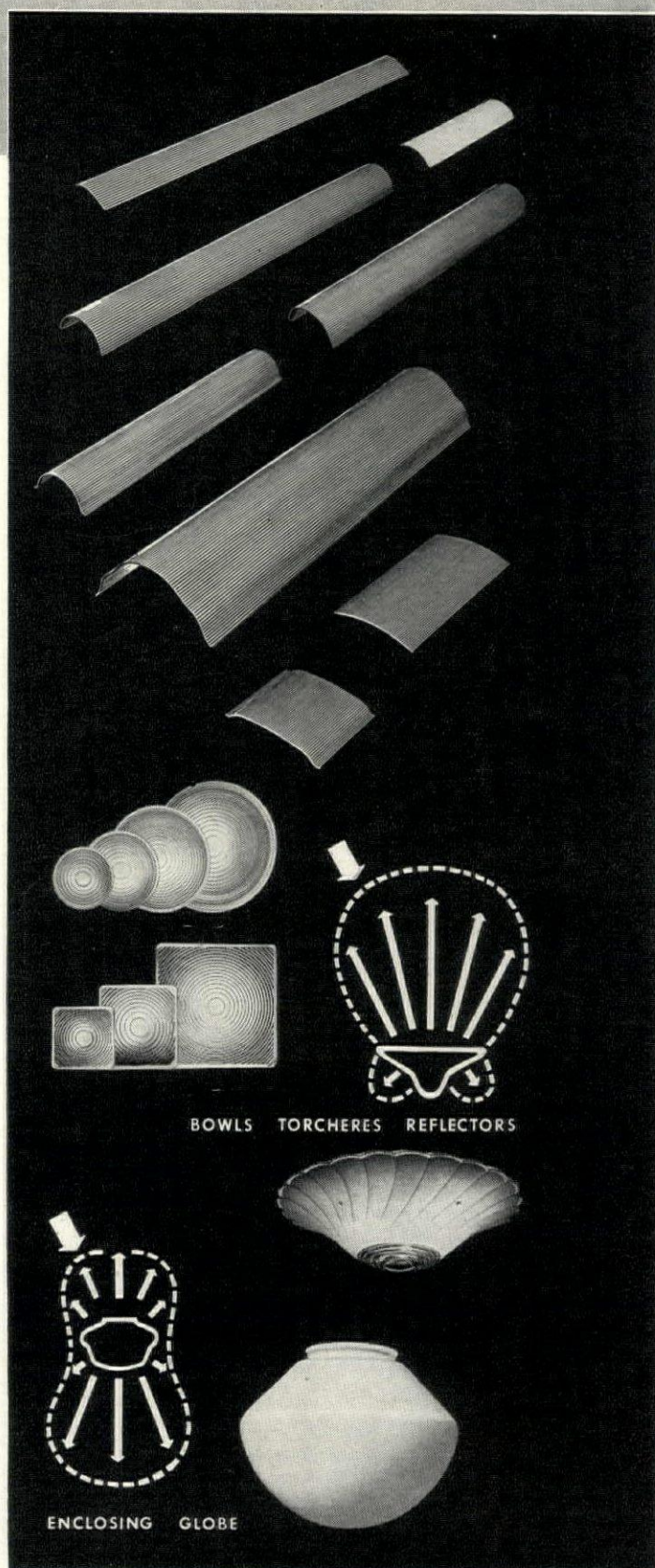
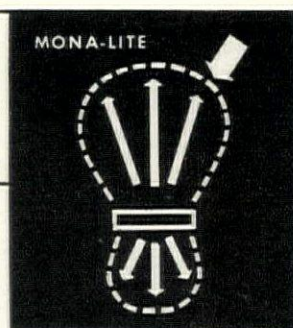
LENSLITES made of PYREX Brand heat-resisting glass are available in many sizes, both round and square, for wide angle or concentrated light beam spread.

MONAX enclosing globes provide efficient, attractive, low-cost illumination on general diffuse lighting applications.

CORNING I.E.S. TYPE reflectors are ideally suited for table, bridge and floor lamps.

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whose idea of a dream house calls for trouble-proof double-hung windows and modern window hardware.



And 134,445,000 magazine readers share his opinion Grand Rapids Invisible Sash Balance advertising reaches the middle and upper-crust home-building market . . . the kind of people who retain architects and engage responsible builders . . . the kind of people who want the very best.

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The practical SPIRAL sash balance

Tested in the laboratory and in thousands of homes, Grand Rapids Invisible assures smooth-working windows that never chatter. No tapes, no cables, no exposed parts—protected against corrosion. Save many hours of costly installation time . . . just drive three screws, that's all! Fits the narrowest casings. Simple adjustment without removing sash. Versatile, too—only a few standard sizes needed for 95% of your jobs—same size balance fits either upper or lower sash.

Get complete installation data

Write today for complete, fully-illustrated specifications and installation data . . . see how Grand Rapids Invisible simplifies and improves every double-hung window job!

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Quality Leaders in Sash Hardware for 50 Years



Grand Rapids Sash Pulleys

No. 103 face plate, cone bearing type and Nos. 175, 109, 110 sawtooth drive type sash pulleys cover 95% of all sash pulley requirements.



FORUM

Behind the scenes with FORUM contributors



Sculptor **BIMEL KEHM** is currently reshaping the Connecticut countryside by converting creaking colonial houses into comfortable contemporary homes. One such face-lifting is his own handsome studio home in New Canaan (p. 79), once a ramshackle old barn. Before coming to Connecticut, he had a studio in New York, was active in the New York World's Fair Sculpture Program.



PHILIP A. MOORE dreamed the dream of many an architect, to be a "great painter, a second Rembrandt." A session at Cincinnati's Art Academy changed that, left him without an ambition or a sou. He took a job as an architectural draftsman at the staggering salary of \$5 a week, and proceeded to adopt architecture as his life's work. Many design years later came the Nelson House (p. 83).



Boston-born Architect **EDWIN G. JOHNSON** is presently living in a resurrected Victorian carriage house, now a neat modern structure of his own design (p. 84) built early in the war. Johnson studied naval architecture at college, but switched to "shoreside" architecture before the ink had dried on his sheepskin. He has practiced in the Boston area ever since, has offices in Cambridge with John M. Whitcomb.



Builder **FRANK W. SHARP**, a casualty of the Depression when his oil company job disappeared, turned instead to work for a Houston contractor. In 1936 he staked out for himself in the building business, on a \$150 shoestring. By 1947, he had built 2,206 homes, more than any other builder in the area. Most of these were small houses (p. 86), the first and largest having been a four unit apartment building.



Before trekking west, **JOHN HIRONIMUS** spent 20 years in New York, some of them in the Office of the late Joseph Urban, others with Scott & Teegen, and Roger Bullard. An ardent competition entrant, he has seen at least seven of his designs premiated and published. One of these caught the eye of Client Rosengren. Result: The graceful country house at Woodcliff Lake, New Jersey (p. 88).



ANTONIN RAYMOND, architect with Partner **L. L. RADO** of the Cable Station at Guam (p. 93), is no novice at mastering such design problems. His tropical baptism came while practising architecture in Japan (where he went with Frank Lloyd Wright) and India before 1938, in America after that. Rado practised in his native Czechoslovakia prior to coming to the U. S. A. in 1939.



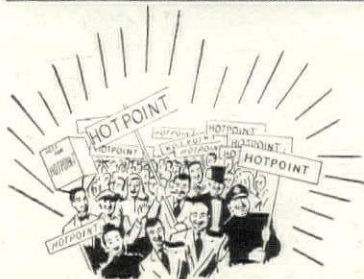
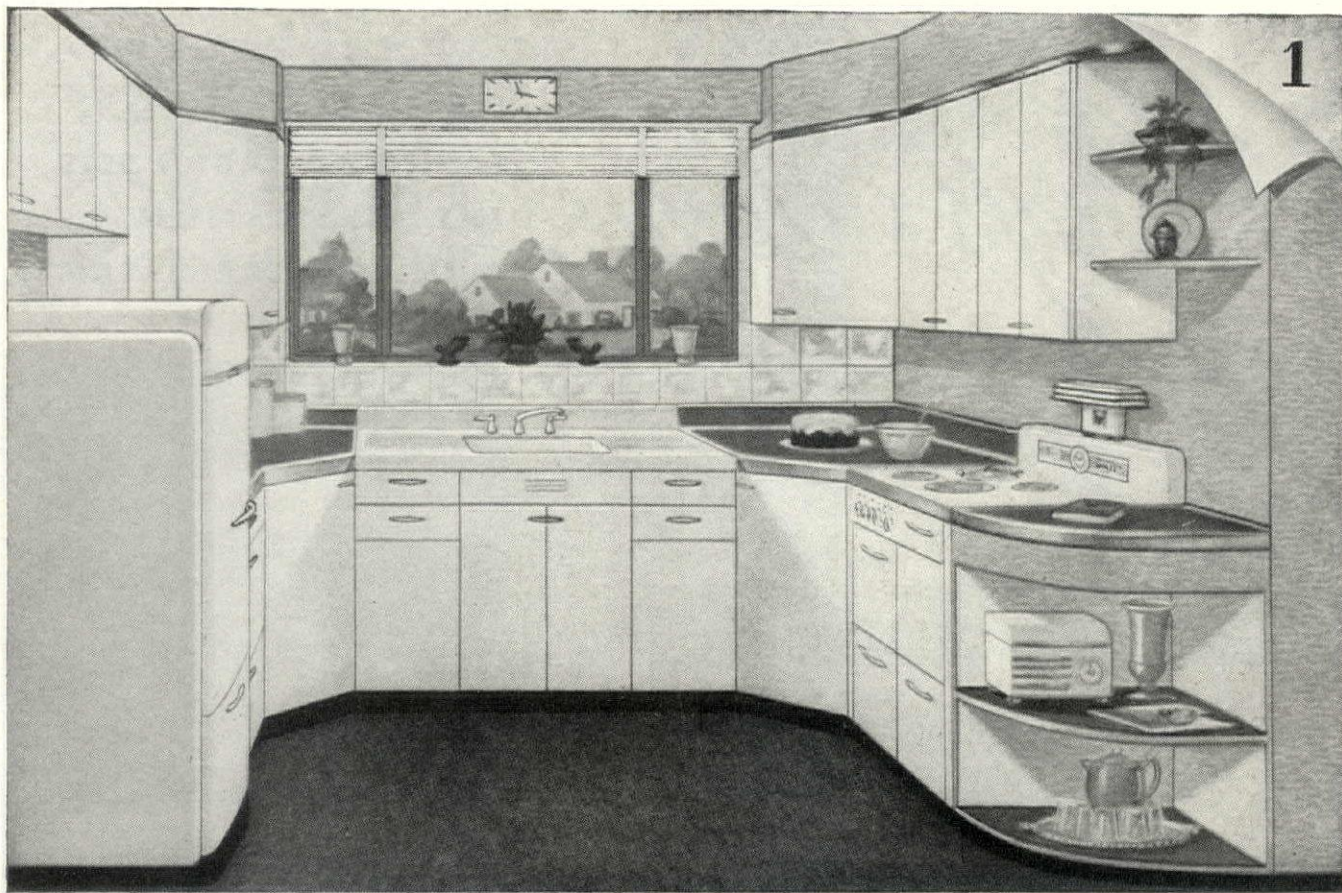
LAWRENCE B. ANDERSON and **HERBERT L. BECKWITH'S** careers are as closely entwined with the Massachusetts Institute of Technology as the proverbial ivy. Both took degrees there, in architecture. Both are professors there, of architecture. Both also have designed buildings there, including M.I.T.'s famous Swimming Pool, the Field House, and in 1942, the then highly secret Radiation Laboratory (p. 98).



ALBERT HENRY HILL, architect of Cahn's Shop (p. 108), is a native Englishman educated at the University of California and Harvard, where he studied under Walter Gropius. With Classmate (later Partner) John Dinwiddie, he has snared three consecutive *House & Garden* Annual Awards. During the war Hill was a captain in O.S.S., left the "cloak and dagger corps" in 1945, opened his own design office in 1946.



LESTER C. TICHY, architect of the \$50 million Flushing Shopping Center (FORUM, Nov. '46), is designer and architectural consultant for various railroads, department stores (James McCreery and Company, New York, p. 114), and furniture manufacturers. Trained at Columbia University and abroad, his chief objective in creative design is "an honest, simple and stimulating solution."



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IT isn't just guesswork when Hotpoint calls the "Blue Bird" kitchen one of America's favorites. This selection is based on thousands of inquiries received by the Hotpoint Institute for this cheerful, convenient kitchen that has been nationally advertised. The Hotpoint Kitchen Planning Service has been swamped with requests for kitchen plans from your potential customers who want to build or remodel. This powerful swing to electric kitchens indicates that, whatever the income bracket, the dream-come-true of Mrs. America is a Hotpoint kitchen with its time and labor saving electric servants. So your market is wide open . . . plan to capitalize on it NOW. To help you do this, Hotpoint has prepared a PORTFOLIO OF PERSONALIZED KITCHEN PLANS. Send the coupon for this handy booklet. It will point the way to an amazingly easy method of enhancing your reputation for building homes today with America's favorite kitchens of tomorrow!



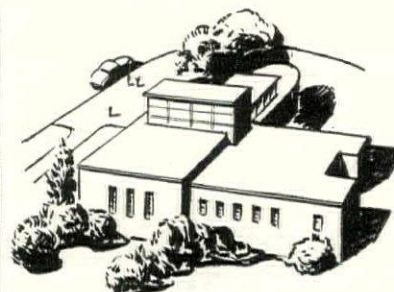
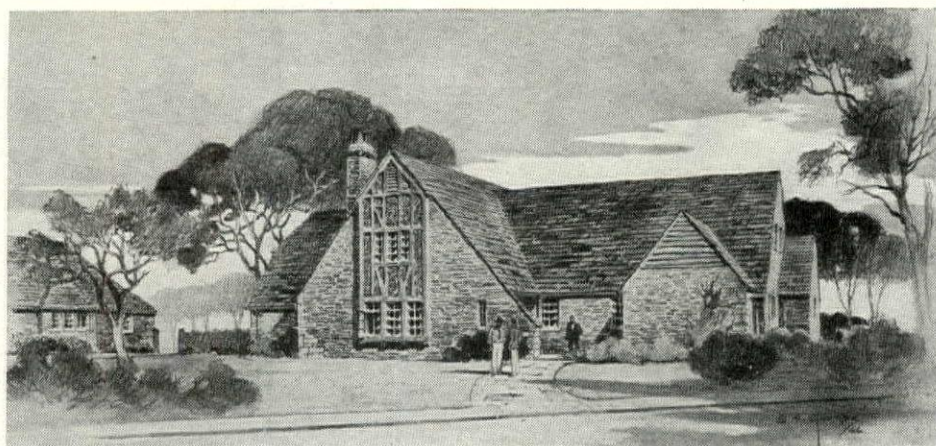
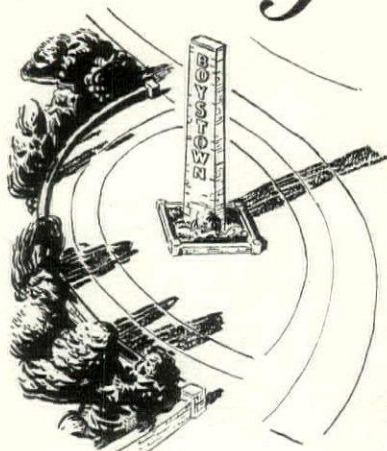
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Without obligation, please send me your Portfolio of
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Boys Town

FATHER FLANAGAN SEES
THE REALIZATION OF
A THIRTY-YEAR DREAM



Boys Town designs, a few of which are shown here, are the work of Leo A. Daly Co., Omaha, Nebr., architects.

Buildings, living quarters completely Bryant Winter Air-Conditioned



A dream that began thirty years ago with a young priest and five homeless boys is nearing reality with the construction of a three-million-dollar addition at Boys Town, ten miles from Omaha, Nebraska.

When completed, Father Flanagan's Boys Town will be able to provide accommodations for one thousand boys, more than twice the number now being cared for. The new addition includes twenty-five cottages of the type shown in the larger illustrations above, each of which will house twenty boys of high school age; a grade school and a high school, both completely equipped with motion picture apparatus for visual education; a fully-equipped trade school; a field house, athletic fields and swimming pool; an administration building and all other facilities necessary to the proper care of destitute boys of every race and creed.

Besides these living and educational facilities, Boys Town's nine hundred acres include great farm lands and its own herds of dairy and feeder cattle, as well as

sixty acres of vegetable gardens. Here farm and dairy training are provided for boys who are so inclined.

All buildings and living quarters at Boys Town are equipped with Bryant BA-88 Winter Air Conditioners. The BA-88 is made in seven sizes with outputs up to 200,000 BTU per hour. Bryant Heater Company, 17825 St. Clair Avenue, Cleveland 10, Ohio . . . One of the Dresser Industries.

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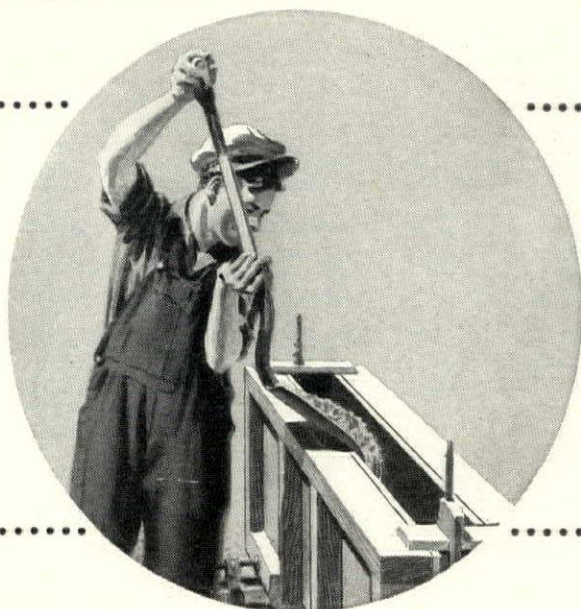
LET THE PUP BE FURNACE MAN

Kimpreg*... Plastic Armor for Plywood

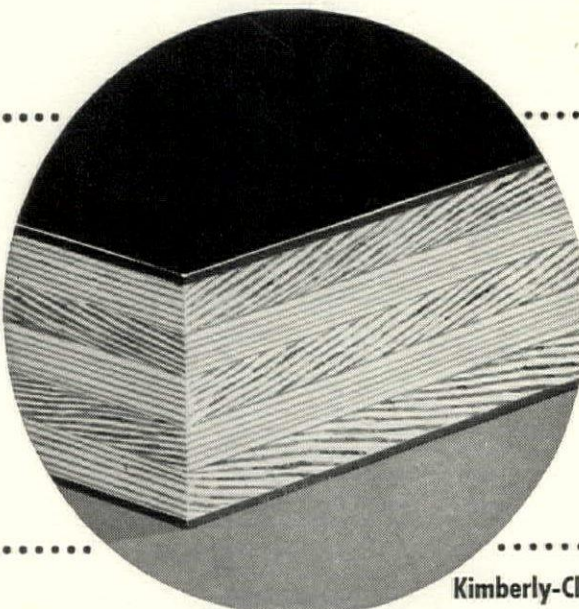


LIGHTWEIGHT; WATERPROOF. Kimpreg* plastic surfacing material is an insoluble substance fused to plywood by manufacturers who produce Kimpreg plus plywood, a light, strong material. It repels rain and snow, defies parasites and decay... is long-wearing and washable.

ARMOR-SURFACED; WORKABLE. Kimpreg surfaced plywood is a versatile, hardworking product. Certain types are suitable for concrete forms, factory storage bins, inspection or wrapping tables, flooring... or wherever a durable surface is required.



PERMANENT; ECONOMICAL. Abrasion-resistant, scuffproof Kimpreg has many possibilities. Mail the coupon today for complete information about this material—and the names of manufacturers making plywood surfaced with Kimpreg. *If you cannot get all the Kimpreg-surfaced plywood you need, please be patient until the resin supply is more plentiful.*



Kimberly-Clark Corp., Neenah, Wis. Please send me the free Kimpreg book and the names of manufacturers making plywood surfaced with Kimpreg. AE-747

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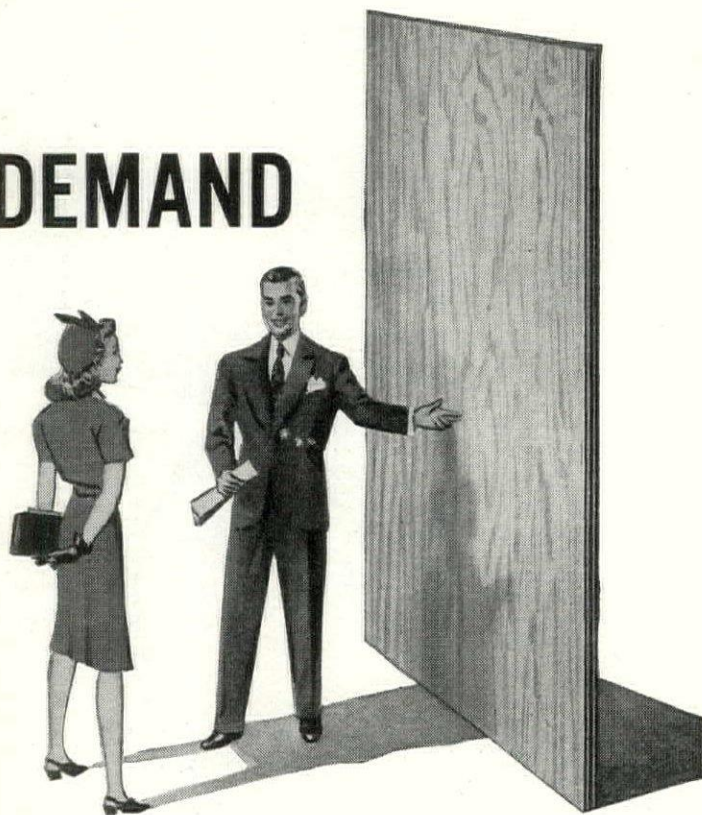
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MEET THE HUGE DEMAND

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FINE WELDWOOD HARDWOOD PLYWOODS



For the first time since before the war, Weldwood Plywood is available in large supply . . . in a wide variety of fine cabinet hardwoods!

And you'll find eager acceptance for Weldwood all through your clientele.

Why? Because . . . even in the face of serious shortages . . . we've carried on a vigorous national advertising campaign to sell Weldwood to home-minded Americans. As a direct result of this advertising, almost half-a-million prospective users have written for more complete information.

We've told them all the entire Weldwood story. They know, for instance, that Weldwood has striking decorative beauty plus high structural

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And your clients know this: Weldwood's first cost is the last. It's guaranteed against splitting, cracking or warping for the life of the building in which it's installed.

Take advantage of this knowledge . . . and the acceptance that comes with it. Specify Weldwood. It's a modern material of *proved* quality and demand.

You can get detailed information on the wide variety of sizes and veneers now available from your nearest USP office or representative.

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Weldwood Plywood and Mengel Flush Doors are products of
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Distributing units in Baltimore, Boston, Brooklyn, Chicago, Cincinnati, Cleveland, Detroit, Fresno, High Point, Los Angeles, Newark, New York, Oakland, Philadelphia, Pittsburgh, Rochester, San Francisco, Seattle. Also U.S.-Mengel Plywoods, Inc. distributing units in Atlanta, Dallas, Jacksonville, Louisville, New Orleans, Houston, St. Louis. *In Canada:* United States Plywood of Canada, Limited, Toronto. *Send inquiries to nearest point.*

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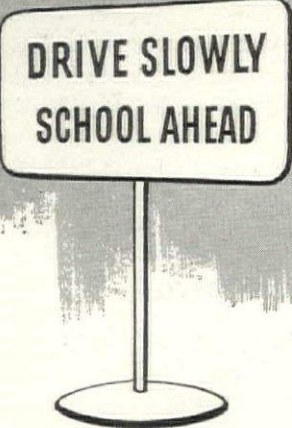

**Plastics and Wood
 Welded for Good**

Tekwood* (paper-faced plywood)
 Flexmetl*
 Weldwood Glue* and other adhesives
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 Decorative Micarta
 Flexwood*
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Waterproof Weldwood for exterior use is bonded with phenol formaldehyde synthetic resin. Other types of water-resistant Weldwood for interior applications are manufactured with extended urea resins and other approved bonding agents.

Only Sloan *can say this:*



DRIVE SLOWLY
SCHOOL AHEAD

**83% OF ALL SCHOOL SYSTEMS* ARE
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**54% OF ALL SCHOOL SYSTEMS ARE
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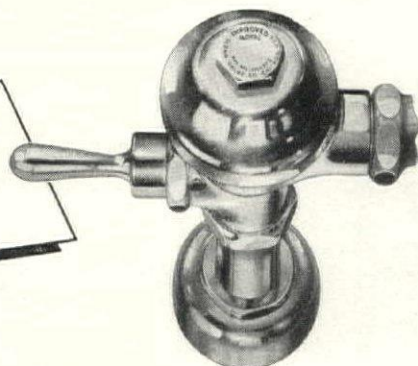
There are several reasons for Sloan's pre-eminence. For one thing, maintenance costs are reported as low as $\frac{1}{4}$ of 1c per Valve *per year*. Then too, Sloan Flush Valves save water; they protect public

health by preventing back syphonage; they can now be whisper quiet; they have unlimited life—yet cost no more. That is why more Sloan Flush Valves are sold than all other makes combined.

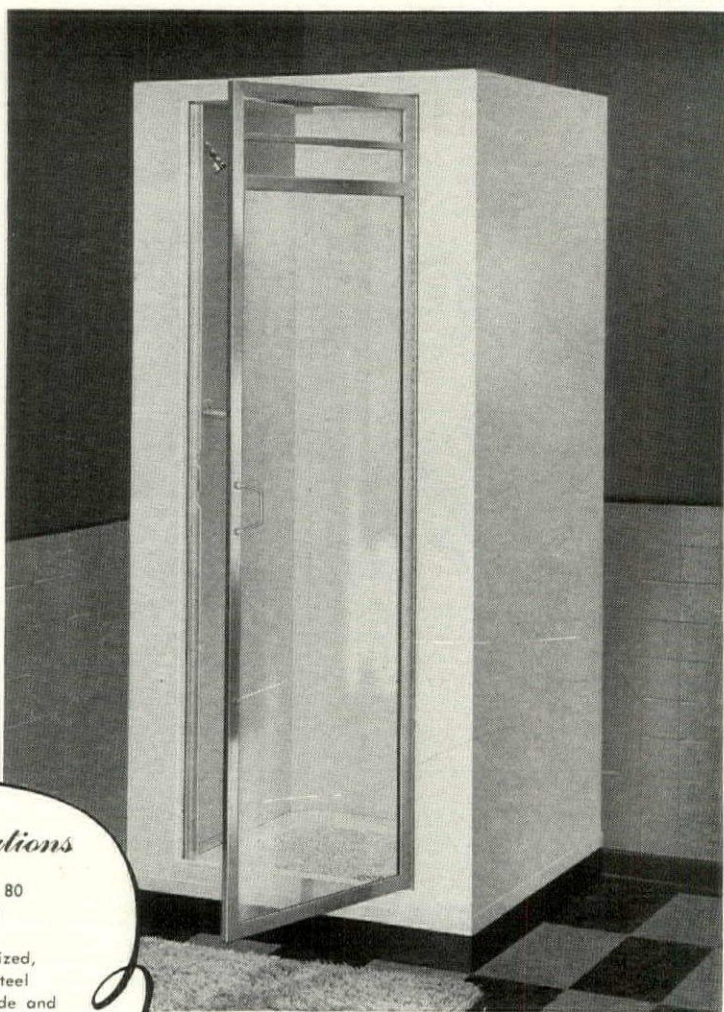
SLOAN VALVE COMPANY • 4300 W. Lake St., Chicago, Ill.

*In cities of 25,000 population and over.

sloan *Flush* valves



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SIZE—32 x 32 x 80
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WALLS—Bonderized, galvanized steel. Finished inside and out with white baked-on synthetic enamel.

RECEPTOR—Semi-flat type. Pre-cast terrazzo or Artex, non-slip, leakproof, non-absorbent. Brass drain for 2" waste connection cast integral with receptor.

VALVES—Individual compression valves with arm and shower head.

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...with Zephyr Door A shower bath, representative of the best quality in cabinet construction available to the plumbing trade today. Recommended for installation in the better class of homes, institutions, hotels, and clubs. The Fiat Cadet Shower and Zephyr Door are products of fine workmanship and design, in harmony with modern bathroom architecture.

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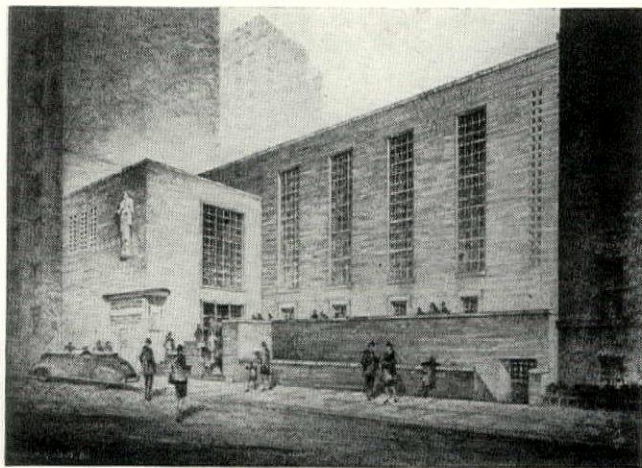
A WORLD CONGRESS FOR THE STUDY OF FAMILY AND POPULATION PROBLEMS was held in Paris during the week of June 22nd under the auspices of the French National Union of Familial Associations. One of the principal topics scheduled for discussion was "Housing for Families." This committee considered housing shortages, both as a result of war and of economics; interrelation of house design and family problems; home financing; recent improved techniques of building, and legal protection of family housing (zoning, taxation, etc.). Robert Boudet served as Secretary-General.

A TWO-WEEKS COURSE IN HOME MORTGAGE LENDING OPERATIONS for Junior Mortgage officers will be conducted by the Small Homes Council of the University of Illinois and the American Bankers Association, beginning July 7th. Emphasizing operational techniques, the course will include study of the processing of home loans guaranteed by FHA and VA, home planning, principles of home construction, fundamentals of home appraising, legal aspects of loan transactions, mortgage servicing and merchandising.

BLACK MOUNTAIN COLLEGE, N. C. will commence its 8-weeks session on June 30th. Among courses offered are: Painting and Drawing, conducted by Ilya Bolotowsky; Weaving, by Franziska Mayer and Trude Guermonprez; and Photography, by Beaumont Newhall of the Museum of Modern Art.

ADDITIONAL INSTRUCTORS in Architectural Design, Structural Design, Building Materials and Equipment, and Freehand Drawing are needed at schools of architecture during the coming summer and fall semesters. Further details may be obtained from Professor Paul Weigel, Chairman of the Committee on Employment for Collegiate Schools of Architecture at Kansas State College, Manhattan, Kansas.

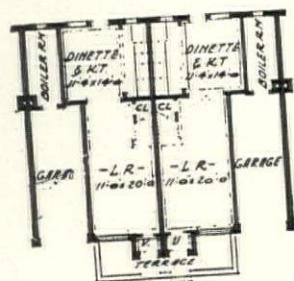
BUILDING PREVIEWS



THE COMMUNITY CHURCH, East 35th St., New York City, designed by Salo & Magoon, architects, will provide facilities for the many activities of this non-sectarian group. Consulting rooms and conference space for educational and social gatherings are located in the basement, while a large assembly hall seating 1,000 will take up the entire main floor. The exterior is brick and the air-conditioned interior will be of painted cinder block. Now under construction, the new church should be finished by fall.

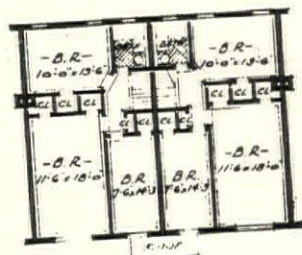
THE \$15,000,000 ADDITION to John Hancock Mutual Life Insurance Co. offices in Boston, Mass. (Cram & Ferguson, architects) is now being built by Turner Construction Co. The structure, designed as a 26-story tower flanked by two 8-story wings, will provide

(Continued on page 64)



FIRST FLOOR PLAN

— RALEIGH —



SECOND FLOOR PLAN

Bay Development, TRUMP HOMES

Seelig & Finkelstein—Architects

Par Plumbing—Contractors, all of Brooklyn, N. Y.

800 Delany Flush Valves and No. 50 Vacuum Breakers.

MODERNIZE with DELANY VALVES

These 400 Beautiful Homes are equipped with streamline, space saving Delany Valves—one of the reasons for the rapid sales of the above homes long before they are completed.

These families are on the threshold of a service many families have been enjoying for the past 20 years. You too can have this, light fingertip manipulation, the speedy cycle of operation (6 seconds), the smooth streamline action, the positive clean elimination of waste, definitely doing away with all personal annoyances of additional housekeeping.



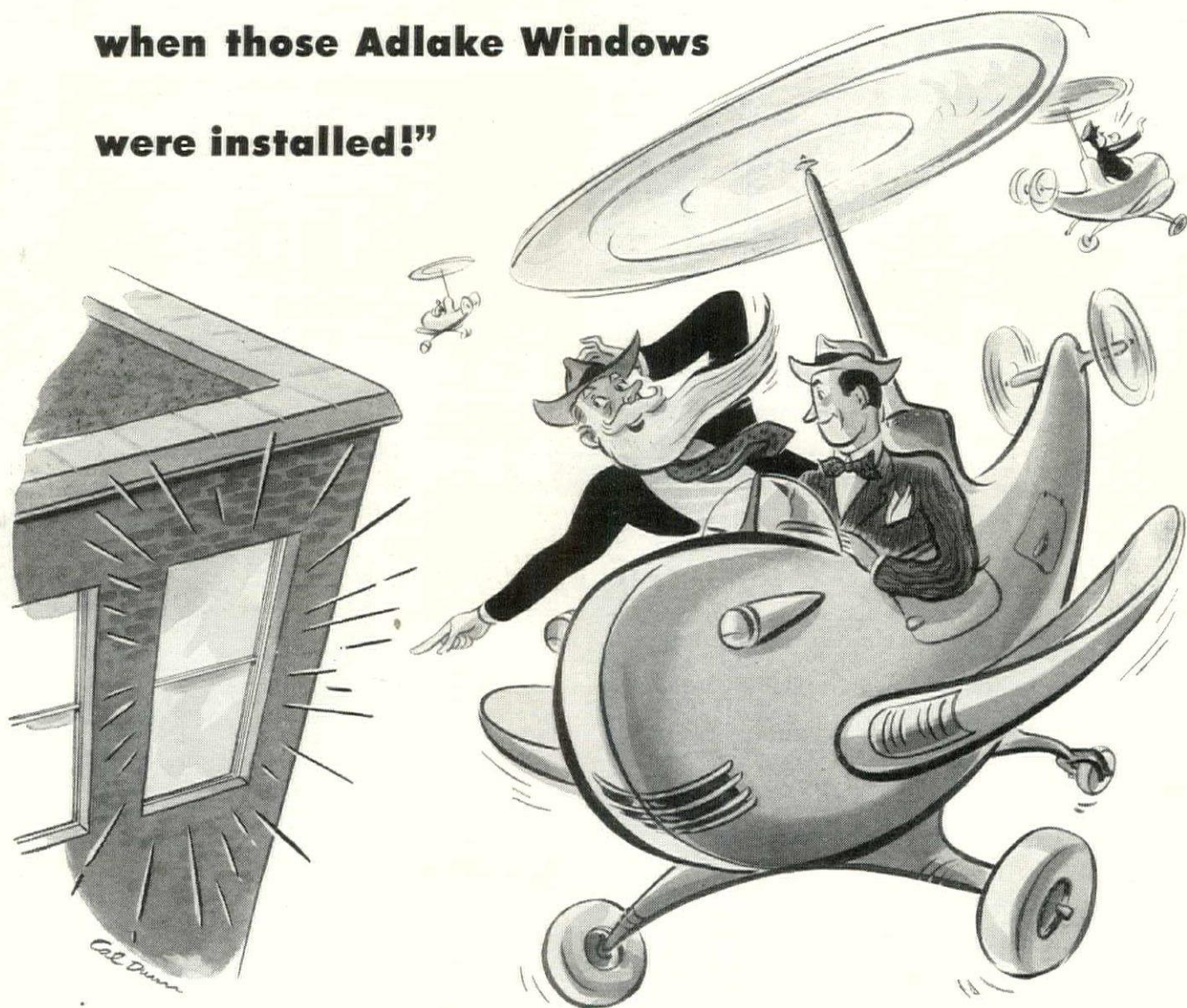
THE SIMPLEST, MOST EFFICIENT, AND EASIEST TO MAINTAIN FLUSHOMETER ASSEMBLY—with full protection against back-syphonage and resulting water contamination.

SINCE 1879
Coyne & Delany Co.
BROOKLYN N.Y.
FLUSH VALVES · VACUUM BREAKERS · PLUMBING SPECIALTIES

"I was just a boy back in '47...

when those Adlake Windows

were installed!"



BUILT FOR A LIFETIME of service, designed for lasting beauty—*Adlake* Aluminum Windows are today's best window investment!

Only *Adlake* combines non-metallic weather stripping and serrated guides to stop excessive air infiltration and give you finger-tip control. What's more, its lustrous aluminum sash requires no painting or maintenance. No warp, rot, swell, stick or rattle—*ever*.

Truly, the *Adlake* Aluminum Window

fulfills your every architectural requirement! Complete information and data will be mailed you on request. Drop us a post-card today... there's no obligation, naturally. Address: The Adams & Westlake Company, 1101 N. Michigan, Elkhart, Ind.

THE
Adams & Westlake
COMPANY

Established 1857 • ELKHART, INDIANA • New York • Chicago



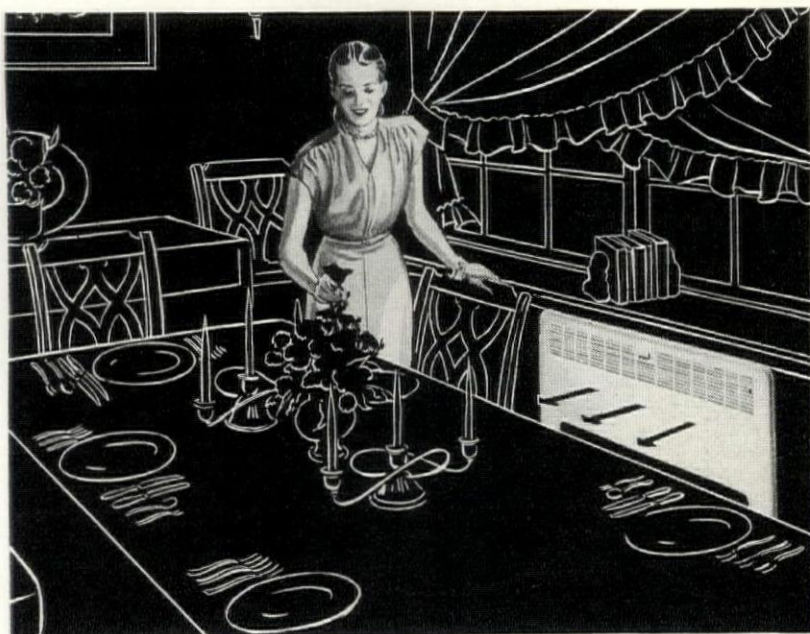
Furnishers of
Windows to the Transportation Industry
for Over 30 Years

**I'm strong for
radiant heat!**



**I'm strong for
convection heat!**

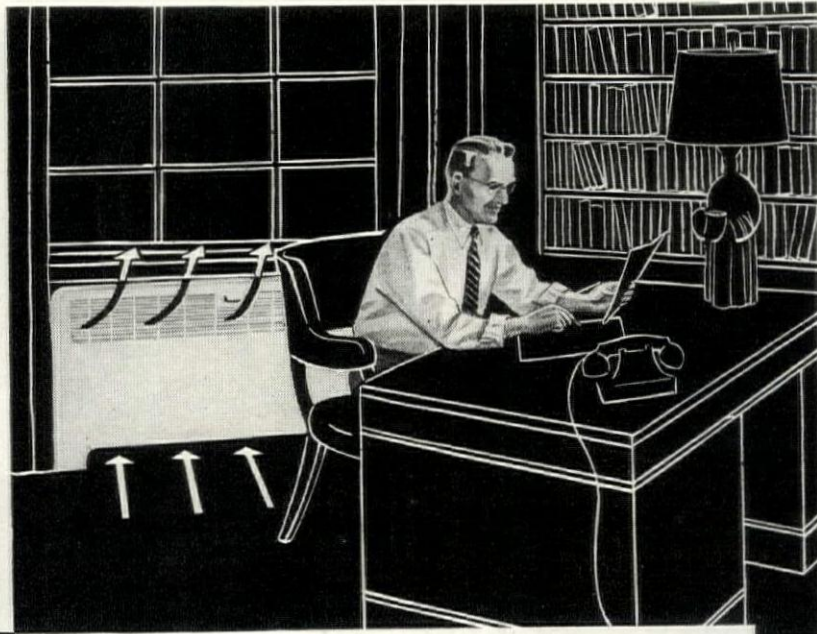
**Modine gives you BOTH of these
great heating principles blended into one!**



1

RADIANT HEATING

Mild, radiant heat in just enough quantity to offset heat loss from window areas — that's what those arrows represent, coming from the Modine Convactor Panel below the window. To this we add . . .



2

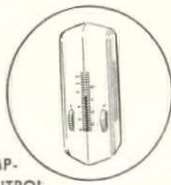
CONVECTION HEATING

Warmed air circulated by Convection Heating. Hot water or steam passes through copper heating unit which draws cooler, floor-line air into bottom of convector where it's warmed, rises and then passes out through grille.

Result: Dependable new heating comfort for moderate cost homes and apartments . . . distinctive room charm and cleanliness without unsightly radiators! Yes, Modine Convactor Radiation provides a modern, blended heating system for modern living — a heating system that makes possible individual room control — that responds almost instantly to sensitive automatic controls — that gives you gentle air circulation without the use of moving parts that wear out. If you're planning to modernize, think of Modine Convactor Radiation . . . look for Modine's representative in the "Where-to-Buy-it" section of your phone book . . . or send in coupon below for new, free Convactor Booklet! MODINE MANUFACTURING CO., 1736 Racine Street, Racine, Wisconsin.



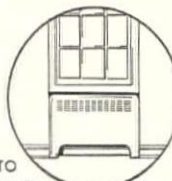
MODERN
BEAUTY



CLOSE TEMP-
ERATURE CONTROL



EASY TO
INSTALL



ADDS TO
LIVING SPACE



PRICED
FOR TODAY'S
HOMES AND
APARTMENTS

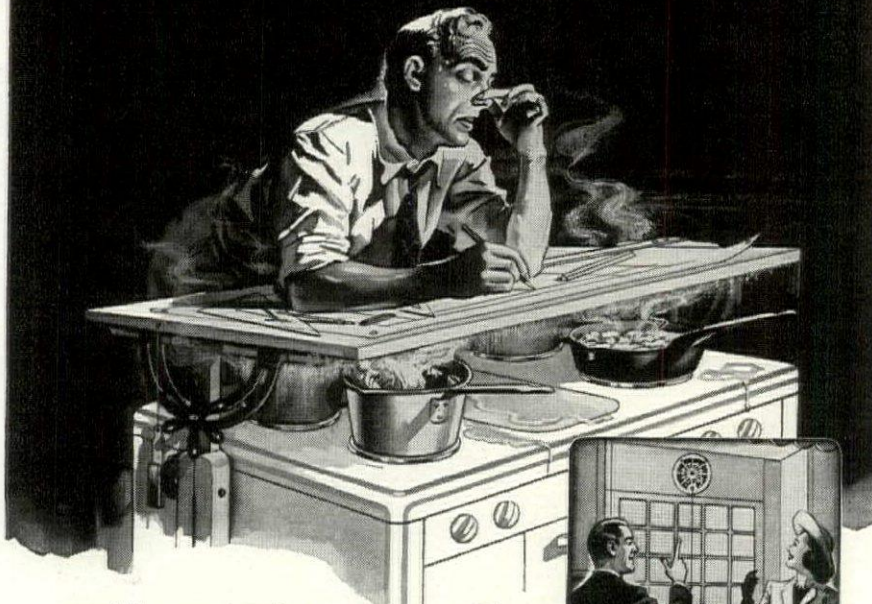
Modine
CONVECTOR RADIATION

The Modern "proved by use" heating method

Modine Mfg. Co., 1736 Racine St., Racine, Wis.
Yes! I want your new free booklet containing complete facts on Convactor Radiation. Please send it today!
NAME _____
ADDRESS _____
CITY _____
STATE _____

ANNOUNCEMENTS

if YOU worked over a
Hot Stove...

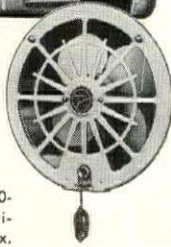


you'd remember to specify
EMERSON-ELECTRIC

*Kitchen
Ventilation*



Emerson Junior 10-
inch Kitchen Ventila-
tor with wall box.

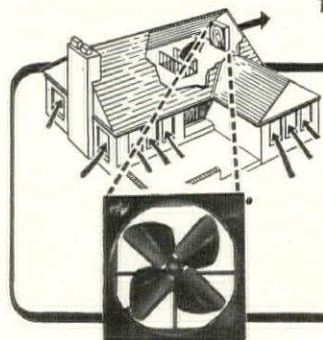


If you took time out on every designing or home construction job to sniff the odor of cooking cabbage, chances are you'd never fail to specify Emerson-Electric Kitchen Ventilation.

Fussy housewives become your biggest boosters when your plans provide for kitchen comfort. Again this year, Emerson-Electric is making your client-job easier by selling the idea of proper kitchen ventilation in more than a score of popular magazines reaching thousands of present and prospective home owners.

For detailed specifications on Emerson-Electric Kitchen Ventilating Fans, write for free Folder No. 203 today!

THE EMERSON ELECTRIC MANUFACTURING CO.
ST. LOUIS 21, MISSOURI



Breeze Condition
The Entire Home with an
EMERSON-ELECTRIC HOME COOLER FAN
Installed in attic, this sturdy fan forces out day's
accumulation of hot air, draws in refreshing night
air through open windows and doors.

32

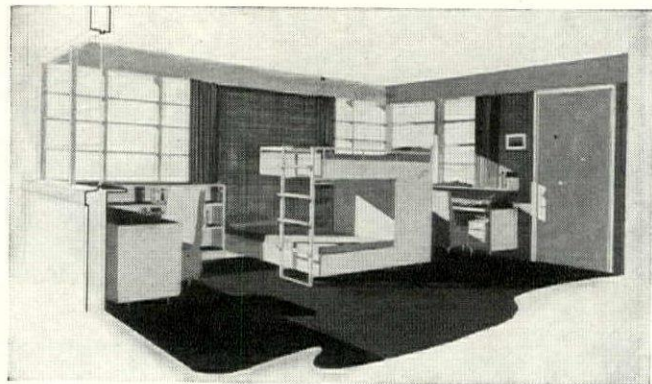
EMERSON  **ELECTRIC**
MOTORS FANS APPLIANCES

625,000 sq. ft. of office space for the company's staff, and will be Boston's highest building. For increased flexibility of interior space, all load-bearing columns are located in the exterior shell. An auditorium to accommodate 1,100 will be included in one of the wings.

A TWELVE-STORY AND PENTHOUSE APARTMENT BUILDING on New York City's upper East Side is now being erected by Tishman Realty & Construction Co. Steel work is under way and the end of the year should see completion of this brick and limestone structure which will provide 53 cooperative apartments for New York's higher income brackets. Emery Roth is architect.

AWARDS

THE AMERICAN ACADEMY OF ARTS AND LETTERS and the NATIONAL INSTITUTE OF ARTS AND LETTERS at a recent joint meeting named Gilmore Clarke, landscape architect, as a member of the Academy. Frank Lloyd Wright, John Walter Cross, Carl Milles and Kenneth Miller were chosen as members of the Institute.



THE "BETTER ROOMS FOR BETTER LIVING" COMPETITION sponsored by the *Chicago Tribune* announced the winners of its \$1,000 awards for the best designs of seven domestic room types. Winning plans are simple, colorful, easy to maintain, and—presumably—inexpensive. George Rafferty, of St. Paul, Minn. received first prize for a living-dining room combination; Betty Bovee, Seattle, Wash. for a dining room; George Clark, of Champaign, Ill. for a juvenile bedroom (see cut above); Stuart Johnston and wife, R. Kemper Johnston of Chicago, Ill. for a kitchen-recreation room.

Winning designs are now on display in the Blackstone wing of the Art Institute, Chicago.

COMPETITION

"WHAT PLANNED LIGHTING CAN DO," a contest sponsored by the 2nd International Lighting Exposition (to be held in Chicago, November 3-7), offers twelve \$100 prizes for entries of recent successful industrial or commercial lighting installations. Prizes will be apportioned among the four types of professionals who are invited to join in this competition: Electrical Contractors, Utility Lighting Representatives, Architects and Consulting Engineers, Wholesalers' Lighting Specialists and Salesmen. Each group will be judged separately. Closing date is August 31. Further information may be obtained from the Merit Award Committee of the Exposition, 326 W. Madison St., Chicago 6, Ill.

APPOINTMENTS

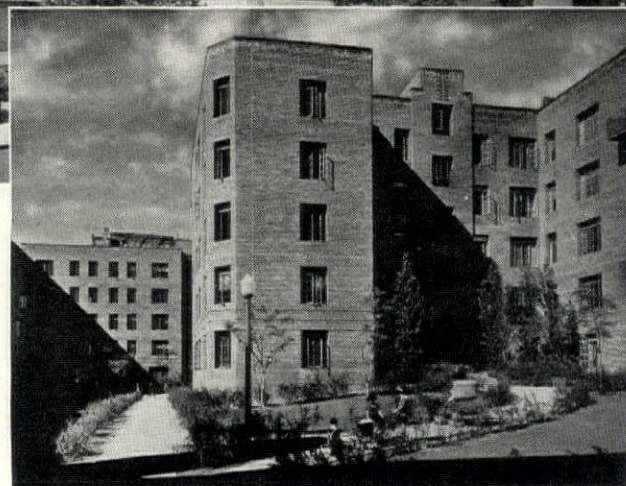
JOHN WALQUIST is now a partner in the New York architectural firm of Reinhard & Hofmeister, to be known hereafter as Reinhard, Hofmeister & Walquist. Richard Granelli has been made an associate of the firm.

(Continued on page 68)

Investment protected!



MODULAR BRICK and TILE for Rental Housing



In rental housing, more than one group makes an investment.

Investors, of course, risk capital. But architects risk their reputation for good design. Contractors and builders risk their reputations for building with quality materials and for performing according to contract.

All want to *protect* their investment. All get protection when rental housing is built with modular brick and tile.

These traditionally fine building materials are available today for exterior and interior use at reasonable cost. Masonry construction costs have not increased as much as other types.

Brick and tile, especially in modular sizes, lend themselves easily to any desired architectural design. They eliminate unnecessary, costly cutting and fitting on the

site...saving time, labor and dollars...assuring earlier occupancy, quicker income.

Maintenance and repair costs, too, are reduced to a minimum. This is mighty important from a long range investment point of view. It means lower annual operating cost.

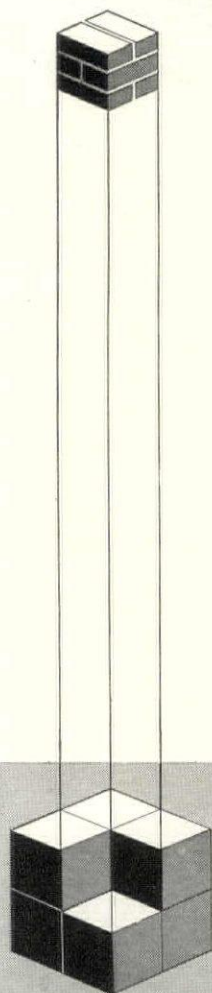
Beauty, structural strength and maximum fire-safety are other reasons for protecting your investments by building with modular brick and tile.

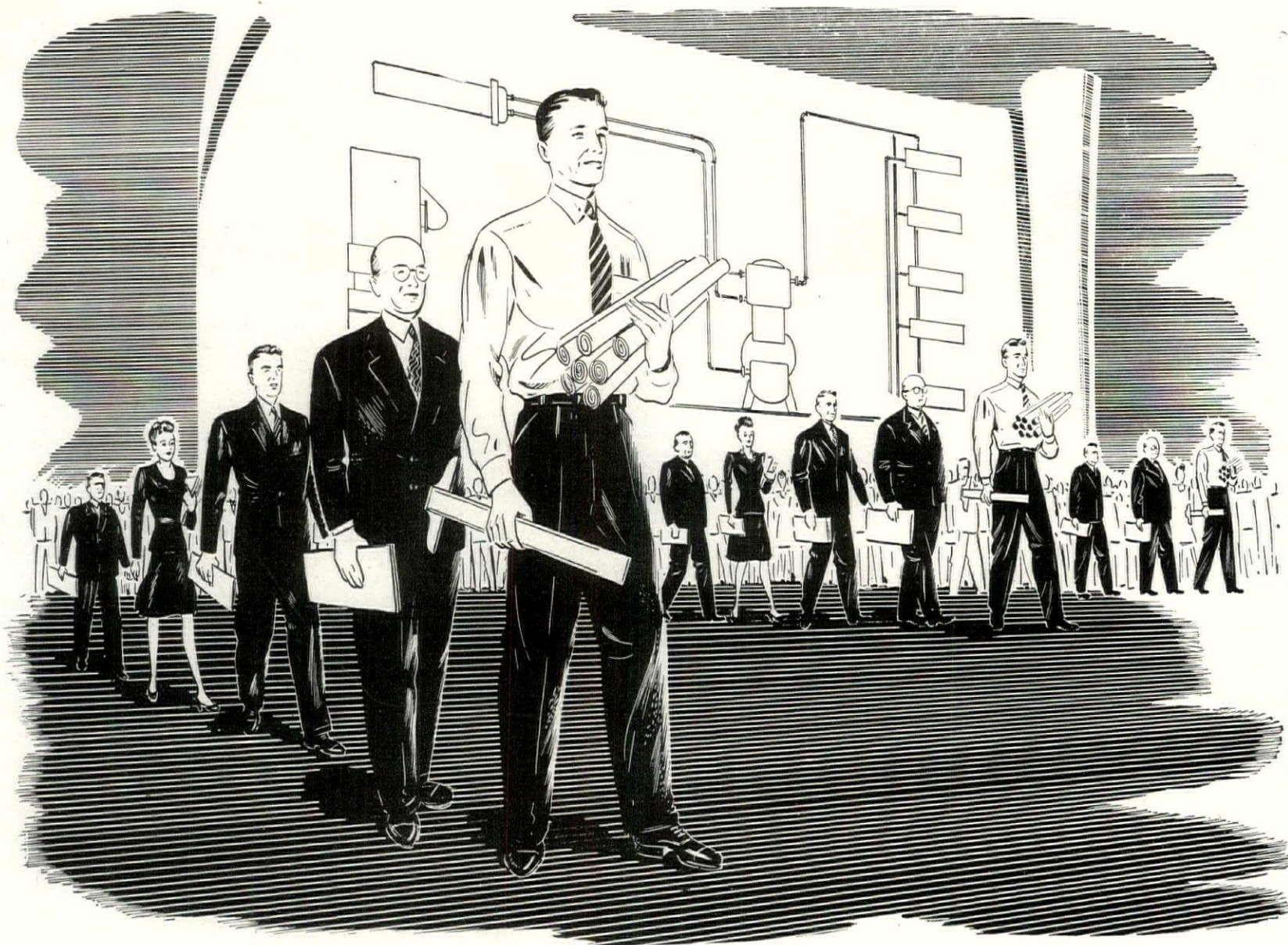
TWO FREE BOOKLETS

Of interest to architects are: "Modular Sizes of Brick and Tile," an aid to current design; and "The ABC of Modular Masonry," important in the development of coordinated dimensions. For your copies, address the Structural Clay Products Institute, Dept. AF-7, 1756 K Street, N.W., Washington 6, D.C.



NOW IT WILL BE BUILT WITH MODULAR-DESIGNED BRICK AND TILE





IN THE HOUSE OF WEATHER MAGIC . . .

ONE OUT OF FIVE IS AN ENGINEER

One out of every five of the people in the main office of the Trane Company is an engineer. Considering the number of people required for the duties of accounting, order handling, and the like, the figure is significant. Small wonder that Trane has been called an organization of manufacturing engineers.

Engineering governs every phase of Trane

activity . . . from the design, testing, and manufacture of Trane products to cooperation with architects, engineers, and contractors by Trane field engineers. Thus is the phrase Engineered Air Conditioning given meaning in the fullest sense.

Trane heating systems and air conditioning systems are designed by the architect, engineer, or contractor, drawing on the complete line of Trane products. Trane

field offices in 85 principal cities offer these men their entire cooperation.

* * *

The Convactor-radiator—modern successor to the old-fashioned cast iron radiator—has been engineered by Trane for universal application to steam and hot water heating systems, and is being produced in quantity so you can soon secure it from local distributors' stocks.

TRANE

Manufacturing Engineers of Equipment for
HEATING AND AIR CONDITIONING

THE TRANE COMPANY, LA CROSSE, WISCONSIN • Also TRANE COMPANY OF CANADA, LTD., TORONTO, ONTARIO



The Architect Recommended

Ferro-Therm STEEL INSULATION

Residence and business premises of C. Metzroth, Babylon, L. I.



More and more architects are recommending Ferro-Therm Steel Insulation for home and industry. Because, being a sheet of alloy coated steel, its high reflectivity keeps heat just where you want it—inside or out as required. All your insulation problems can be solved by using Ferro-Therm Steel Insulation.

FERRO-THERM FEATURES

1. Minimum heat storage capacity
2. Quick temperature pull down
3. Increases pay space
4. Saves weight
5. Does not adsorb odors or gases
6. Positive vapor barrier with steel sheets resulting in permanent insulating efficiency
7. Tin alloy coating protects against atmospheric moisture
8. Absolutely vermin-proof
9. Definite fire protection

Ferro-Therm
REG. U. S. PAT. OFF.
STEEL INSULATION

Fully Protected by U. S. and Foreign Patents issued and pending

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AMERICAN FLANGE & MANUFACTURING CO., INC.

Ferro-Therm Division, Dept. AF, 30 Rockefeller Plaza, New York 20, N. Y.

Please send me, without obligation, complete information on Ferro-Therm Steel Insulation.

Name.....

Firm.....

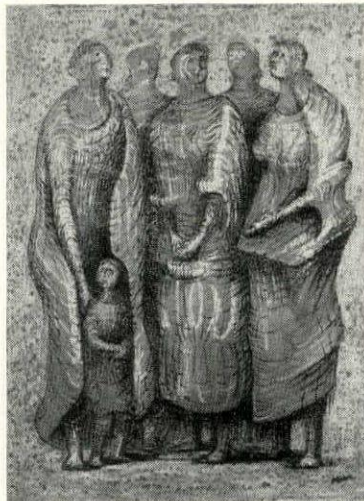
Street.....

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

ANNOUNCEMENTS

EDWARD SCHADE has been made an associate member of Mitchell & Ritchey, architects, Pittsburgh, Pa.

NEW COLOR REPRODUCTION PROCESS



"A GROUP OF DRAPED FIGURES IN RED," one of a series of chalk drawings by Henry Moore, is the most recent addition to the remarkable group of reproductions now being made by Esther Gentle Studios, 70 Bedford St., New York City. Her process, which employs as many as seventeen stencils for a single picture, obtains with great exactness the vivid and subtle tones of the original paintings. The

new Henry Moore print is being added to collections of the Esther Gentle set now on view at the Metropolitan Museum of Art and the 42nd Street Public Library in New York City. Other prints in this series are: "Still Life with Glass and Pipe," by Picasso; "The Brown Hat," by Milton Avery; "The Yellow Donkey," by Paul Klee; "Composition in Blue," by Hans Hofmann; and "The Gothic Spire," by Lyonel Feininger.

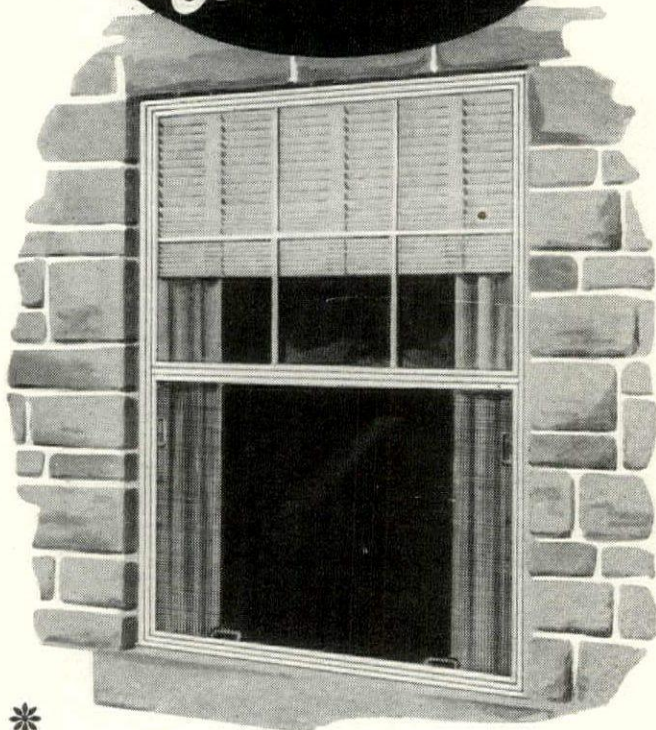
NEW OFFICES

RALPH SPICER, architect, announces the opening of his new office at 550 N. Oleander Ave., Daytona Beach, Fla.

CHARLES GOWING has reopened his architectural office at 41 Tremont St., Boston, Mass. (Continued on page 72)

RUSCO

WINDOW CONDITIONING*



*
All the benefits of storm windows
All the benefits of screens
All the benefits of weatherstripping
in one permanently installed unit

*with nothing to change... nothing to store...
year 'round, rainproof, draft-free, filtered-
screen ventilation... patented Thermolok*
frame insures permanent, weatherproof fit.*

Thousands upon thousands of prospective home, commercial and industrial building prospects know all about the many year 'round advantages of RUSCO ALL METAL, SELF-STORING COMBINATION SCREEN AND STORM SASH. Your recommendation will receive enthusiastic approval.

Specifications will be found in Sweets File or complete descriptive literature and specifications sent upon request.

THE F. C. RUSSELL COMPANY

6400AF HERMAN AVENUE • CLEVELAND 2, OHIO

"Always one step ahead
of the weather" with
RUSCO

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T. M. REG. APP. FOR

Also manufacturers of Rusco All Metal Venetian Awnings, Thermoseal Combination Windows, Cinco Sto-a-way Windows.

Stainless Steel SINKS AND CABINET TOPS



**CUSTOM BUILT
to YOUR SPECIFICATIONS**

Custom fabrication is an original policy of Just Manufacturing Company and we have maintained that policy throughout the years. The needs of our custom-built trade have always had preference and always will. You design the cabinets... we build the sinks and cabinet tops to fit your design... any size... any shape, and they will always have that incomparable...

Radiiluxe QUALITY

which gives you two important exclusive features:

**IN-BUILT ANTI-SPLASH RIM ON
BOWLS, DOUBLE-PITCH DRAIN-
BOARDS** with no channels to clean, no
grooves to endanger fine glassware.

ALL WELDED, seamless construction polished to a beautiful satin finish... radius corners in bowls, vertically and horizontally... fully sound deadened and many other quality features.

Other JUST LINE products are Cabineteer "Package Unit" Stainless Steel Sinks, Stainless Steel Scullery Sinks, and Galvanized Scullery Sinks that are hot-dip galvanized after fabrication.

Write today for bulletins and details.

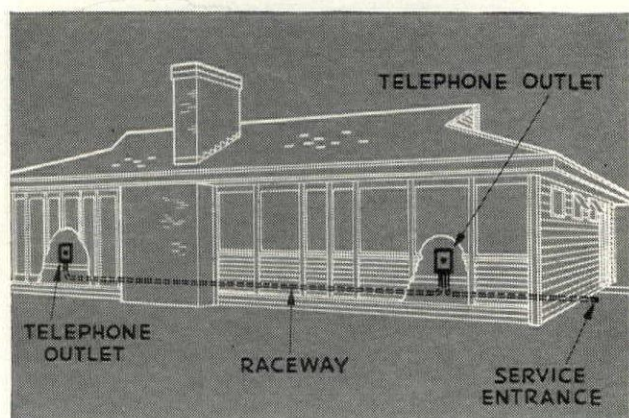
Just Manufacturing Co.

4610-20 W. 21st Street, Chicago 50, Illinois



Schweikher and Elting, Architects

SMALL HOMES, TOO, NEED RACEWAYS FOR TELEPHONE WIRES



When you pack a lot of livability into a small space, little things mean much in comfort and convenience. A raceway for concealing telephone wires is especially important.

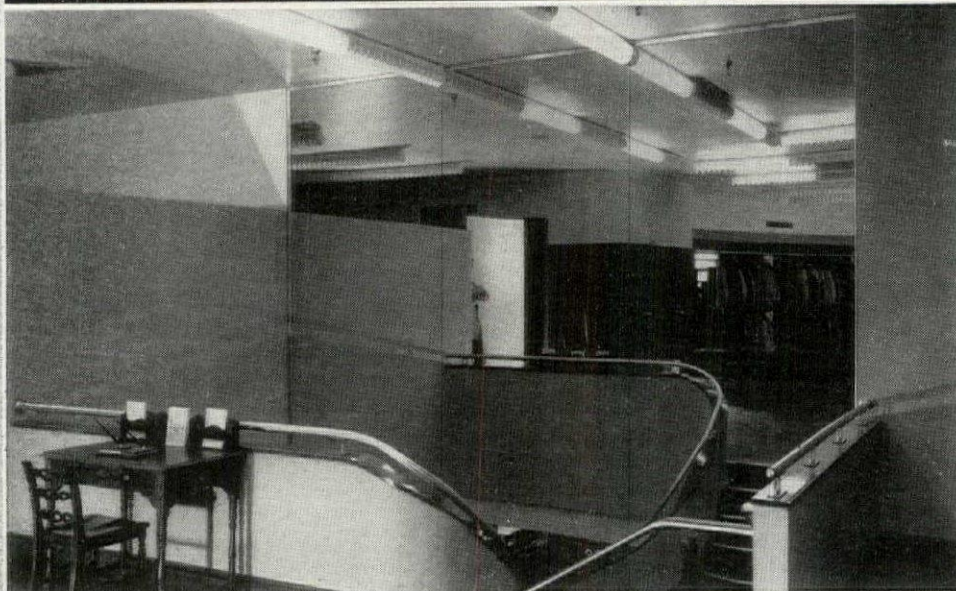
During construction of a one-story home without a basement, for example, the builder can generally assure a good telephone arrangement by (1) providing an entrance raceway for telephone wires; and (2) running a raceway under the floor to convenient telephone outlets. If there is to be an unfinished basement, all that may be needed is the entrance raceway, plus short raceways up within the walls to telephone outlet locations.

Your Bell Telephone Company will be glad to help you plan economical telephone wiring facilities in small homes or large. Call your Telephone Business Office and ask for "Architects and Builders Service."

BELL TELEPHONE SYSTEM



UP-TO-DATE use of *Glass* in



Customers linger longer—and buy more—in attractive, up-to-date stores. The proper application of mirrors can do much to enhance the decor of any interior. "Pittsburgh" offers regular polished Plate Glass, and blue, green and flesh tinted Plate Glass with silver, gold or gunmetal backing . . . a wide range to meet any design problem. Architect: K. C. Welch.

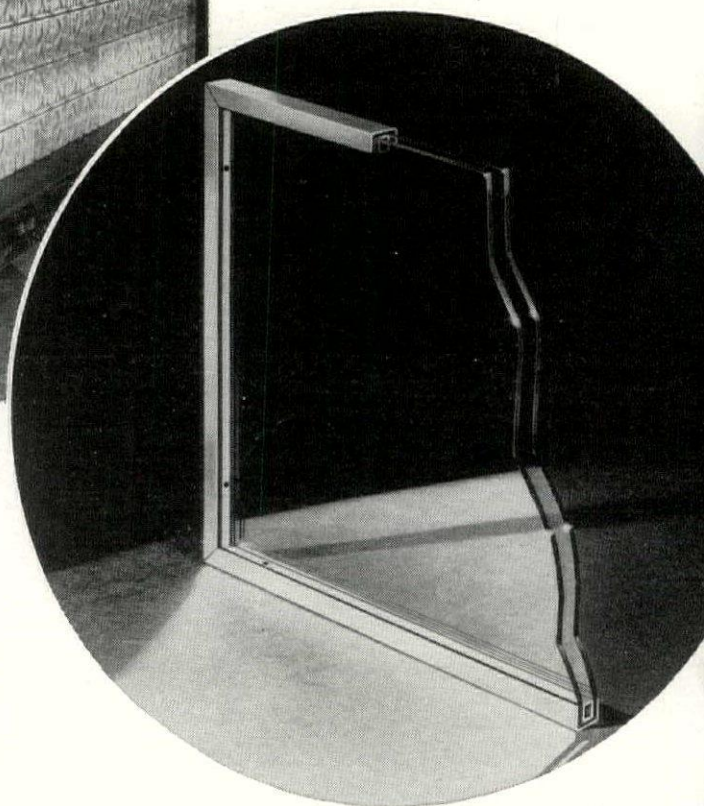
. . .



PC Glass Blocks are an increasing favorite with architects and builders. Easy to install and easy to clean, they combine modern good looks with exceptional versatility. They transmit daylight generously. They preserve privacy. They aid temperature control. And they can be used decoratively, as in the bar at left, with striking effect. Architect: Frank Smart.

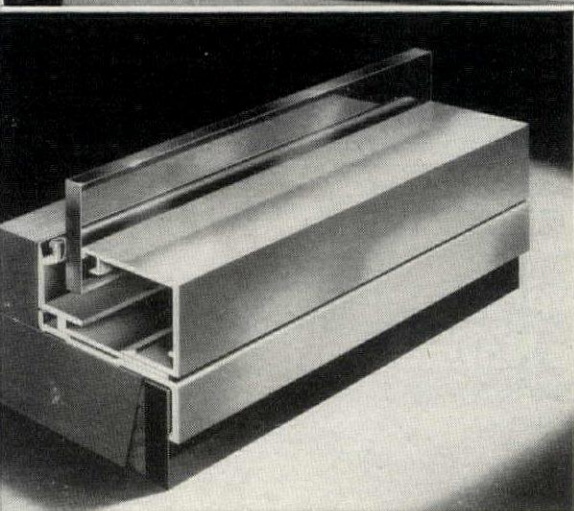
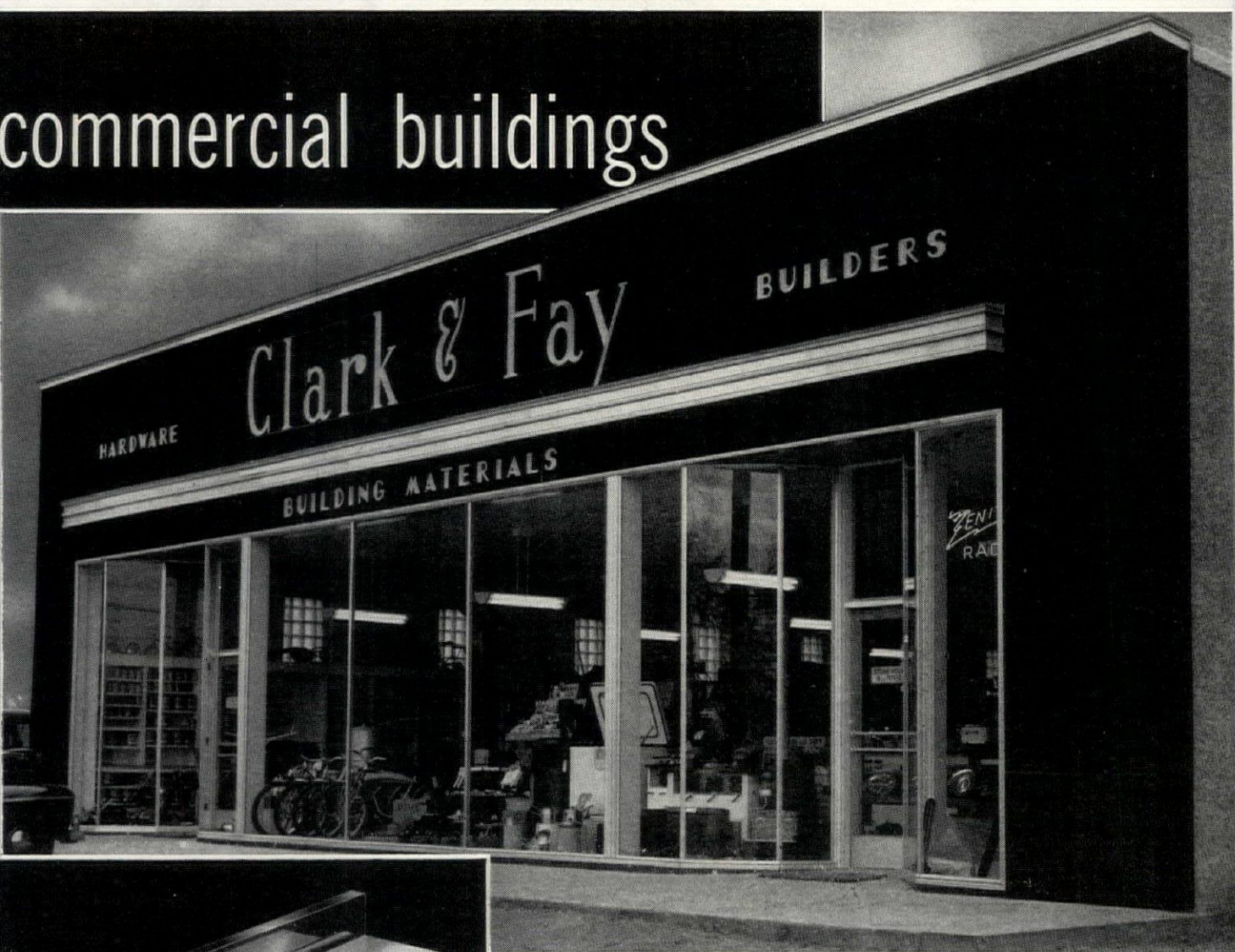


→
Twindow—"Pittsburgh's" new window with built-in insulation, consists of two or more panes of "Pittsburgh" Glass separated by hermetically sealed air spaces, and enclosed in a protecting frame of stainless steel. The 2-pane Twindow unit cuts heat loss through windows nearly in half—and has even greater insulating effectiveness when made with three or more panes of glass. It minimizes downdrafts near windows, contributes increased comfort as well as economy to stores, hotels, restaurants, office buildings and factories.



PITTSBURGH PLATE GLASS COMPANY

commercial buildings



"Open vision"—the new trend in store design—has emphasized the need for *quality* in the glass products used to build distinctive store fronts and interiors. "Pittsburgh" products, such as Carrara Structural Glass, Polished Plate Glass, Pittsburgh Mirrors, Herculite Tempered Plate Glass and Twindow, the window with built-in insulation, have proved themselves outstanding quality leaders in the store field. You can depend upon them for the faithful and effective execution of your store designs. Architect: Austin K. Hall.

← This rectangular sash is a recent addition to the Pittco De Luxe Store Front Metal line. It gracefully harmonizes with modern store front design. Its extruded method of manufacture assures rugged strength and a clean, sharp profile. Its beauty and practical utility are typical of the Pittco De Luxe line. Where economy is of prime importance, Premier, the other Pittco line of store front metal, is the ideal choice.

We believe you will find much to interest you in our illustrated booklet of ideas concerning the use of Pittsburgh Glass in building design. Send the coupon for your free copy.

★ Design it better with

Pittsburgh Glass



"PITTSBURGH" stands for Quality Glass and Paint

Pittsburgh Plate Glass Company
2175-7 Grant Building, Pittsburgh 19, Pa.

Please send me, without obligation, your free booklet entitled "Ideas for the Use of Pittsburgh Glass in Building Design".

Name.....

Address.....

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

PITTSBURGH PLATE GLASS COMPANY

ANNOUNCEMENTS



but it's troubled with **SVP***

Bathrooms have it, too. So do recreation rooms and laundries. It's the *Special Ventilating Problem arising from overloads that normal changes of air can't eliminate. Kitchen odors, that permeate the house—bathroom steam—fog, stale smoke from recreation rooms and soapy-vapors from laundries must be cleared by controlled ventilation . . . by



VENTILATING FANS

Specify Victron in these hard-to-ventilate rooms and your clients will appreciate your foresight long after the blue-prints are filed away.

There's a Victron model for every size home and architectural style. Model V 1106 (illustrated) is an attractive, modern design that moves 700 cfm; grille snaps on and off (without tools) for easy cleaning . . . fits snugly against wall.

Other models, including VS 50U for ceiling installation, have all the built-in quality and efficiency that comes from Victron precision engineering and 20 years experience.



Write for illustrated specification, or refer to Sweet's Architectural 1947 File 29B

14

VICTOR  **ELECTRIC**
PRODUCTS INCORPORATED
2930 Robertson Avenue, Cincinnati 9, Ohio

GEORGE NEMENY AIA and A. W. GELLER, architect, are now associated in practice at 14 E. 39th St., New York 16, N. Y.

VICTOR SPECTOR RA and H. EUGENE MONTGOMERY will be associated in general architectural practice at 1057 W. Broad St., Falls Church, Va.

STEVENS & WILKINSON, INC. (formerly Burge & Stevens) will practice architecture and engineering in their new building at 157 Luckie St., NW, Atlanta, Ga.

JOHN MORSE and FRED BASSETTI, architects, with Mary Bassetti as associate in interior design, have formed a partnership at 509 4th and Cherry Bldg., Seattle 4, Wash.

VICTOR FRID and CMDR. T. MERRILL PRENTICE USNR will practice architecture under the firm name of Ebbets, Frid & Prentice at 862 Asylum Ave., Hartford, Conn.

CARLTON BRUSH, architect, has resumed private practice at 1503 Wilshire Blvd., Austin 22, Tex.

PETER TROLIO AIA and JAY LIDDLE JR. AIA announce the formation of a partnership in Jackson, Miss.

ARTHUR DUPRE RA will specialize in residential and apartment buildings at 1595 W. Fifth Ave., Columbus 8, Ohio.

KATY and PAUL STEINMETZ, landscape architects, have opened an office at RFD Box 710, San Rafael, Calif.

CHANGES OF ADDRESS

FREDERICK HODGDON AIA has moved his offices to 3300 Temple St., Los Angeles 26, Calif.

GARFIELD, HARRIS, ROBINSON & SCHAFER, architects, are now located at 1740 E. 12th St., Cleveland 14, Ohio.

LOUIS KAHN, architect, announces that his new address is 1728 Spruce St., Philadelphia 3, Pa.

BACK AGAIN!
Pure Copper Home Protection
at 1/5 the Normal Cost

SAVE TIME . . .
SAVE MONEY

Here's the modern
low-cost way to
put lasting pure
copper protection
into all types of
buildings.

**COPPER ARMORED
SISALKRAFT**



YES, it's here again — the same fine Copper Armored Sisalkraft you specified before the war! Ideal for all concealed flashing and membrane waterproofing—will not kink, break or tear, gives all homes and commercial buildings enduring copper protection. Available now in copper weights of one, two and three oz. in rolls up to 60" wide. Write for your free folder and sample.

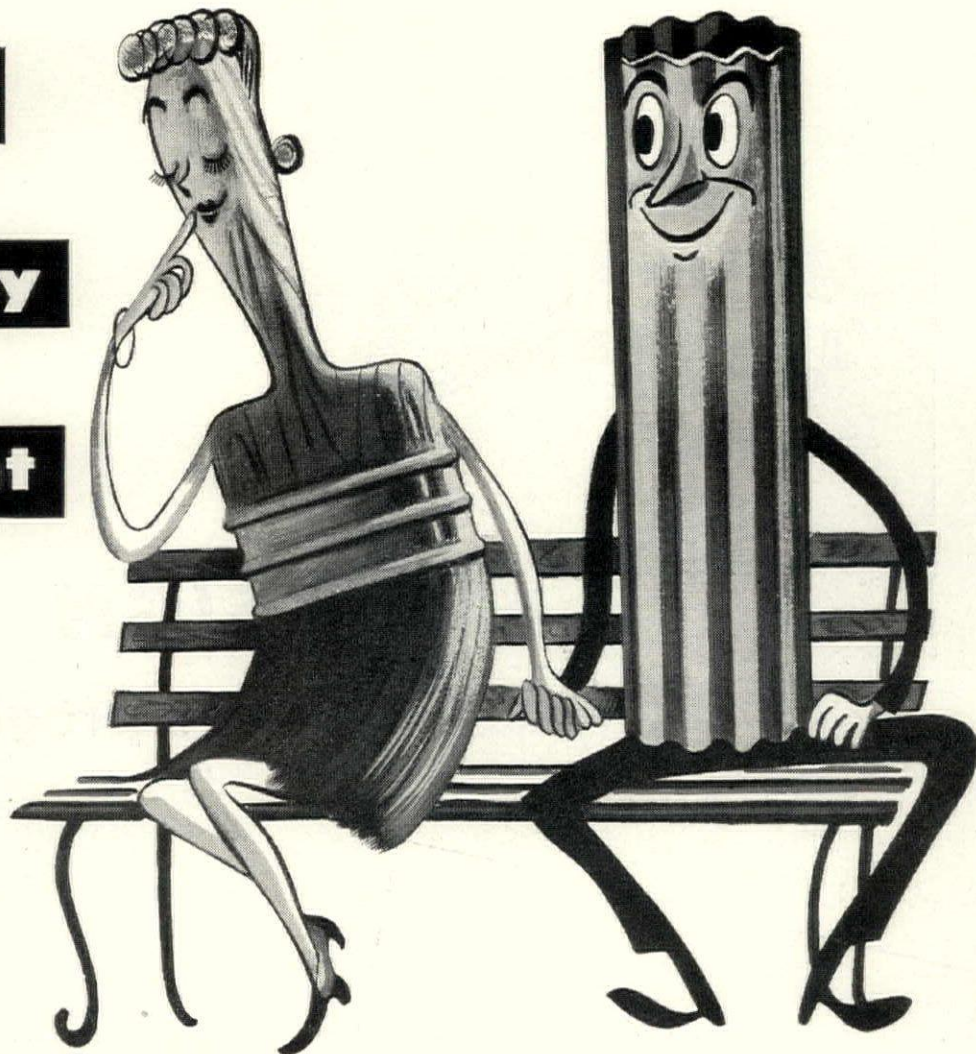
The SISALKRAFT Co.

205 W. WACKER DRIVE Dept. AF CHICAGO 6, ILLINOIS

This steel

has a way

with paint

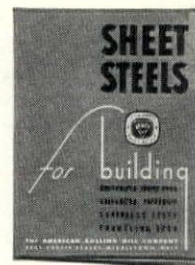


- ARMCO Galvanized PAINTGRIP Steel has a full-weight zinc coating. Unlike ordinary galvanized steel, it's friendly to paint. It does not dry out the vital oils, causing paint to flake and peel off before its time.

- The zinc coating on PAINTGRIP is Bonderized at the Armco mills. This neutral film provides a smooth surface that takes and holds paint. Weather-exposure tests show that paint lasts several times longer on ARMCO Galvanized PAINTGRIP than on ordinary galvanized or uncoated steel. And it actually costs less to use PAINTGRIP for gutters, down-

spouts, air-ducts and other construction than to use ordinary galvanized steel and acid-etch before painting.

- Armco distributors now have more orders for PAINTGRIP than they can fill immediately. But everybody — the Armco mills, the Armco distributor, and the sheet-metal contractor — is trying hard to supply more of this special-purpose steel. They know how important it is to have sheet metal work that looks better and satisfies owners. The American Rolling Mill Company, 11051 Curtis Street, Middletown, Ohio. Export: The Armco International Corporation.



See SWEET'S CATALOG for uses, advantages and general specifications of these other Armco special-purpose sheets:

ARMCO Stainless Steels

Galvanized ARMCO Ingot Iron

ARMCO Enameling Iron (for fine porcelain enameled work)

THE AMERICAN ROLLING MILL COMPANY

- SPECIAL-PURPOSE SHEET STEELS

- STAINLESS STEEL SHEETS, STRIP, BARS AND WIRE





To Escalators

SIGN

of a progressive store

*Here are some typical outstanding
stores in which Otis Escalators
have recently been installed:*

STONE & THOMAS
Wheeling, W. Va.

THE MAY COMPANY (Crenshaw Store)
Los Angeles, Calif.

SEARS, ROEBUCK and CO.
Salt Lake City, Utah

R. H. WHITE CO.
Boston, Mass.

D. H. HOLMES CO., Ltd.
New Orleans, La.

L. S. DONALDSON CO.
Minneapolis, Minn.

B. ALTMAN & COMPANY
New York, N. Y.

Why have 44 more of the nation's most progressive stores recently decided to install Otis Escalators . . . and why are 23 others extending their present Escalator service to higher floors?

- Because Escalators induce customers to visit *every sales floor* in the store.
- And because Escalators give upper floors *main-floor convenience*.

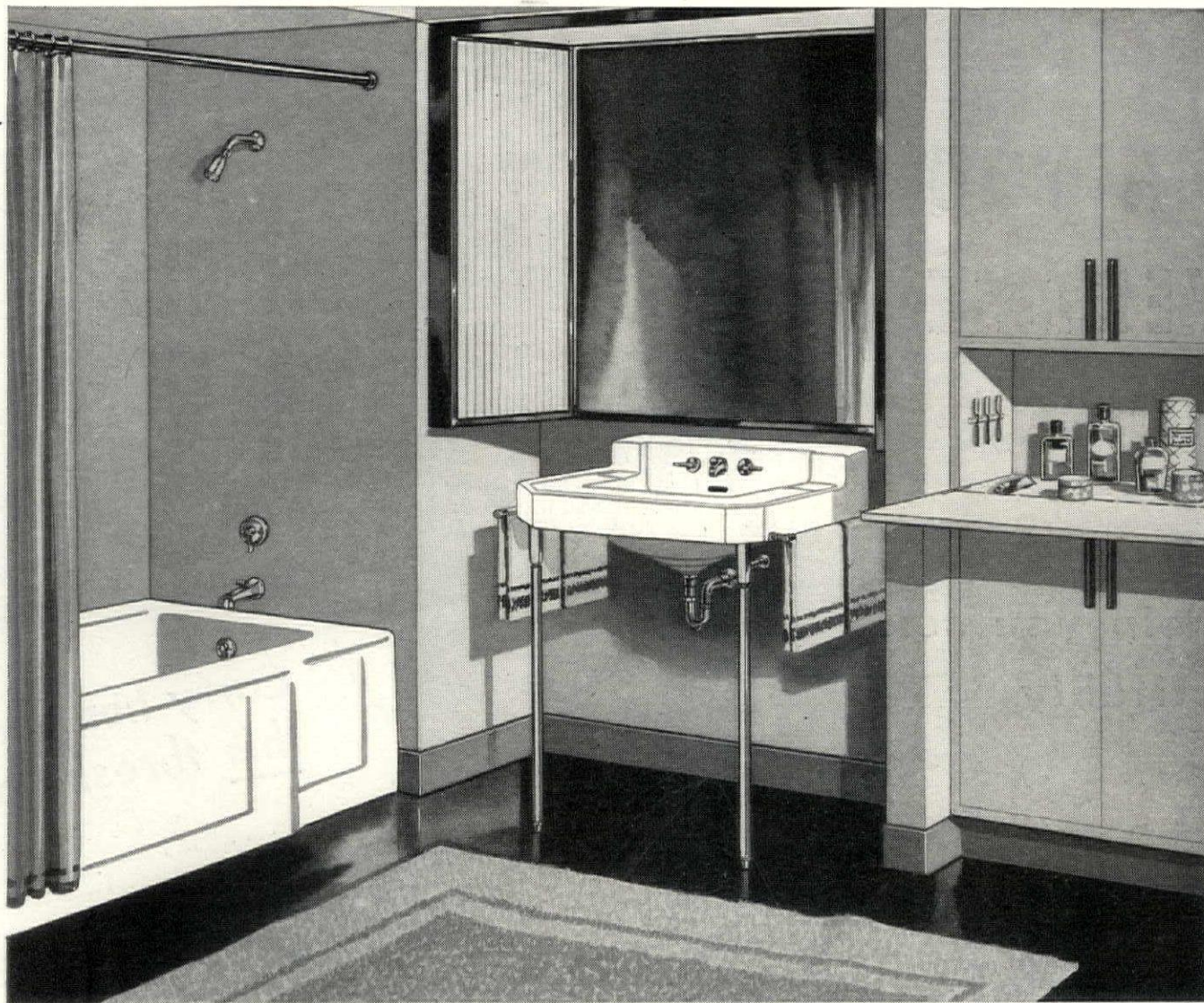
The Otis representative in your city will be glad to give you the facts on Escalators for *your* store.

"Escalator" is a registered trademark of the Otis Elevator Company. Only Otis makes Escalators.



**ELEVATOR
COMPANY**

**OFFICES IN
ALL PRINCIPAL CITIES**



KOHLER QUALITY creates satisfaction and good will

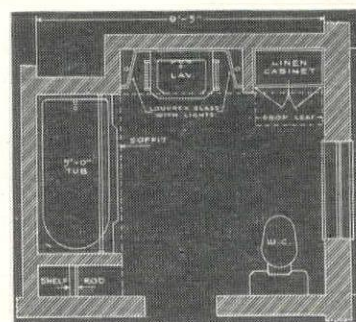
HOME OWNERS have learned to associate the name "Kohler" with the many advantages that go with first quality—and they have become increasingly aware of the importance of having, in the bathroom, the health-protection of sound sanitation in fixtures that are attractive, inviting to use, and easy to clean, equipped with carefully made, reliable working parts. Hence, when you specify Kohler plumbing you establish confidence and good will among home owners, because you help them invest in lasting satisfaction and added value for their homes.

For the home of average size the ar-

range above is both practical and convenient. It includes the Gramercy vitreous china lavatory, with built-in fittings and roomy shelf; the Cosmopolitan Bench Bath, made with durable, pure white enamel on time-tested, non-flexing cast iron—with the Triton shower mixer; and the quiet Wellworth close-coupled closet.

Kohler products, made in one plant under one supervision, are backed by 74 years of experience in manufacturing first quality plumbing. Write for further information.

Kohler Co., Dept. I, Kohler, Wis.
Established 1873.



Practical plan for Kohler fixtures in a compact arrangement allowing free access to each—together with handy storage facilities and other conveniences.

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS

WHEN YOU ADVERTISE A HOUSE...

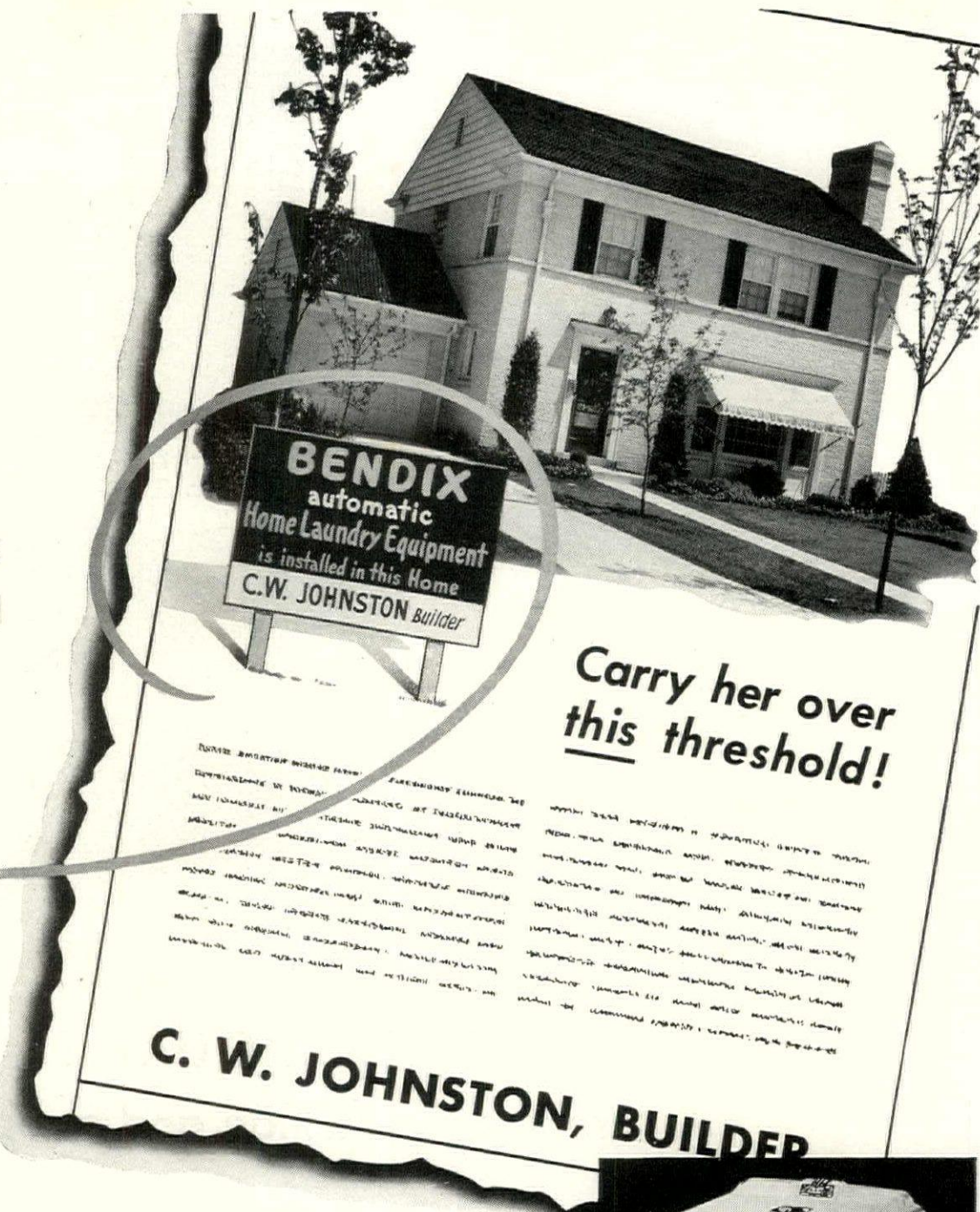
A built-in Bendix
will help you sell
it profitably

MILLIONS OF WOMEN will appreciate the price-tag on your house when they know it means "complete with Bendix Washer."*

FOR MILLIONS OF WOMEN know how the Bendix ends washday drudgery. They know they just put in the clothes—add soap—and the Bendix washes, triple-rinses, damp-drys, then cleans itself, drains itself, and shuts itself off, while the housewife isn't even there!

WHEN THE HOUSE you're offering for sale has a laundry planned for the Bendix Dryer and the Bendix Ironer—and is equipped with a Bendix Washer—put a sign on the front lawn telling the customers that! And feature it in your ads.

BENDIX automatic Home Laundry



Carry her over
this threshold!

C. W. JOHNSTON, BUILDER

THEN THE SALE will come quicker. And the deal will mean extra satisfaction for the customer—and extra profit for you.

*The Bendix can be included in a "package mortgage".

BENDIX HOME APPLIANCES, INC., SOUTH BEND, INDIANA



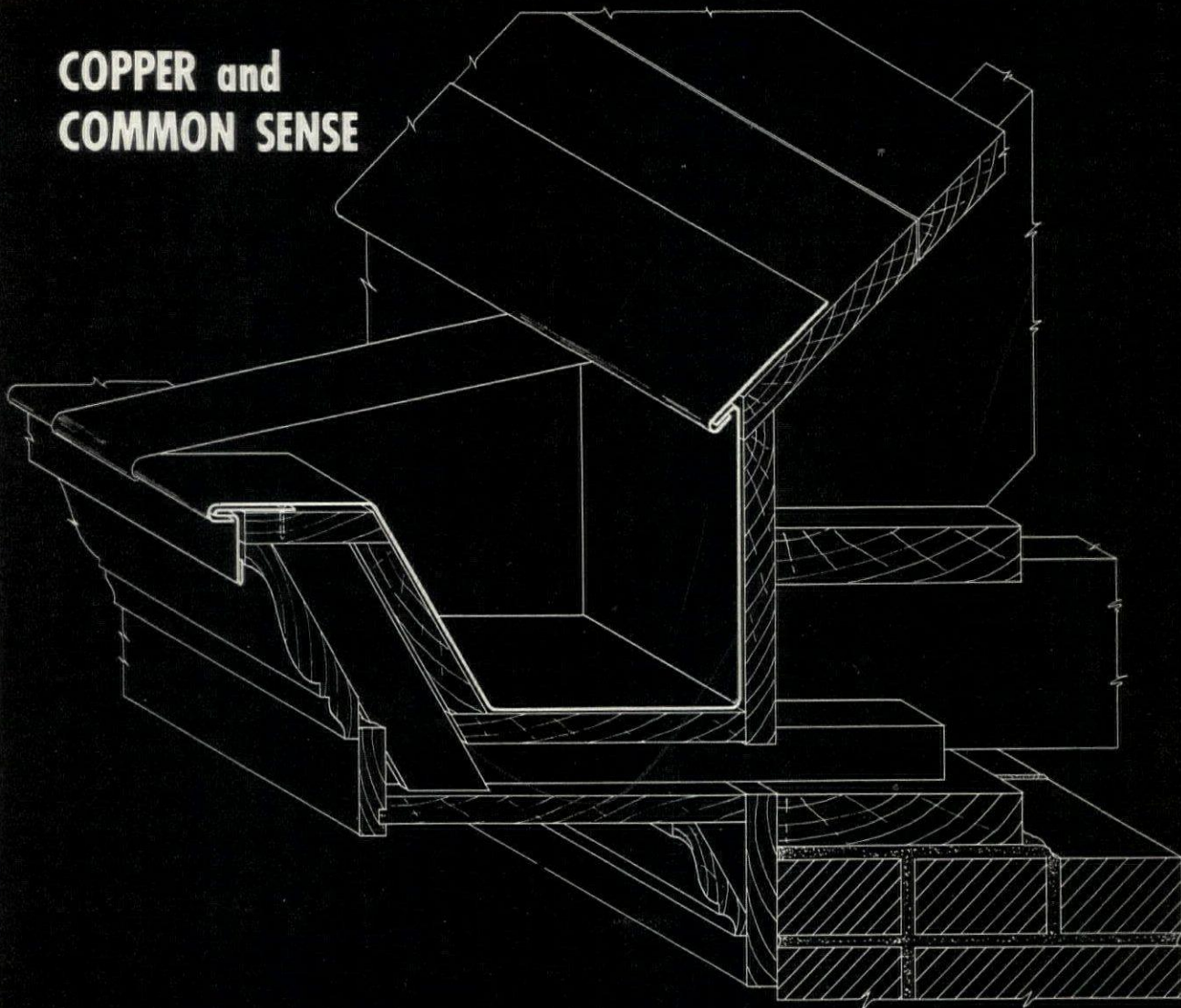
BENDIX DRYER—Gas or electric. Tremendously popular work-saver. Tell customer you've provided space for it in the plan.



BENDIX WASHER—Compact—only 4 square feet of space. Never slops water, so it can be installed easily in any convenient location.

BENDIX IRONER—Sensationally easy to operate. This completes the truly automatic home laundry.

COPPER and COMMON SENSE



QUESTION: What is the best way to determine locations of expansion joints in sheet copper construction?

ANSWER: Use the chart on page 28 in Revere's Manual of Sheet Copper Construction*

A CHART which makes it easy for you to determine the correct gauge copper for any gutter lining as well as the maximum distance that may safely be used between an expansion joint and a fixed point is one of the important results of Revere's extensive sheet copper research program. This chart and simple instructions for using it are on pages 28-29 in Revere's 96-page manual of sheet copper construction.*

This booklet is filled with new facts which enable you to design or install gutter linings, flashings and roofs that give *extra* years of service. It is complete with charts, illustrations and detailed information so arranged that you can read and apply final figures that insure the finest sheet copper construction.

This book has been widely distributed to archi-

*"Research Solves Problems of Stress Failures in Sheet Copper Construction."

ects and sheet metal contractors, and in all probability it is in your office files. Be sure to refer to it. If you do not have a copy, write for one now on your office letterhead.

For further information or assistance with the design or installation of sheet copper, the Revere Technical Advisory Service, Architectural, will be glad to help you.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

230 Park Avenue, New York 17, New York

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.;

New Bedford, Mass.; Rome, N. Y.

Sales Offices in Principal Cities, Distributors Everywhere.



Metal Windows?

All over America architects, engineers, contractors and builders are planning ahead today for the homes and apartments of tomorrow. In each living unit they know there must be new features to increase beauty and utility. One feature every home and apartment should have is steel windows—because steel windows not only offer greater utility but add to the beauty and lasting good appearance of any type of architecture. So consider these eight advantages Ceco metal windows offer:

- 1 Tighter weatherseal—precision engineering keeps out cold, dust, rain; keeps heat in.
- 2 Give more light—afford from 20% to 60% greater light area. Also increase wall space.
- 3 Lowest initial cost installed—with metal windows maintenance cost is cut to the minimum.
- 4 Easy to install—no weatherstripping. Less labor in installing hardware. No planing.
- 5 Controlled ventilation—up to 100% . . . catches stray breezes . . . controls drafts.
- 6 Easier operation—always fit . . . no sticking, warping or swelling to worry about.
- 7 Fire safety—Ceco metal windows are fire resistive, reduce fire hazards.
- 8 Easily washed from inside—both sides of the windows can be washed from within.

CECO ALL-ALUMINUM STORM WINDOWS AND METAL FRAME SCREENS provide year 'round controlled ventilation in metal casements. New beauty and utility are combined with ease of installation . . . from the inside!

CECO STEEL PRODUCTS CORPORATION

GENERAL OFFICES: 5701 West 26th Street, Chicago 50, Illinois

Offices, warehouses and fabricating plants in principal cities

Other Ceco products include—Meyer Steelforms, Reinforcing Steel, Steel Joists, Roof Deck, Metal Lath

**CECO
STEEL**



In construction products **CECO ENGINEERING** *makes the big difference*

The Architectural **FORUM** Magazine of Building

Robert M. Damora

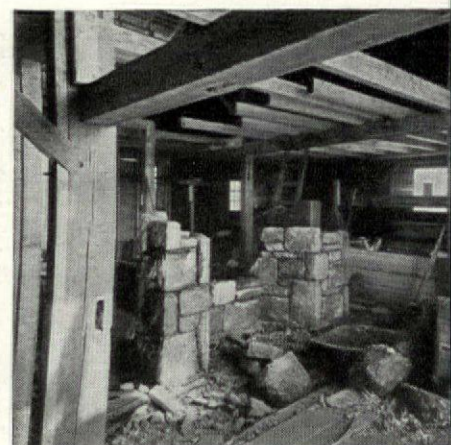
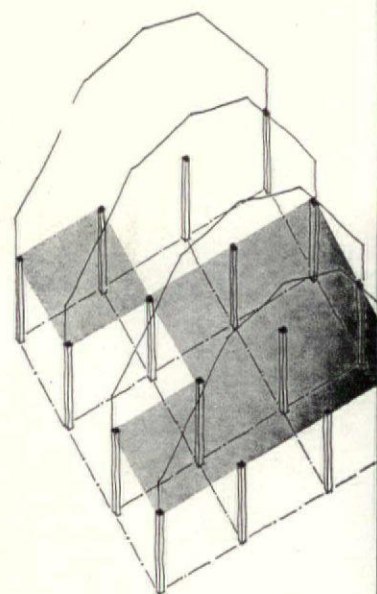


A Connecticut hay barn is remodeled into a country house pleasantly free of affectation or cliché.

BIMEL KEHM, Designer and Owner

This country house is the work of a young sculptor whose skill in converting neglected old buildings into handsome livable houses has already won him a reputation and a remunerative hobby. Unlike several previous projects (including that for Hildreth Meiere, *FORUM*, May '45), this one is for Mr. and Mrs. Kehm's own use. Originally a hay barn on a New Canaan, Conn. estate, Designer Kehm bought it with a two-acre tract and set to work. Much of his success in remodeling can be attributed to his respect for the original structure. It was a sound wooden building with a mansard roof. It was framed in two floors of nine bays each, with tall double wagon doors and two-story corridor occupying the center bays to the west. Very wisely, from the standpoint of both appearance and cost, this structural system has not been tampered with. Glass doors and transoms, replacing the old wagon doors, open on to a two-story dining room. Beyond this, at the very center, a huge stone chimney has been built. Otherwise, all original elements—columns, beams, lintels and joists—are not only preserved but, cleaned and waxed, establish the basic character of the interiors. Horizontally-sliding wood sash, large in size and with a minimum of muntins, are used throughout. The straightforward handling of such elements gives the rooms a modularity reminiscent of Japanese building.

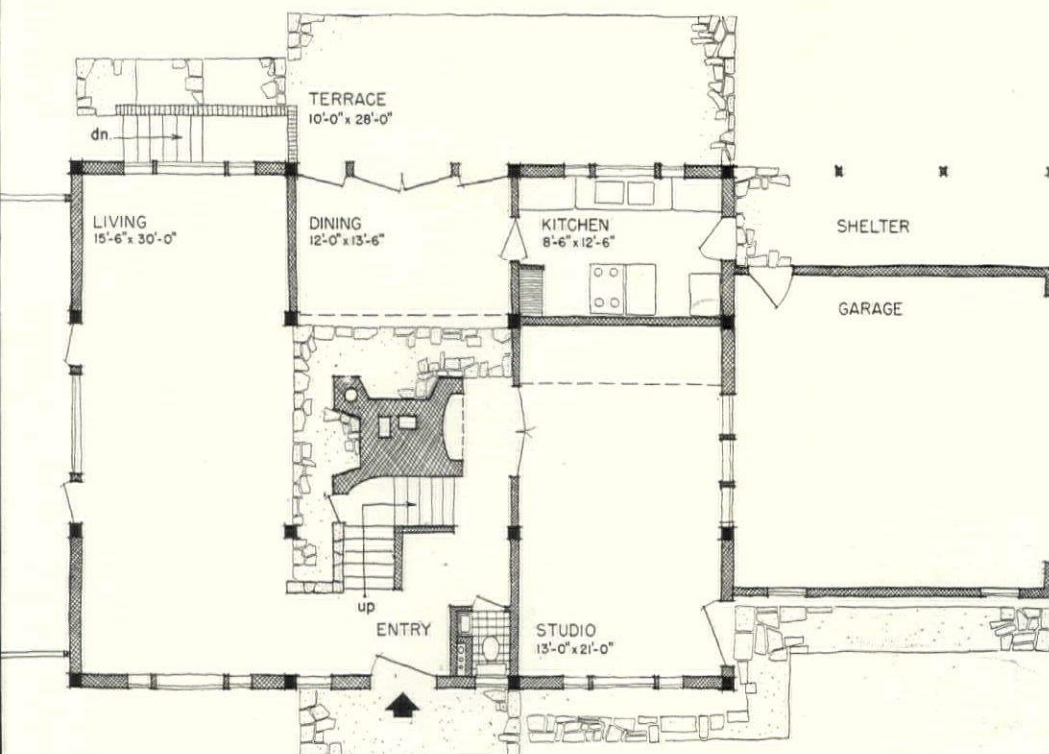
A CROSS-OVER BALCONY IN THE TWO-STORY DINING ROOM PROVIDES ACCESS TO BEDROOMS





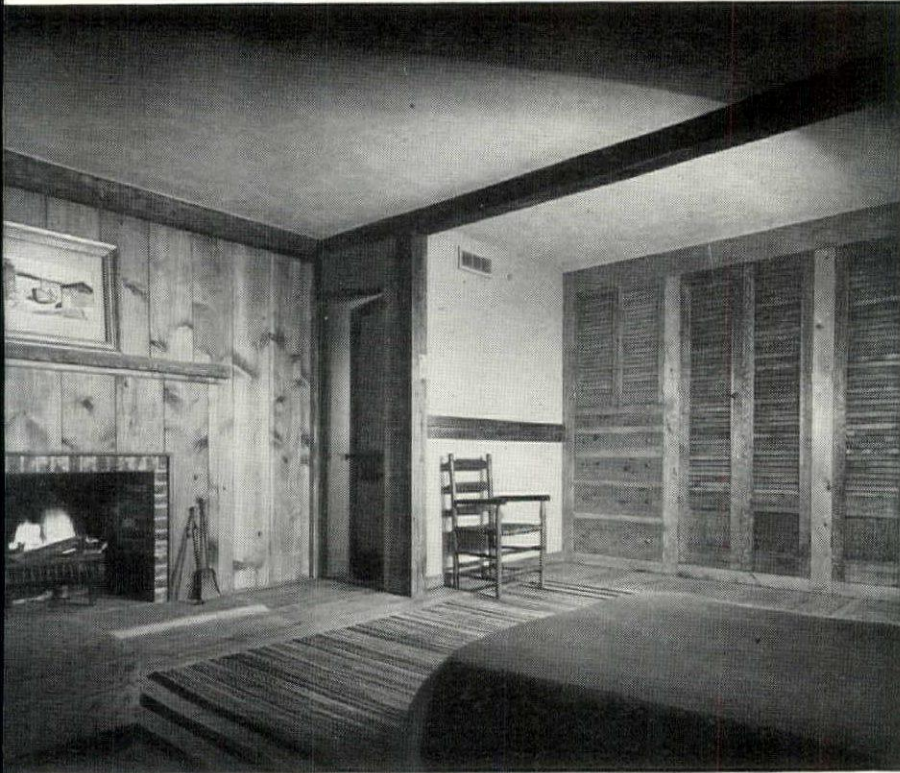
WARM GLOW OF ORIGINAL FRAMING TIMBERS AND OLD CHESTNUT FLOORS COMPLEMENTS CHALK WHITE WALLS, TURQUOISE CEILING

Robert M. Damora

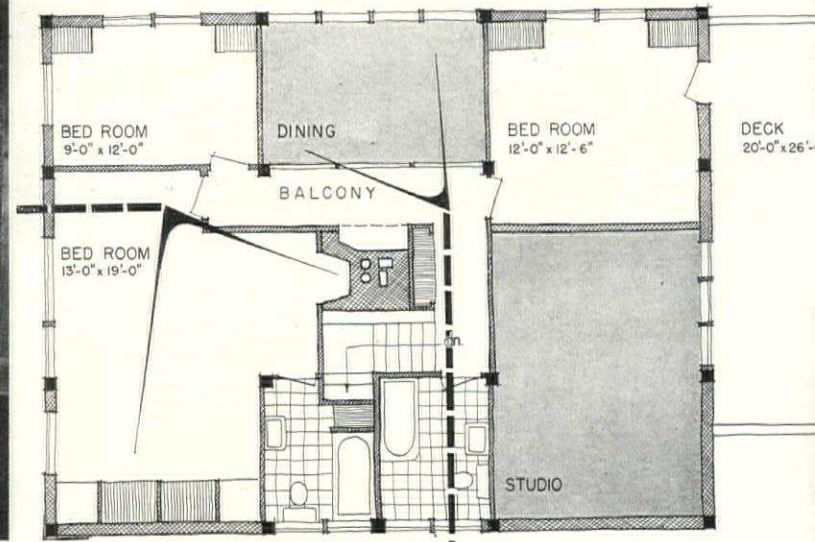


ALTHOUGH THE ORIGINAL structural system was carefully preserved, conventional stud construction was used to fill the interstices between the old members. In outside walls, this consisted of cedar shingles, painted white, on top of building paper and diagonal sheathing backed up with blanket insulation. Interior finish is sand float plaster on gypsum lath, slightly recessed to leave the old wooden skeleton exposed on inside. With few exceptions, all new interior partitions follow line of original columns and beams.

The barn was almost perfectly oriented to begin with, and Mr. Kehm has developed his new plan inside it with maximum effectiveness. Thus, he has placed his two-story studio along the north end. Since north light from above was desired, he was able to fit a two-car garage snugly against the studio wall and still get a large bank of windows in the gable end. This left the entire southern end of the first floor available for the living room and placed the dining room to the west, toward the sunset and away from the road.

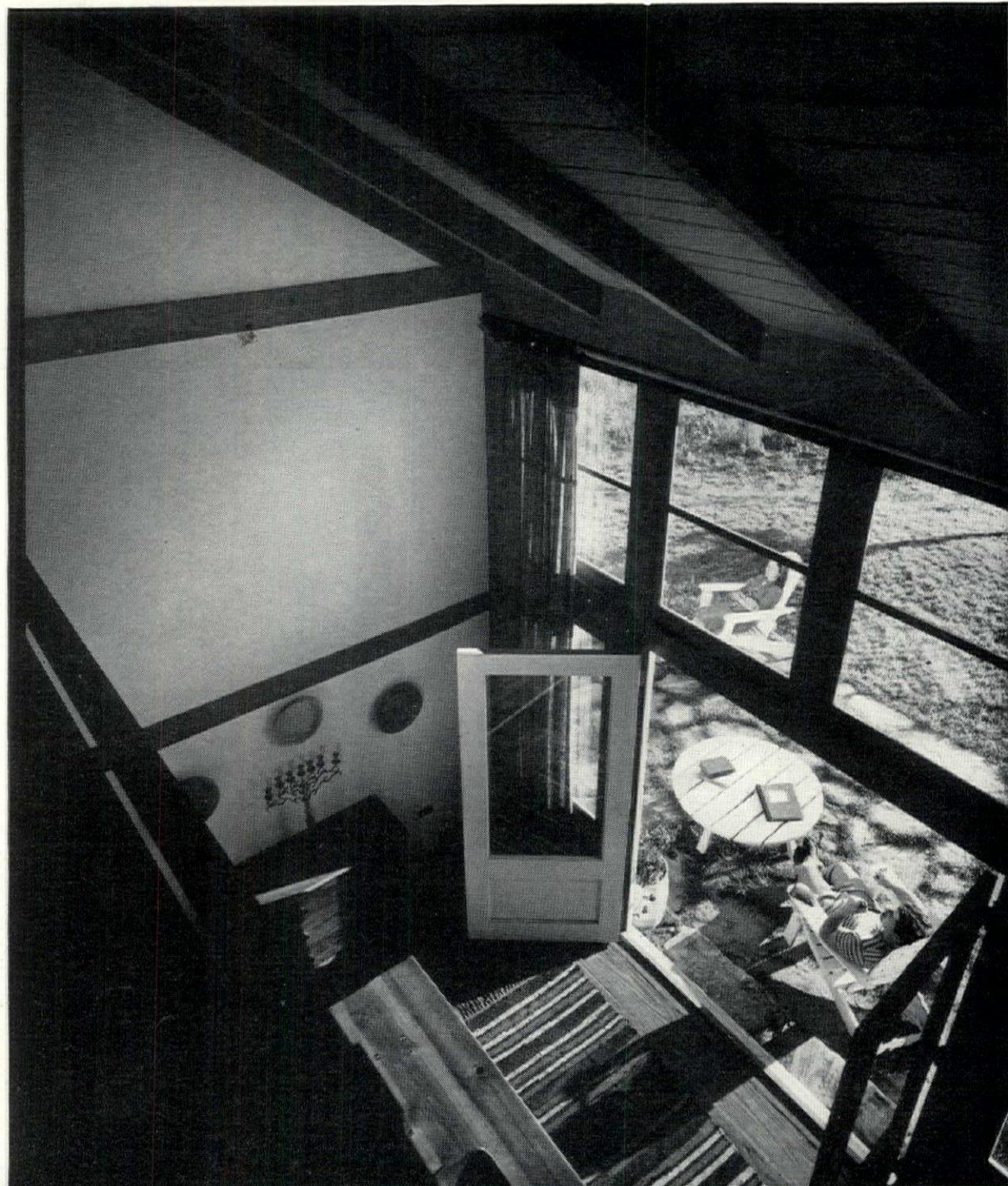


LARGE MASTER BEDROOM ON THE SOUTH END (ABOVE) IS REACHED BY THE NEW BALCONY IN THE TWO-STORY DINING ROOM (RIGHT).

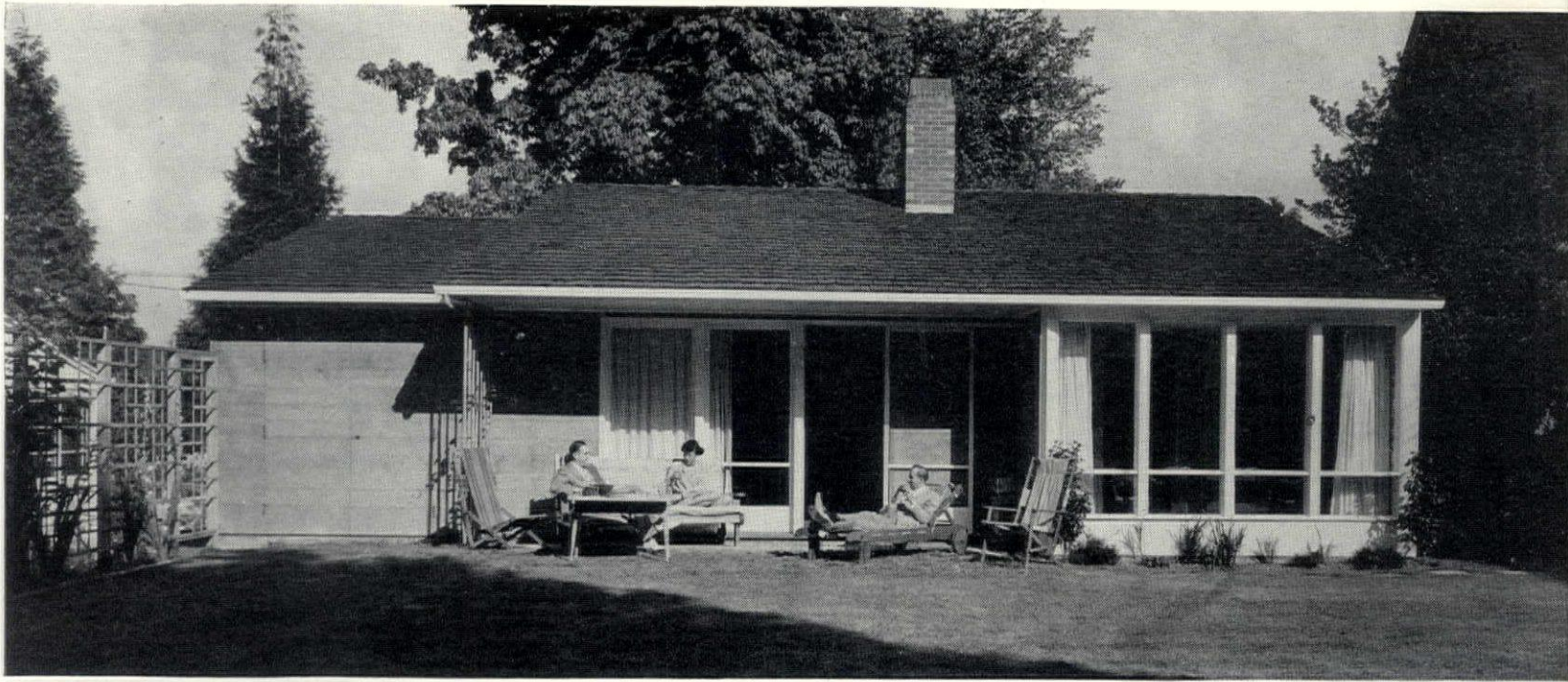


CONSTRUCTION OUTLINE

FOUNDATION — common brick. **Water-proofing** — Colorthru, Evercrete Corp. **STRUCTURE**: Exterior walls—cedar shingles, building paper, sheathing, studs, Kimsul insulation, Kimberly-Clark Corp., Rocklath, U. S. Gypsum Corp., and plaster. Floors—chestnut timbers or pine boards. **ROOF** — cedar shingles. Deck—90 lb. felt and glazed roofing paper. **INSULATION**: Ground floor—Celotex, Celotex Corp. Remainder—Kimsul, Kimberly-Clark Corp. **FIREPLACE**: Damper—Donley Bros. Co. **SHEET METAL WORK**: Ducts—sheet iron. Remainder—copper. **WINDOWS**: Sash—horizontal sliding, Andersen Corp. Glass—plate and quality A, Libbey-Owens-Ford Glass Co. **ATTIC STAIR**—Bessler Disappearing Stairway Co. **WALL COVERINGS**: Studio—one wall and ceiling of plywood. **PAINTS**—Martin-Semour Co. **WOODWORK**: Trim—pine. Cabinets—plywood and pine. Doors—fir. Garage doors—Overhead Door Corp. **HARDWARE**—Russell & Erwin Mfg. Co. and Sargent & Co. **ELECTRICAL INSTALLATION**: Wiring—Palmer Electric Mfg. Co. **KITCHEN EQUIPMENT**: Range—General Electric Co. Refrigerator—Frigidaire Sales Corp. Cabinets—Morgan Sash & Door Co. **BATHROOM EQUIPMENT**—Crane Co. Seat—C. F. Church Mfg. Co. Cabinets—Columbia Metal Box Co. **PLUMBING**: Soil pipes—cast iron. Vent pipe—galvanized. Water pipes—copper. **HEATING AND AIR CONDITIONING**—filtering, humidifying system, Bard air conditioning unit, Bard Mfg. Co. Regulator—Minneapolis - Honeywell Regulator Co. Water heater—Whitehead Metal Products Co., Inc.

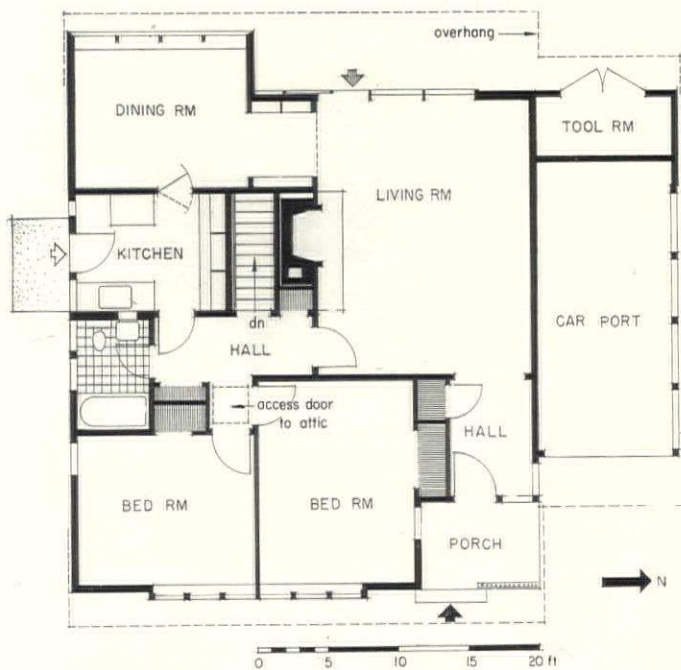


Pint-sized house is tailored to the confines of a typical inside lot

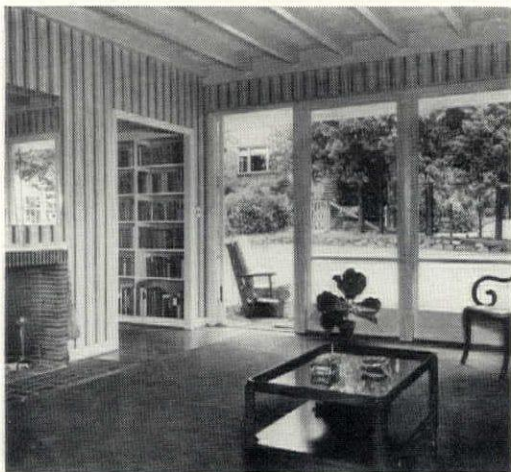


LIVING PORTION OF THE HOUSE OPENS TO REAR GARDEN. DINING ROOM PROJECTION SCREENS TERRACE FROM ADJOINING NEIGHBORS

P. A. Dearborn



VIEW FROM LIVING ROOM TO REAR GARDEN



Leonard Delano

HOUSE IN SEATTLE, Wash. JOHN T. NELSON, Owner

PHILIP A. MOORE, Architect. WEDWICK & KVALHEIM, Contractors

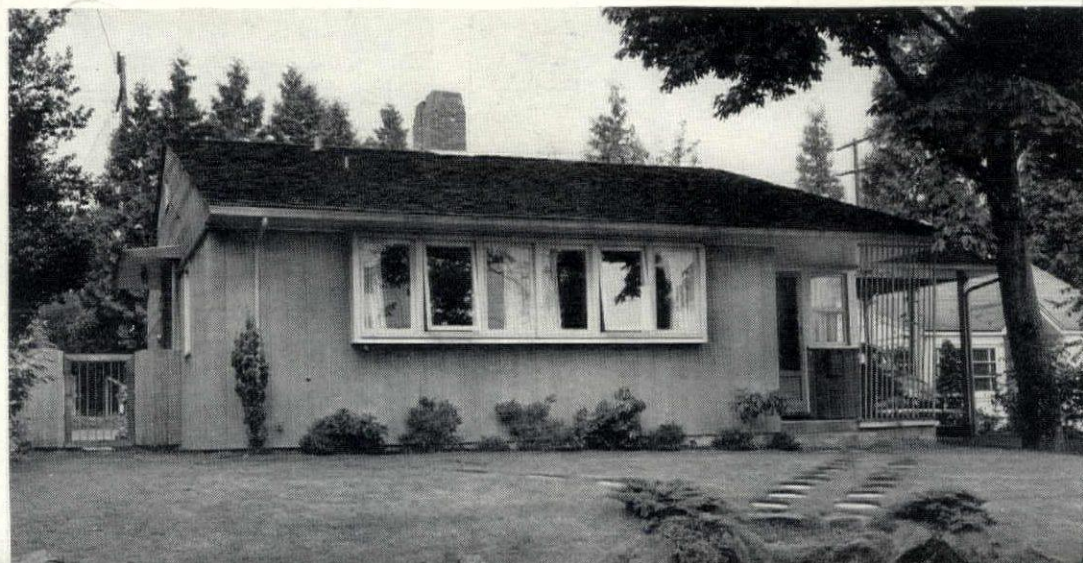
After months of frustrating attempts to design the perfect abode, the bachelor-owner of this small house finally succumbed to the merciful comfort of an architect's services. His requirements were simple: five rooms on a single level with a basement and some dead storage space in the attic, a living room large enough for small parties and acoustically treated to enhance a fine record collection.

The lot faces east to the street, slopes mildly up to an alley at the back of the property. Though the site plan may appear to sacrifice useful outdoor living space to a needlessly large front lawn, adjacent houses dictated a central placement for the sake of privacy. Likewise, windows along the sides of the house are held to a minimum.

CONSTRUCTION OUTLINE

FOUNDATION: Waterproofing—R.I.W., Toch Bros., Inc. STRUCTURE: Exterior walls—cedar, felt, shiplap, studs, lath and plaster. SOUND INSULATION—Thermax, Thermax Co. FIREPLACE: Damper—The Majestic Co. FLOOR COVERINGS: Linoleum, Armstrong Cork Co. PAINTS—W. P. Fuller & Co., Schorn Paint Co., HARDWARE—Russell & Erwin Mfg. Co. ELECTRICAL SWITCHES—toggle, Harvey Hubbell, Inc. KITCHEN EQUIPMENT: Range—Universal gas, Cribben & Sexton. Refrigerator—Frigidaire Division—General Motors Corp. BATHROOM EQUIPMENT—Crane Co. Cabinets—Hall-Mack, Inc. HEATING—forced warm air, gas fired furnace, filtering, humidifying, L. J. Mueller Furnace Co. Grilles—U. S. Register Co. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—Crane Co.

ENTRANCE AND WINDOW STRIP, SERVING TWO BEDROOMS, ARE ON APPROACH SIDE



New England house combines compactness with open planning

HOUSE IN CAMBRIDGE, Mass.

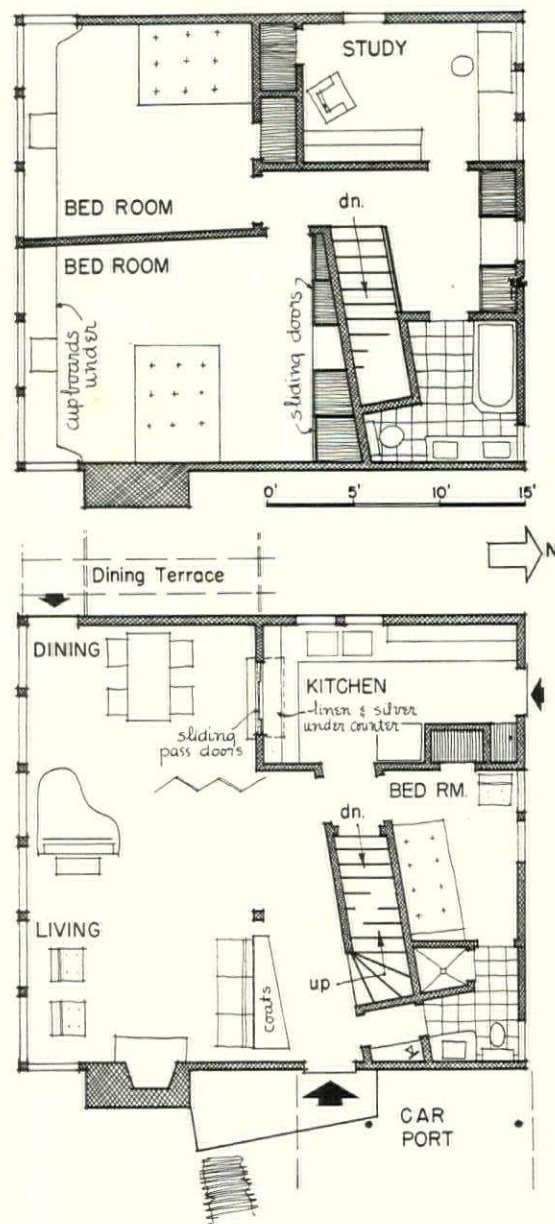
EDWIN G. JOHNSON, Owner-Architect

Largely built of materials salvaged from an old carriage house on the site, this house incorporates some of the framing of the original structure and stands on the same foundation. All possible lumber was incorporated, even the beaded sheathing of the old partitions which, painted, serves as wall finish in the living room and study.

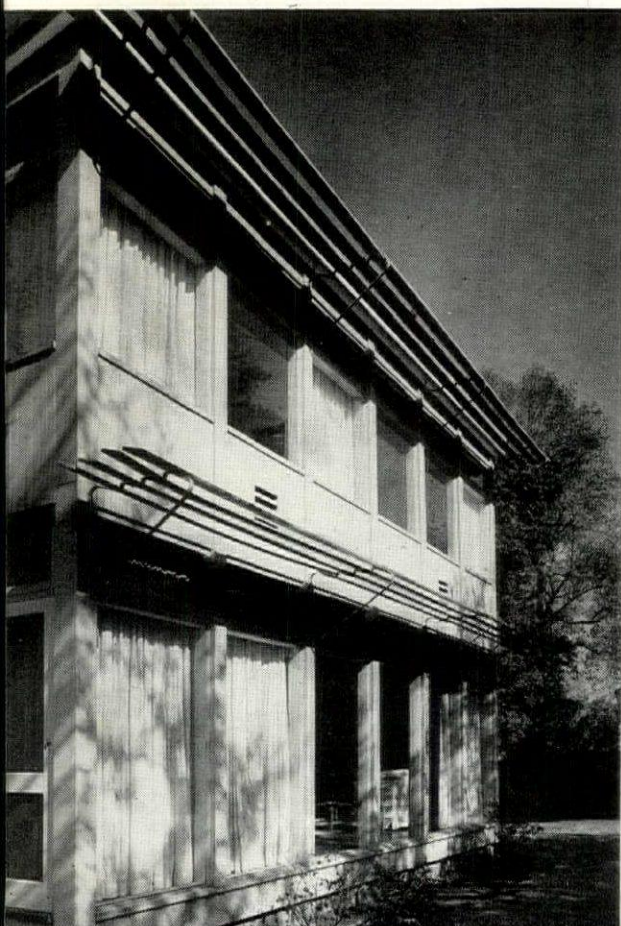
The house stands on a lot 75 x 100 ft. within a block of old-fashioned Victorian homes typical of Cambridge. The property has no street frontage but the owner was lucky enough to acquire a perpetual right of way. The architect's guiding idea was to design a very simple structure that would reduce housekeeping chores to a minimum. Occupancy has proved his success. At ground level the south half of the house is entirely open to the outdoors and in plan—an ideal environment for a family without children. A maid's room and bath adjoins the kitchen. This room and the owner's study on the floor above are the only ones that face north. The telephone booth off the entry assures privacy and acts as insulation between the living area and the lavatory. The architect, who acted as his own contractor, realized considerable savings by having most of the woodwork and built-in fittings manufactured at the site. The large window areas on the south side of the house consist of ordinary plate glass. Comfort, however, is no problem thanks to radiant heating.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—cedar clapboards, wood sheathing, studs, Rocklath, U. S. Gypsum Co. and plaster. Floors—oak, E. L. Bruce Co. **INSULATION:** Kimberly-Clark Corp. and U. S. Gypsum Co. **WINDOWS:** Sash—double hung. Glass—quality AA, Pittsburgh Plate Glass Co. **LINOLEUM:** Armstrong Cork Co. **PAINTS:** National Lead Co. **HARDWARE:** W. C. Vaughan Co., Sargent & Co., Vincent Whitney Co. **ELECTRICAL FIXTURES:** Kurt Versen Co. **KITCHEN EQUIPMENT:** Range—Hardwick Stove Co. Refrigerator—Servel, Inc. Washing machine—Easy Washer Co. **BATHROOM FIXTURES:** Speakman Co. and Kohler Co. **HEATING:** radiant panel system. Boiler—American Radiator Co. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—Ruud Mfg. Co.



BOARD-OVERHANGS GIVE LOUVERED PROTECTION AGAINST THE SUN. SLIDING SERVICE DOORS ARE LOCATED OVER COUNTER IN DINING AREA

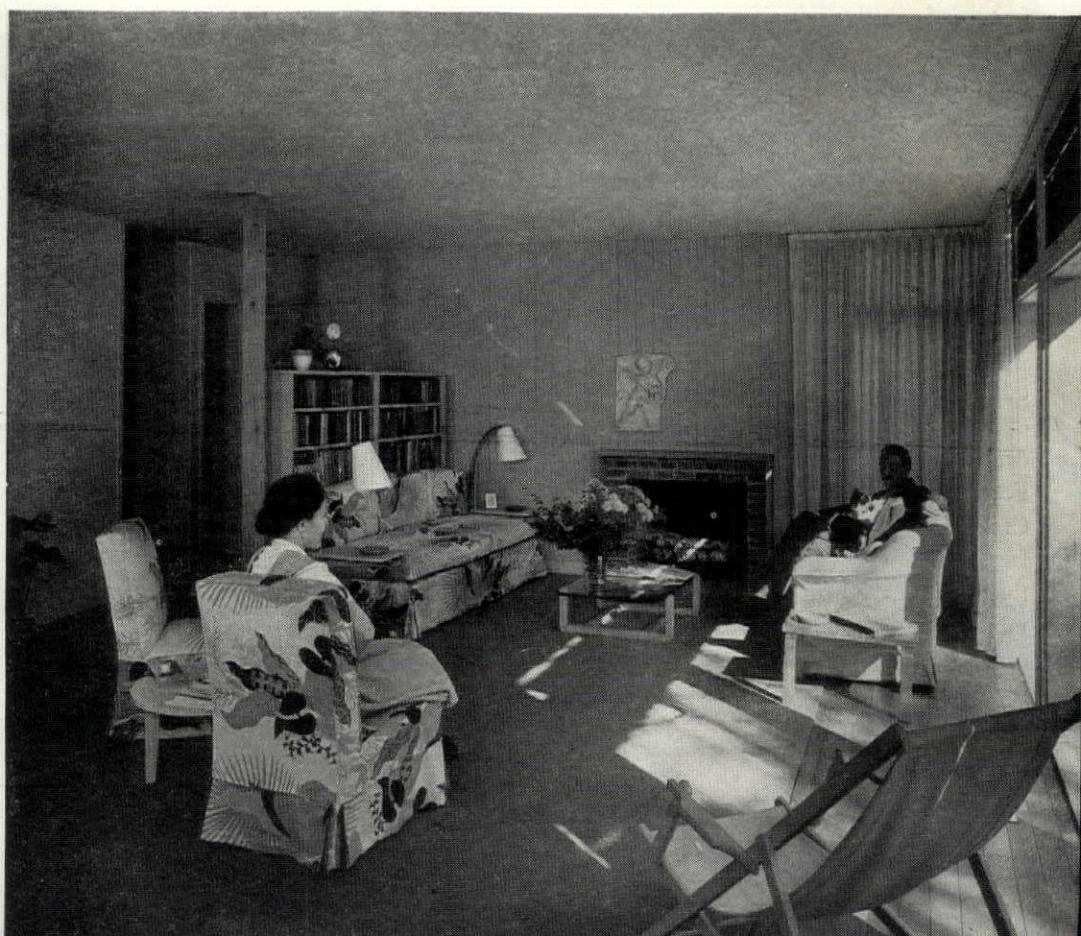




CARPORT, A SHEET OF CORRUGATED CEMENT ASBESTOS SUPPORTED ON A WOOD FRAME, FLANKS AND SHELTERS THE MAIN ENTRANCE

Photos by P. A. Dearborn

OBLIQUE ANGLE OF A WALL IN ENTRANCE HALL INCREASES ITS APPARENT SIZE. INTERIOR FINISH MATERIALS ARE SIMPLE IN THE EXTREME



Texas subdivision has 4780 different houses

FRANK W. SHARP, Builder

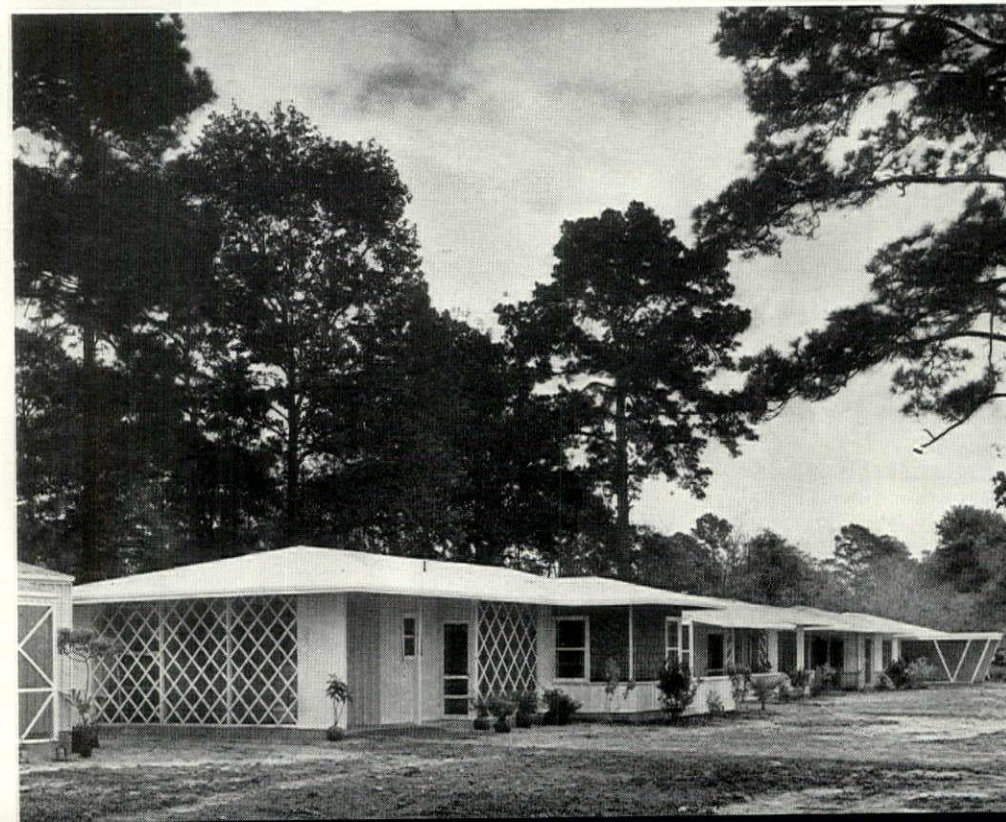
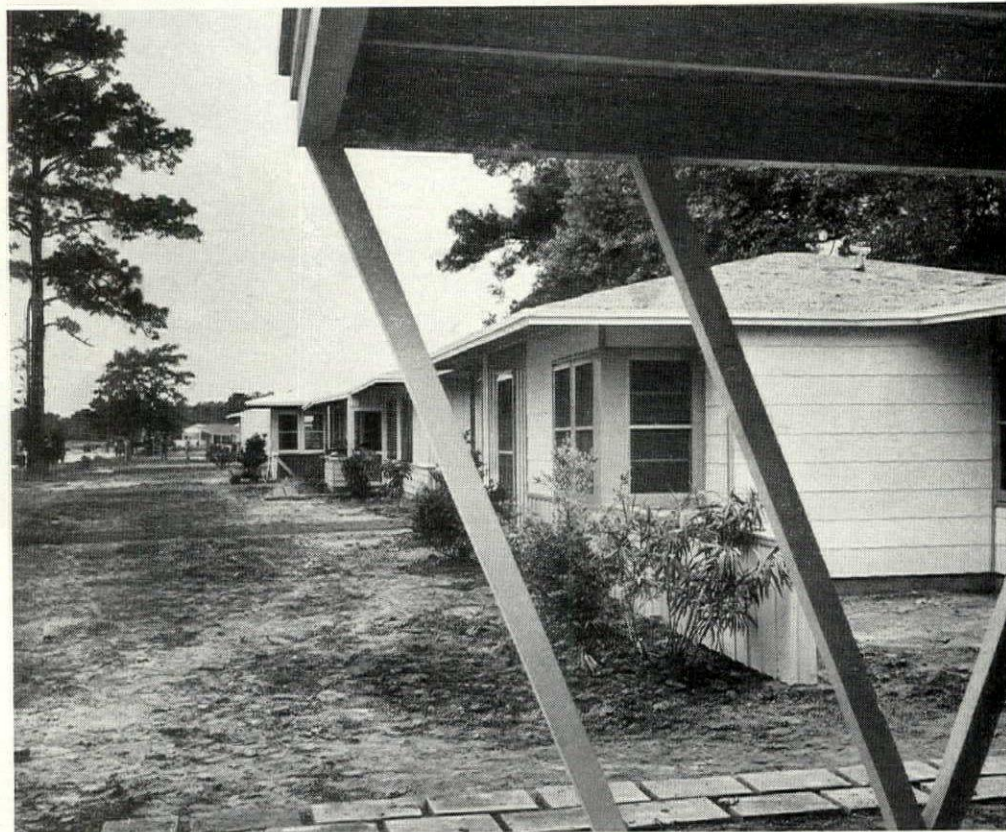
WILSON, MORRIS & CRAIN, Architects

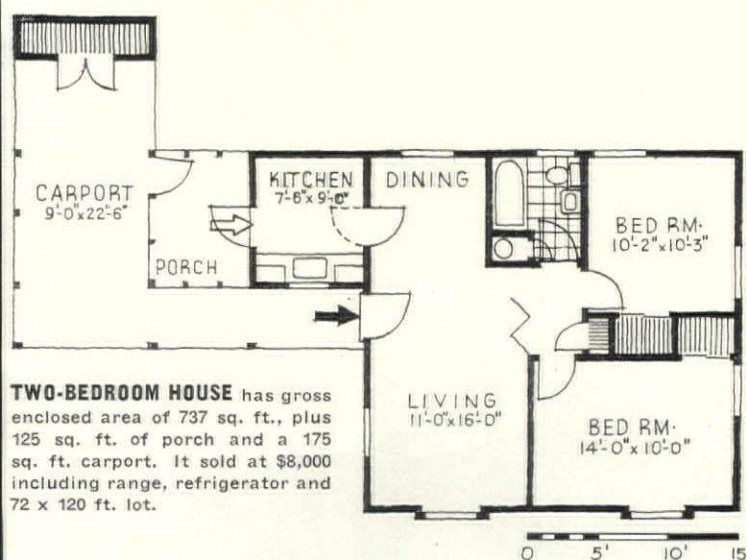
Promising ultimate benefits for the public and the building industry alike, postwar construction difficulties are fostering the development of big, integrated house-building organizations and big, integrated housing projects. To the mounting evidence of this healthy trend, Houston adds the names of Frank W. Sharp and Oak Forest, his \$32 million subdivision.

Ten years ago when Sharp swung on a \$150 shoestring from bookkeeping to housebuilding, Oak Forest was a golf course. This year, with some 2,200 houses to his credit, Sharp is Houston's No. 1 builder and the director of five closely related organizations which are rapidly converting Oak Forest into the largest privately financed house project in U. S. history. Although currently limited to small two- and three-bedroom bungalows selling for \$7,000 to \$10,000, production will eventually include two-story units selling for as much as \$25,000 and will eventually account for 4,780 houses.

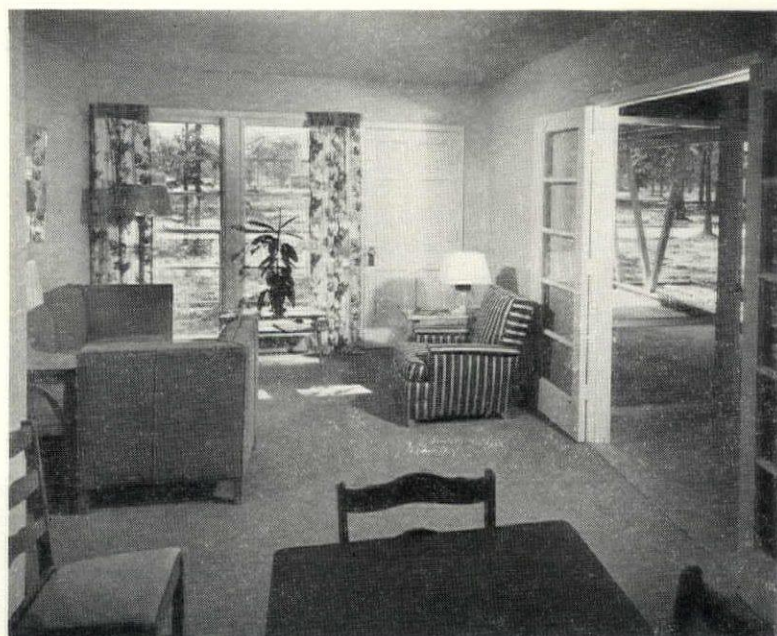
Just as important as Oak Forest's 1,132 acres of land, Sharp has the organization, know-how, equipment and much of the materials with which to develop it. They are in the four subsidiaries of the so-called "Frank W. Sharp Enterprises": 1) Industrial Road Equipment Co., headed by Houston's ex-city manager, does all of Oak Forest's grading, street paving and other concrete work; 2) Douglas Fir Lumber Co. has two Pacific coast mills and more than 2 million board feet of fir—all of it, if necessary, for Sharp; 3) Oak Forest Corp., headed by a former FHA executive, handles project development and merchandising; 4) Frank W. Sharp Construction Co., as its name implies, does the actual building. Although independently owned, Houston's M and A Woodworks is closely knit into the group for the supply of millwork. (Most of its raw lumber comes from Sharp's mills; all of its output goes to Oak Forest.)

In a somewhat different category are the two other major participants in the project's development. American General Investment Corp. exclusively handles the financing of all Oak Forest houses, and Architects Wilson, Morris & Crain design them. The architects' work is far more conspicuous than that performed by their teammates, for Oak Forest's houses are of unusual design, and they are all different. While elements of all houses are standardized and much of their framework is preassembled in identical sections, plans and exteriors are varied to maintain an advertising slogan of questionable significance: "No two houses are alike."

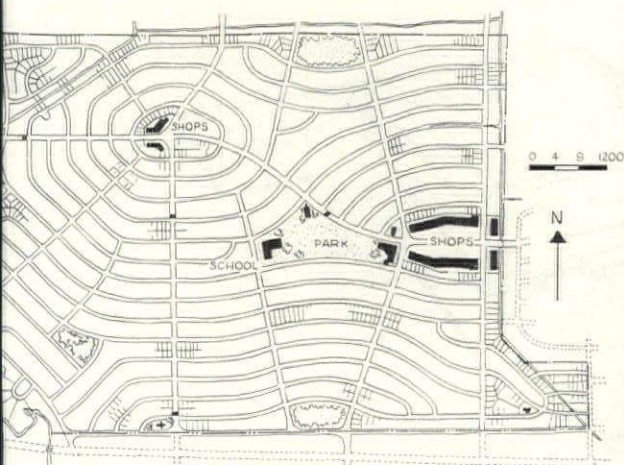




TWO-BEDROOM HOUSE has gross enclosed area of 737 sq. ft., plus 125 sq. ft. of porch and a 175 sq. ft. carport. It sold at \$8,000 including range, refrigerator and 72 x 120 ft. lot.



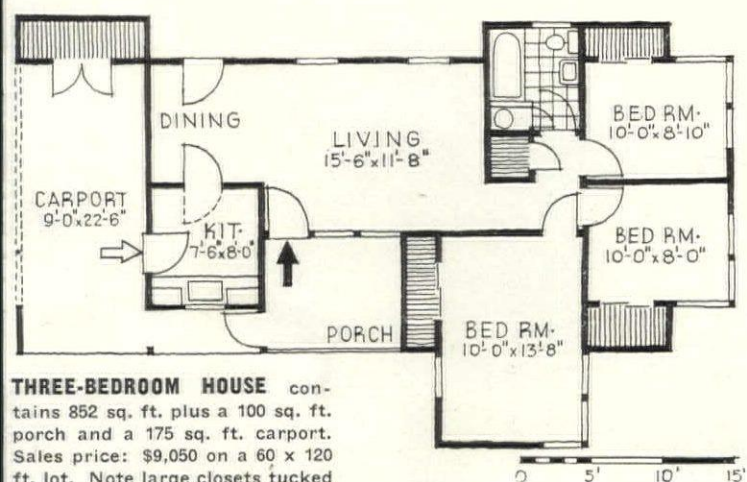
TYPICAL LIVING-DINING ROOM OPENS ON YARD AND SIDE PORCH



1,132-ACRE SITE, including a defunct golf course, is subdivided by 36 miles of paved streets (covering a total of 270 acres) whose curved pattern focuses traffic on two shopping centers. After setting aside 20 acres for business use and 50 for parks, churches and schools, the remaining 792 acres were divided into 4,780 lots ranging from 60 x 120 ft. to 130 x 150 ft.



CONSTRUCTION is conventional, but is speeded by the precutting of framing members and the preassembly of wall framing sections, cabinets, windows and doors. While all houses are different in plan and appearance, the design of kitchens, bathrooms, windows, doors and trim is highly standardized. Peak production schedule calls for 20 houses a day. Carports replace garages to reduce costs; owners may convert them easily and economically into garages or porches. Each carport has a large closet for the storage of screens, garden tools and other outdoor equipment.



THREE-BEDROOM HOUSE contains 852 sq. ft. plus a 100 sq. ft. porch and a 175 sq. ft. carport. Sales price: \$9,050 on a 60 x 120 ft. lot. Note large closets tucked under the projecting eaves outside the main walls.

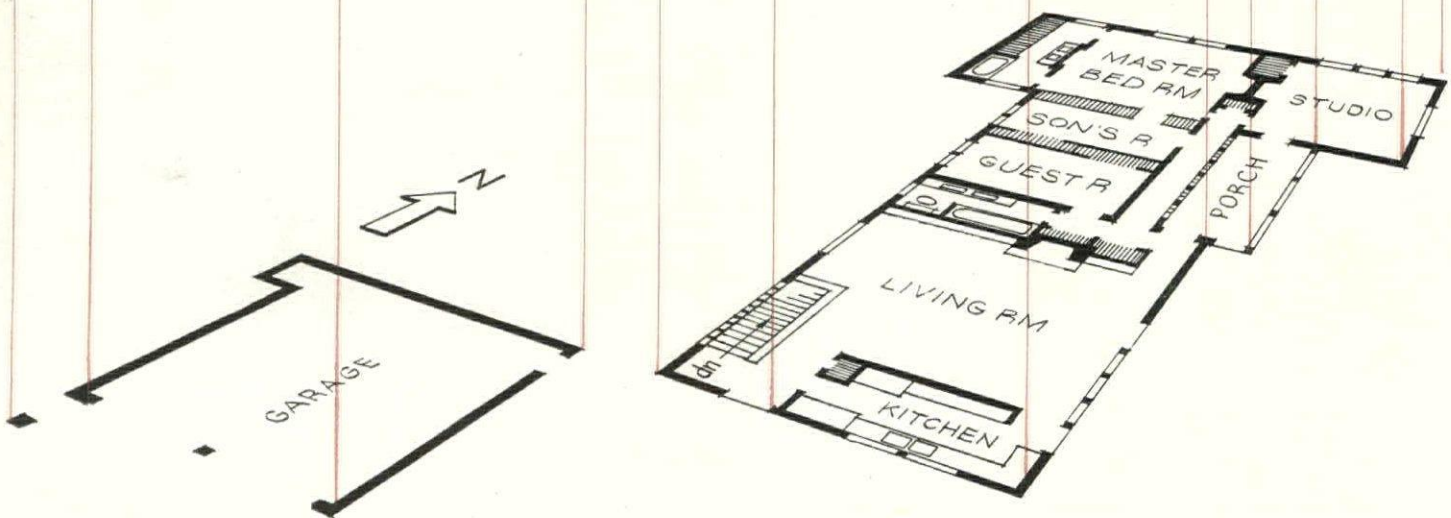
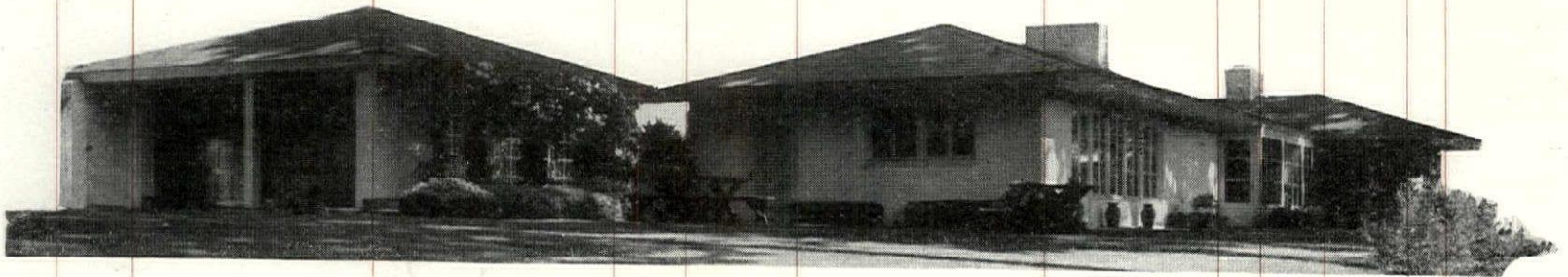
CONSTRUCTION OUTLINE

FOUNDATIONS—reinforced concrete slab. **Waterproofing**—2-ply 15 lb. felt or 2 layers mopped reinforced weathercap. **STRUCTURE**: Exterior walls—pine or fir sheathing or asbestos siding on shiplap, or wood shingles on 1 x 2 in. battens, and 15 lb. felt on studs; inside—1 x 10 in. shiplap, canvas and paper or 3/8 plaster board, U. S. Gypsum Co., and paper. **Ceilings**—canvas and paper or plaster board, U. S. Gypsum Co. **ROOF**—cedar shingles. **SHEET METAL WORK**—galvanized iron. **WINDOWS**: Sash—white pine, double hung. **FLOOR COVERINGS**: Main rooms

—Orco carpet, Ohio Rubber Mfg. Co.; kitchen—asphalt tile; bathrooms—ceramic tile. **WALL COVERINGS**—paper throughout main rooms; Masonite wainscot in kitchen and baths, Masonite Co. **PAINTS**—U. S. Gypsum Co. and Sherwin-Williams Co. **WIRING SYSTEM**—Romax, General Electric Co. **KITCHEN EQUIPMENT**: Range and refrigerator—General Electric Co. **BATHROOM EQUIPMENT**—Kohler Co. **PLUMBING**: Sewer pipes—cast iron. Water pipes—galvanized steel. **HEATING**—gas outlets. Bathroom heater—Day & Night Mfg. Co., Inc.

Year round house strikes an urbane note in country living

HOUSE IN WOODCLIFF LAKE, N. J.
HERBERT ROSENGREN, Owner
JOHN HIRONIMUS, Architect
GEORGE DeBAUN, Contractor



GLASS-ENCLOSED SUN PORCH CONNECTS LIVING ROOM AND STUDIO. EXTERIOR SHOWS SUN PORCH WINDOWS FLUSH WITH PROJECTING EAVES





LIVING SPACE OVERLOOKS GENEROUS LAWN AREA TO EAST THAT IS DIRECTLY ACCESSIBLE FROM SUN PORCH, LIVING ROOM AND KITCHEN

Drifting in the doldrums of the housing shortage for the past few years, the owners of this house had ample opportunity to analyze the inadequacies of obsolete planning. Moving from one old-fashioned house to another, each with steeper stairs than the last, resulted in a fierce determination to build a house all on one level. This desire ultimately materialized despite the architect's original suggestion that the site—a hillside overlooking a lake—called for staggered levels. Instead, the contours were remolded by bulldozer to accommodate a one-story structure 112 ft. long. The client's only specification as to exterior appearance was that the house should blend smoothly with the landscape and take full advantage of the lake view. Consequently, it faces east, overlooks the water from a heavily wooded slope. The exterior is of brick veneer painted white with a low pitched slate roof and wide overhangs. In a frank expression of construction, the masonry is carried only up to the window head.

The house is set just far enough away from the hillside at the rear

to provide a terrace, which is sheltered from the wind by the garage wing and slight projection of the master bath. While the location of the kitchen on the approach side is a familiar planning device, the inter-relationship of major areas is quite out of the ordinary. The segregation of the sleeping-study wing is efficiently accomplished with a bath and closet space serving as insulation between these and the living area. However, the fact that the bedrooms are accessible from the entrance only by crossing the living room seems unnecessarily awkward. Nor does the connection of the living room and study by an enclosed porch remedy this circulation fault. Not compensatory but worthy of notice is the pleasant outside corridor in the bedroom wing illuminated by one wall of glass blocks.

Since owner Rosenman is an industrial designer in his own right, built-in furniture and general interior details are precisely worked out. One striking feature is a hinged dining table that lets down from the plywood wall at the south end of the living room. In position, it



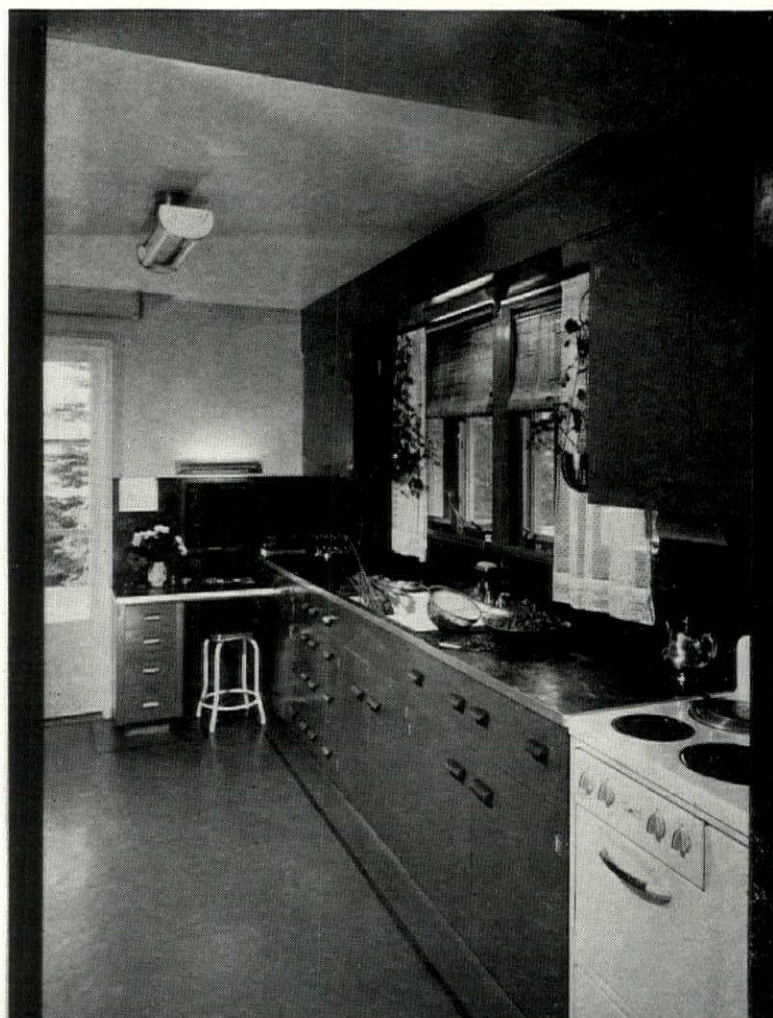
STAIR IN CORNER OF LIVING ROOM LEADS TO PLAYROOM AND WORKSHOP IN BASEMENT. PLANT COUNTER ACTS AS DECORATIVE BALUSTRADE

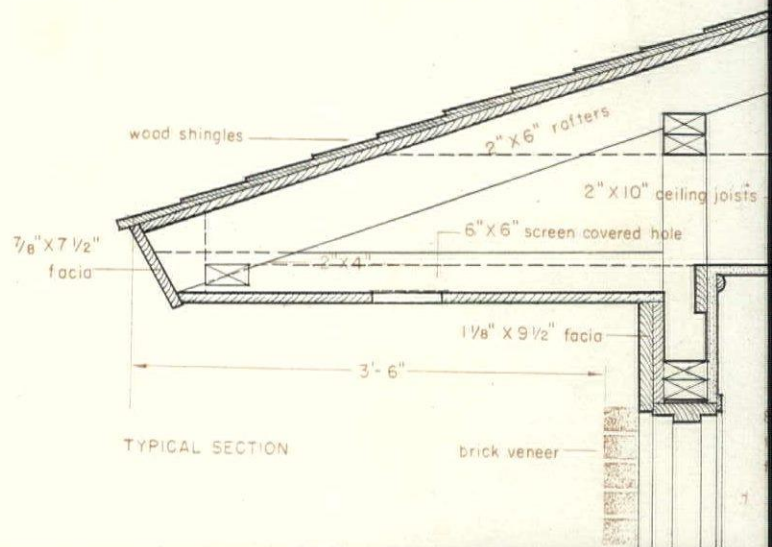
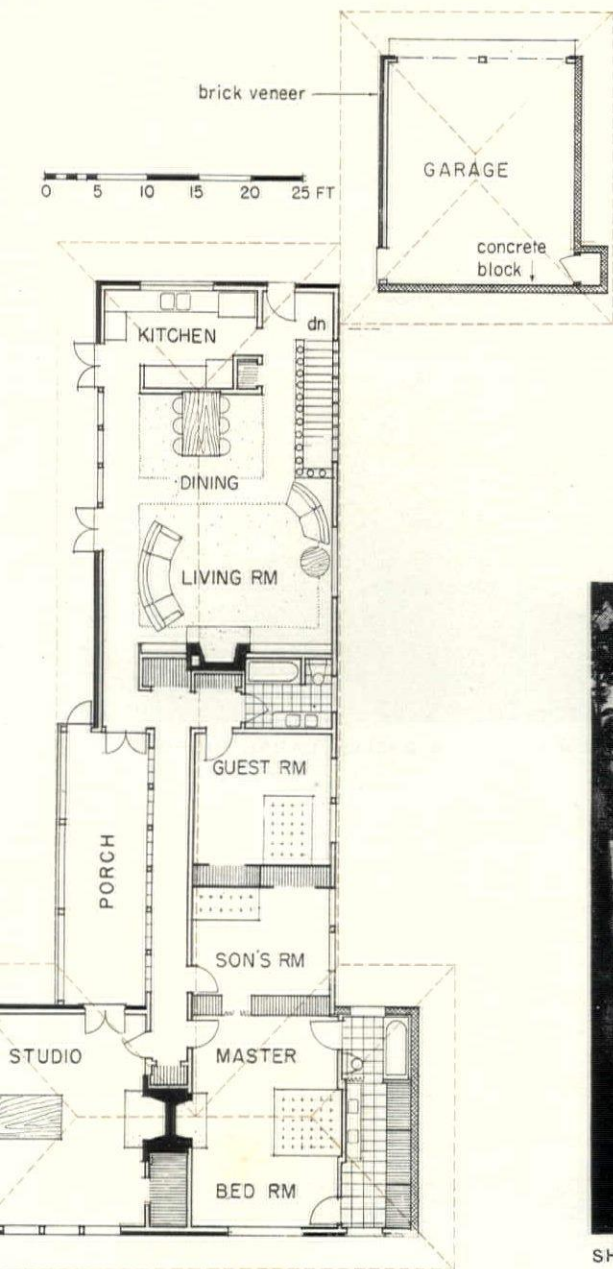
WORK DESK AND BLACKBOARD SUPPLEMENT KITCHEN EQUIPMENT

is indistinguishable from the other panels, and the annoying problem of concealing the legs is solved by the use of a separate wood triangle, which doubles as an occasional table when not acting as support. The spacious dressing-bath combination off the master bedroom has worked out well from a practical viewpoint and provides useful built-in storage space. The lavatories in both baths consist of small kitchen sinks attached to the under side of a slate slab with cabinets below. In this manner the standard medicine cabinet is replaced by a full width mirror over the counter.

The interior color scheme, which plays a major role in the overall effect, was worked out by Dan Cooper. His choice of cerulean blue linoleum for the floors of the living room and kitchen combined with warm brown walls is intended to bring indoors the tones of the surrounding landscape.

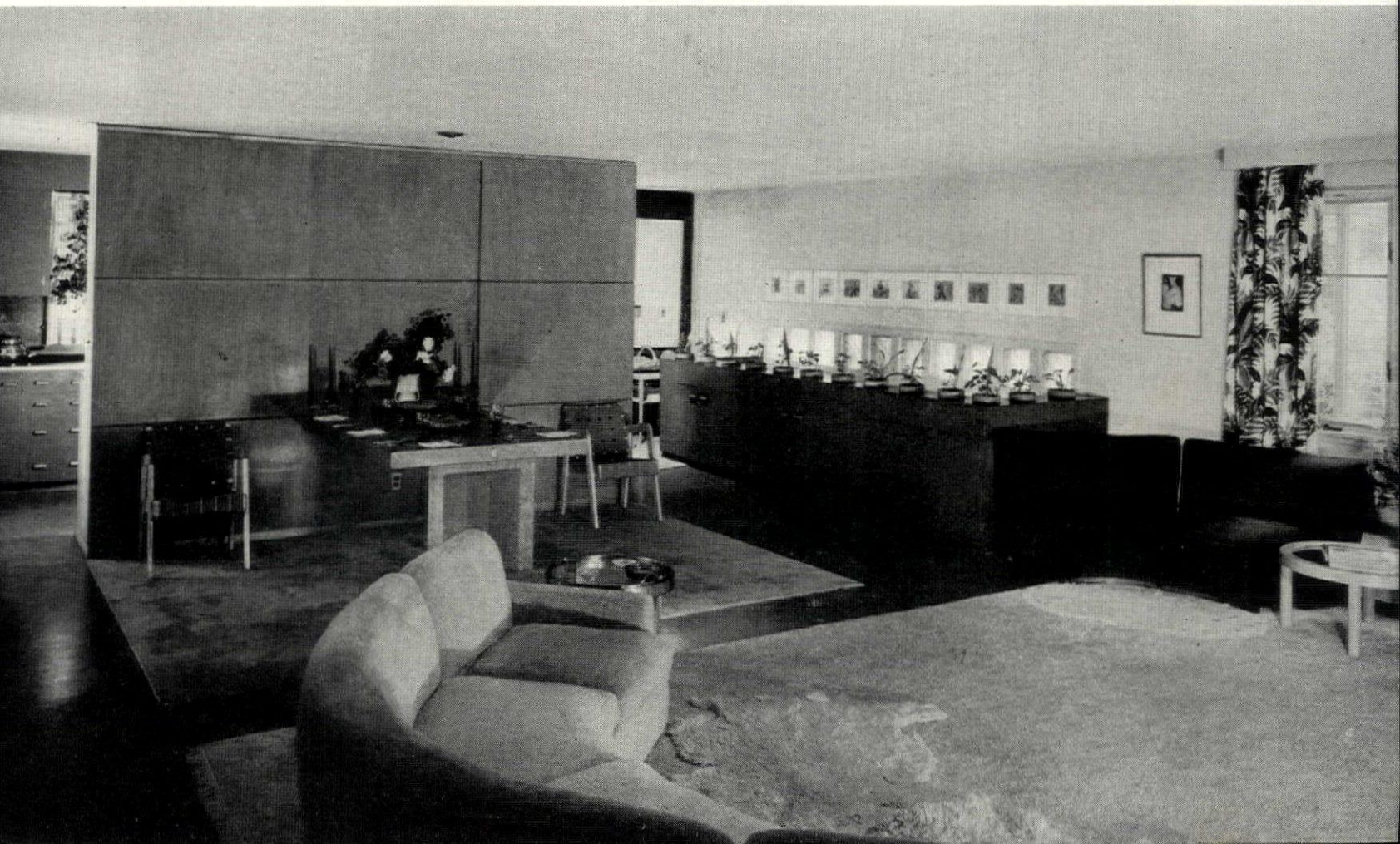
CONSTRUCTION OUTLINE: STRUCTURE: Exterior walls—studs, Celotex, Celotex Corp., brick veneer or vertical boards; inside—gypsum board and plaster. Floors—plywood finish. ROOF—slate. INSULATION: Outside walls—1 in. Celotex, Celotex Corp. Attic floor—4 in. rockwool, Johns-Manville. FIREPLACE: Damper—H. W. Covert Co. SHEET METAL WORK: Flashing—copper. Ducts—sheet metal. WINDOWS: Sash—wood casements, Andersen Corp. Glass blocks—Pittsburgh-Corning Corp. FLOOR COVERINGS—linoleum, Congoleum-Nairn, Inc. WALL COVERINGS: Living room—plywood on one wall, U. S. Plywood Corp. Bathrooms—linoleum, Congoleum-Nairn, Inc. GARAGE DOORS—Overhead Door Corp. HARDWARE—Stanley Works and P. & F. Corbin. ELECTRICAL FIXTURES—Kurt Versen, Inc. Switches—General Electric Co. WASHING MACHINE—Bendix Home Appliances, Inc. BATHROOM FIXTURES—Kohler Co. and W. A. Case & Son Mfg. Co. HEATING—warm air, filtering, humidifying, The Fox Furnace Co.

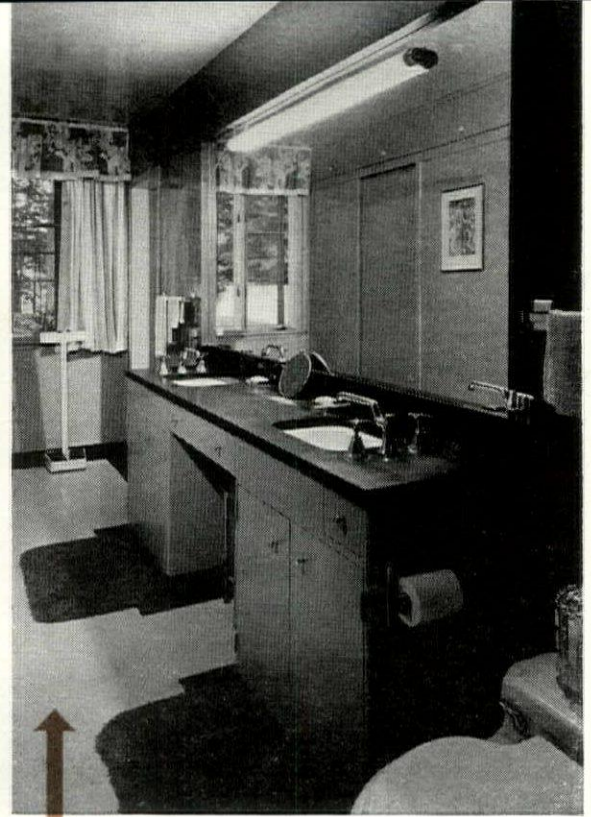
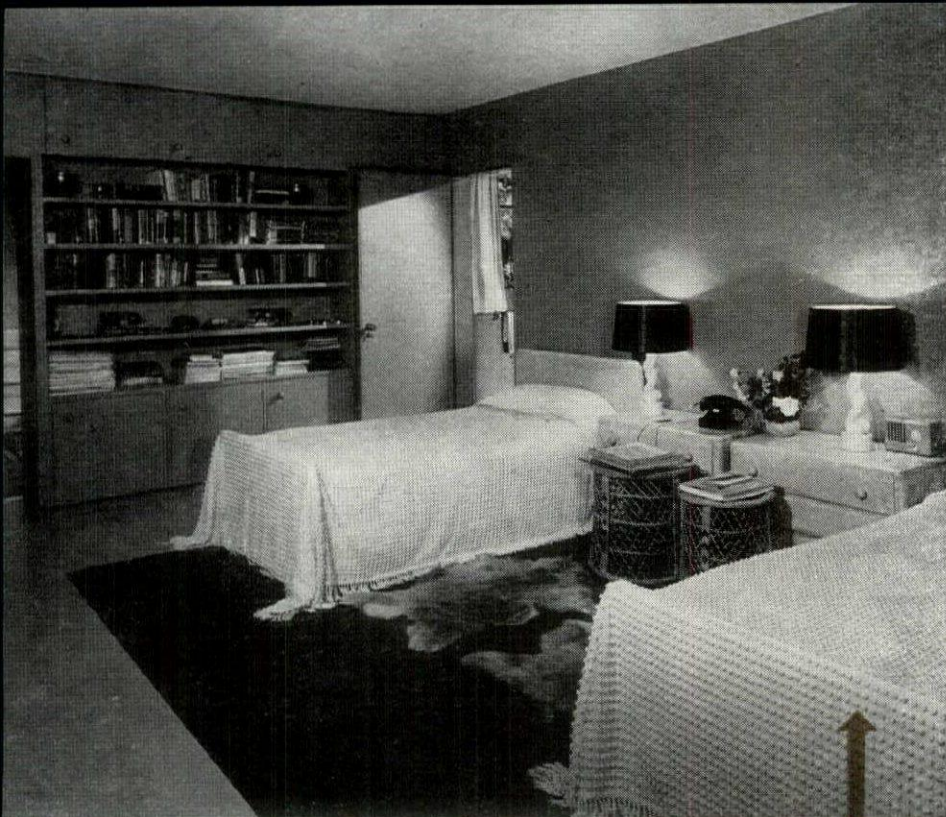




SHELTERED BY HOUSE AND HILL, REAR TERRACE IS PLEASANT AFTERNOON SUN TRAP

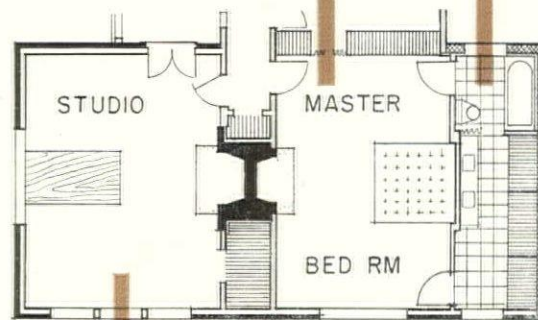
STANDING WALL, ONE PANEL OF WHICH CAN BE LOWERED AS A DINING TABLE, IS ONLY SEPARATION BETWEEN LIVING ROOM AND KITCHEN





BOOKCASE-CABINET WALL SEPARATES SON'S ROOM FROM MASTER BEDROOM BATHROOM HAS TWIN BASINS, LARGE MIRROR

Photos by Ezra Stoller



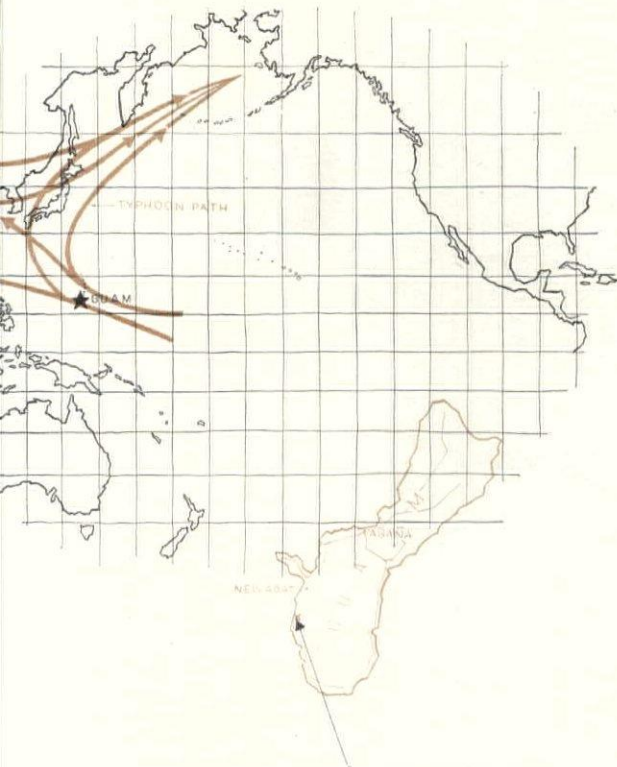
WARM COLOR OF WALLS AND CARPET, PLANTS AND OVERSTUFFED FURNITURE GIVE STUDIO A HOMELIKE ATMOSPHERE



CABLE STATION

designed to make life bearable for American staff in tropical, sea-girt Guam.

ANTONIN RAYMOND & L. L. RADO, Architects
SEELYE, STEVENSON & VALUE, Engineers
COMMERCIAL PACIFIC CABLE CO., Owners



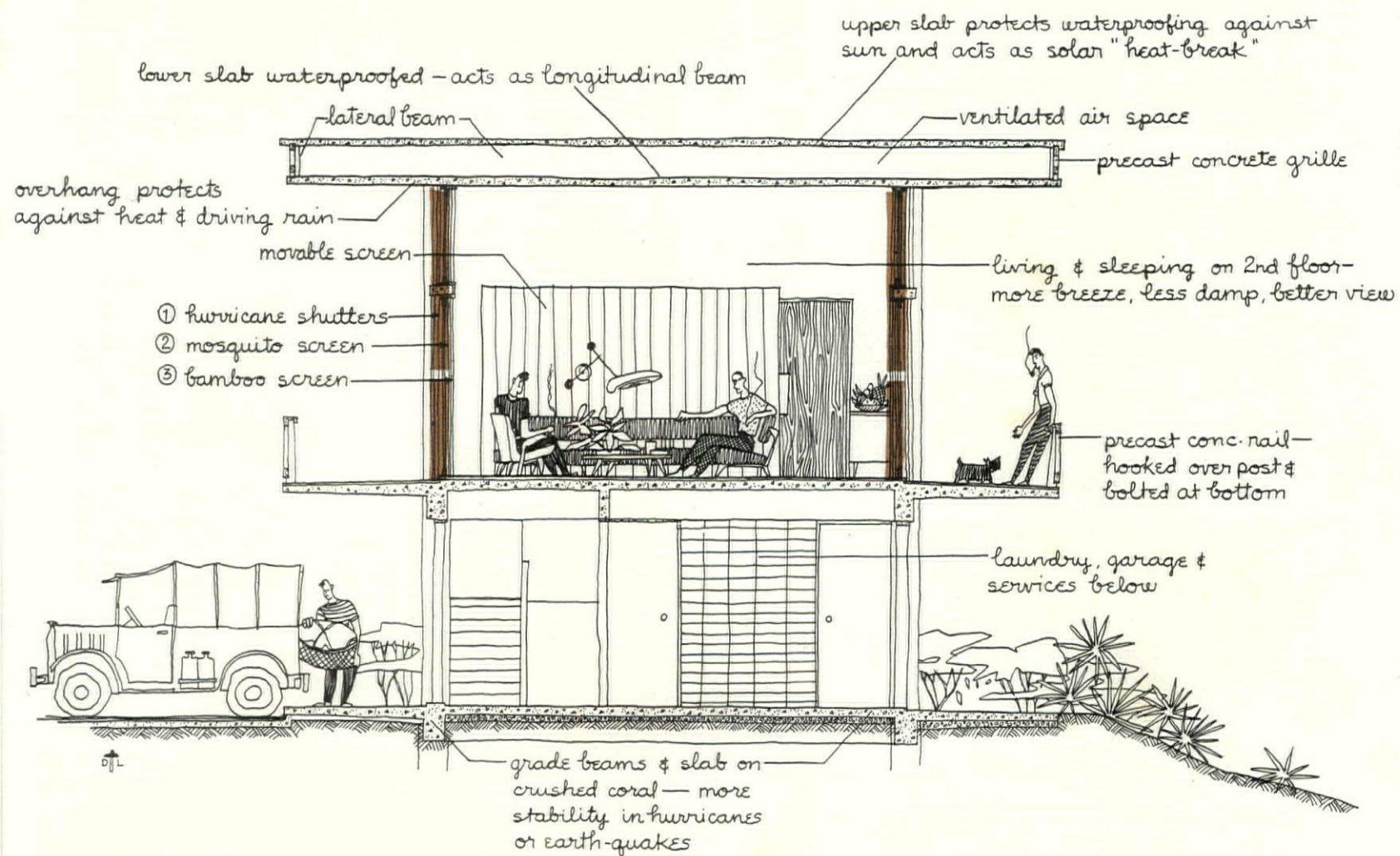
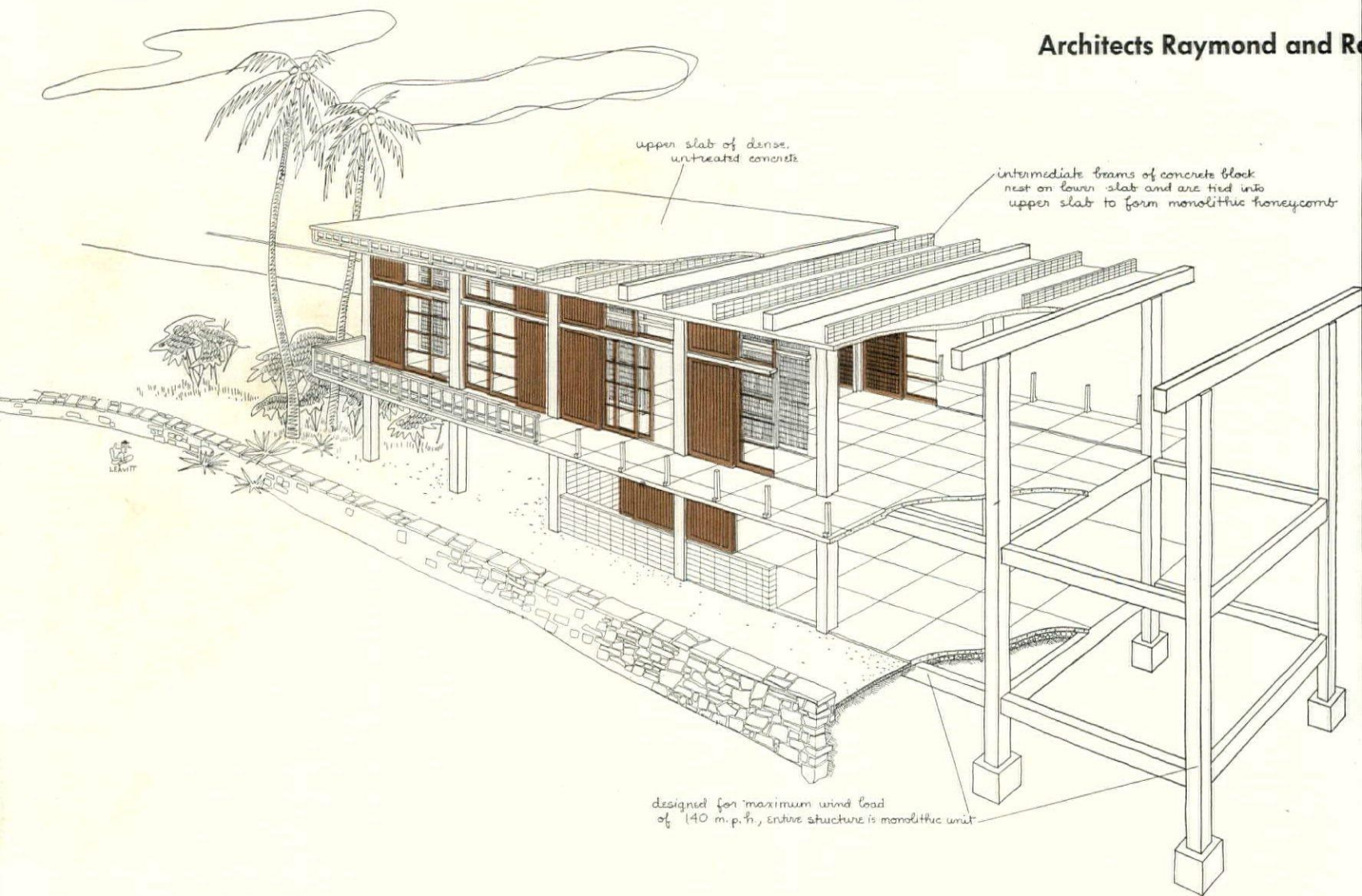
On the Pacific island of Guam, some 13 degrees north of the Equator, the simplest and most secure architectural proposition is apt to prove totally unworkable. Here is a climatic regime where mild temperatures (79 to 82 degrees F. the year 'round) are largely negated by extreme humidities—often up to 90 per cent, never below 83 per cent. The rainfall is terrific—an average of 230 in. a year, with as much as 121½ in. in 24 hours. Typhoons out of the China Sea bring winds of up to 130 m.p.h. Finally, because it lies on the rim of one of the Pacific's earthquake zones, Guam can expect to be shaken up now and again.

In such a context, standard construction details are useless: you cannot, for instance, frame roofs conventionally because termites will get the wood, sea air destroy the nails, equatorial sun beat up the roofing—and typhoons carry away what insects, ocean and sun have left behind. Or again, you cannot use glass because of the danger of fragmentation in a typhoon—and a detailed analysis of light and ventilation problems will reveal that you don't need ordinary windows, anyway. Few American architects are more familiar with these paradoxes of tropical architecture than Antonin Raymond. In an 18-year practice in Japan (where he went in 1920 with Wright) and India, he produced a wide range of buildings. This experience enabled him to by-pass a lot of preliminary fumbling in the design of the new cable station for Commercial Pacific Cable at New Agat, Guam. Quite fortuitously, two young men who had spent some weary wartime years on Guam also worked on the project: David Leavitt of the Raymond-Rado staff, and Landscape Architect James C. Rose. They knew by heart a list of personal discomforts which no atlas would show.

In simplest terms, Commercial Pacific's problem was one of personnel. To operate the station, a staff of six or seven State-side technicians was required. In order to hold the staff, work and dwelling space which would make life relatively safe and pleasant was mandatory. How the architects have met this problem is apparent in the following pages.

Rendering by David Leavitt



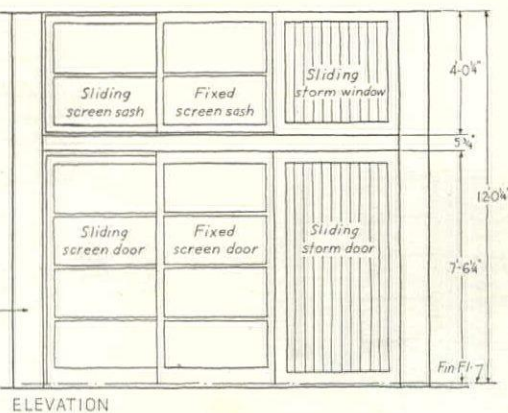
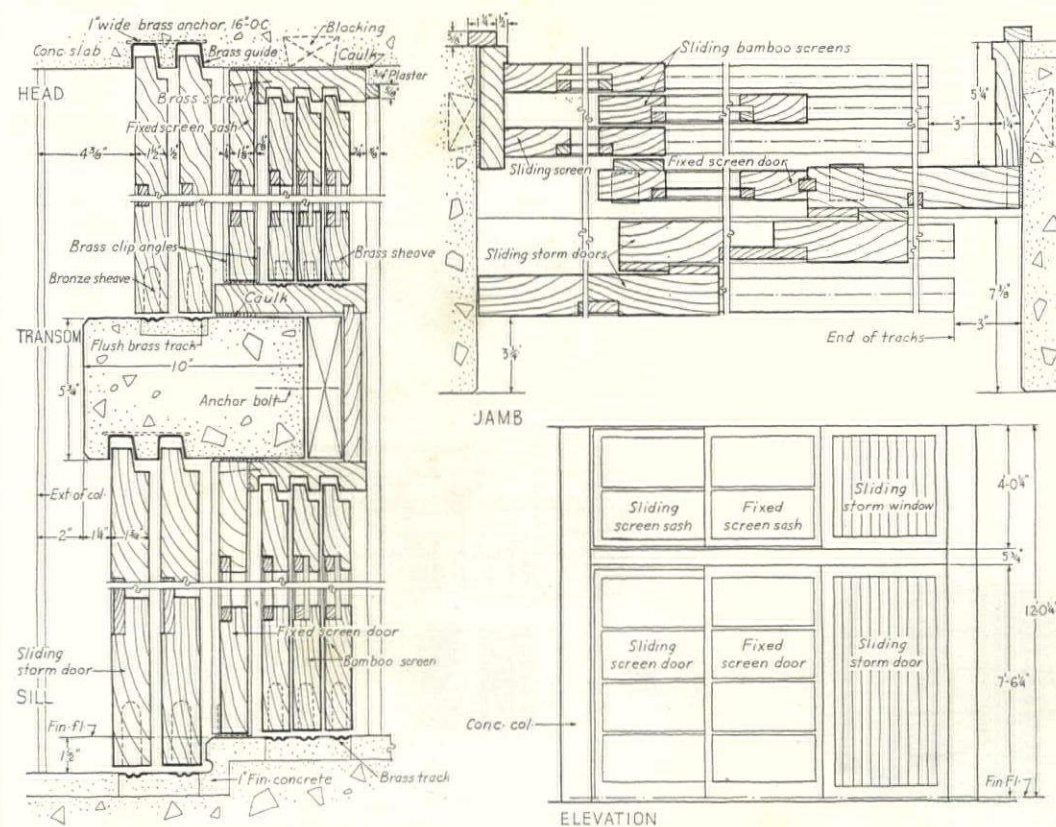
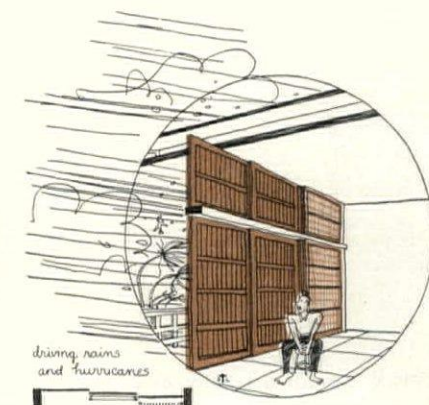
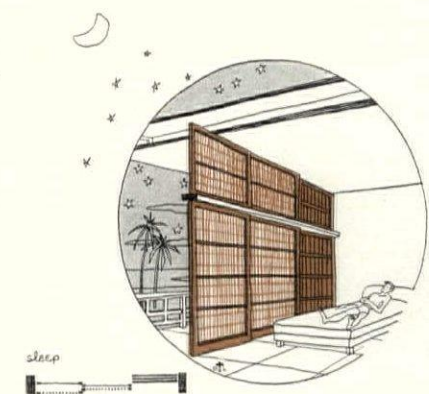


Develop a new alphabet of architectural details to meet exigencies of tropic sun, wind, rain and insects.

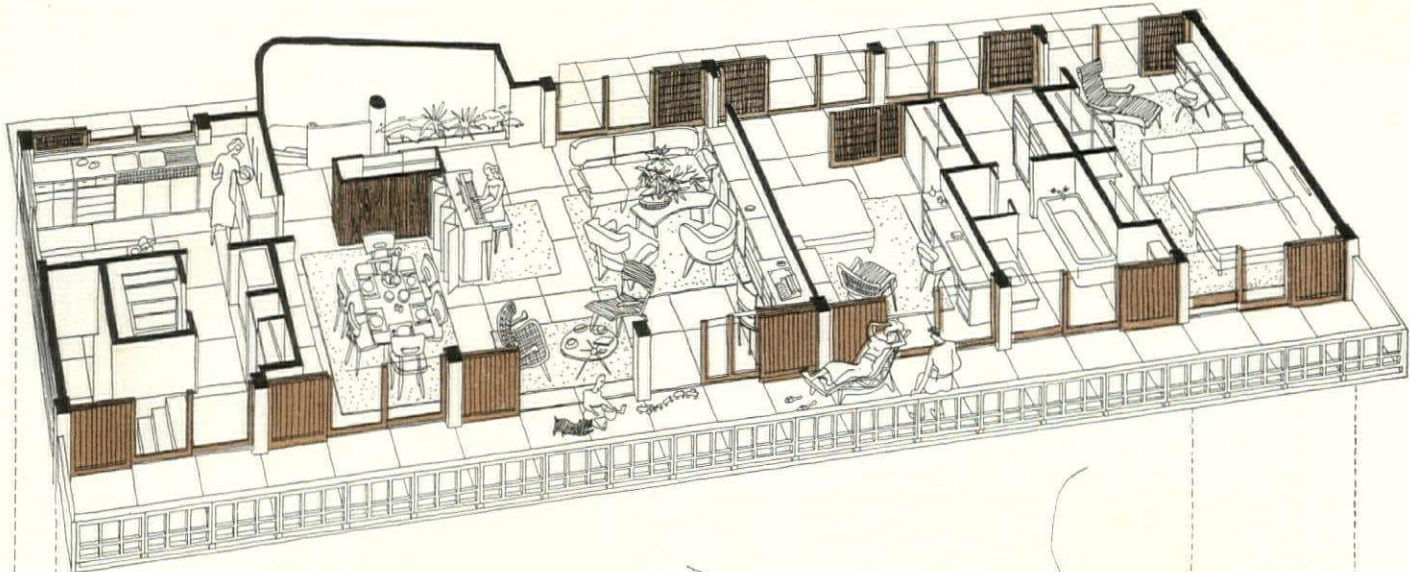
To meet the demands of Guam's peculiar climate on the one hand, and the needs of the client on the other, Architects Raymond and Rado found themselves reversing the usual design procedure of moving from the general to the particular. Instead, they evolved all the structural details first, at large scale, and then worked backward to floor and plot plans. In this process, the structure was inevitably resolved into two quite separate components: a rigid homogeneous skeleton and a highly flexible system of curtain walls. Everything in the problem dictated this. The buildings must furnish an envelope which could be either completely opened or tightly sealed, or anything in between. At the same time, they must be able to resist the immense and unpredictable forces of typhoon and 'quake. Obviously, no loadbearing wall could meet these demands. A skeleton frame was thus the logical choice and—because of the corrosive ocean air—concrete the logical material. This conclusion meshed neatly with logistics—plentiful supplies of coral stone and coral sand were available; only cement and reinforcing steel need be imported; and no skilled labor would be required for simple formwork.

The architects have used a variant of the double concrete roof first used by Raymond in his Indian monastery. The structure consists of two dead-level slabs separated by an air space. The upper and thinner element is a naked concrete slab, whose principal function is to block solar heat from the "real" roof below. This lower and heavier slab is structurally monolithic with the frame and is protected by a membrane of bituminous waterproofing. Securely tied together by reinforcing, these two slabs form a rigid honeycomb structure which is cantilevered out some 6½ ft. beyond the building face to protect the rooms from sky glare, sunlight and rains.

To admit as much light and air as desired at any time while excluding insects, driving rain or high winds at all times, the architects have evolved a wall composed entirely of horizontally sliding screens. The only wooden elements in the entire project, these screens fill the 12 ft. bays between columns and reach from floor to ceiling. Three complete walls may be formed—bronze mosquito netting, bamboo lattice, or solid wood—which offer many combinations. With year-round humidities of 83 to 90 per cent, the primary requirement for human comfort is a high, steady air movement. Every effort has been made to guarantee this in the Guam project. All buildings, oriented to straddle the prevailing winds from the west, are off the ground for maximum exposure. To facilitate air circulation inside the buildings, most partitions stop at the transom level. The only alternative to natural ventilation would have been artificial dehumidification. However, for a series of reasons (cost, operation and replacement problems), this was considered impractical except for a small area of the cable station proper. This heavily-insulated area is air conditioned.

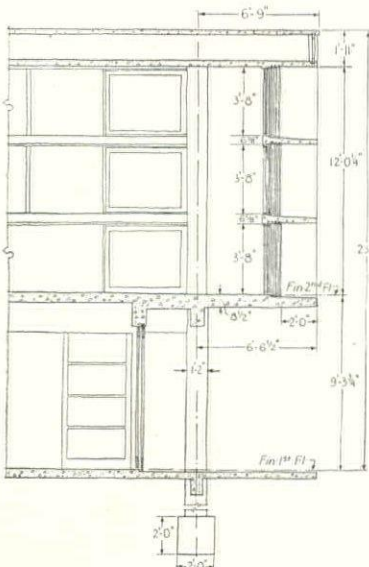


Almost classic in their simplicity, the living and working quarters of Guam's new cable station are plan

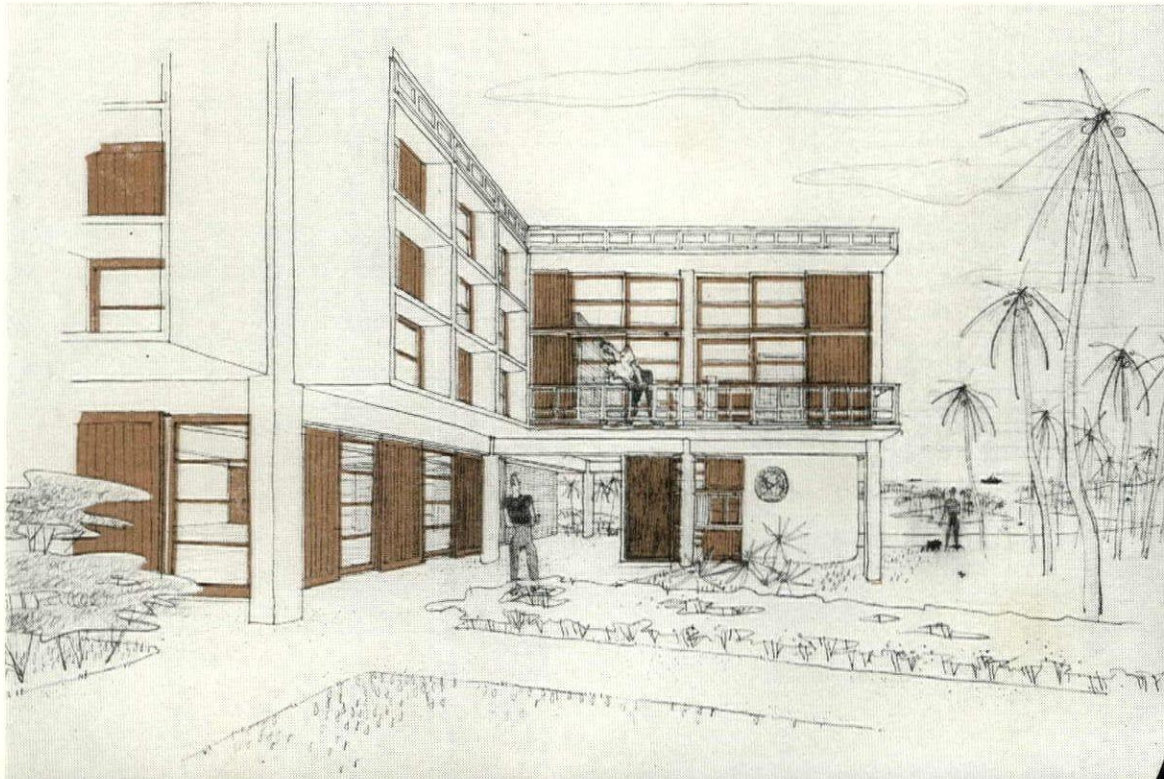


SUPERINTENDENT'S RESIDENCE

CONCRETE SUN-BREAK IS CANTILEVERED BEYOND BUILDING FACE TO PROTECT CABLE OFFICE



SECTION THROUGH SUN-BREAK

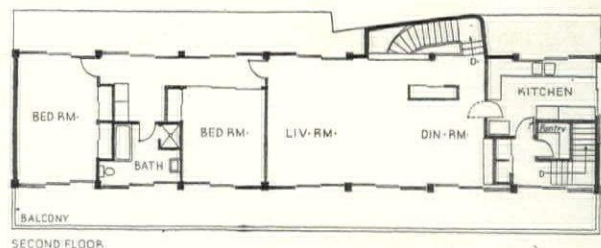


minimize boredom and discomfort of life in a tropical outpost.

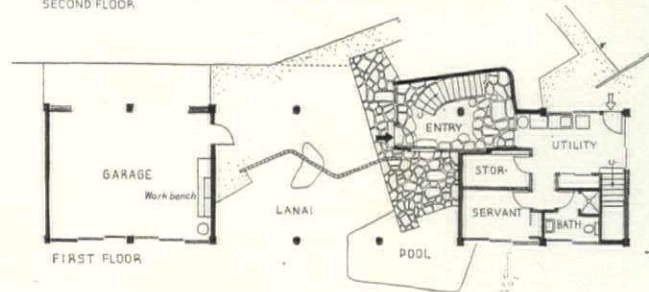
Architects Raymond and Rado have demonstrated the flexibility of their structural system by applying it with equal ease to all four buildings in the project. The only departure from the triple-screen walls is found in the projecting bay of the cable office, where an eggcrate sun break is used to reduce glare in the operating room, (bottom, facing page). The freedom of planning possible within this series of 12 ft. bays is clear in the superintendent's residence (facing page). All rooms have cross-ventilation, adjustable outside walls, shaded balconies on both sides. By placing the main living quarters on the second story, the designers have not only given them improved exposure and view but also created a natural service area on the ground floor. Here they have placed garage, laundry, servant's room and bath. They have also developed a portion of this area into a charming loggia, protected from sun and rain but open to breeze and view. The same general principles have been followed in laying out the bachelors' quarters.

Although the station will have its own water and sewage disposal system, it is otherwise almost as suburban as Westchester. A paved highway connects it to Agat, several miles up the coast, where supplies and services are available.

Raymond and Rado will design all furniture and fixtures for the new project. Having in mind the hazards of the climate, they plan to use only treated woods, foam rubber, plastic fabrics and non-ferrous metals. And they feel that after designing Guam-proof buildings, the furnishings should not be too difficult.

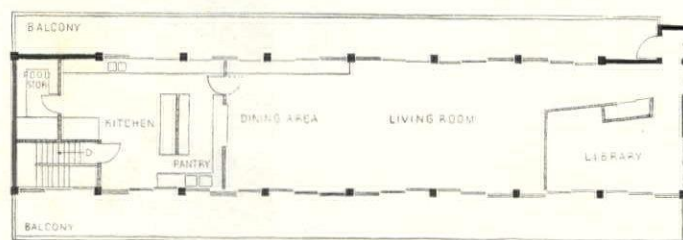


SECOND FLOOR.

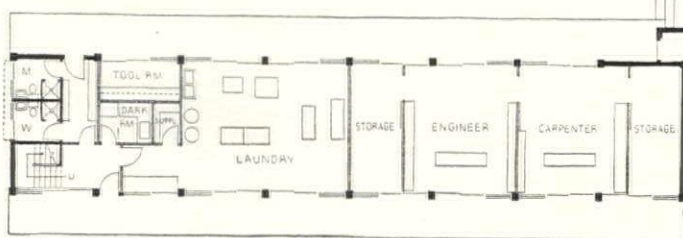


FIRST FLOOR

ASSISTANT SUPERINTENDENT'S RESIDENCE

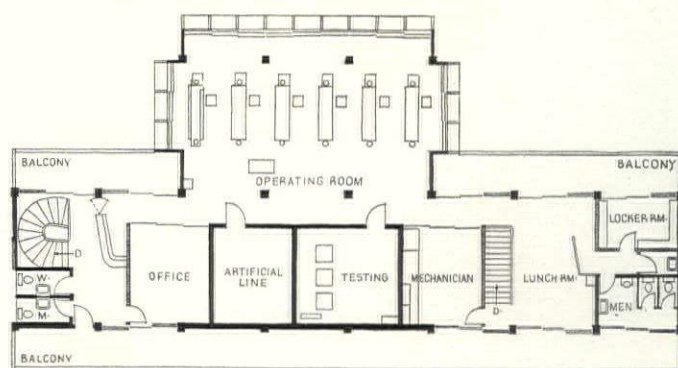
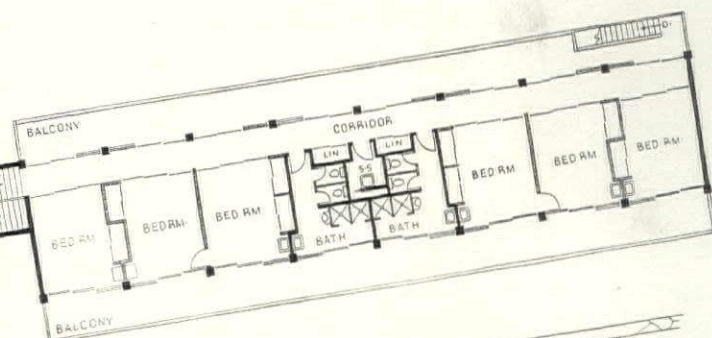


SECOND FLOOR

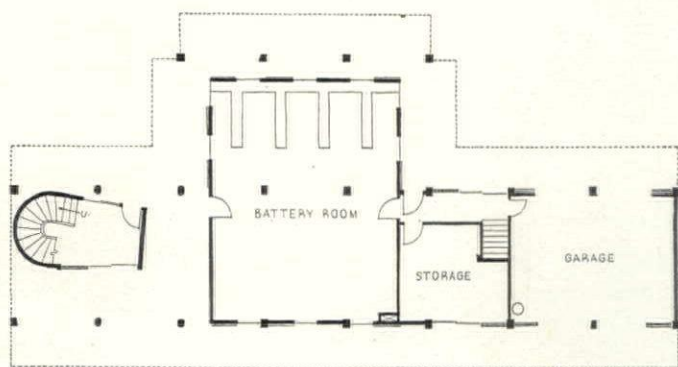


FIRST FLOOR

BACHELORS' QUARTERS

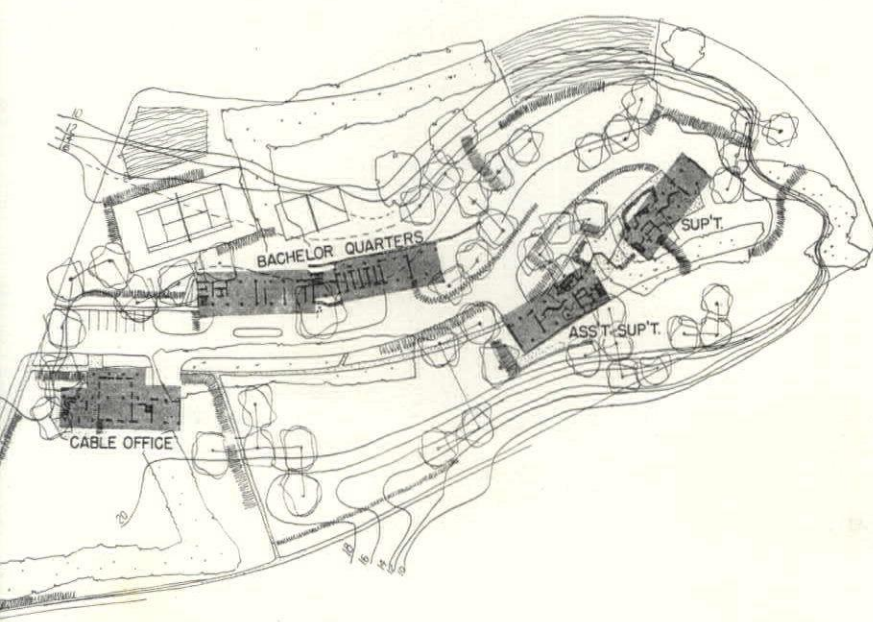


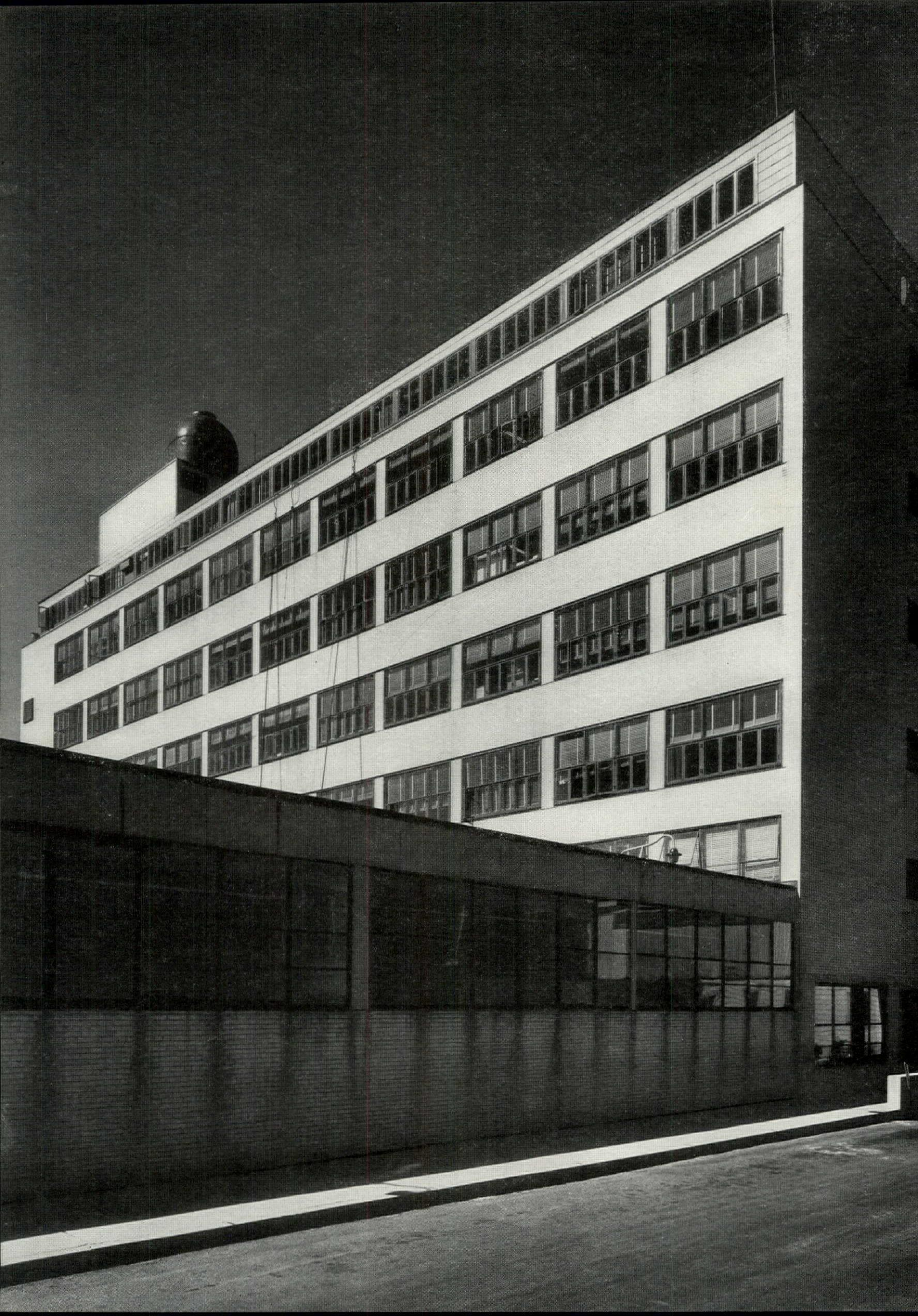
SECOND FLOOR



FIRST FLOOR

CABLE OFFICE





M.I.T. LABORATORY AND OFFICE BUILDING was designed for utmost economy, rapid wartime construction and easy conversion to peacetime academic use.

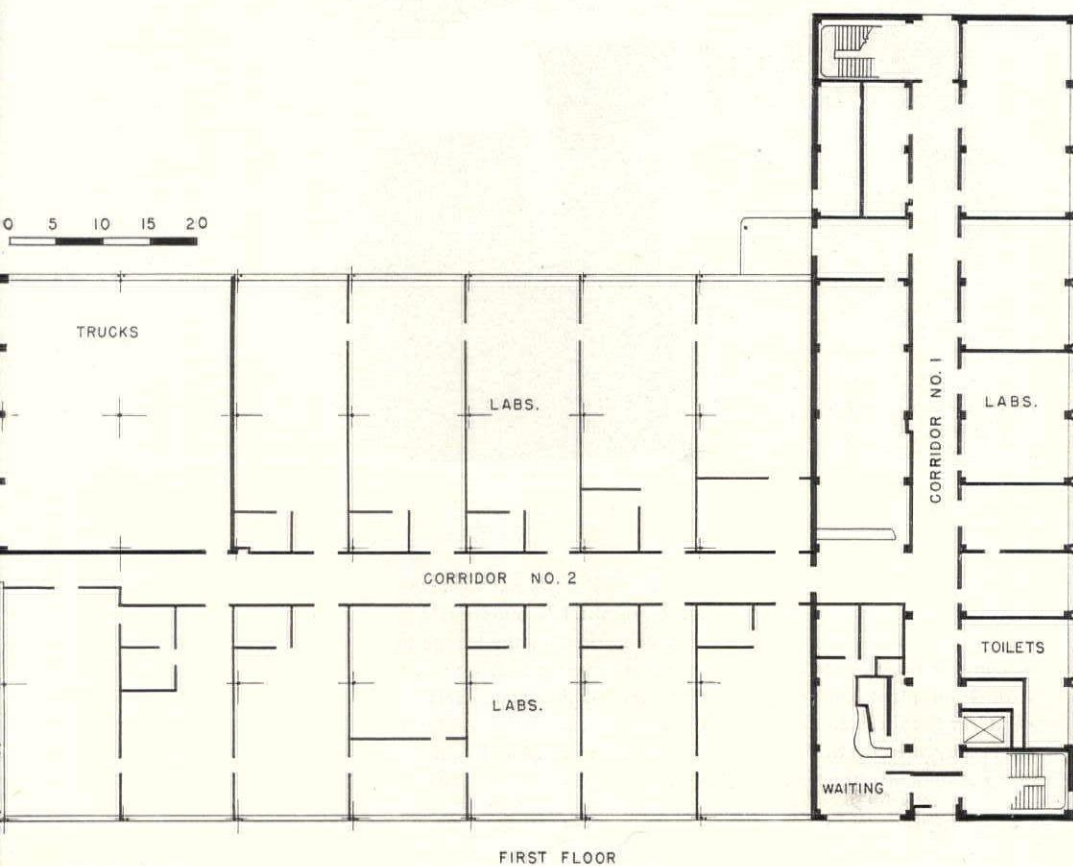
LAWRENCE B. ANDERSON & HERBERT L. BECKWITH, Architects

SAWYER CONSTRUCTION CO., General Contractor

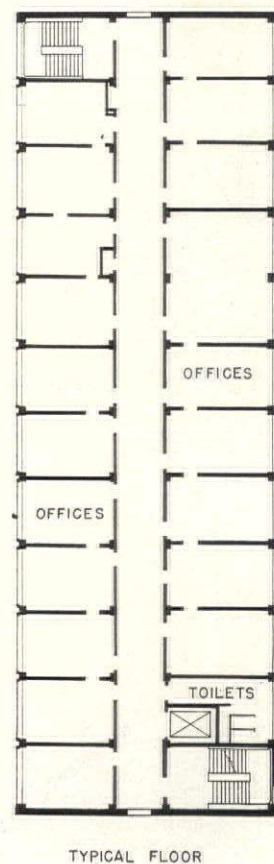
Built in a hurry as an emergency war project, this handsome, simple laboratory and office building at the Massachusetts Institute of Technology has been converted to peaceful use with a minimum of alteration, for conversion was one of the original design requirements. The wartime client and occupant was the Radiation Laboratory, a division of the National Defense Research Committee of the Office of Scientific Research and Development, which was primarily concerned with the development of the atom bomb and radar. While the building had to meet this agency's exacting requirements for well-lighted large and small laboratories and offices, for utmost speed of construction and minimum cost, it also had to fit a restricted site in the middle of the M.I.T. campus, harmonize with the existing buildings and lend itself to peacetime academic use. All of these factors are apparent in the completed building.

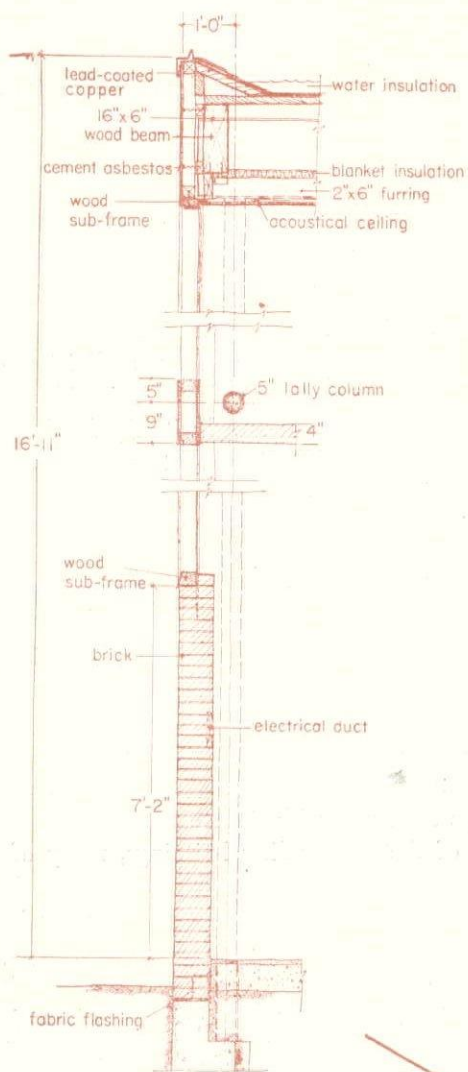
The meager site and need for economy dictated that the small laboratories and offices be concentrated in a permanent multi-story structure, facing east and west. To the west, a temporary one-story wing was provided to house the larger laboratories, requiring long spans and high ceilings, and to facilitate the installation of heavy, bulky equipment. Curtain-walls of both wings are faced with light brick whose appearance closely approximates that of the surrounding buildings, many of which are limestone.

Originally conceived as a two-story unit, the permanent wing was expanded with four more permanent floors and topped with a light-weight temporary seventh floor. The added height facilitated the experimental use of radar equipment (which requires a "line-of-sight" to its objective) and is now used by the Institute's meteorological department, some of whose weather forecasting apparatus is in evidence on the roof.

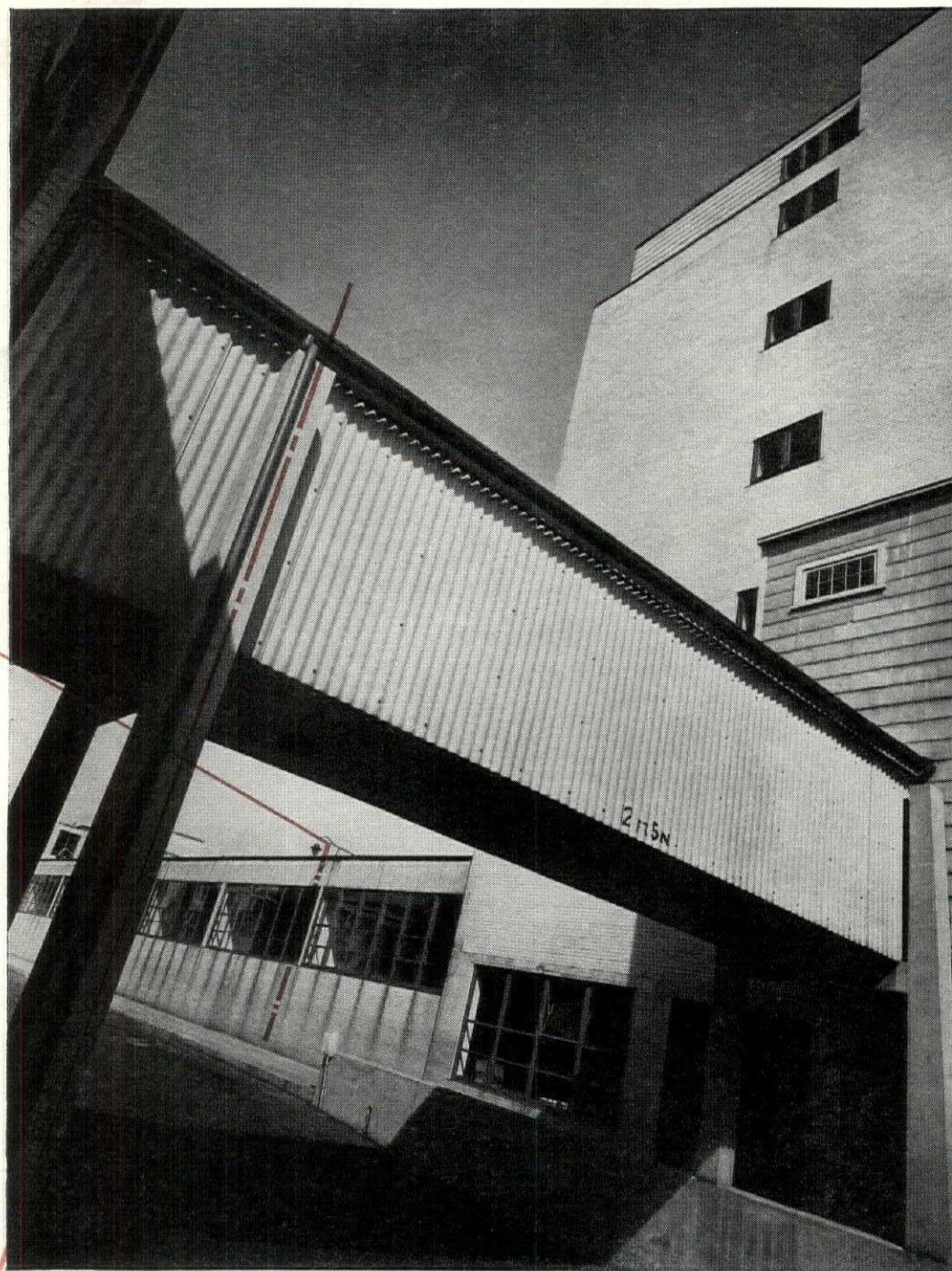
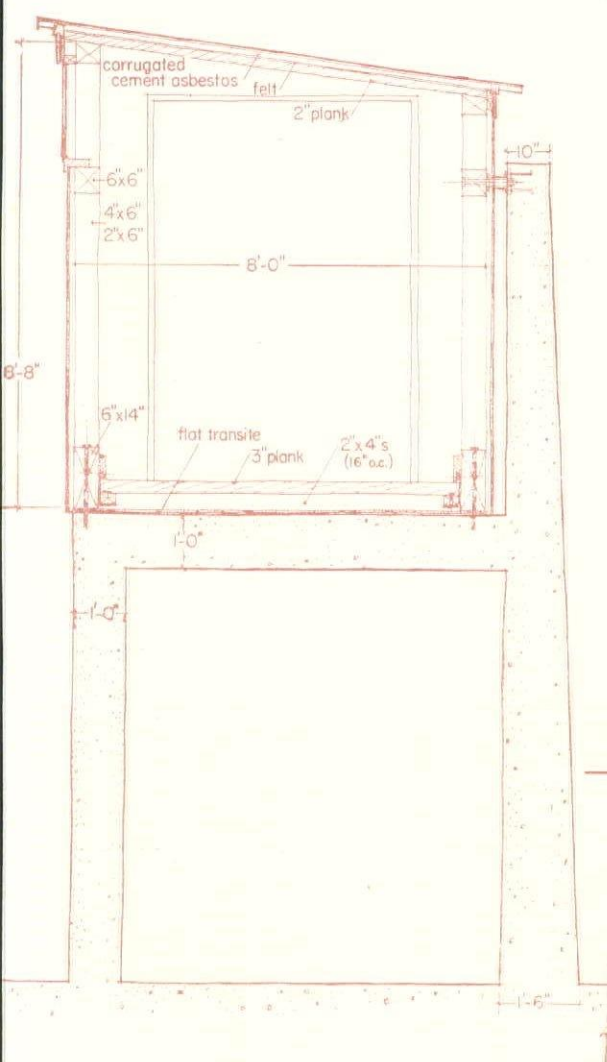


← Ezra Stoller photo





WATER ON THE ROOF supplements 2 in. of mineral wool in the insulation of the temporary one-story wing. Construction of this wing features heavy timber framing, brick curtain walls, large steel sash windows and built-up roofing on wood planking. The permanent multi-story wing is reinforced concrete.



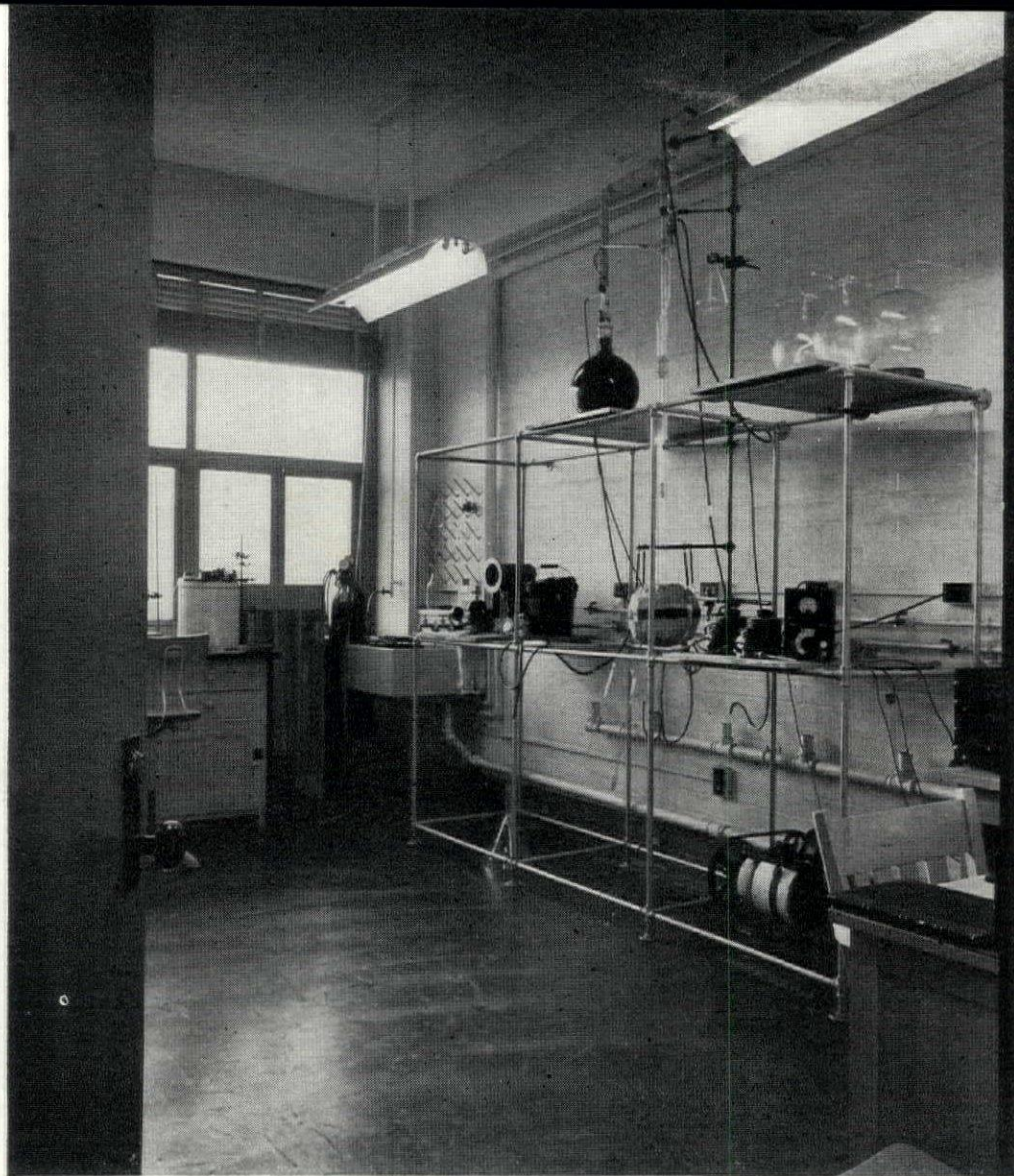
BRIDGE connects second floor of laboratory building with the chemical engineering building. (Many of M.I.T.'s buildings are so connected.) Of heavy wood frame construction, the bridge is walled and roofed with corrugated cement asbestos board, floored with 3 in. planking and cradled in two h-shaped supports of reinforced concrete. Its unadorned utilitarian design (later marred by the addition of a shingled bridge to another building) is in keeping with the laboratory building.

SMALL LABORATORY ROOM is equipped with multiple outlets for all types of services (gas, air, electricity, water and waste disposal) permitting flexible arrangement of experimental apparatus. Efficiency is further assured by generous lighting.

CONSTRUCTION OUTLINE

FOUNDATIONS—reinforced concrete. Caissons—Raymond Concrete Pile Co. **STRUCTURE**: Exterior walls—12 in. brick, exposed and painted interior. Face brick—Hanley Co., Inc.; back-up brick, New England Brick Co. Interior partitions—4 in. cinder block painted, 1/4 in. birch on 2 x 3 in. studs. Columns—reinforced concrete. Floors—reinforced concrete, 1 1/4 in. granolithic finish. Ceilings—1/2 in. 12 x 12 in. Acousti-Celotex, The Celotex Corp., or exposed concrete painted. **ROOF**: Permanent structure—reinforced concrete slab; temporary structure and one-story laboratory—wood plank. All areas covered with 5-ply built-up tar and gravel, The Barrett Div., Allied Chemical & Dye Corp. **SHEET METAL WORK**: Flashing—16 oz. lead coated copper. Ducts—#20 and 26 gauge galvanized sheet metal, U. S. Steel Corp. **INSULATION**: Roofs—1 1/2 in. Celotex, The Celotex Corp. **WINDOWS**: Sash—projected, Hope's Windows, Inc., and wood casement. Glass—quality B, drawn sheet. **STAIRS**—closed steel channel stringers; steel pan treads and landings, grano filled; steel risers, handrails and supports standard steel pipe, welded. **ELEVATORS**—Otis Elevator Co. **FLOOR COVERINGS**: Offices and laboratories—linoleum, Armstrong Cork Co.; elsewhere—1/4 in. granolithic. **WOOD AND METAL TRIM**: Trim—white birch, natural finish. Doors—flush panel, Roddis Lumber & Veneer Co., and Kalamein, Richmond Fireproof Door Co. Garage doors—Overhead Door Corp. **HARDWARE**—Yale & Towne Mfg. Co. and The Stanley Works. **PAINTS**—E. I. Du Pont de Nemours & Co., Inc. **ELECTRICAL INSTALLATION**: Wiring—AC 4-wire, single phase and 3-phase, 115 and 208 v.; 110 v., and 220 v. D.C. Wiring channels throughout laboratories. Fixtures—2 tube, 4 ft. fluorescent, Sylvania Electric Products, Inc. **PLUMBING FIXTURES**—W. A. Case & Son Mfg. Co. and Kohler Co. Soil pipes—cast iron. Vent pipes—galvanized standard steel. Water pipes—brass. **HEATING**—steam radiation from central power plant, and tempered filtered air, American Air Filter Co., Inc. Grilles—Register & Grille Mfg. Co., Hendrick Mfg. Co. Regulators—Powers Regulator Co. Water heater—Taco Heaters, Inc. **SPECIAL EQUIPMENT**: Teletalk system—Teleautograph Co. Blinds—Columbia Mills, Inc.

CORRIDOR in multi-story wing illustrates the building's economical construction and finish. Like the cinder block partitions, the reinforced concrete ceilings are merely painted. No effort has been made to conceal the network of electrical conduit and steam and water pipes. Once occupied by government radiation and radar experts, this floor now accommodates M.I.T.'s Geology Department.



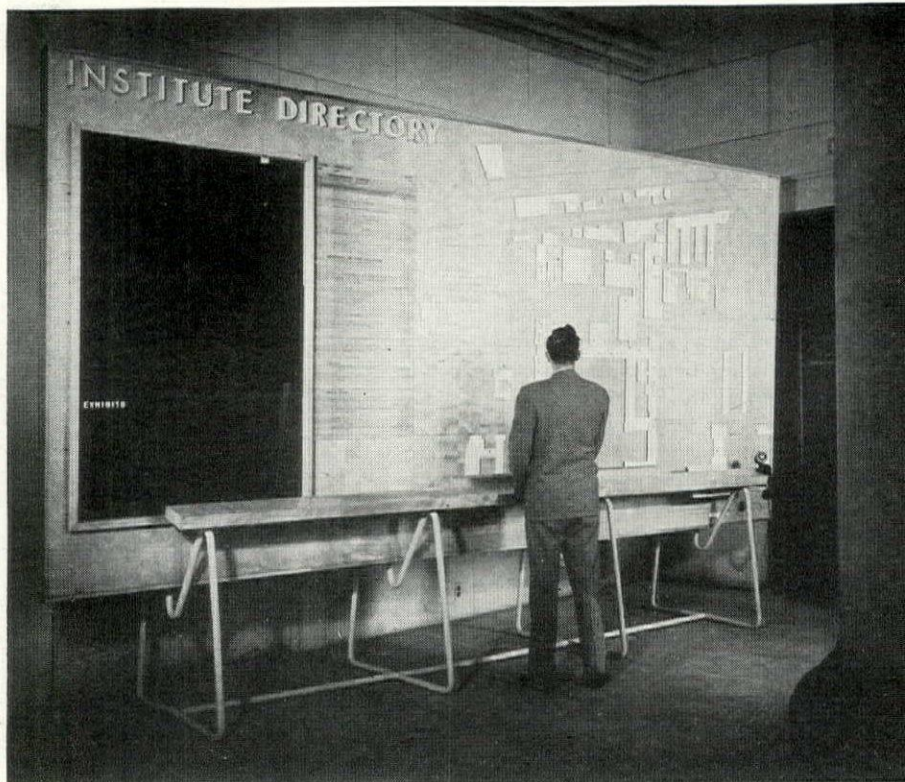
M.I.T. ARCHITECTURAL DEPARTMENT OFFICES

LAWRENCE B. ANDERSON & HERBERT L. BECKWITH, Architects

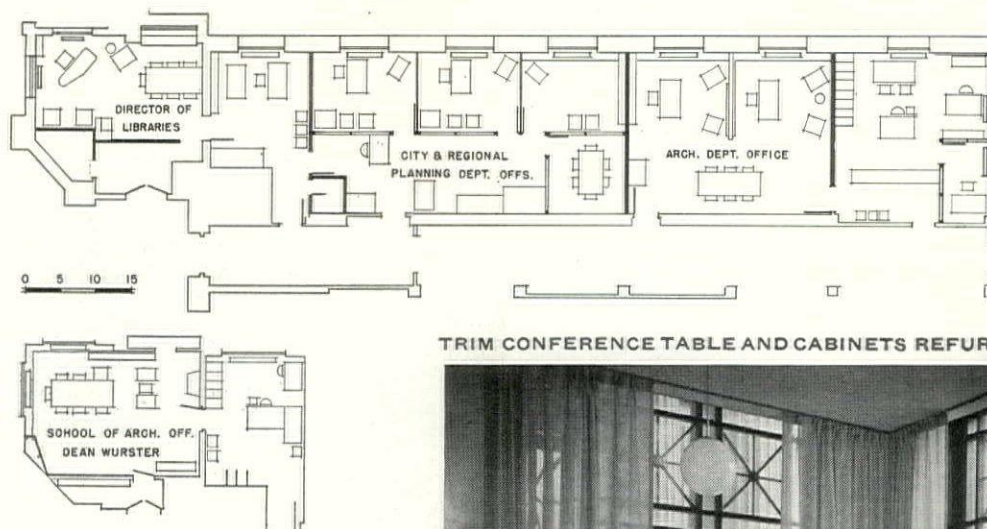
WILLIAM W. WURSTER, Dean of Architecture

Headed by Dean William W. Wurster, the staff of Massachusetts Institute of Technology's School of Architecture and Planning has not only given the campus an attractive, functional laboratory and office building (pp. 98-101), but has also boosted the appearance and efficiency of its own working space. Occupying one wing of the main academic building, the school's professors were formerly cloistered in drab offices whose dimensions were controlled by the building's narrow bays and its dark central corridor, used exclusively for access purposes. By combining offices and replacing conventional partitions with plywood storage units and glass panels (opposite page), the space was better used and its natural lighting greatly improved.

Further evidence of M.I.T.'s program of interior refurbishment is seen in the dean's office (right, below) and the foyer of the main building. In the latter, a free-standing bulletin board and campus directory (right, above) answers visitors' questions regarding department locations with the flash of a light.



CAMPUS DIRECTORY LIGHTS BUILDINGS WHEN INDEXED BUTTONS ARE TOUCHED



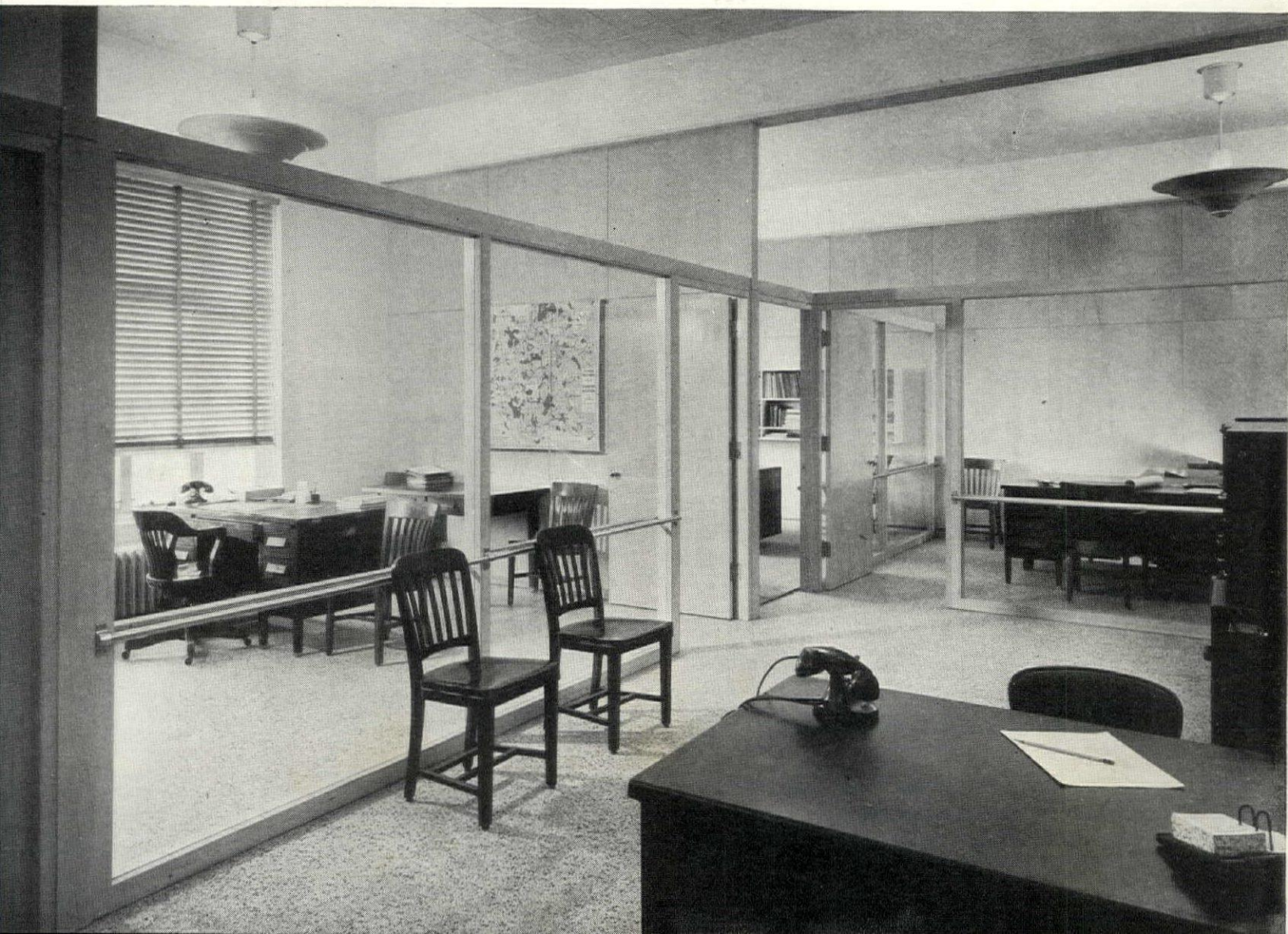
TRIM CONFERENCE TABLE AND CABINETS REFURBISH DEAN WURSTER'S OFFICE



Esra Stoller photos



SCREENED ONLY BY SPUR STORAGE WALL OF BIRCH PLYWOOD, THE OFFICES OF TWO PROFESSORS ARE COMBINED TO ELIMINATE CORRIDOR
GLASS AND PLYWOOD PARTITIONS DIVIDE TWO BAYS OF SAME BUILDING INTO THREE PROFESSORS' OFFICES AND CENTRAL RECEPTION ROOM



TEA CENTRE

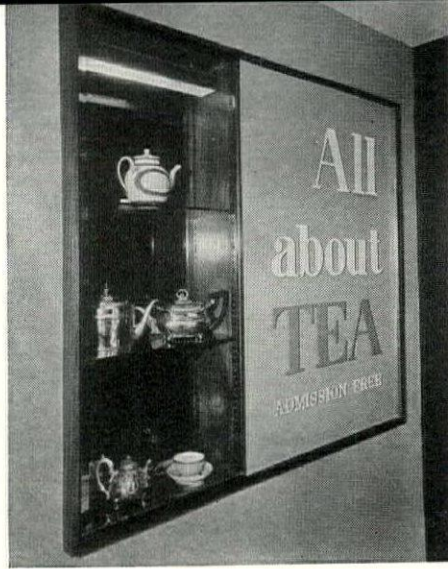
The British national drink is given a boost with modern public relations and display techniques.

MISHA BLACK and BRONEK KATZ, Architects

KENNETH BAYES and AUSTIN FRAZER, Associates

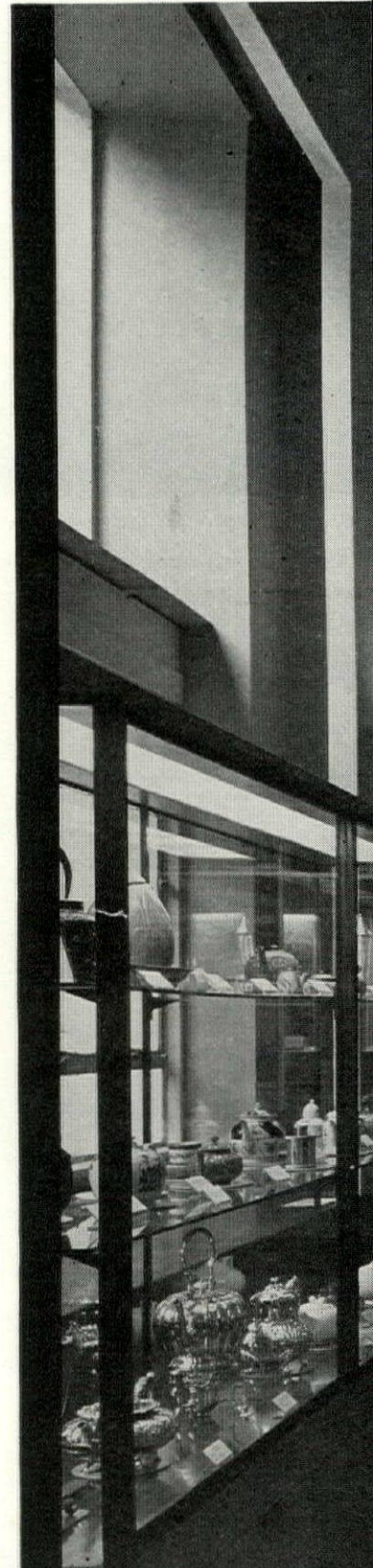
This information center and exhibition hall for the Empire Tea Bureau, near London's Picadilly Circus, demonstrates that a building's function can be successfully changed without expensive structural alterations if the basic design is well conceived. During the war the Bureau lent its quarters to the Government of Ontario for a servicemen's club (FORUM, June '45), investing in a complete redesign job. With the closing of the club in the spring of 1946, Empire Tea reclaimed its headquarters, setting up an educational service program with a minimum of change in the recreation club layout.

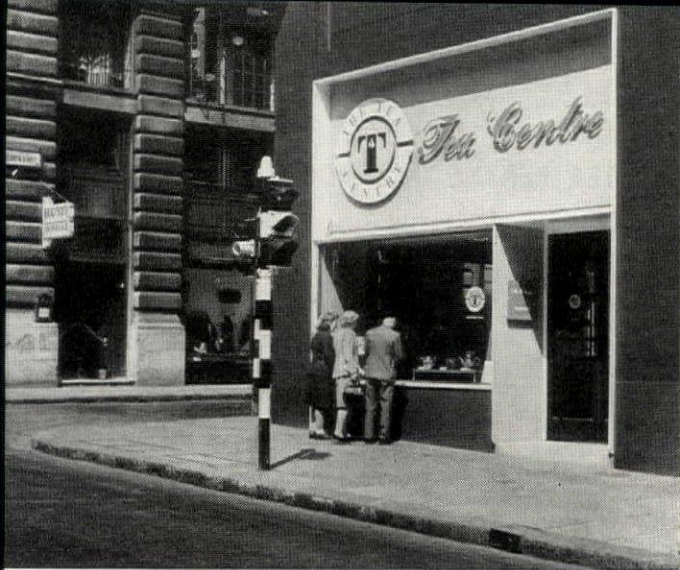
Despite the limitations of structure, materials and labor, the architects have done an outstanding job by any design standards. Richly decorative murals and emblazoned circular plaques adroitly played against bare rectilinear wall surfaces create a feeling of elegance without fussiness. The complex of display panels and exhibit cases which are the main feature of the lower floors, have been so expertly handled that they become part of



the general decorative scheme, providing both continuity and variety. Decorative details, such as the small plaster medallions used in a repetitive pattern on the wall of the stair landing, lend a textural richness unusual in contemporary design.

Offices, information rooms and library are placed on the upper floors and a small cinema is provided at the basement level for use in connection with the catering training schemes and demonstrations of large-scale restaurant equipment which are part of the Tea Bureau's program. Eventually, a tea bar will be added.

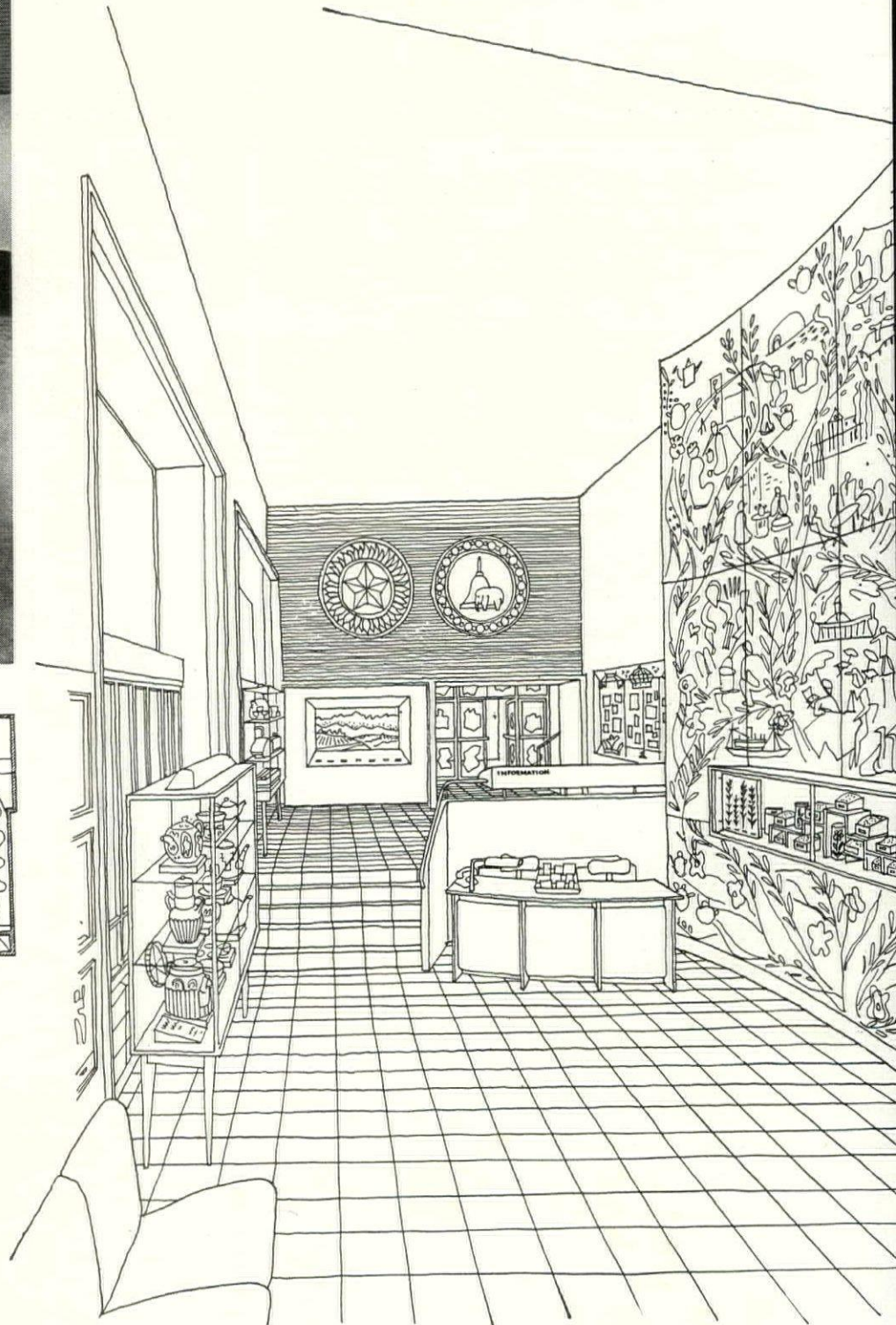
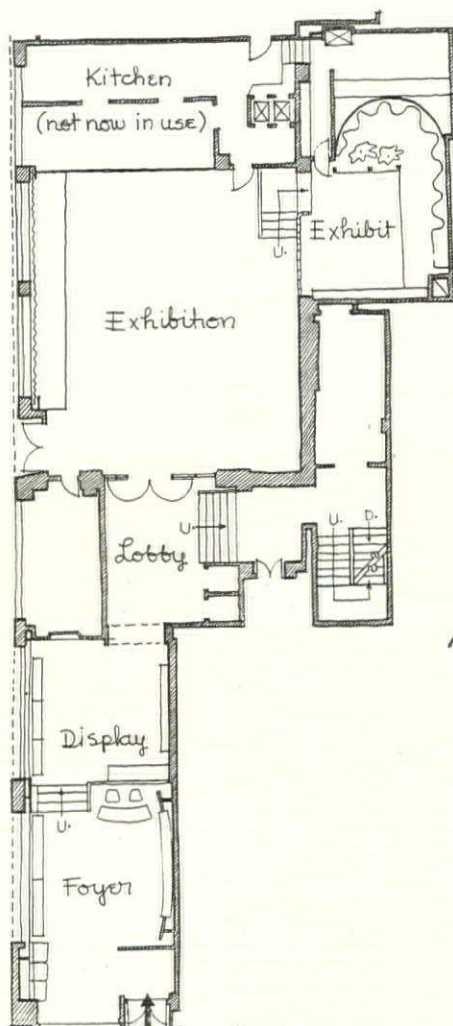




TRIM SHOW WINDOW ATTRACTS PUBLIC INTO TEA CENTRE FOYER, A SEMI-PERMANENT ENTRANCE TO SHORT-TERM EXHIBITS IN REAR



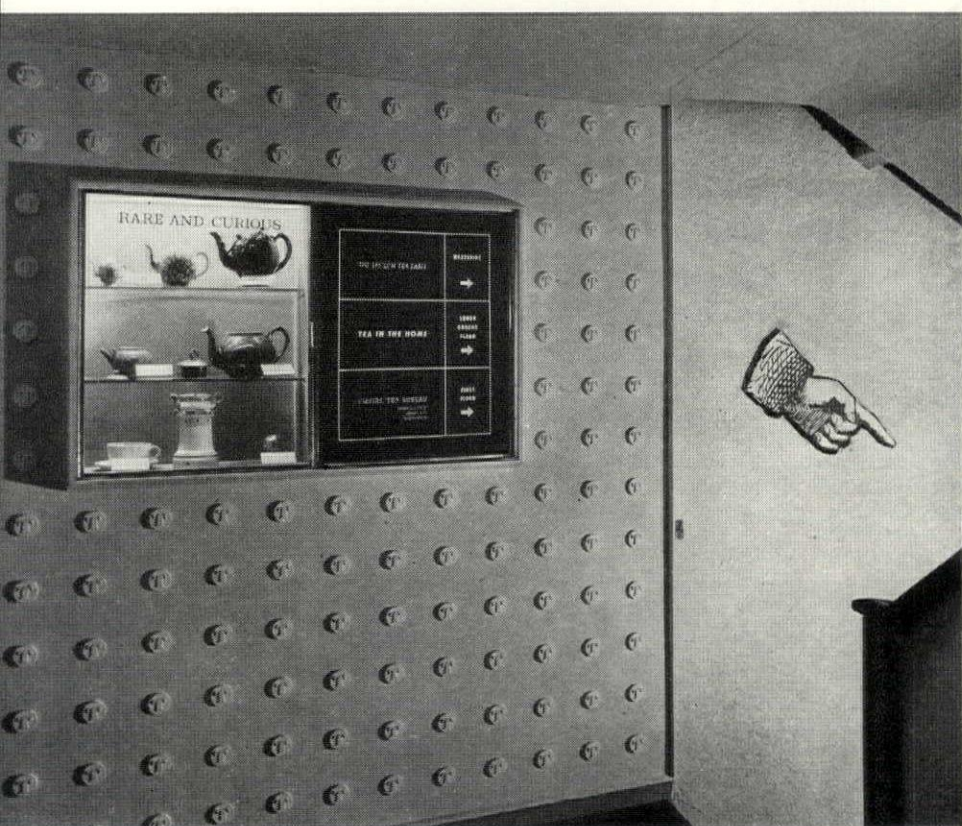
TEA CENTRE IN LONDON



Views from opposite ends of the foyer reveal effectiveness of a two-level scheme in breaking up a long narrow space. Free-standing display cases, shadow box exhibits, illuminated panels and projecting mural further relieve monotony, draw the public toward special exhibition and demonstration rooms in rear.

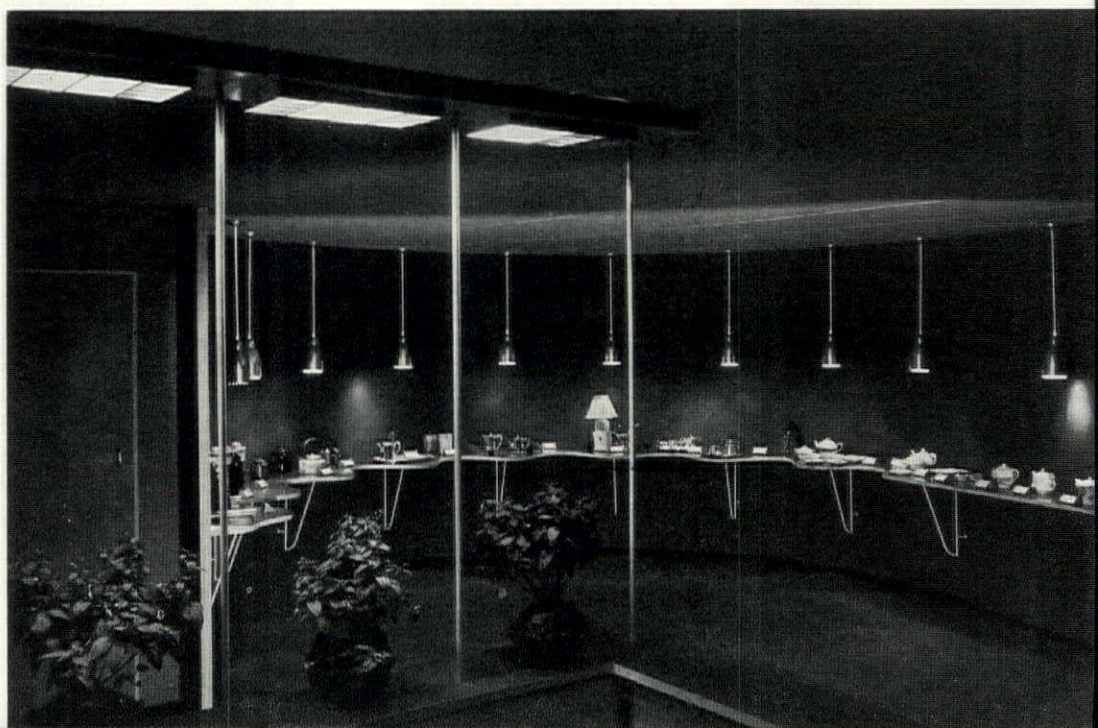


EXHIBIT OF PERIOD TABLE SETTINGS
ILLUSTRATES THE EFFECTIVENESS OF RICHLY
WORKED ANTIQUES PLACED AGAINST A
SEVERELY SIMPLE MODERN BACKGROUND.



THE WALL OF THE STAIRCASE
LANDING IS DECORATED WITH
SMALL PLASTER MEDALLIONS,
TRADEMARK OF THE TEA CENTRE.

MODERN TEA SETTINGS ARE STRIKINGLY
DISPLAYED AGAINST A DARK, CURVED WALL.
NOTE REPETITION OF DELICATE VERTICAL LINES
IN FIXTURES, TABLE SUPPORTS AND COLUMNS.



DRESS SHOP

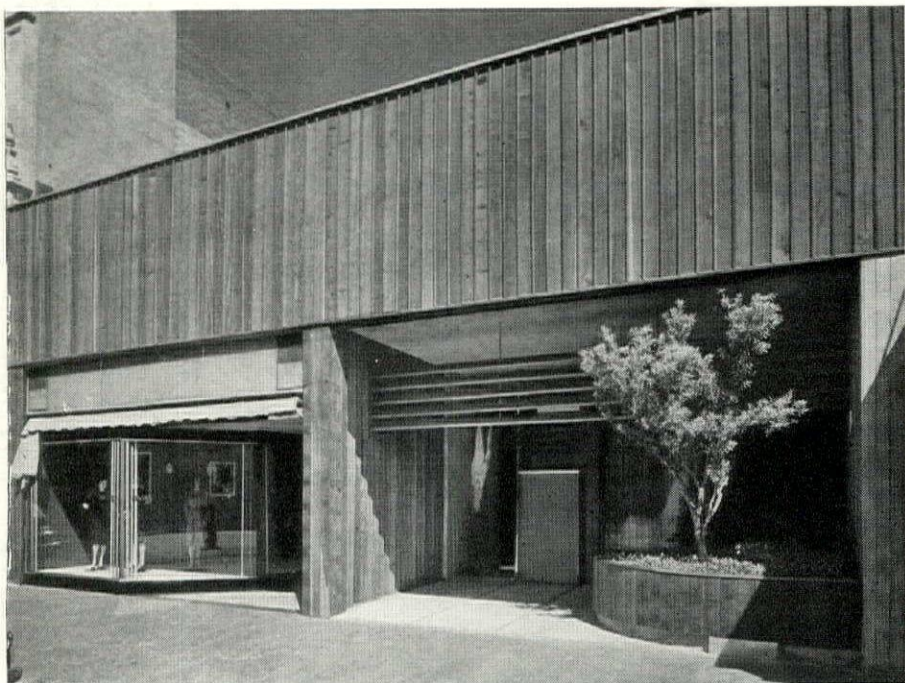
experiments with customer reaction to good modern design.

ALBERT HENRY HILL, Architect

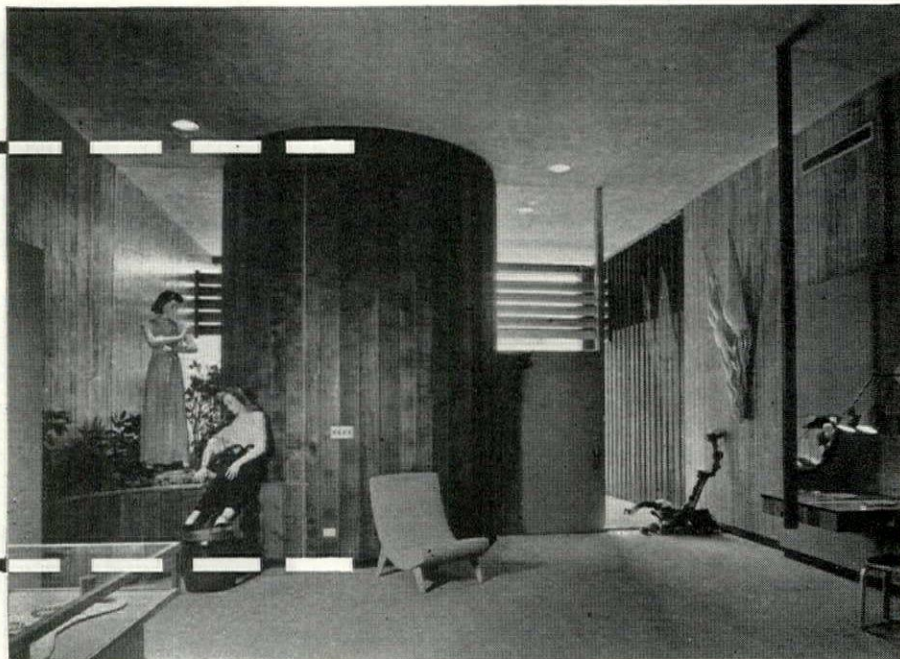
TREWHITT, SHIELDS & FISHER, Contractor

The expansion and remodeling of this highly successful dress shop in Fresno, California revolved around the customer psychology peculiar to a moderate-priced store. Formerly one bare sales area where dresses were merely hung out on racks, the store's expansion involved providing a gracious selling atmosphere without frightening away budget-conscious shoppers by a background of too-great luxury. Economy of construction was important in itself because the owner could not risk raising prices. The solution was to take over a next-door restaurant and redesign this needed extra space while leaving the original shop unchanged, thus weaning customers from the pipe-rack atmosphere by degrees. Because of the enthusiastic response to the new design, the old shop eventually will also be redone.

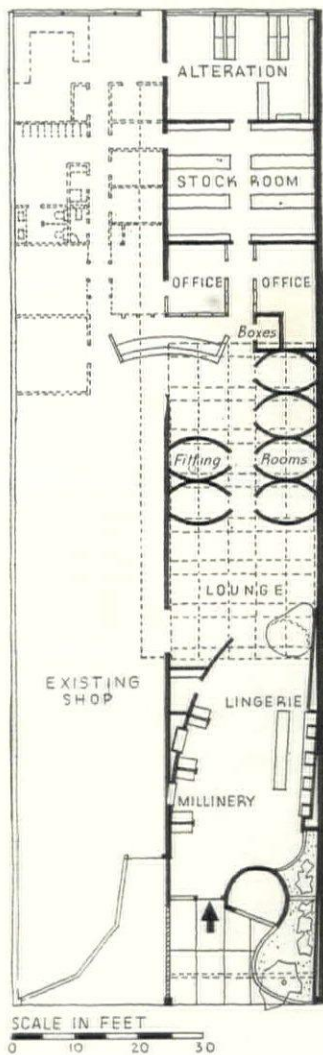
The shop is located on the main shopping street of Fresno facing due west and is thus subject to heat and glare of blast furnace proportions all summer long. A Spanish hacienda front, flush with the building line, helped not at all in relieving this situation. The facade was therefore stripped clean, the upper part faced with redwood and the new shop entrance set well back from the sidewalk to provide a shaded outdoor area. An attractive planting bed was placed next to the entrance, extending beneath the plate glass show window into the interior, to give both visual and actual relief from the heat. It is equipped inside and out with "grocery store sprinklers" which send up a fine mist of spray and act as a cooling device and unique display attraction.



OLD AND NEW SHOP ENTRANCES ARE TIED TOGETHER BY COMMON FACIA



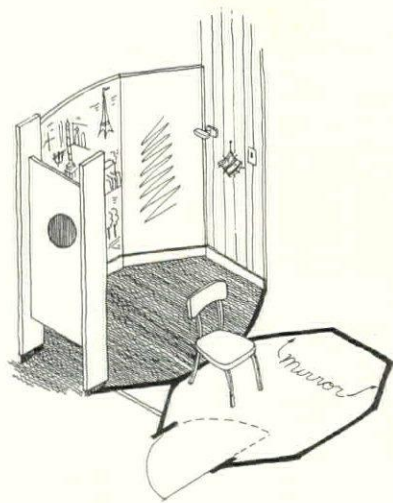
UNIQUE SEMI-CIRCULAR WINDOW DISPLAY CASE IS SET BETWEEN PLANTING BED AND ENTRANCE. EXTENDING FROM FLOOR TO CEILING AND ACROSS MAJOR WIDTH OF SHOP, IT ACTS AS AN EFFECTIVE BUFFER AGAINST REFLECTED HEAT.



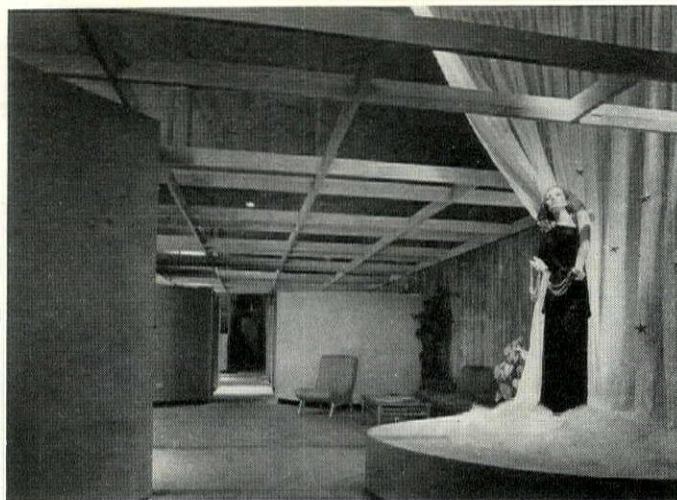
MILLINERY DEPARTMENT (RIGHT) AND LINGERIE (BELOW) ARE LOCATED ALONG WALLS OF MAIN SHOP AREA, TREATED AS A UNIT WITH VERTICAL AND HORIZONTAL SCREEN DIVISIONS.



DRESS SHOP IN FRESNO, CALIFORNIA

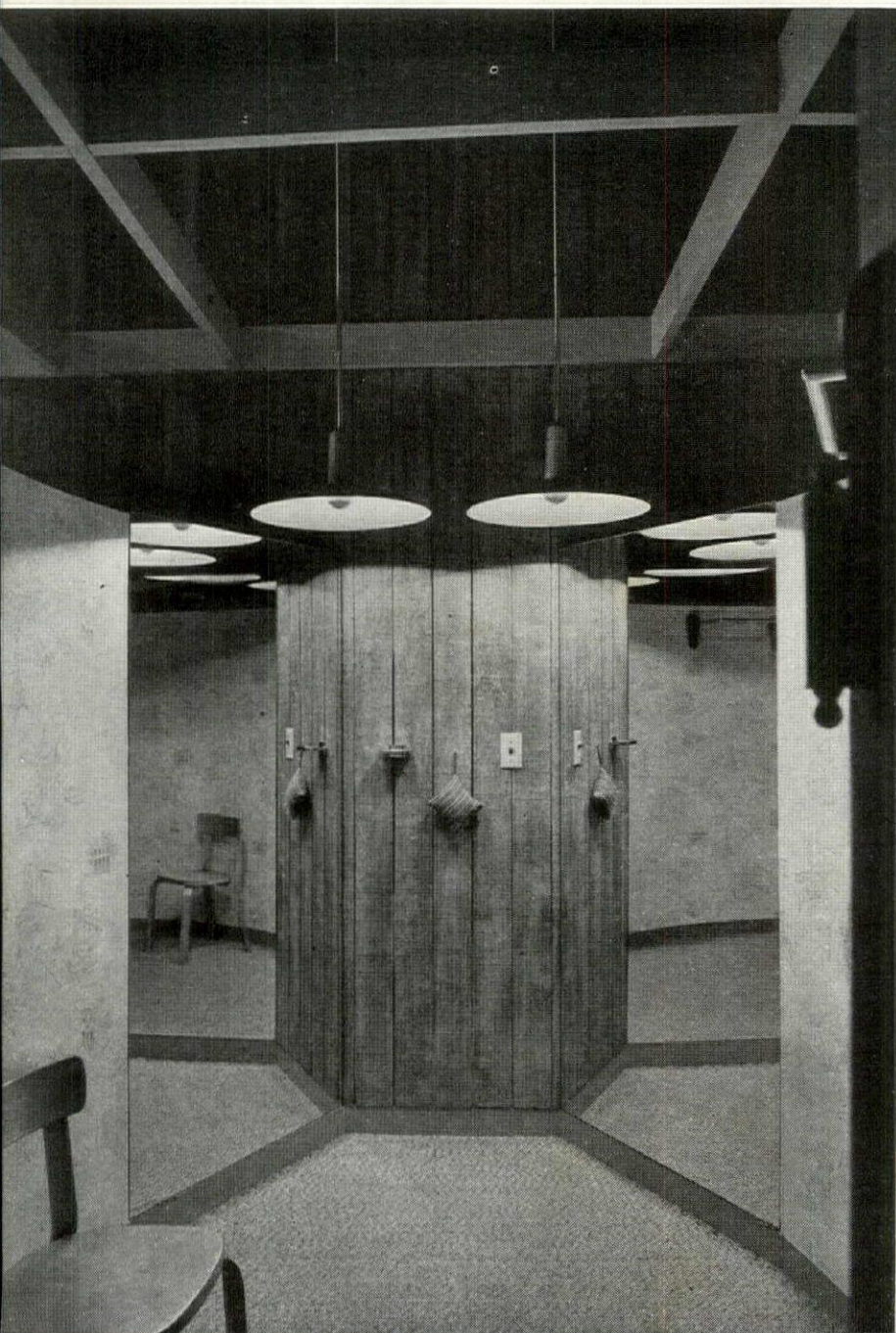
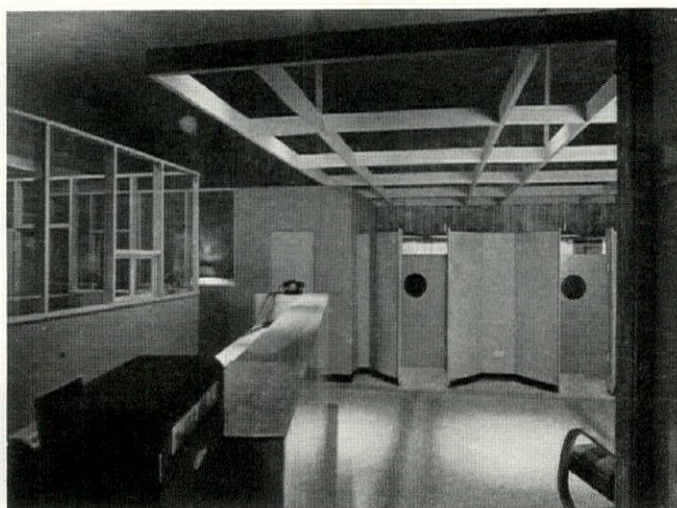


TYPICAL FITTING ROOM HAS ANGLED MIRRORS, ATTRACTIVE FINISHES



LOUNGE CONNECTS BOTH SHOPS WITH REAR FITTING AREA

CEILING GRID EXTENDS THROUGH LOUNGE TO OFFICES



FINISHES AND EQUIPMENT

FOUNDATIONS—concrete; side brick walls. STRUCTURE: Exterior walls—redwood board and batten. Floors—Douglas fir. Ceilings—plaster. INSULATION: Ceiling (new shop)—Johns-Manville. WINDOWS: Glass—plate, Pittsburgh Plate Glass Co. FLOOR COVERINGS: Store—carpet. Alteration and rack rooms—asphalt tile, Armstrong Cork Co. WALL COVERINGS: Side walls—vertical pine. Show stage—redwood. Dressing rooms and screen walls—plaster. FURNISHINGS: Cases and tables—maple. Chairs—Frank de Witt. DOOR—Herculite, Pittsburgh Plate Glass Co. HARDWARE—Schlage Lock Co. PAINTS—Pratt & Lambert, Inc. ELECTRICAL INSTALLATION: Switches—General Electric Co. Fixtures—Karl von Hacht. HEATING AND AIR CONDITIONING—Carrier Corp. system.

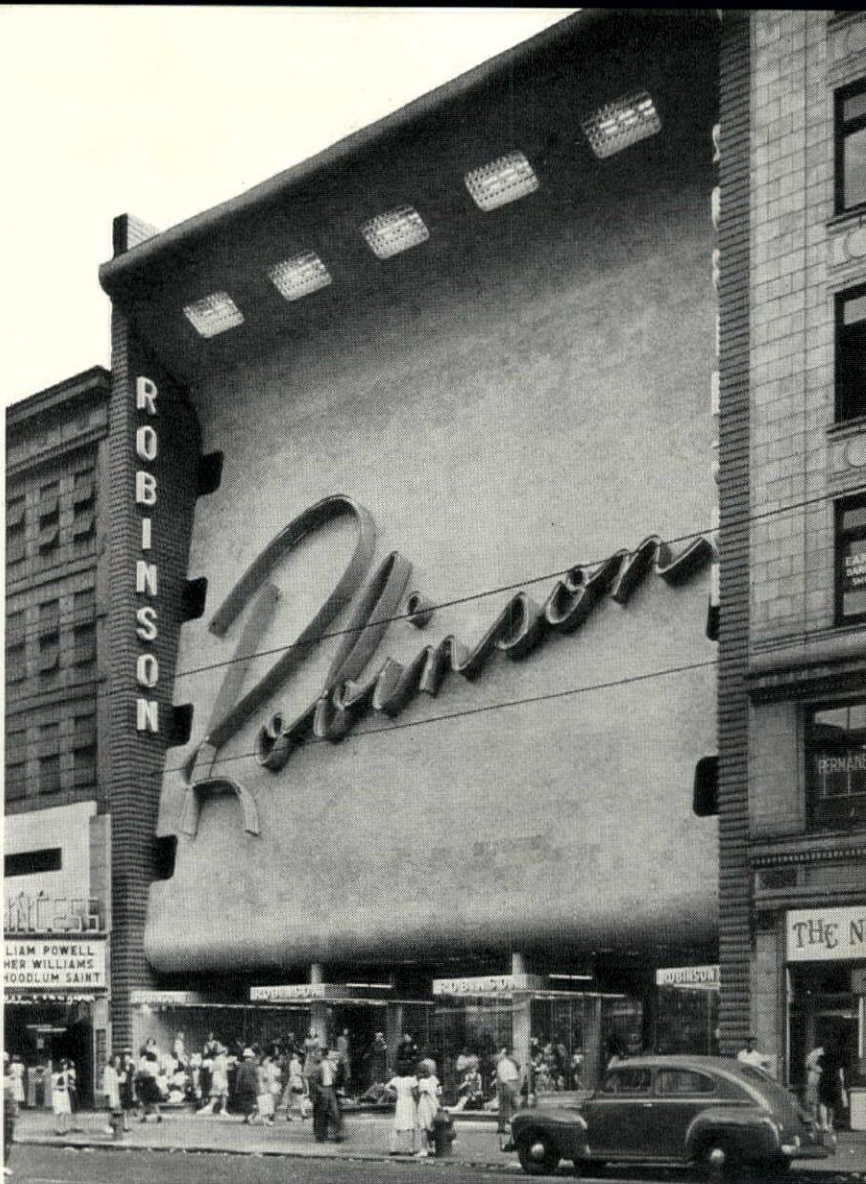
DRESS SHOP

on Philadelphia's busy Market Street
makes its name a dramatic merchandising feature.

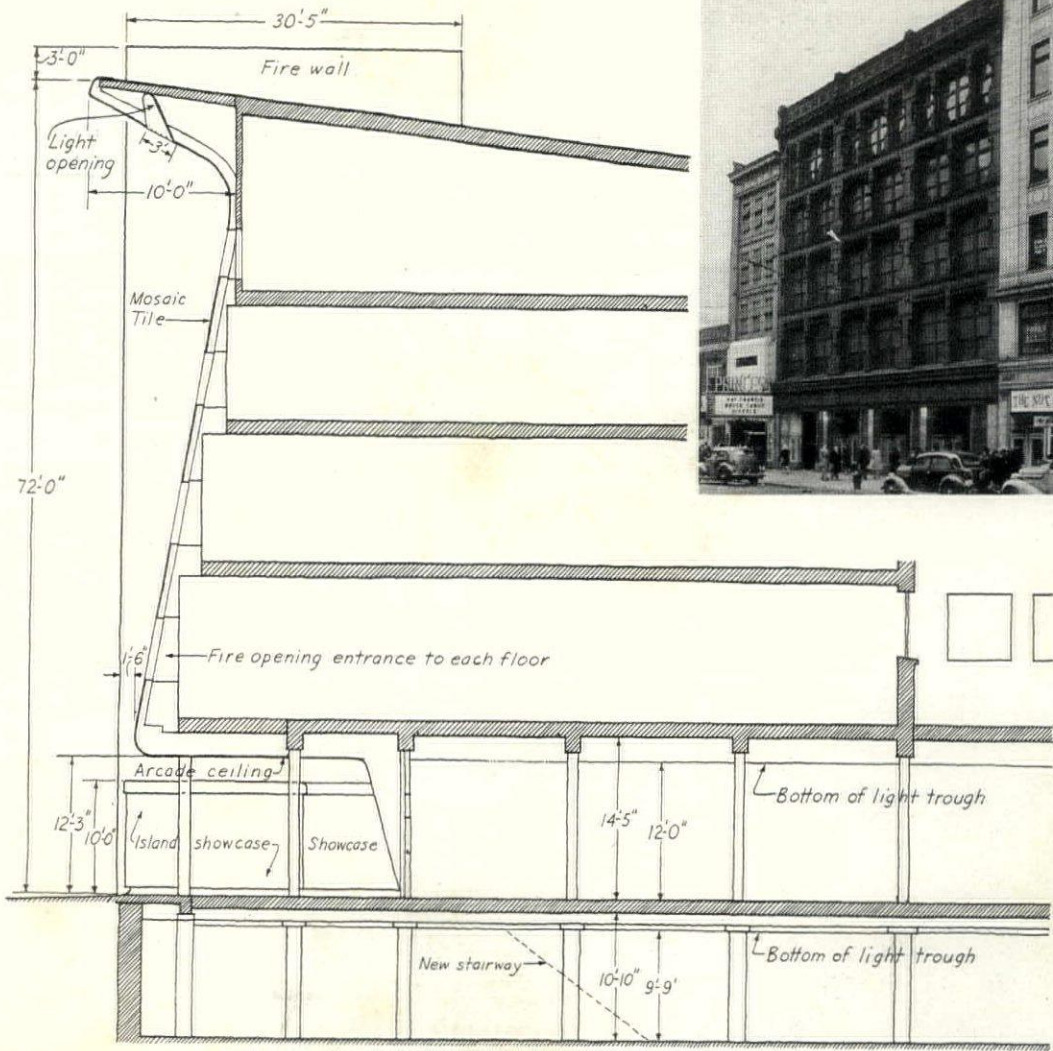
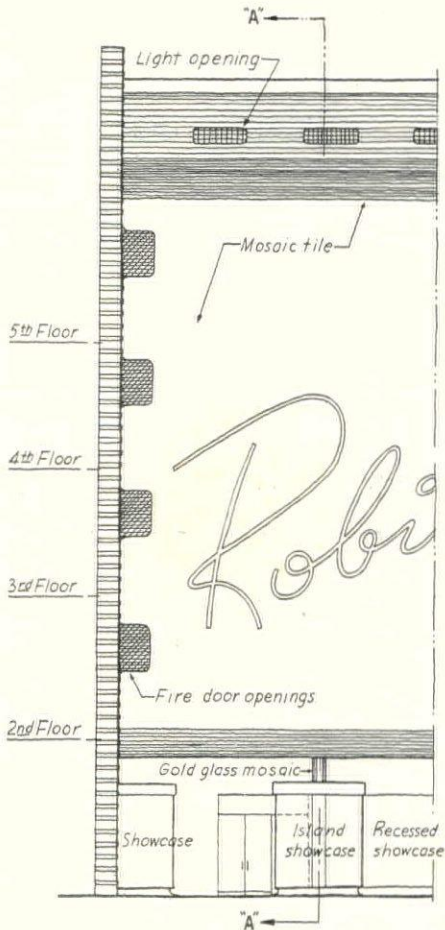
GRUEN & KRUMMECK, Designers
MICHAEL AUER and R. L. BAUMFIELD, Associates
ROBERT E. McKEE, Contractor

When Gruen & Krummeck designed their first Grayson store (FORUM, Sept. '41), they were starting on a snowballing architectural assignment. From one Los Angeles shop in 1932, Graysons had expanded into a thriving west coast chain, successfully scooping in the low-priced clothing business. Last year they branched into a countrywide market with the purchase of a chain of 17 popular-priced dress shops—Robinson's Women's Apparel Inc. Into the new territory came also Gruen & Krummeck, veterans of 25 Grayson designs, to plan among others the Philadelphia branch of the Robinson chain.

Remodeled from an ancient dime store building, the new shop presents a fresh and eye-catching facade typical of the designers' flair for merchandising. Its treatment was determined by two important client requirements: to attract attention from the opposite sidewalk and to provide good vertical sign visibility for passing pedestrian and motor traffic. The entire facade above show window level was therefore converted into an enormous signboard, slanting inward from bottom to top. The sidewalls, left projecting, form the background for vertical signs seen from up or down the street. A top canopy with built-in louvered lights illuminates both sign areas.



Gottsch-Schleisner



SECTION A-A



DRESS SHOP IN PHILADELPHIA, PA.

The island arcade, an accepted customer come-on in small dress shops, has been expertly applied to the Robinson store. The front wall of the building, the arcade ceiling and the back wall are one continuous form, thus leading the eye smoothly from the exterior sign to the rear show window.

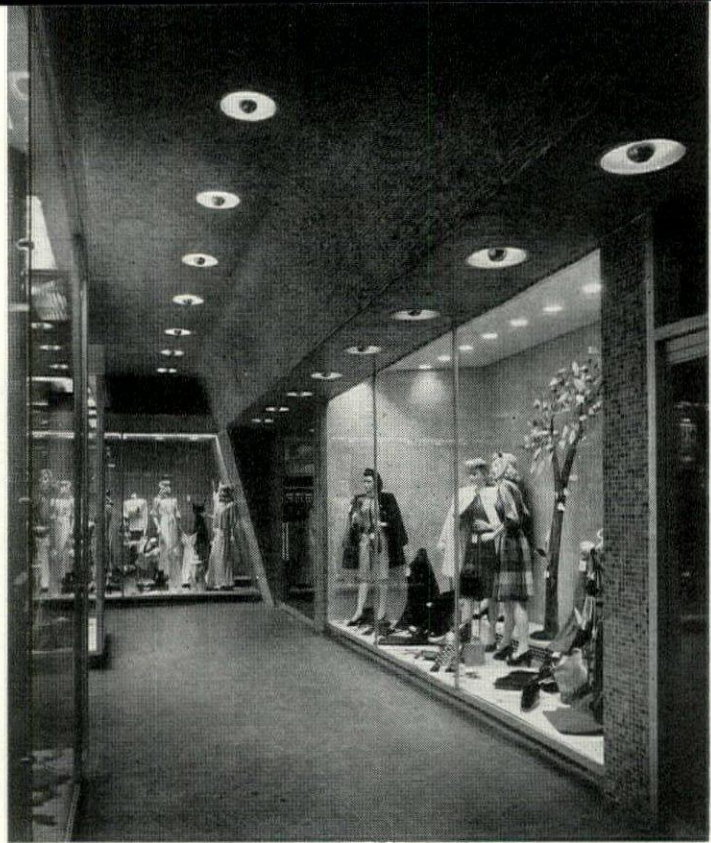
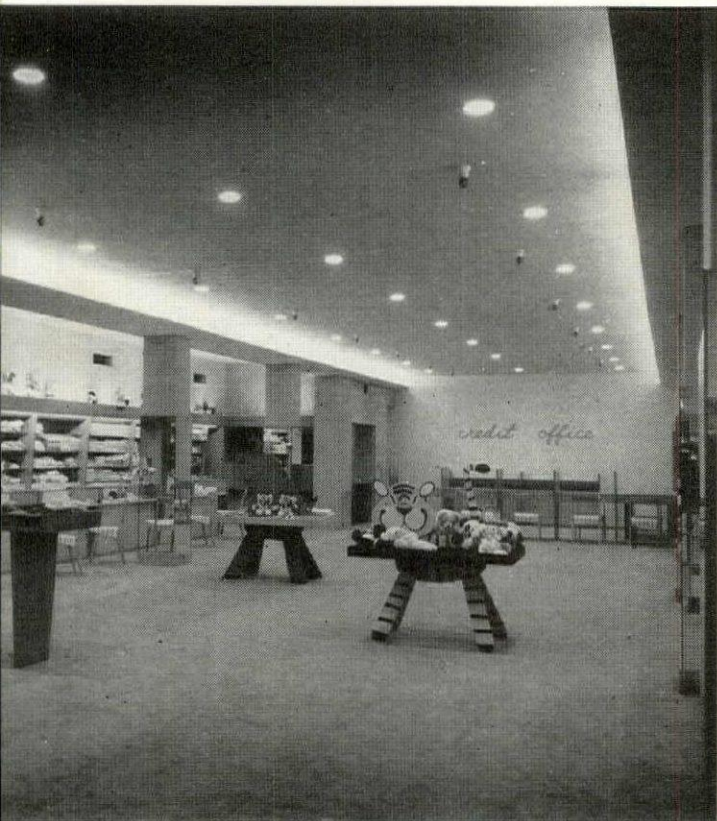
In the interior, sales areas occupy the basement (coats, suits and children's department) and the first floor (dresses and accessories), while the second and third floors are utilized for storage, employe restrooms, air conditioning and heating equipment. In developing the merchandising layout, the designers were hampered by the unusually large number of columns within the store. Therefore, to organize the floor and ceiling pattern, display cases were built around the posts, counters lined up between them to form definite parallel lines, and light troughs centered atop rows of columns.

The lighting itself is of particular interest. Exceptionally even illumination has been achieved, eliminating glare but keeping a high light level. This was accomplished by a combination of indirect lighting (built-in cold cathode tubing concealed in pre-cast plaster light troughs) and direct flood-light reflector lamps in metal recessed fixtures.

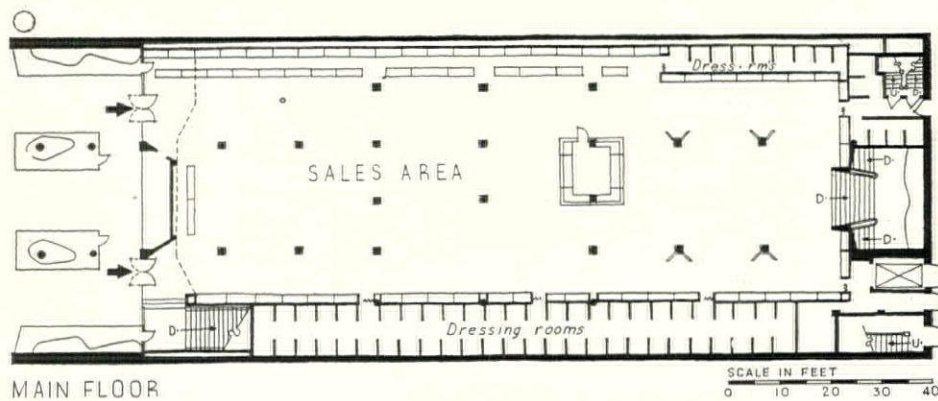
FINISHES AND EQUIPMENT

STRUCTURE: Front wall—mosaic tile, cement backing. Front side walls—cement plaster, grooved design. Interior partitions—curtain walls, cast corrugated plaster, 2 x 4 in. frame. **WINDOWS:** Sash—alumilited aluminum, Metalco Corp. Glass—plate. **STAIRS:**—wood, carpet covered. **FLOOR COVERINGS:** Sales room—carpet. Offices and storage—asphalt tile. **FURNISHINGS—**special design, Cowan Fixture Co. **SHOW WINDOW AND GLASS WALL METAL WORK—**Metalco Corp. **DOORS—**Herculite, Pittsburgh Plate Glass Co. **HARDWARE—**Oscar C. Rixson Co. **ELECTRICAL FIXTURES—**Kurt Versen Co., General Lighting Co., Century Lighting Fixture Co. **HEATING—**steam system. **AIR CONDITIONING—**Carrier Corp.

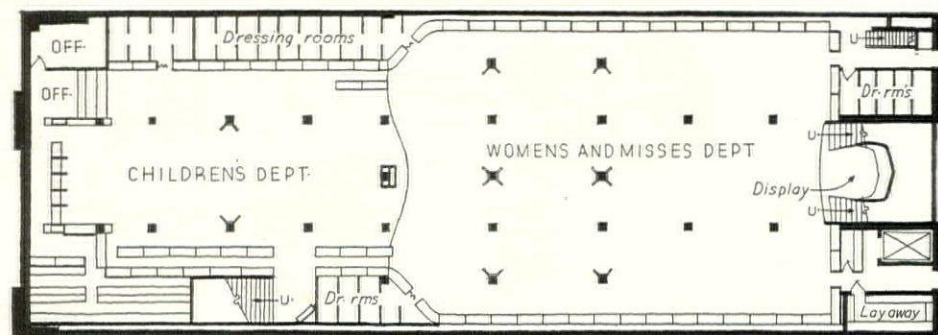
CHILDREN'S DEPARTMENT FEATURES GAY STRIPED TABLES



STORE ENTRANCE IS BETWEEN DISPLAY CASES AT REAR



MAIN FLOOR



BASEMENT



MAIN FLOOR PRESENTS SEEMINGLY UNBROKEN EXPANSE DESPITE TROUBLESOME COLUMNS



BASEMENT SUIT DEPARTMENT INVITES MORE LEISURELY BUYING THAN FIRST FLOOR LAYOUT





VIEW OF CENTRAL AISLE FLANKED BY DISPLAYS OF FURNITURE AND DRAPERY. NOTE STRIKING EFFECT OF WHITE DROPPED CEILING

Robert M. Damora

NEW FURNITURE FLOOR applies glamorized display techniques to the moderate-income trade.

LESTER C. TICHY, Architect

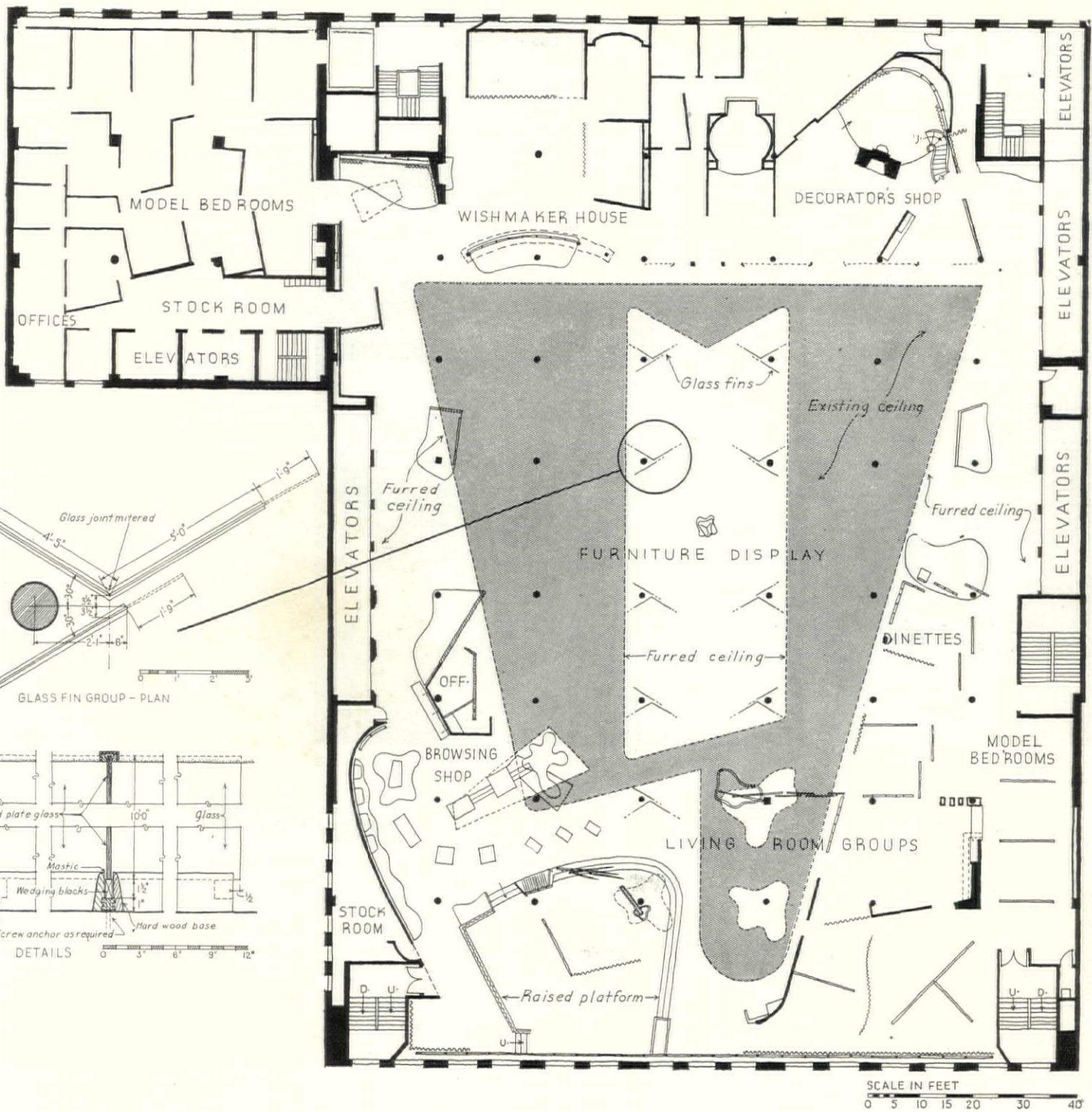
CHARLES HERMAN CONTRACTING CO., INC., Contractors

LEWIS SMITH, Lighting Consultant

The problem of displaying a diverse quantity of furniture, lamps, rugs and bric-a-brac in a semblance of order without sacrificing the view of certain pieces has long been a vexing one. The opening of McCreery's new furniture department marks a departure from the ordinary haphazard solution with an entire floor designed by a practicing architect. Stores which have abandoned the ordinary, uninspired collection of furniture have usually turned to the make-believe room as a method of providing emphasis and correlation. Here, however, the architect tried to create a flow of interest with no definite points of demarcation but with "vignetted" areas, separating groups of furniture by placement and lighting. A center aisle cuts between the modern and traditional displays and here the different lines of

furniture are shown in mixed groups. Platforms at either side focus attention on separate lines.

A striking feature of the design is the use of glass fins around structural columns. Each fin has a hole at top and center which allows the display of appropriate drapery fabrics. The ceiling also adds drama to the over-all effect. In order to reduce the cost of a complete furring job, only a portion of the area (in free-form design) was lowered and the remainder left untouched except for a coat of black paint. Lighting simulates a home-like atmosphere, but strong spots are used to pick out special displays. One of the most successful elements in the design is a translucent glass wall panel, concealing fluorescent lights, to create the illusion of sun on dark days and at night.

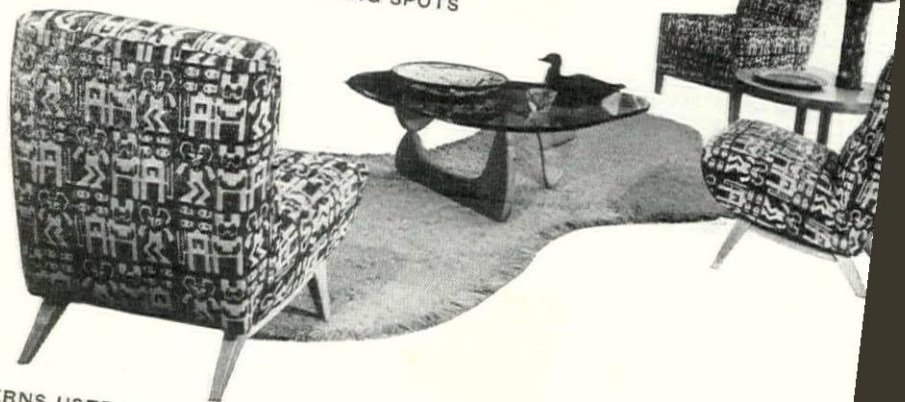


SPECIAL GROUPS OF FURNITURE ARE ARRANGED AS ROOMS, BUT NOT SHUT OFF FROM VIEW IN THE USUAL BOX-LIKE MANNER





ACCESSORY DEPARTMENT FEATURES TABLES FOR CHINA DISPLAY HIGHLIGHTED BY CEILING SPOTS



FREE-FORM CEILING PANEL IS TYPICAL OF CONTRASTING PATTERNS USED THROUGHOUT THE SHOP



Robert M. Damora, Photos

PRODUCTS AND PRACTICE

DISASTER-PROOF buildings may result from flame-and-smoke control system developed by three-company research.

The past fifty years have seen a lot of sweat and hard thinking expended in the effort to make multi-story buildings safe from fire. Each time an advance was registered, the building field felt that its objective was attained—and each time another disastrous fire would flare up to contradict the claims. Structure was fireproofed, but the hotel fires of the past year have demonstrated that fireproof structure is not enough. Unless the contents are also non-combustible, they will support a fire which can suffocate those occupants who are not burned to death. Hence the realization that a fireproof building is not necessarily a *firesafe* one—and the current emphasis on fireproof paints and upholstery.

The task is enormously complex and no single remedy is apt to be discovered. Fire-safeness is obviously a quality which results only from painstaking analysis at every stage of the building—design, construction, furnishing and maintenance. One aspect of the problem, however, can be isolated and simply stated: "If you can't *prevent* a fire in a multi-story building, then *extinguish* it; if you can't extinguish it, then *confine* it. But whatever you do, *quarantine its by-products*. At all costs, prevent super-heated air, noxious gases and smoke from penetrating the rest of the building—at least until it has been evacuated." If there is one principal lesson to be learned from some 30 disastrous hotel fires in the past year, this is it. For authorities seem agreed that most of the 272 deaths in these fires were caused by asphyxiation, not by flames.

Elevators, stairs and the corridors which serve them are always considered as means of emergency exit. Yet, the fact is that in multi-story buildings a fire can (and very often does) quickly convert them into the exact opposite. Instead of offering the tenants an avenue of escape, they become the avenue whereby the fire and its devastating by-products invade the entire building. Enclosure in fireproof walls and fire-resistant doors is no guarantee that stairs and elevators will remain safe. Many things can happen in a fire. A door will be left open at one point. Super-heated air will enter the shaft, set up a violent up-draft, spread gas, smoke and heat through the building. This may ignite the grease on the elevator tracks or the paint on the stair tower walls. In no time at all, the entire shaft will be a roaring chimney.

With moving stairways this problem is especially acute. Total enclosure is difficult: doors must be of the center-opening, double-swing type and must remain open to permit an uninterrupted flow of passengers. Even when closed, such doors are not smoke tight. Hence, because any enclosure seriously reduces their crowd-moving capacity, most existing installations are open.

Anticipating the fact that last year's fires were bound to bring corrective legislation, Otis

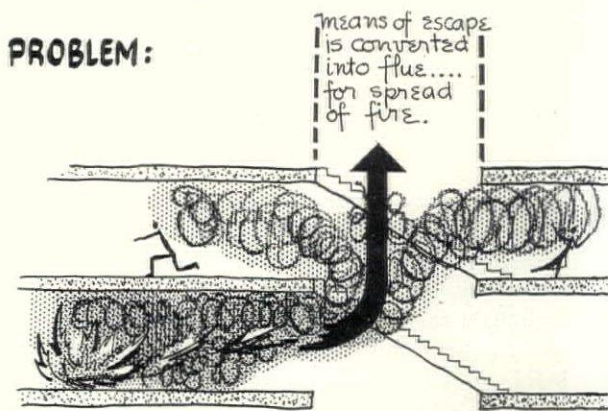
Elevator and Westinghouse, the nation's two largest manufacturers of moving stairways, last summer teamed up with the Grinnell Company, producer of automatic sprinkler systems, on a research program. First results of this collaborative project were recently made available in Providence, R. I. There the three companies had built a full scale mock-up of a three-story building and installed mock-ups of moving stairways (see p. 118). Then, with smudgepots, smoke bombs and alcohol fire to reproduce the heat and smoke of an authentic conflagration, the engineers had set to work to devise some method of protecting the moving stairways. They ended up with a system which—using air currents and water curtains—promises to protect not only moving stairways but conventional stairs and elevators as well. In the Providence demonstration, they showed that all shafts can be kept safe long enough to evacuate the building's occupants.

What the researchers have done is to throw a ring of ceiling sprinklers around the open stair well which can lay down a solid curtain of water spray. Just inside this curtain, at the ceiling line, they have placed a high-velocity exhaust duct, with intake slots along side or bottom. These ducts are connected at each floor to a riser with its own fan—independent of any other ventilation system the building may have. In the roof at the top of the stairway is a fresh air inlet whose damper opens when the system starts. Finally, as a reserve measure, there are a series of high-velocity sprinkler heads along the underside of each flight: these are directed down the wellway and can, if required, deluge the stairs with water.

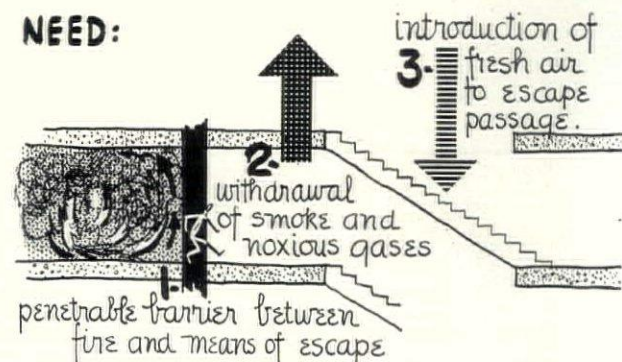
When fire breaks out on a given floor, the exhaust system goes into operation, actuated by a flow switch, thermostat, electric eye or smoke detector. The blower starts and dampers in the fresh air vent at the head of the shaft are opened. The high-speed exhaust ring on that floor begins to draw fresh air down from the roof vent above (thereby reversing the inherent tendency of all open wellways or vertical shafts to act like chimneys). All evacuated air is exhausted directly to the outside. Simultaneously, the ring of sprinklers around the opening lays down a solid curtain of water spray. This serves as a barrier to flames and heat. (Any smoke or gas that penetrates the curtain is picked up by the slotted exhaust). Only in case of intense fire near the base of the stairway would the reserve jets be called into play to flood the stair.

The three-company system not only isolates the fire, preventing the spread to the rest of the building of superheated air and noxious gases: it also preserves the primary function of the stairs themselves as means of exit. Escape even from the floor on which the fire occurs is made more certain than through

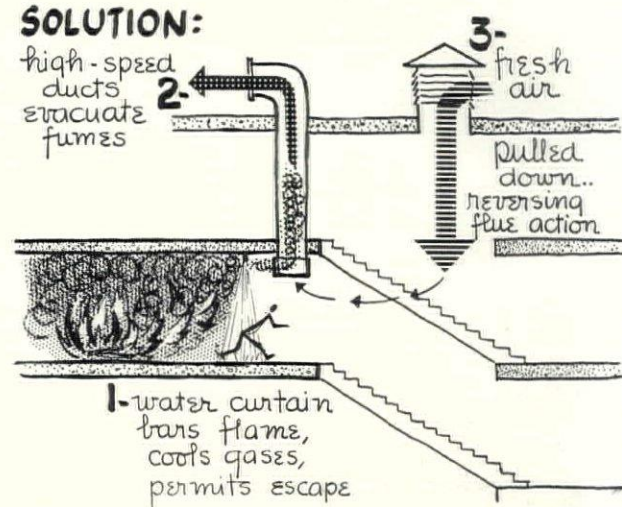
PROBLEM:



NEED:



SOLUTION:



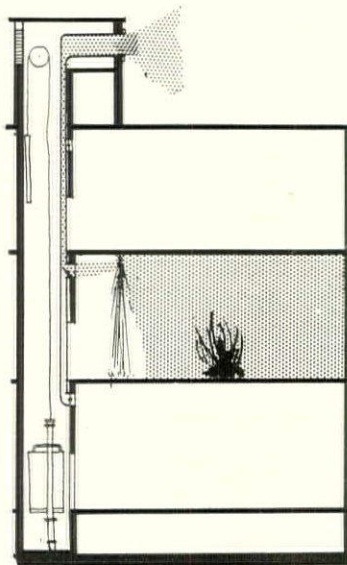
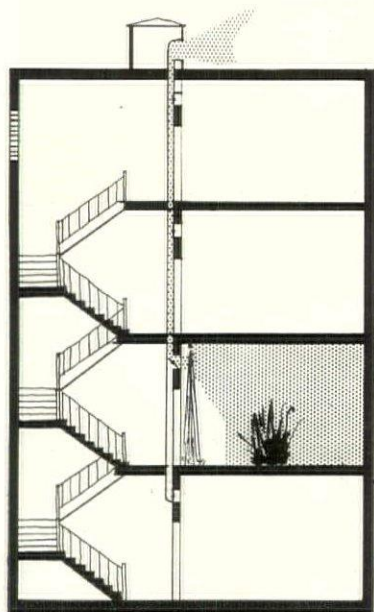
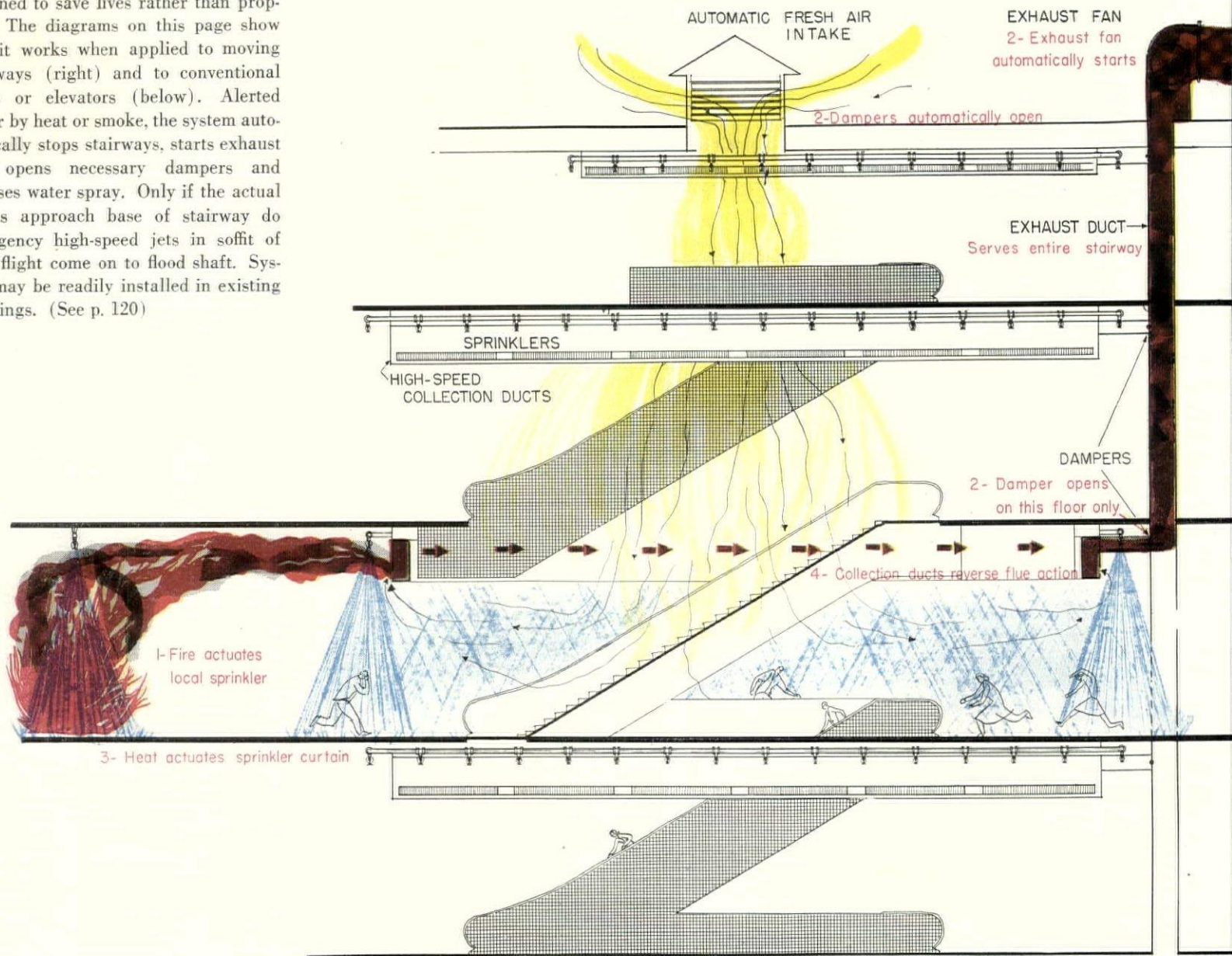
doors which might not open or—having opened—may jam in that position and flood the shaft with flame and smoke.

While the system was developed primarily for moving stairways, the principle obviously can be applied to any type of vertical trafficway in a multi-story building. It could, for example, be enlarged to create firesafe "lobbies" before emergency exits of all sorts—points at which many tragic deaths from trampling and suffocation have occurred in recent disasters.

Details of system and field tests appear on the following pages.

FLAME AND SMOKE CONTROL, not fire extinguishing, is function of new system.

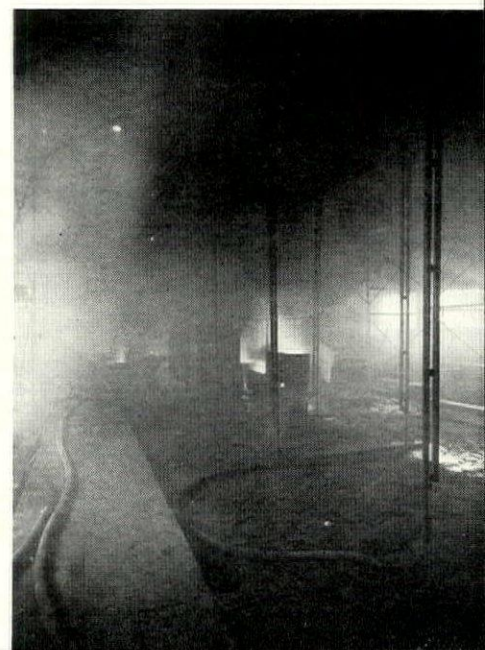
The Otis-Westinghouse-Grinnell system is novel in the sense that it is primarily designed to save lives rather than property. The diagrams on this page show how it works when applied to moving stairways (right) and to conventional stairs or elevators (below). Alerted either by heat or smoke, the system automatically stops stairways, starts exhaust fan, opens necessary dampers and releases water spray. Only if the actual flames approach base of stairway do emergency high-speed jets in soffit of each flight come on to flood shaft. System may be readily installed in existing buildings. (See p. 120)

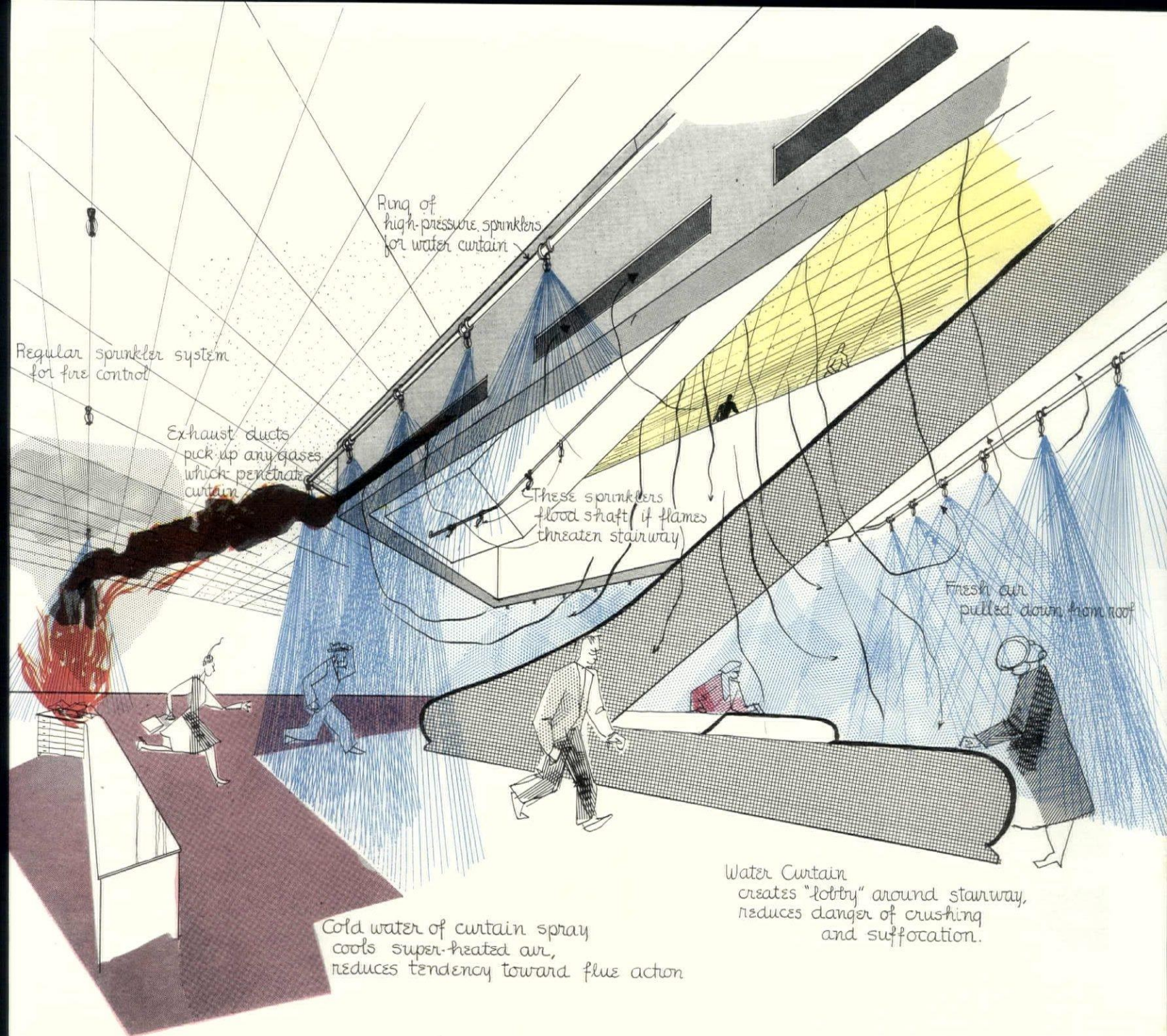


PROTECTION for stair and elevator towers is also a possibility with new system. Exhaust - and - water spray barrier could be used to create firesafe "lobbies" before each shaftway entrance door.

TESTS OF NEW SYSTEM demonstrate

First floor of test building is flooded with noxious gases and heated air which threaten life but . . .





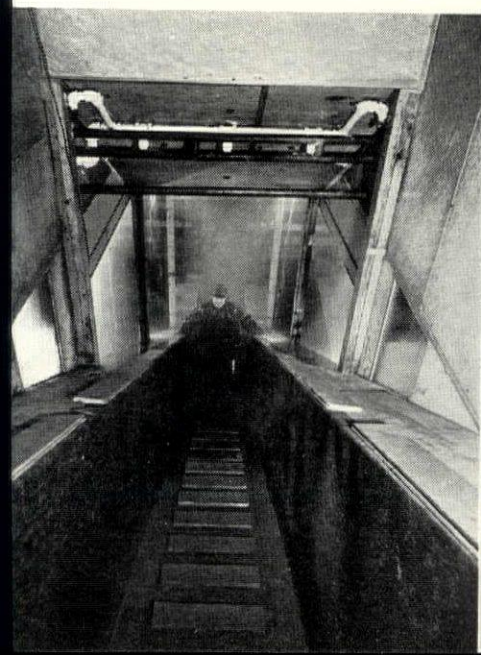
Ability to keep stairways free of death-dealing smoke and super-heated air.

Waterspray and exhaust protect shaft, permit persons caught on burning floor to escape . . .

Visitors look down clear shaft to smoke-filled floor below . . .

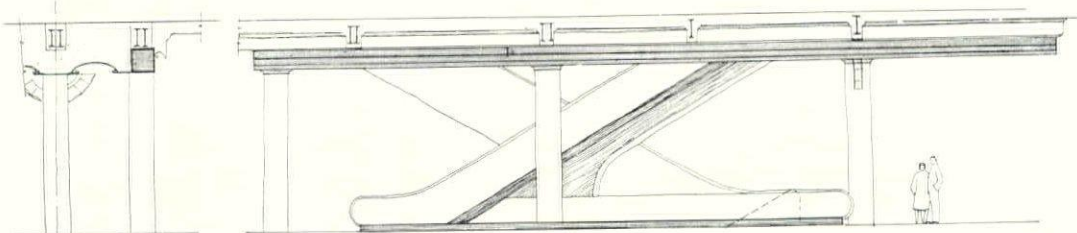
Engineer proves purity of air at base while system operates . . .

Yet, seconds after system is cut off, smoke is flooding up shaft.



Photos by Newman-Schmidt Studio

FLAME-AND-SMOKE CONTROL system should prove boon to property owners and municipal fire authorities.

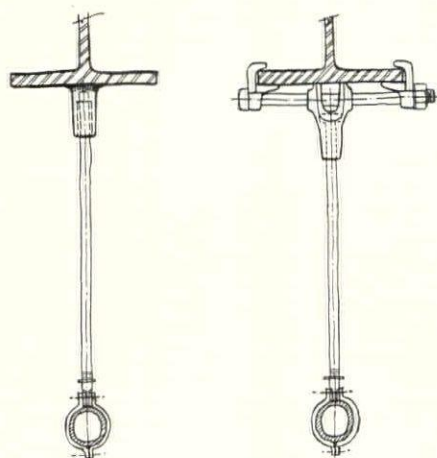
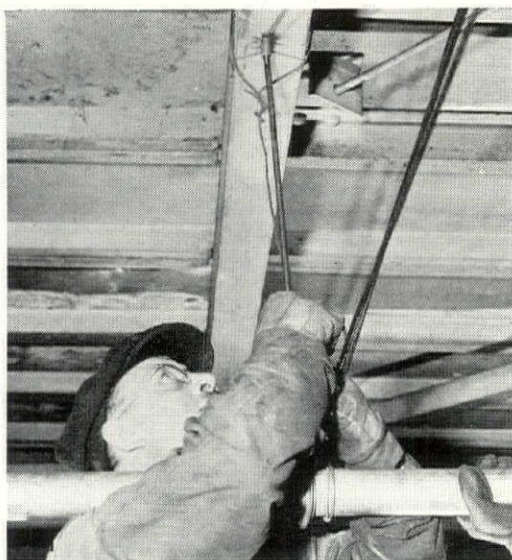


PROPOSED INSTALLATION of new control system around moving stairway in Hartford, Conn. store (above) contains same elements as in test unit (left): however, they are concealed in new soffit.

Municipal fire and building departments, faced with a series of disastrous fires in recent months, have shown an understandable interest in the Otis-Westinghouse-Grinnell experiments. One city—Cincinnati—has already revised its code to accept the exhaust duct and water curtain as an acceptable alternate to complete enclosure of moving stairways in fireproof masonry walls. The sponsoring companies feel confident of ultimate acceptance elsewhere. Meanwhile, in the experimental building at Providence, R. I., research is con-

tinuing. As the system operates only in emergency, many of the refinements which go with air conditioning proper can be omitted. High velocities permit smaller ducts; motors can be more powerful, fans noisier, etc. However, a number of ticklish problems remain. How much heat and gas does a fire produce? What is the maximum stairtower volume which the new system can economically protect? These are some of the questions the three companies hope to answer in order to further refine and develop the new system.

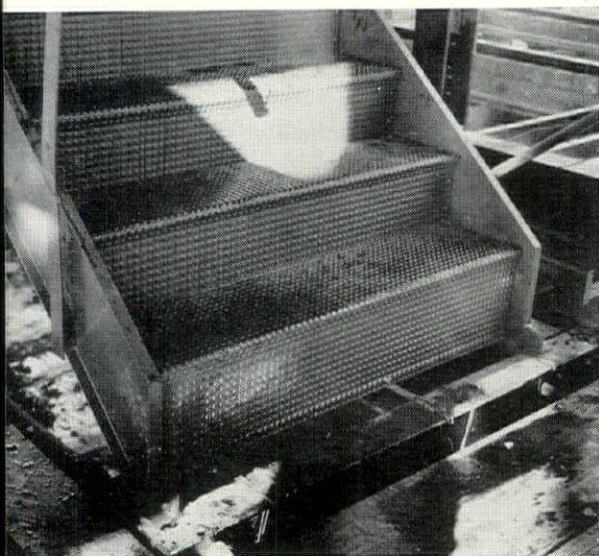
SPRINKLER INSTALLATION in steel frame buildings simplified by stud-welded hanger connection.



NEW WELDED HANGERS (left) replace cumbrous clamp types (right) for steel construction, save money, time and weight.

Installation of sprinkler systems in either new or existing steel framed structures has been greatly facilitated by the recent perfection of low cost stud-welded hanger connections. Developed by Nelson Stud-Welding Corp. of Lorain, Ohio, the new method was accepted by Underwriters Laboratories after tests showed it to be from six to nine times as strong as the required minimum. Sprinkler installations, especially in existing buildings, are often both knotty and expensive. Conventional hangers for the piping require extensive damage to existing finishes. Large openings must be chipped out to accommodate cumbersome beam clamps. With automatic stud-welding, basic hanger costs and redecorating are reduced to a minimum. A small hole, just large enough to permit insertion of the Nelson stud and ferrule, is the only drilling or chipping required. Hanger proper is then screwed into threaded ferrule (extreme left).

3,290 LIGHTWEIGHT, ALL-STEEL stairs speed construction, lower costs in New York housing projects.

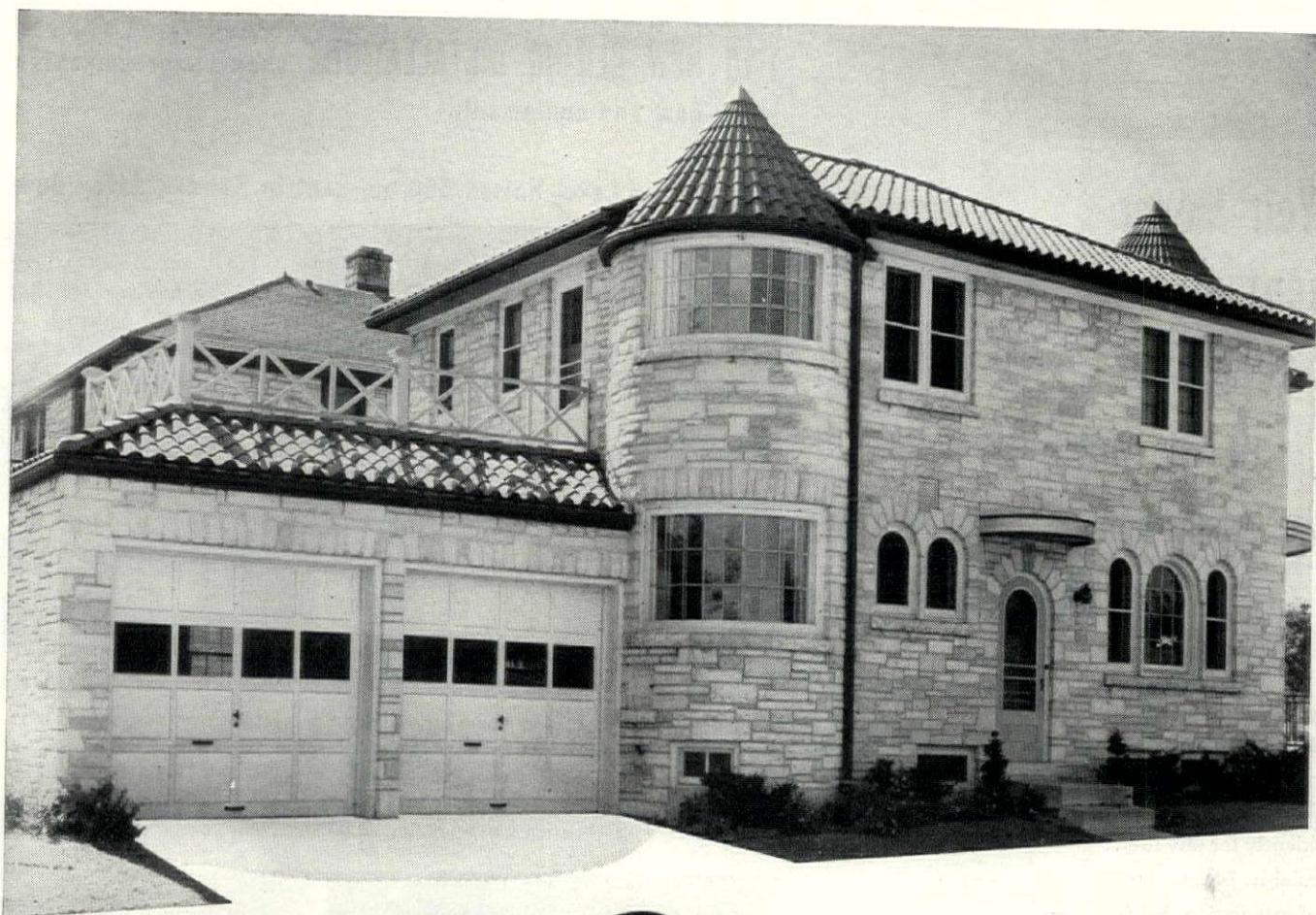


Newman-Schmidt Studio

QUICKLY ERECTED along with structural steel work, these all-steel stairs are complete except for railings, paint and fireproof soffit, yet rugged enough to be used without protection during construction.

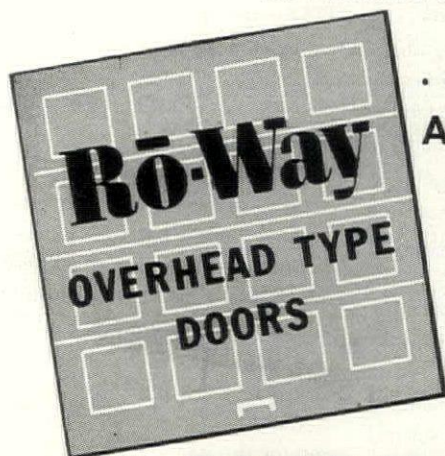
Constituting what is probably the largest installation of its kind, Sexauer & Lemke Inc. of Long Island City, N. Y. are currently delivering the last of 3,290 lightweight all-steel stairs to three housing projects now building in Manhattan. Specially designed for this installation, the stair is shop fabricated but site assembled. The stringers are 10 in., 6.5 lb light channels. They are cut and punched for bolting directly to the structural frame and have clip plates to receive steps already in place. After stringers are installed, individual tread and riser sections of Jal-tread non-slip floor plates are bolted to clips. This yields a completed stairway, except for paint, railing and a Vermiculite plaster soffit. In some of the stairs, this fireproofing is carried from basement to roof; in others, from basement to second floor.

(Continued on page 122)



MORE PEOPLE *Ride* THAN *Walk*
... that's why more of them see
the FRONT doors on today's UP FRONT GARAGES

In styling and construction Ro-Way Overhead Type Doors insure "lasting good looks." Every part is manufactured completely in the Ro-Way plant. Each door leaves the factory as a carefully balanced unit. Every spring is "tailor made" and power metered for the weight of the door which it must lift. All metal parts are Parkerized and painted after fabrication. So you see Ro-Way Doors



... HAVE PLENTY OF "FRONT"
AND EXCLUSIVE FEATURES TO BACK IT UP!

To add extra years of service the Ro-Way Track is designed to lessen friction . . . The track rollers have double thick tread . . . The outer-bearing is rigidly supported by Ro-Way patented Crow's Foot support. Ro-Way Sales and Service is nationwide through carefully selected distributors. They take the same pride in their installation of Ro-Way Doors as we do in their manufacture.

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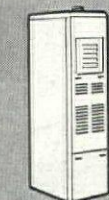
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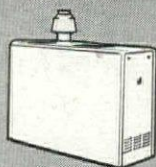
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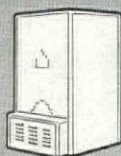
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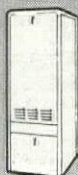
Gas-fired Hi-boy



Gas-fired Air Conditioner



Gas-fired Gravity



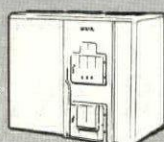
Oil-fired Hi-boy



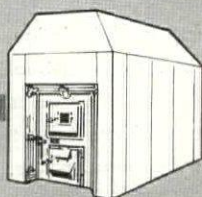
Oil-fired Air Conditioner



Weir Steel furnace



Coal-fired Air Conditioner

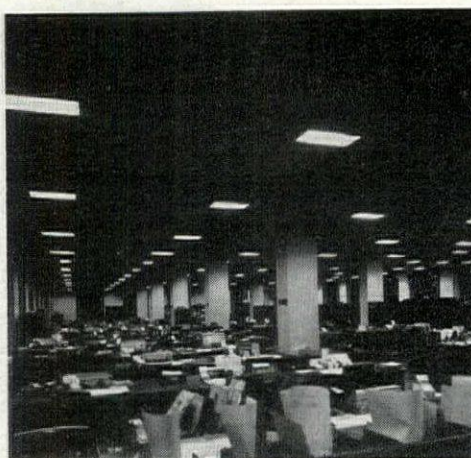


Industrial & commercial
heating equipment



TWO NEW CEILING INSTALLATIONS show improvements in lighting know-how and equipment.

1. Lighting Level Raised 500 per cent in Newark Office Building.



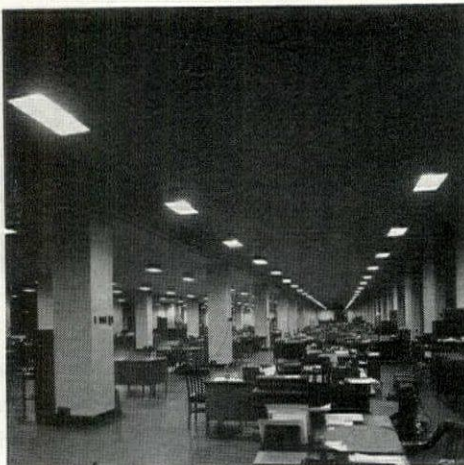
BEFORE: 10 ft.-candles on lucky desks



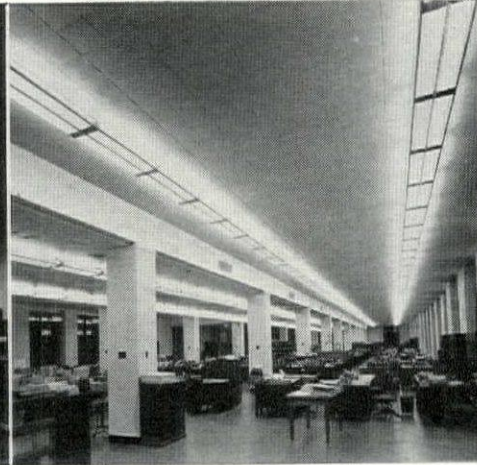
AFTER: 60 ft.-candles, evenly distributed

Although it was only seven years old, the lighting system in this office building was inadequate. Footcandles at desk level ran as low as six; brightness contrasts were large; shadows on work surfaces confusing; light sources only partially concealed. As a result, there was much dissatisfaction among employees and a general tendency to move desks over toward the windows, creating inefficient layout. Poor space utilization led, in turn, to an unsatisfactory work flow.

Photos by Sylvania Electric



BEFORE: Recessed lights left ceiling dark



AFTER: Suspended fixtures give bright ceilings

With the new lighting system, desktop illumination levels have been raised to from 56 to 64 ft.-candles; brightness contrasts greatly reduced by an illuminated ceiling; confusing shadows eliminated; fixture brightness lowered and light sources concealed except when looking straight up.

These before-and-after pictures of the home offices of the Mutual Benefit Life Insurance in Newark, N. J., reflect the changes wrought by engineer Charles Brady, in the current renovation of Mutual's lighting system. Although the management was aware that the previous lighting left something to be desired, it was not until an efficiency expert was called in to reorganize several departments for better space utilization that the importance of lighting was discovered. For, with desk top illumination at from 6 to 10 ft.-candles, everyone tried to get his desk near a window. There was little prospect of an even use of floor space until there was an even distribution of light.

A survey showed that, while the work being performed on the remodeled floors varied somewhat, the hardest visual tasks were statistical and that these occurred in each department. It was therefore decided to carry the minimum level of illumination for such tasks—60 ft.-candles of shadowless light at desk top—throughout the floor.

A total of 1,790 Sylvania fixtures are used on the three floors, hung in continuous rows, with eggcrate louvers on bottom and directional glass prisms along sides for diffusion on ceiling. New installation ups current consumption from former load of 14.25 k.w. to 100.2 k.w. per floor. Entire cost of new system was \$2.00 per sq. ft. of floor area.

(Continued on page 124)

The PLANNING BOARD

For Present Strength and Future Expansion Needs

The Allied Electric Supply Company in Pittsburgh, Pa., needed a new building in a hurry—needed a big floor area to meet present business requirements and also had to plan for future upward expansion of the structure.

Truscon Open Truss Steel Joists and Truscon

The underslung design of the bearing permits maximum head-room under the supporting girders. The open web allows the passage of pipes and conduits in any direction. In practical use, Truscon "O-T" Open Truss Steel Joists are very simple to install, being completely shop fabricated and reaching the job ready for placing. Each joist is marked to correspond with the erection diagram, thus greatly simplifying and speeding construction work.



Allied Electric Supply Company, Pittsburgh, Pa., M. Ve-Shancey, Architect, Branna Construction Co., Contractor.

Truscon Open Truss Steel Joist

Truscon Open Truss Nailer Joist

Open Truss Nailer Joists were designed into the building to assure the rigid, fire-resistant, economical and light weight construction required. The Open Truss Steel Joists were used for the first floor, and the Nailer Joists were used for roof construction. The front bay of the Allied Electric Supply Company structure is designed for a future second floor, and the Truscon Steel Joists used assure this expansion without alterations.

Advantages of the Truscon "O-T" types of steel joists are many. Fundamentally, the Truscon "O-T" Open Truss Steel Joist is a Warren truss having top and bottom chords of wide tee-shaped members and a plain round continuous web member. The bottom chord is continuous from end to end of joists and bent up at the ends to form the bearings. Steel joists are fabricated by means of electric machine welding under pressure, making positive connections at all joints.

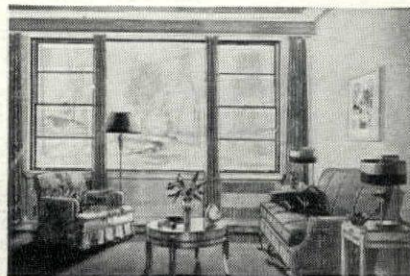
First All Resistance Welded Steel Joist

The Truscon "O-T" Open Truss Steel Joist was the first all resistance welded steel joist on the market. These joists were used in building the Grant Building, Pittsburgh, Pa., world's tallest building with Open Truss Steel Joist Floor Construction.

The Truscon Planning Board says, "Normal delivery on many of our Steel Building Products is now possible. In fact, on



all material for which raw material is readily available, a normal rate of production and delivery is currently in effect." However, since production and delivery schedules change from week to week, we suggest you contact the nearest Truscon sales office for the latest information.



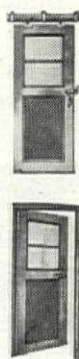
For Smart Styling

There are scores of smart room designs possible with the Truscon Series 138 Double-Hung Steel Window. The wide range of window openings in single, twin, triple and panoramic combinations inspires unusual window treatments, resulting in rooms and entire structures of appealing architectural beauty.

Several improvements are now embodied in the Series 138 Window, making it better, heavier, stronger than ever before. Write for free illustrated catalog showing complete range of types and sizes.

What's Your Door Problem?

There's a range of Truscon Steel Doors to meet every type or size needed in any type of structure, from 2' 7 3/8" industrial swing type for residences, garages, manufacturing buildings, etc., to great mechanically operated doors for airplane hangars with openings of hundreds of feet in width. The types include swing and slide industrial doors, two-section vertical lift doors, two-section turnover doors, accordion doors, crane and canopy doors, pier doors and hangar doors. Write for details.



New Literature

A complete reprint of the 72-page insert in SWEET'S, covering all types and sizes of Truscon Steel Windows, with their installation details, is available on request.



TRUSCON
STEEL COMPANY

YOUNGSTOWN 1, OHIO

Subsidiary of Republic Steel Corporation

READY NOW!

Write for Your FREE Copy

"The A-B-C of Building Breezes," a 48-page manual on the Bar-Brook BREEZEBUILDER* Attic Fan. Richly colored, profusely illustrated with photographs and diagrams. Features complete information on the principal of attic fan cooling, step-by-step installation procedure, and suggestions for a variety of uses. A request on your letterhead will bring your copy.



Give Your Clients BUILT-IN Breezes

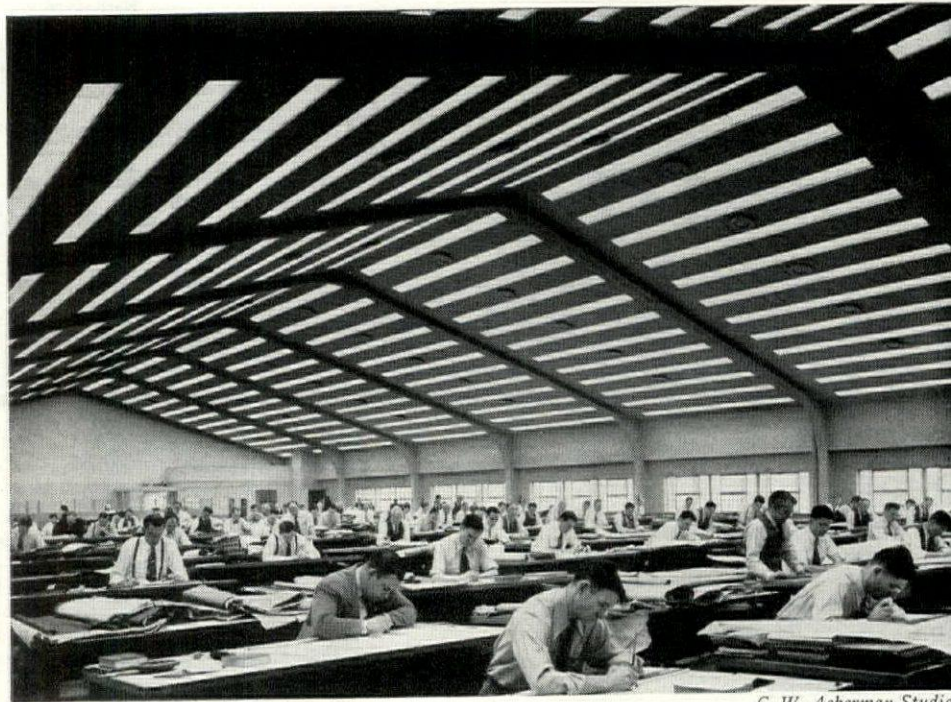
Dependable cooling can be included in any home you plan—just specify a Bar-Brook BREEZEBUILDER* Attic Fan installation. Easily installed in any size or type home, new or old. Available in 4 sizes, certified capacities, FHA approved.



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Attic Fans

Available in 4 sizes

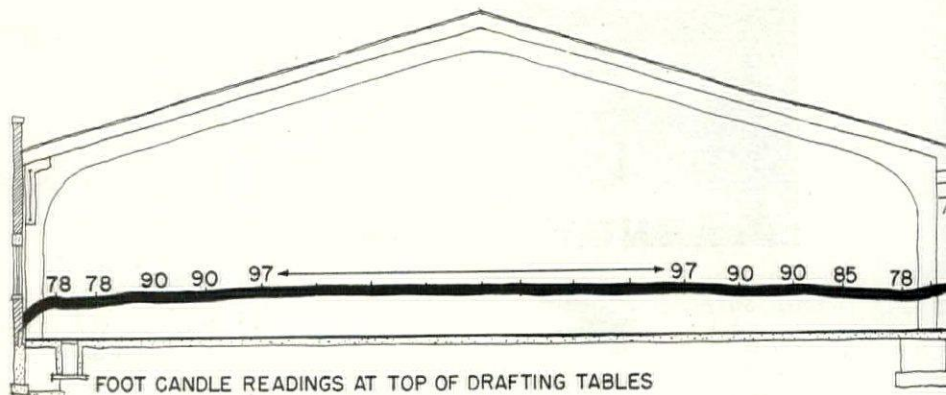
* Trade Mark



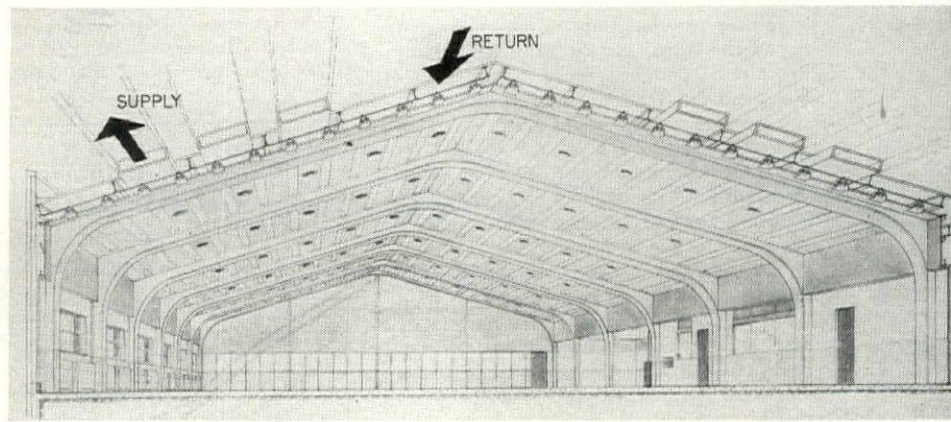
C. W. Ackerman Studio

2. Ceiling integrates lighting, acoustics and air conditioning.

Illumination of 90 ft.-candles at drawing-board height, good acoustics and an even distribution of conditioned air are all accomplished by this ceiling in Austin Co.'s new drafting room in Cleveland, Ohio. Seventy-foot rigid frames, 25 ft. o.c., support recessed light troffers which, in turn, carry the acoustic ceiling. Roof proper is supported by longitudinal purlins. Main supply ducts run along both sides of room, between purlins, to supply three lower outlets in each bay. Cavities between purlins along peak of gable form return ducts, using upper four exhausts. Although some might object to brightness contrasts in ceiling general lighting is even and high.



DESPITE SLOPING CEILINGS, general illumination in Austin's new drafting room is remarkably even, as shown by actual readings plotted across the room (above). The air distribution is economically handled in the "attic" between rigid frames and roof (below). Air supply is distributed by ducts which fit snugly between purlins, while return air is merely pulled back through the plenum formed between ceiling and roof and divided by longitudinal purlins.



DAYLIGHT IN SCHOOL CLASSROOMS

THOUSANDS of Light Measurements—
84 Pages of Diagrams and Tables—Will
Help You to Plan the Result You Want

Let this Manual Answer Your Questions on PLANNED DAYLIGHTING FOR SCHOOL CLASSROOMS

IT IS EASIER for the architect to design a school if he has this book at his elbow and easier for a school administrator to answer many questions that come up in connection with natural daylighting.

How bright is a clear sky in winter?—What is the pattern of brightness of an overcast sky with respect to azimuth from the sun and with respect to altitude from the horizon?

What brightness ratios may one hope to get with daylighting constructions available today? How far are windows typically shaded under various conditions of outside lighting? (More than 1,500 classrooms examined to get this information.)

What reflectances are recommended for different interior surfaces? What task brightnesses may be expected with bilateral lighting? What effect does ceiling height have on task brightnesses?

What task brightness may be expected when the child is reading from a book lying horizontal on a desk farthest from the fenestration in a south room on March 21st in Seattle? In New Orleans? In Denver?—In any city in the United States, for any time of day for any room orientation and for a bright or overcast sky?

These are some of the questions answered by the data in this book, "Daylight in School Classrooms." There are hundreds of other questions answered too. The tables are complete enough to permit you to work out many special problems of your own, prob-

lems that have never occurred to anyone else but you or problems that are peculiar to your north latitude, or a particular orientation of the classroom that may interest you.

FREE to architects, school administrators, educators, teachers, lighting engineers and others interested in the problems of classroom lighting. Write for your copy today.

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INSULUX
GLASS BLOCK

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Insulux Products Division, Dept. D-19
Toledo 1, Ohio

Gentlemen:

Kindly send me, at no cost, Daylight in School Classrooms.

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Position _____

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City _____ State _____

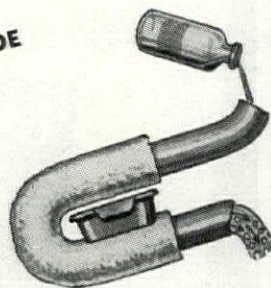
HERE'S *WHY* THE GAS REFRIGERATOR STAYS SILENT... LASTS LONGER

LIQUIDS COOL ON EVAPORATION



When you pour alcohol on your skin and blow on it, it will feel cool. That's because liquids draw heat from the surrounding area as they evaporate. You could test this for yourself with a thermometer. Both gas and electric refrigerators operate on this principle... but there's a big difference in application. Study the following illustrations and you'll see why Gas Refrigeration's method is superior.

SUPPOSE YOU MADE A SIMPLE REFRIGERATOR



All you would have to do would be to pour continuous streams of ammonia or any other refrigerating liquid and air through a bent metal tube. As the ammonia evaporates on the inside, the outside of the tube cools... which causes refrigeration. The evaporated ammonia is then passed off in the form of vapor gas. However, in practical refrigeration, allowing this vapor gas to escape would be wasteful. It must be recovered and used again.

WHETHER you're building apartments or private homes, it will pay you to study the simple explanation shown above before placing any orders for new refrigerators.

The chart shows why Servel's method of operation is simpler, different... and better. There is not a single moving part in the freezing system. That means there's nothing to cause mechanical humming or clicking. The entire freezing job is done by a tiny, silent gas flame.

That explains why there's an increasing trend toward the Servel Gas Refrigerator. Today tenants and owners expect new household refrigerators to operate silently. Many architects and builders realize that it's good business to install

Servel Gas Refrigerators NOW... for once the housing shortage is eased, freedom-from-noise will be an important factor in renting apartments and selling homes.

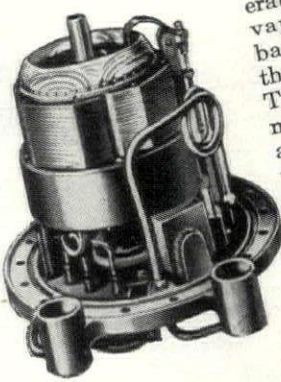
And—equally important—Servel *lasts longer*. Since the freezing system has no moving parts, there's nothing to wear or break down. Servel's repair and replacement bills are remarkably low. Operating costs remain low too. After years of dependable, trouble-free service, the depreciation of the Servel Gas Refrigerator—compared with a mechanical refrigerator—is much less. For complete information, consult Sweet's Catalog... or write today to Servel, Inc., Evansville 20, Indiana.

STAYS SILENT
LASTS LONGER

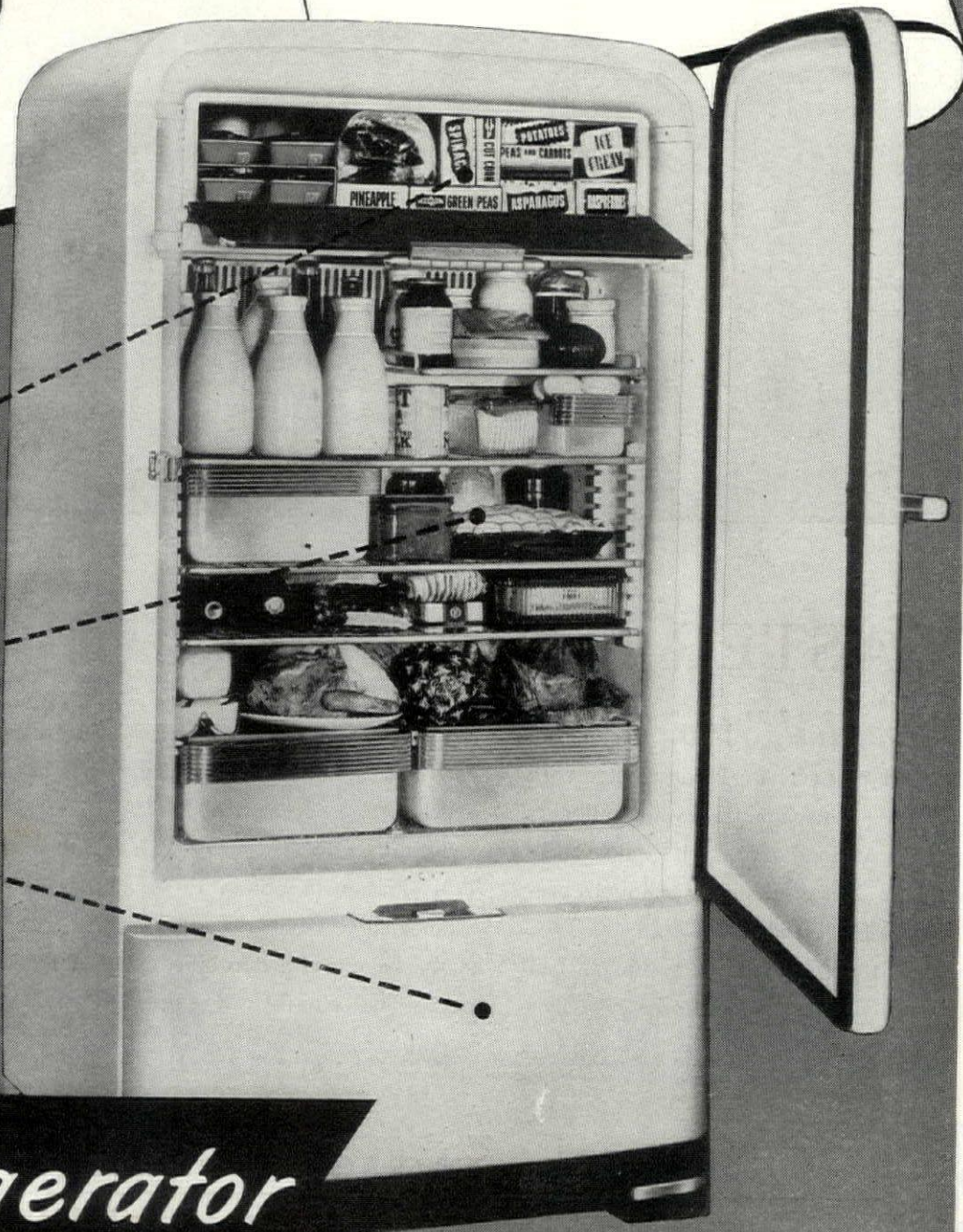
Servel The GAS

THERE ARE TWO WAYS OF CHANGING VAPOR BACK TO LIQUID FOR RE-USE

In an electric refrigerator, the ammonia vapor is compressed back into liquid by the use of machinery. This machinery, includes a motor, pumps, valves, pistons, and compressors.



But in the Gas Refrigerator, the vapor is changed back to a liquid by first being passed through water. The water absorbs the ammonia. The mixture is then boiled by a tiny gas flame. The ammonia is driven off in the form of hot ammonia vapor. Cooled by passing through pipes, it condenses again into a liquid. *Not a single moving part is needed.*



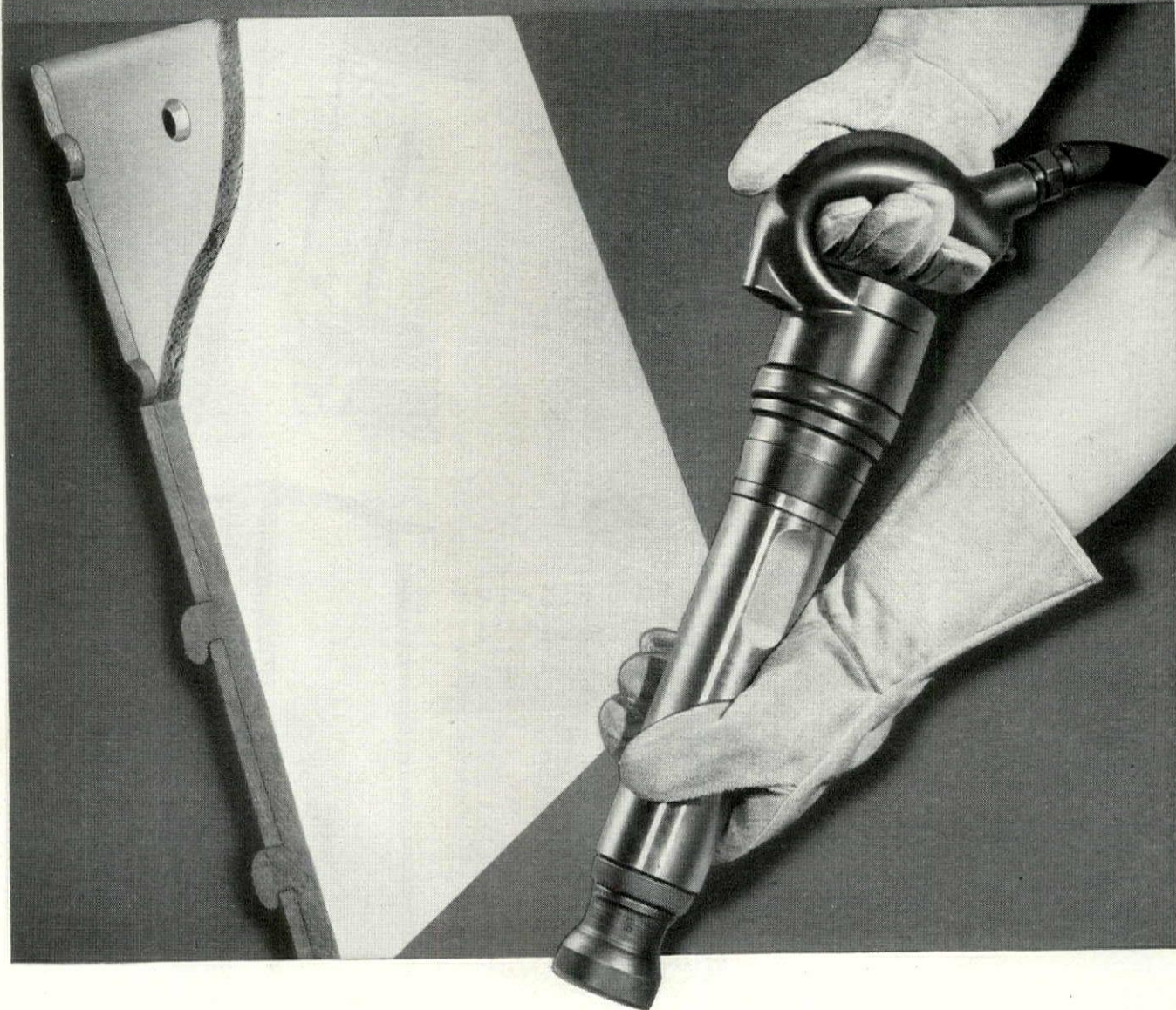
Big Frozen Food Compartment

Moist Cold Dry Cold

No Noise No Wear

Refrigerator

FOR MODERN INTERIORS USE PLASTER



PLASTER—"riveted"—to ROCKLATH*

and "welded," too. Perforated ROCKLATH plaster base holds plaster with a double grip—a mechanical key that clinches like a rivet—a suction bond which "welds" plaster to the lath. This results in a continuous barrier of gypsum from studs to finish.

What does this mean to the architect? Just this. Recognized testing laboratories give Per-

forated ROCKLATH and RED TOP* Plaster partitions a one hour fire rating with proper plaster proportion and thickness.

Specify Perforated ROCKLATH and RED TOP Plaster to obtain these added fire resistance and double grip advantages in addition to the beauty and durability of plastered surfaces—flexible to the will of the designer.

*ROCKLATH and RED TOP used above are registered trademarks which distinguish products manufactured only by the United States Gypsum Company.



United States Gypsum

For Building • For Industry

Gypsum • Lime • Steel • Insulation • Roofing • Paint

**THE LUSTRON
CORPORATION
has selected**

**WILLIAMS
OIL-O-MATIC
HEATING**

**to be used in
the houses* it will
manufacture**

WILLIAMS OIL-O-MATIC DIVISION
Eureka Williams Corporation
BLOOMINGTON, ILLINOIS

***FOR THE COMPLETE STORY OF THE LUSTRON
HOUSE, SEE THE JUNE, 1947 ISSUE OF
ARCHITECTURAL FORUM**



Photo by Jerry Cooke

No. 17 in the "Man of Adventure" Series

LEADER IN THE PROMISSORY LAND

On one day at least, Amadeo Peter Giannini did not behave like a cool banker. It was the day his market-basket credit house became the world's largest private bank...

The story of the Bank of America* is not alone the success story of California, but an exciting document of democratic capitalism. For a Giannini, bridging the credit gap between dreams and proprie-

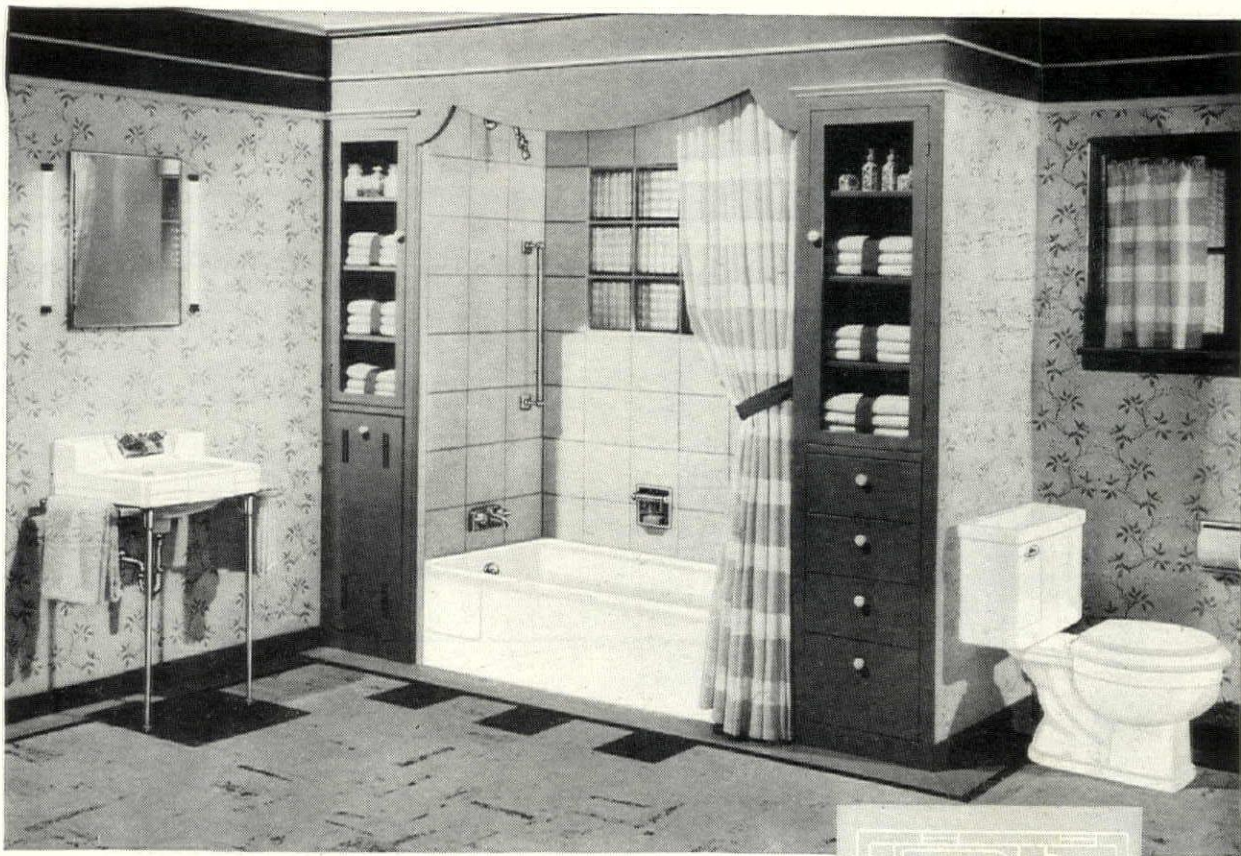
torship, both of fruit stands and shipyards, broadens the base of enterprise. And in making the most of his own opportunities, he opens thousands of opportunities to others.

Month after month, as part of its continuing Exposition of Enterprise-at-Work, FORTUNE reports the people and careers of America's most case-worthy business

firms—from their first dollars of credit... through their triumphs and frustrations in manufacturing and sales... to their latest profits or losses. And because its performance this year surpasses even FORTUNE's standards of excellence, more managerial leaders than ever before say they turn to FORTUNE as their finest source of enlightenment.

*See "World's Biggest Bank"—p. 69 FORTUNE, July, 1947





Fifth of a Series: The Oxford Bathroom

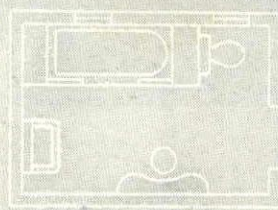
Crane Styling makes sales

Here is the styling that makes home buyers say, "This is it . . . this is the home for us!" It's the Crane Oxford Bathroom Group, priced for homes in the middle brackets.

From the many bathroom groups in the '47 Crane line, you can select a style for any taste, at a price for any building budget. Each group features the new *Dial-ese* faucets that open and close at a finger's touch . . . each has the high quality that has always been part of the best-known name in plumbing.

For the kitchen, too, Crane offers sinks in a wide selection of styles and sizes. And for home heating, Crane supplies the right boiler or furnace for any type of fuel—plus radiators, piping, and all necessary controls.

Look in the 1947 Sweet's Builders' File for a condensed catalog of the Crane line, or write for a copy of the colorful line presentation booklet. No matter what you need in plumbing and heating, your Crane Branch will gladly help you select your equipment from the complete Crane line.



Approx. Size: 11' x 7'

Above is the floor plan of the Oxford Bathroom, the near wall providing space for a dressing table as shown, or for an additional lavatory. Of course, the Oxford Group fits smaller bathrooms, too, as suggested below.

Approx. Size: 8' x 6'



Approx. Size: 5' 6" x 5'



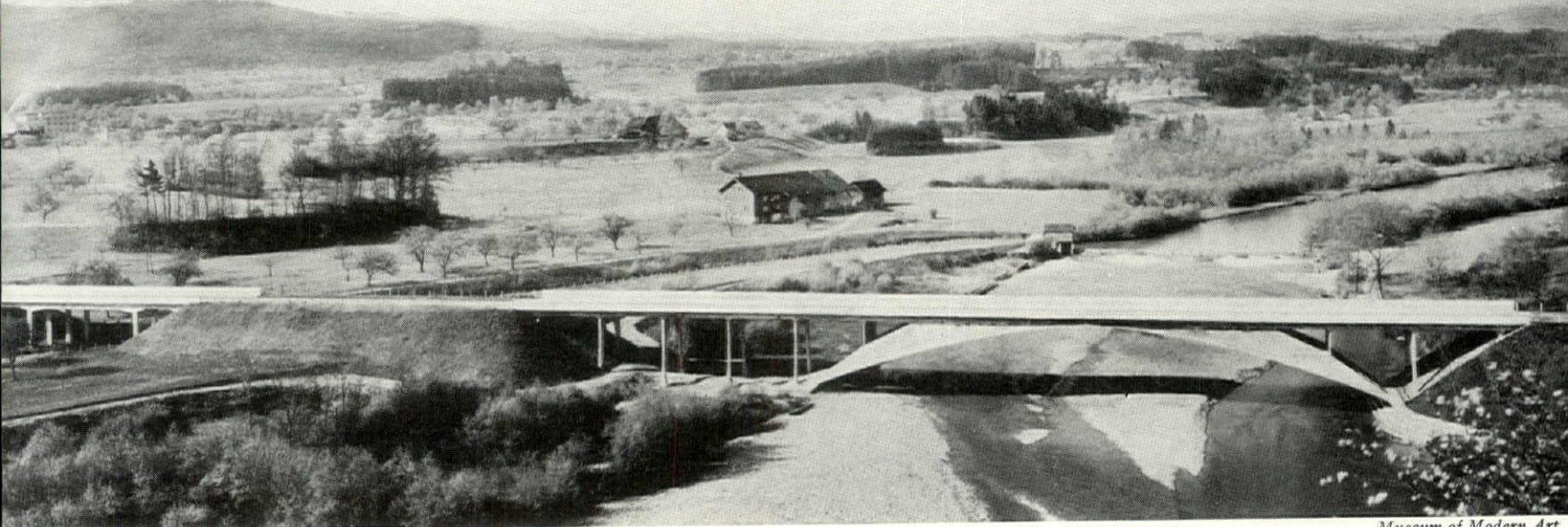
CRANE

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

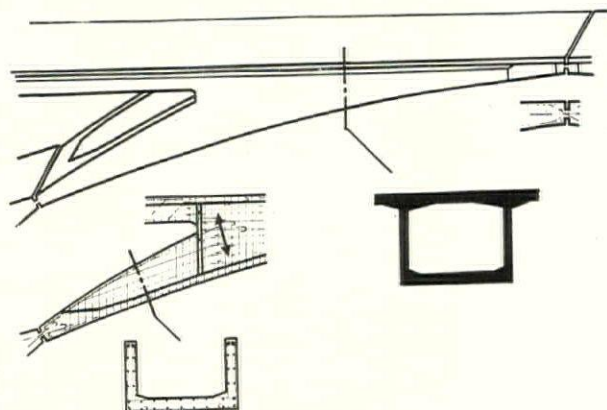
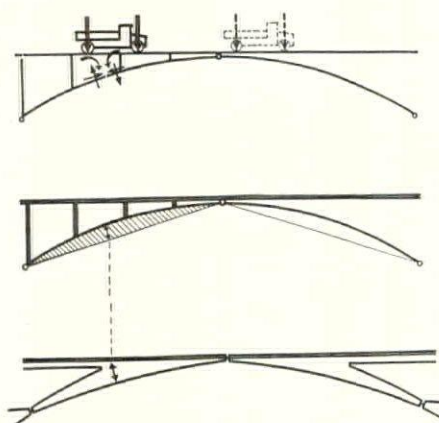
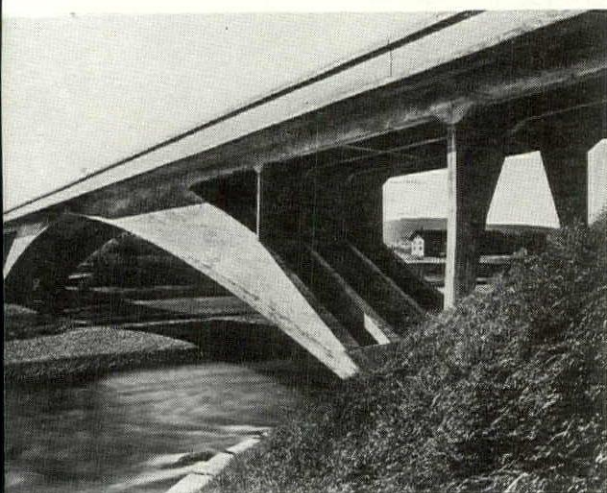
CRANE CO., GENERAL OFFICES:
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VALVES • FITTINGS • PIPE
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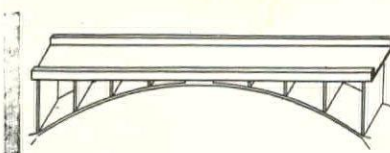
REVIEWS



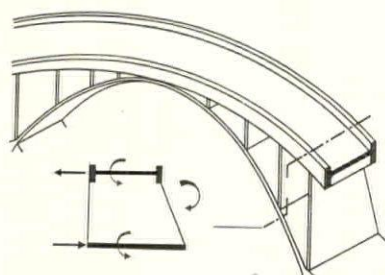
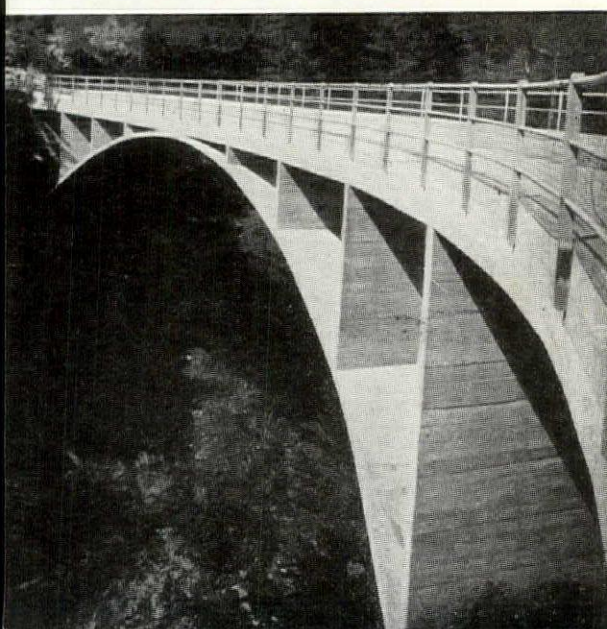
Museum of Modern Art



Maillart's three-hinged arch bridge is composed of two symmetrical girders hinged at the middle and at each end, the concrete slab roadway becoming an active structural member fused with the supporting arch (above, right.)



Stiffened arch bridge (above) has thin curved slab joined to roadway-and-parapet girder by thin vertical transverse walls.



Curves in two planes increase stiffness, while reducing mass.

EXHIBITS

ROBERT MAILLART'S BRIDGES are beloved of the "Form Follows Function" school of architectural designers for, in scientifically shaping his material (reinforced concrete) to its maximum efficiency, this Swiss engineer developed esthetic forms of sheer beauty.

Maillart worked with François Hennebique, pioneer in reinforced concrete construction, at the turn of the century. In 1912 he went to Russia and built large factories; after the revolution he returned to his native Switzerland and built a series of the beautiful bridges that have now become famous. Until his death in 1940, however, his life was a constant struggle against official opposition and public apathy, and because his bridges were too radical in theory for his fellow engineers and too unusual in form for the public he was forced to build most of them in remote valleys where they were little known for years.

Maillart's use of reinforced concrete was unusual for his time. Previously, this new material had been used in heavy beams like timber and iron; but he pared his structures down to the bone, curved and juxtaposed concrete slabs and thus invented new shapes while cutting down dead weight. Some of his bridges are notable for their very shallow arches and slender structures (see cuts). Subsequent Swiss architecture in reinforced concrete is remarkable for its lightness and elegance.

The work of this Swiss engineer has now been assembled by his compatriot, Sigfried Giedion, for the Museum of Modern Art in New York City, and is on exhibit there until October 12. The Museum has also prepared one of its circulating exhibits of Maillart's work, which may be obtained in pamphlet form.

(Continued on page 132)

FAIRBANKS-MORSE POMONA VERTICAL TURBINE PUMPS



WATER-LUBRICATED:
OPEN IMPELLERS.

You can take your choice at the "BIG STORE"...

The "Big Store" is an American institution, where a man can get a better buy from a broader choice. That's why most buyers go to a Fairbanks-Morse-Pomona dealer for their vertical turbine pumps.

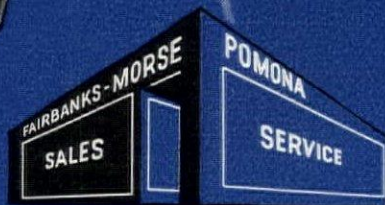
They know that these dealers are not restricted in their recommendations. They know that they'll get impartial help in buying the right pump.

For instance, Fairbanks-Morse offers a choice of oil or water lubrication, open or closed impellers. This is greater surety of getting skilled, unrestricted service in obtaining the pump that is most suited to your particular pumping work.



OIL LUBRICATED:
CLOSED IMPELLERS.

VISIT YOUR NEAREST FAIRBANKS-MORSE-Pomona dealer:
Take advantage of the extra value in trading from the
"Big Store in the pump industry"!



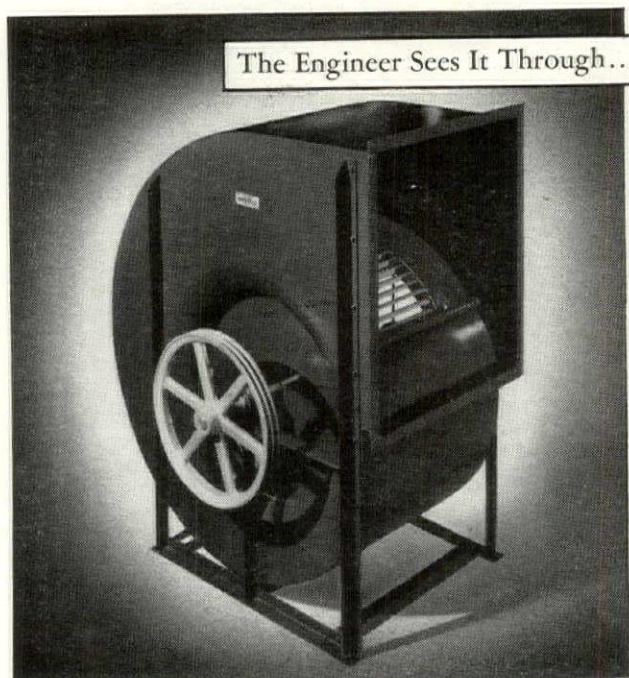
FAIRBANKS-MORSE



A name worth remembering

DIESEL LOCOMOTIVES • DIESEL ENGINES • MAGNETOS • GENERATORS • MOTORS • PUMPS • SCALES • STOKERS • RAILROAD MOTOR CARS and STANDPIPES • FARM EQUIPMENT

form. There are 21 wood panels (the majority 24 x 32 inches) and six technical drawings in shippable form, requiring approximately 125 running feet of display space, weighing 180 pounds, for rental at \$85 for three weeks. This circulating exhibit has already been shown at Harvard University, M.I.T., Culver Academy, Cranbrook Academy, University of Virginia, and is scheduled to show at the Henry Gallery of the University of Washington in Seattle, as well as the Institute of Design in Chicago. Other panel exhibits in architecture, planning, design, painting and sculpture, crafts, photography, etc., (ranging in fee from \$12 up) may be secured from the Museum of Modern Art's Department of Circulating Exhibitions, 11 West 53rd Street, New York City. A handsome catalog of rental shows is available from the Museum.



The Engineer Sees It Through...at



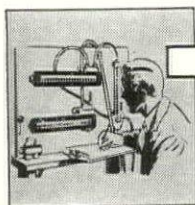
Blowers...built to serve and serve!

Heavy gauge steel, hydraulic riveting, and feather-sensitive balance all help to make good, long-lasting blowers. But the factor that makes usAIRco blowers *exceptionally* long-lived and trouble-free cannot be seen in the frame, the cone, the blades, the backplate, or the bearings. That factor is *engineering follow-through*.

In specifying usAIRco blowers, you buy much, much more than merely fine machinery. You get shrewd, expert knowledge of air-movement. You have as working partners men who know the job and will help you see it through. Call us in on your next blower installation, and see what this means!

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Factory Representatives in Principal Cities



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Before any usAIRco blower goes to the shipping dock it must pass every test established by usAIRco design engineers. You can depend on usAIRco blowers to meet your needs with extra margins of performance.



Plus
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Engineering Counsel

Available to your air conditioning, heating or ventilating problems is the advice and counsel of the engineering staff of usAIRco. With a background of nearly twenty-five years, it is one of the most experienced in the industry. We invite you to use it freely and fully.

JACOB A. RIIS (1849-1914) was one of America's first journalist-photographers. Fifty prints from Riis' long-lost negatives, recently discovered, have been painstakingly restored by photographer Alexander Alland and are now on exhibit at the Museum of the City of New York (until September 14).

The Museum tells us that these "great documentary photographs were the ammunition Riis used in his war against the slums, his battle for the underprivileged . . . As a police reporter (on the old *New York Sun*), he penetrated New York's lower depths and sought for a means of bringing to public attention the conditions under which what he called *The Other Half* lived and worked. One morning in 1887 a press dispatch announcing the discovery of a new method of taking pictures by flashlight (which he immediately realized would illuminate the darkest corners of the foulest tenement) showed him the way, and before very long he set forth armed with his camera and pistol, for the early flashlight was contained in cartridges fired from a revolver. He later substituted a frying pan for this terrifying device and, thus equipped, took the shots which were to aid in his spectacular achievements—the destruction of rear tenements, the abolition of police station lodging houses, the enforcement of child labor laws, the opening of playgrounds, the establishment of a truancy school, and many other pioneer reforms. To him perhaps the greatest triumphs lay in the wiping out of Mulberry Bend (the worst tenement block in the city) to make way for the building of Mulberry Bend Park and the opening of his own Jacob A. Riis Neighborhood Settlement, which today is still expanding and carrying on his great work."

In the *New York Sun* for February 12, 1888, appeared this story about Riis photographs: "With their way illuminated by spasmodic flashes . . . a mysterious party has lately been startling the town o' nights."

This exhibit is appearing while one of New York City's large housing projects, named in honor of this pioneer in slum clearance, is under construction on the site of some of the worst scenes he photographed.—E.B.

PUBLIC INVESTMENT AND FULL EMPLOYMENT. International Labor Office, 3450 Drummond St., Montreal, 25, Canada. 305 pp. Statistical appendices. 9 1/2 in. x 6 3/8 in. \$2.25.

In a period of awakening internationalism, this ILO study can reasonably be expected to get more attention than other valuable reports issued by the organization in the inter-war years. While underlining the lesson of the thirties—that each nation must plan in advance if public investment is to be used efficiently to even out downswings in private investment—the study also makes the new point that such public investment planning must take account of what is being done in other countries. Thus, a public housing program in New England may be of as much importance to lumber interests in some of the Canadian provinces as to any element of the U. S. economy.

Construction is, of course, always the major part of public investment made to create jobs. In view of the current discussion about whether the construction industry can stabilize the U. S. economy during the expected general business recession it is interesting to note that the ILO researchers agree with Beardsley Ruml and Miles Colean that public construction outlay must have a more limited goal. "Construction projects should probably not be planned to stabilize the economy as a whole, but to stabilize the construction industry at a high and gradually rising, level of activity."

ILO hopefully suggests that fluctuations in private investment need not always be so enormous. Given a few decades of full employment, these researchers say, and periodic waves

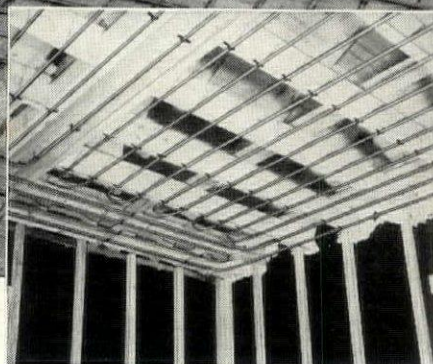
(Continued on page 134)



Best

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CONVECTORS AND RADIANT BASEBOARDS



Radiant heating has taken a firm grip on the interest of both home and industrial builders. More freedom in planning room arrangements—more comfort at lower air temperatures—greater cleanliness—lower operating cost... these are a few of the reasons people are asking questions about this *completely concealed* heating.

Successful radiant panel heating depends upon the use of comparatively large heating surfaces at *low temperatures*! What other heating method can satisfy these requirements as easily, accurately and economically as B&G *Hydro-Flo Heat*—a *forced hot water* system?

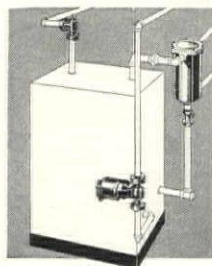
The simple, dependable equipment of a B&G *Hydro-Flo Heating System* positively controls the flow of water through the panels. It smoothly varies the water temperature to meet changes in the weather so that room temperature is maintained constantly at the comfort level. The system circulates water at any level, either above or below the boiler.

Year 'round hot water an added feature

The B&G *Hydro-Flo Heating System* provides an all year 'round supply of low-cost hot water for every household use. Remember that automatic clothes washers, dish washers and showers call for liberal quantities of hot water... that's why the economy of B&G water heating is a big selling feature! No separate heater needed—the same boiler that heats the house also heats the water for kitchen, laundry and bath.

If you haven't complete information on B&G *Hydro-Flo Heating Systems*, write today.

B&G *Hydro-Flo Heating* equipment can be installed on any hot water heating boiler.



***Hydro-Flo* HEAT**

BELL & GOSSETT COMPANY

Dept. AC-10, Morton Grove, Illinois

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of replacement—which are especially marked in building—would tend to level off.

The present Administration is committed to a policy of public outlay to maintain full employment—witness the Full Employment Act and President Truman's statements in various budget messages to Congress. (Sample: "Our long-run objective is to achieve a program of direct federal and federally-assisted public works which is planned in advance and synchronized with business conditions.") But after the abundant talk throughout the war years of a well-stocked postwar works shelf, it is depressing to discover how few of these public works would be ready for contracts tomorrow—if that were necessary. Taking a look at the U. S. planning situation, ILO finds that, in the federal aid category, only the plans for roads and highways are well advanced. Municipal plans are even

more vague; by the end of 1945, New York City had spent \$21 million for planning, but all the other 288 U. S. cities with a population over 10,000 had spent only \$6.4 million combined.

Priority for housebuilding and current uncertainties about building costs have pretty much obscured public works planning. But Building men might take the ILO investigation as a reminder that Building's present enormous market potential is no solution of its familiar boom-and-bust cycle. Those who feel that public outlay and deficit financing are a costly road to construction stability must take account of the ILO conclusion that U. S. experience in the thirties is no test of the effectiveness of public investment in wiping out unemployment.

Although the U. S. spent more money to this end than any other country, and approved outlays that sent non-Keynesian economists reeling, at no time did public construction outlay increase enough to offset the drop in private construction. It is also important to recognize that simultaneous and sharp reductions in state and local construction expenditure counteracted the effect of federal outlay. In 1933, the worst unemployment year, municipal debt was actually reduced. While the federal government began to employ deficit financing, state sales taxes steadily increased, further limiting already-sagging consumer spending.

Both building and government might profitably read the ILO study as convincing evidence of a notion fairly clear even in these hazy times: The way to avoid a depression is not to pretend that there is no possibility of one; the way to avoid a heavy federal hand in works planning is to make the plans at a local level.—L.C.

AMERICA'S NEEDS AND RESOURCES. By J. Frederic Dewhurst and Associates. The Twentieth Century Fund, New York. 787 pp. Statistical appendices. 10 x 7 in. \$5.

This giant statistical profile of the U. S. economy, prepared by Dr. Dewhurst and some twenty other economists, shows, among other things, that the U. S. has the productive capacity to replace its substandard one-third over the next 15 years, to clean up the slums and blight spots in its cities, to build almost all the schools, hospitals and other types of buildings that the growing U. S. population will need by 1960. All this would add up to a Building year of \$21.1 billion in 1950 and \$22.8 billion in 1960 (see FORUM, May '47).

This statement does not promise that the U. S. actually will put its manpower to work at maximum productive capacity; it simply shows that Americans could have almost everything they want and need over the next decade or so if they do manage to maintain full employment. It is important for Americans to recognize that their country is the only one in the world today about which this statement can be made. In the rest of the world, war devastation, undeveloped or presently inadequate productive capacity mean that not even full employment could produce enough for everybody for a good many more decades. The U. S. has not yet solved the problem of full employment; perhaps it can be hoped that this study's golden promise of what full productivity would mean will accelerate our search for a way to keep our manpower and plant resources constantly at work.

The study, which shows exactly how U. S. consumers have spent their money in the past and how they might be expected to spend it in the future, provides in the chapter on housing a handy summary of facts about existing structures, use of electric light, various items of household equipment, etc., derived from U. S. Census and other standard studies. The Fund economists go a little farther than the census-takers in estimating substandard housing. Basing their count on a

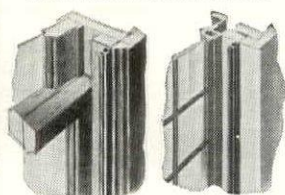
(Continued on page 136)

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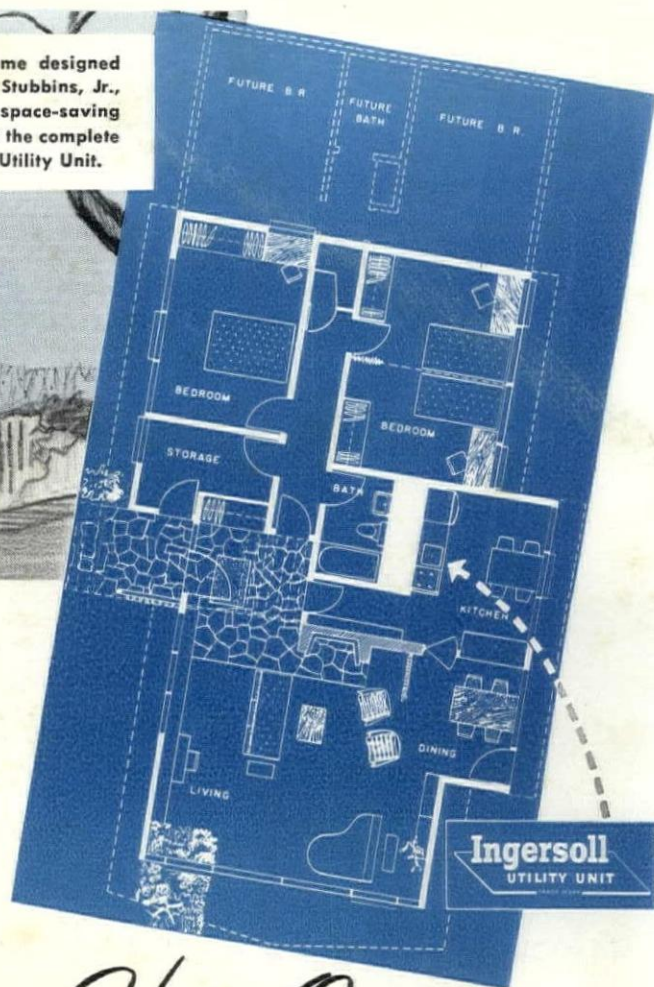
Made by Makers of Famous Pella Venetian Blinds and Casement Windows

Small home designed by Hugh Stubbins, Jr., showing space-saving feature of the complete Ingersoll Utility Unit.



Hugh Stubbins, Jr.
Boston, Massachusetts

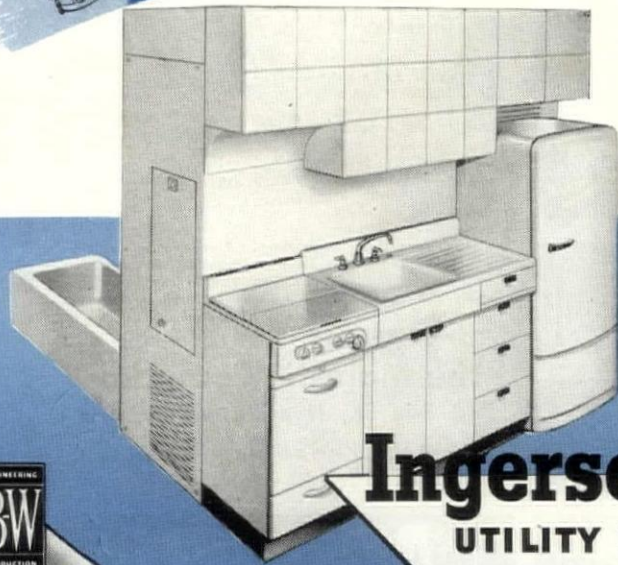
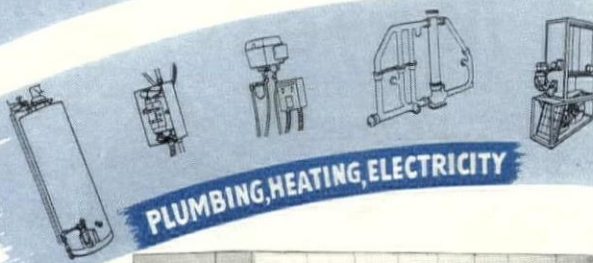
Hugh Stubbins, Jr., noted Boston, Massachusetts architect, says: "The Ingersoll Utility Unit helps us tremendously in planning concentration of services in small cubage and allowing for maximum utilization of space. Its adaptability provides for step-saving, flexible arrangements and gives the home-owner more living space for less money."



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Architects interested in providing roomier, more attractive homes at low cost find the compact, space-saving Ingersoll Utility Unit the answer to their problem. A complete, engineered assembly of an attractive kitchen, bathroom and heating plant, including all basic connections, the Unit saves the architect untold time and trouble in planning and making up specifications. Designed, job-tested and produced in collaboration with leading architects, the Ingersoll Utility Unit is adaptable to highly varied individual needs and plans. Send coupon below for complete literature.



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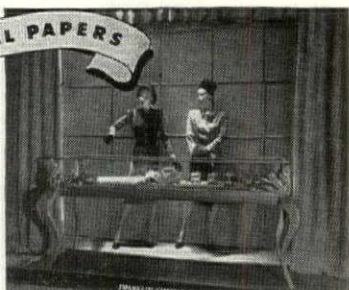
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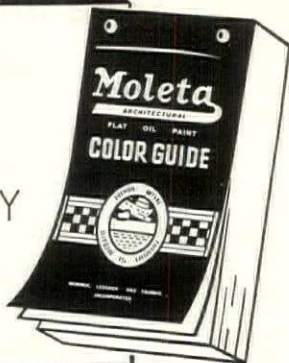
SP-100 Burl Walnut	SP-105 American
SP-102 American	Walnut, Natural Brown
Walnut, French Brown	SP-107 Quartered
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sampling of block-by-block analyses, they figure that 8,391,000 city houses are substandard—or 35 per cent of all urban dwelling units. Two-thirds of all farm dwelling units, they say, are substandard. To replace and remodel these houses to minimum standards of family livability would require 31.1 billion Building Dollars (1940 prices).

The National Association of Real Estate Boards will be depressed by the researchers' suggestion that rent control may possibly have accustomed consumers to allocating a smaller proportion of their budget for shelter. The Building industry will hardly be surprised by the study's emphasis on an already glaring fact: "Housing must be produced at a price well within the reach of a substantial number of families for any sizeable volume of replacement building to be demanded."

About the effect of war technology and war building experience on building costs, these researchers are not very optimistic. They think some simplification of production and some standardization of materials and equipment has occurred, but doubt that anything—including the increasing number of steps toward factory building—has yet happened which promises to lower the cost of the building product very much.

The chapter on urban redevelopment is valuable for its nonbiased summary of the planned-decentralization vs. urban-redevelopment clagues. The men who wrote it sensibly conclude that the U. S. will probably do some of both. They figure that about one-third of the slum housing torn down will be replaced on the outskirts of cities rather than on its present location. It would take \$16 billion (prewar values), they say, to acquire all the land and building in U. S. residential slum and blighted areas.—L.C.

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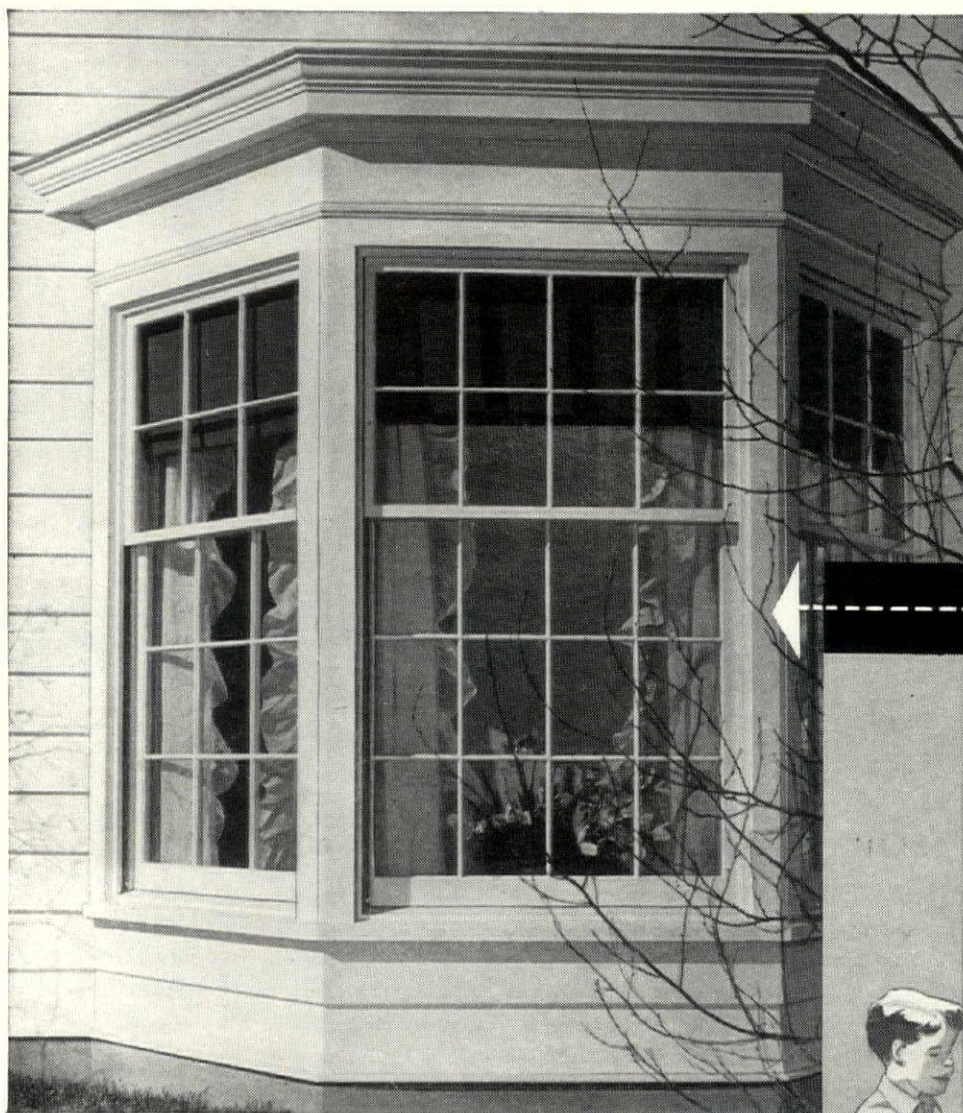
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Majestic Formed Steel Dampers maintain proper ratio of throat area to opening in new and modernized fireplaces. They assure correct height of throat and other dimensions. Built-on flange simplifies installation. Tight-closing valve operates easily with Majestic patented poker control. Withstand years of exposure to rust, smoke, soot, and heat, without impairment. Specify these Majestic Dampers for safe draft control and lasting, smoke-free performance. Write for details.

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It "FLOATS"

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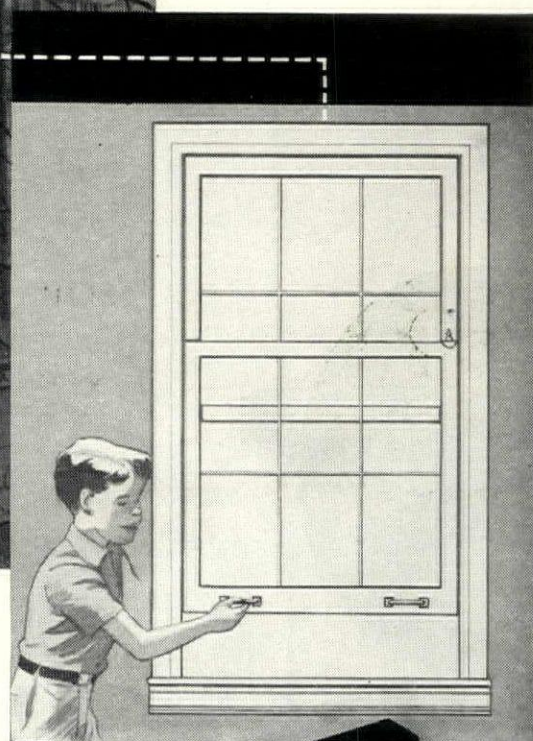
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new self-fitting SILENTITE

Design a window so easy to operate that it actually seems to "float" . . . yet which is constantly sealed against air infiltration . . . far more weathertight than ever before.

That is the problem which Curtis engineers solved in the new self-fitting Silentite. Famous Silentite spring suspension creates a window that even a child can easily open. Yet the full length double-Z type bronze weather-strips in the jambs press sliding bars against the edges of the sash, providing a constantly tight fit. This new type weather-stripping, plus improved weather-stripping at head, sill and meeting rail, makes the new self-fitting Silentite fully 20% more weathertight even than the original Silentite window introduced by Curtis in 1932.

Silentite windows are made of wood—because Curtis has found wood to be the most completely satisfactory of all window materials. Yet Silentite windows have the streamlined appearance that fits today's idea of window beauty. Let us tell you all about the new self-fitting Silentite and its new achievements in window design.



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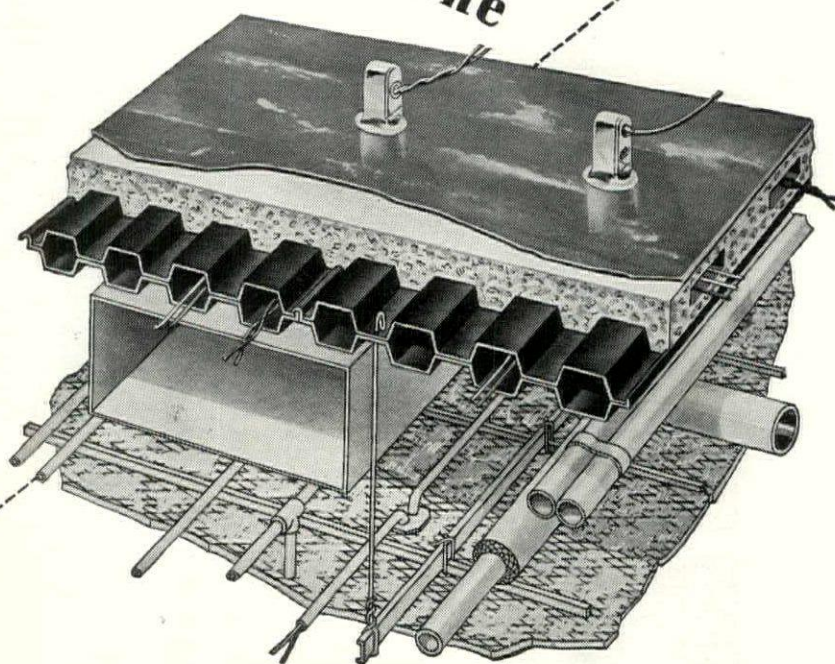
I am ☐ Architect, ☐ Contractor, ☐ Prospective
Home Builder, ☐ Student

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Q-Floors require no revision of drawings—no matter how many changes of electrical outlet location are called for after construction begins. Q-Floors also save drawing revisions for support locations of mechanical equipment, which is suspended anywhere from steel Q-Floors, without prelocating inserts.



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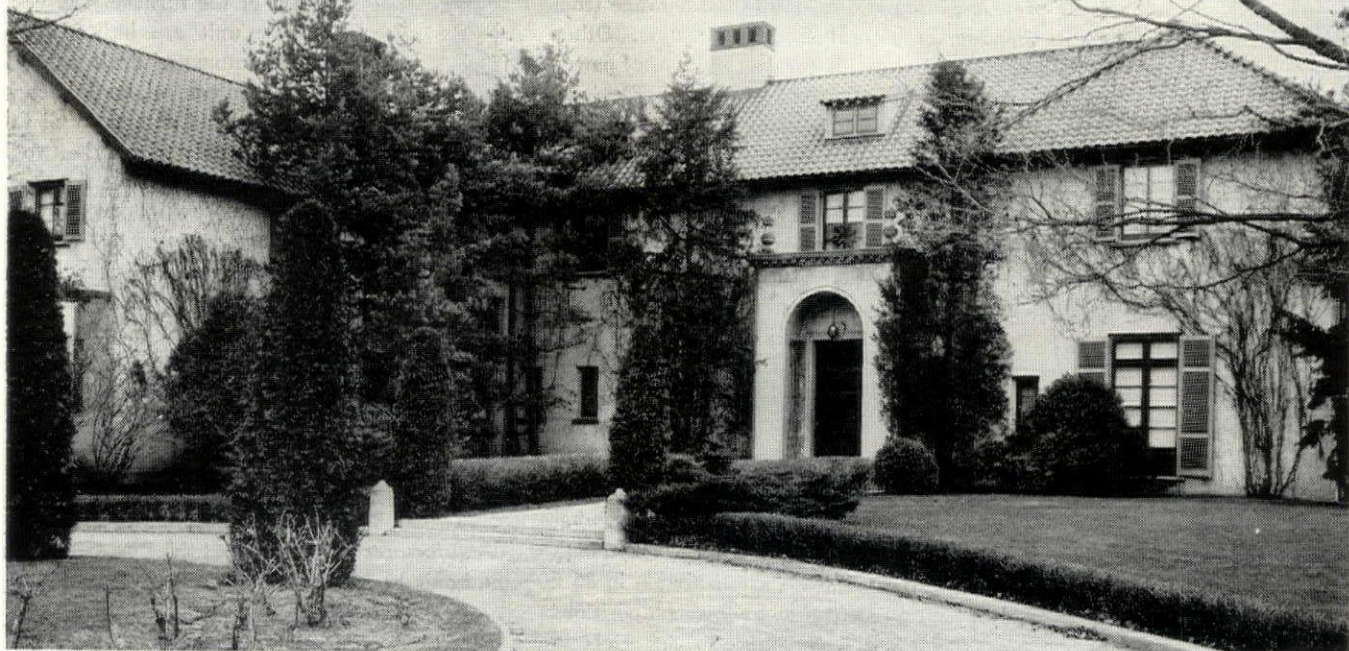


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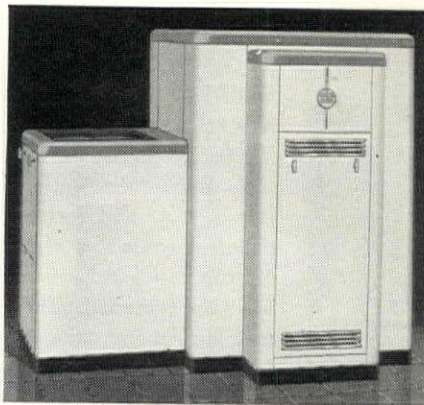
3. **MECHANICALLY-CIRCULATED AIR** keeps warm air fresh and clean while providing the proper number of air changes per hour.

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Architects, builders and contractors who specify and provide modern warm-air heat know that circulating air will be cleaned efficiently. For **DUST-STOP*** Filters, a **Fiberglas**** product, are the choice of most manufacturers as original equipment. They're the homeowner's choice, too, for replacement **DUST-STOPS** are readily available at low cost through suppliers in every community.

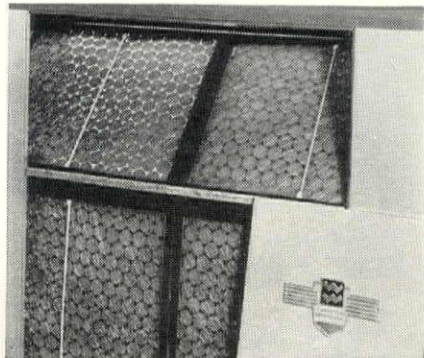
For complete information, see Sweet's Files or write: Owens-Corning Fiberglas Corporation, Dept. 830, Toledo 1, Ohio. Branches in principal cities.

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Waterbury Furnace #1336-24 manufactured by The Waterman-Waterbury Company, Minneapolis, Minnesota.

Below: the blower cabinet of this Waterbury Furnace is equipped with six 20" x 25" x 2" **DUST-STOP** Filters.



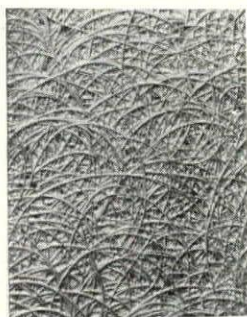
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Manufacturer: Polyplastex United Inc., 92-35 Horace Harding Blvd., Elmhurst, New York, N. Y.

WINDOW SCREENING deflects sun's rays to keep interiors cool, excludes insects.

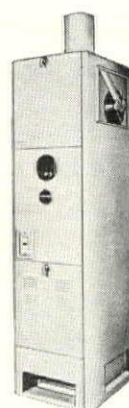
Venetian Screen is a new window screening which combines the duties of conventional fly screens, awnings and venetian blinds. Cut and formed from a solid, continuous sheet of metal, it resembles a miniature venetian blind in that it has 18 tiny horizontal louvers per inch set to slant slightly downward and outward. These louvers keep out flies and mosquitoes, deflect the sun's rays and rain. According to the manufacturer, the louver construction shuts out direct sun rays from mid-morning till late afternoon, thus keeps interiors up to 10 degrees cooler and prevents fading of furnishings. It is also said to provide 20 per cent more open space than ordinary window screens, assuring plenty of light and air and good visibility from the inside. Venetian Screen is strong and durable, is available in either bronze or aluminum alloy. It comes in rolls like ordinary screen wire in widths from 24 in. to 36 in. Easily installed, it is cut with shears and tacked on ordinary screen frames.

Manufacturer: Warp Brothers, 1100 N. Cicero Ave., Chicago 51, Ill.

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The International R-9 Oil Burning Furnace is a low-cost, automatic, completely packaged heating unit for installation in basementless homes. Featuring a new design which delivers warm air at floor level, it eliminates cold floors and drafts, holds temperature differentials between floor and ceiling to a minimum. No heat waste occurs from overheated ceilings for, upon rising, the air is returned to the furnace to

be recirculated over the floors. R-9 has an efficient pot-type burner built in with precision forced-air draft control. Return



air entering the top of the furnace is forced down over the surface of combustion drum by means of a circulating air blower. This large 12 x 12 in. combustion blower and motor are suspended in resilient spring mountings to assure quiet operation. Flue pipe rises out of the top of the furnace. All essential parts of the new unit are built-in: Fusetrol cut-off switch, automatic draft control, safety limit control, fan control, humidifier with water line connection and automatic oil valve. The electrician has only to run the two 110 v. wires to outlet box and connect the thermostat, which automatically maintains desired temperatures, by means of low voltage wiring. R-9 can be quickly and easily installed in buildings which have wood or concrete slab construction, can be located in a hallway, niche, alcove, closet or utility room. Warm air can be circulated to rooms over the surface of the floors from grilles located at the base of the furnace or by running underfloor ducts. Where ducts are desired, registers can be taken directly out of the sides, front, back or bottom of the unit. Heat output capacity of the furnace is 100,000 BTU per hr., overall measurements are 22 1/8 in. wide, 27 3/4 in. deep, 82 3/4 in. high.

Manufacturer: International Oil Burner Co., 3800 Park Ave., St. Louis 10, Mo.

OIL-FIRED HEATING UNITS designed to burn oil or gas.

Two new oil-fired heating units, Type 201 Gravity Furnace and Type 202 Winter Air Conditioner, have been added to the Mueller Climatrol line. Designed for small and medium size homes, Type 201 is available with inputs of 90,000 and 135,000 BTU per hr., while Type 202 has inputs of 100,000 and 150,000 BTU per hr. Both of the units are designed to burn gas as well as oil, have gas-fired ratings identical to those above. If, at some future date, it is desirable to fire either with gas, a packaged gas burner assembly will be available for that purpose. Furnaces employ a heavy-gauge steel drum and tubular radiator of multiple-pass design, with two banks of staggered radiator tubes. Travel of the products of combustion is



completely "updraft" throughout the entire exchanger. Other features of the units include an efficient vaporizing burner and an air damper which automatically adjusts the supply of combustion air as burner changes from high to pilot fire. Furnace cabinets are steel-finished in green crinkle lacquer, inside finish is aluminum. On Type 201 an aluminum-finished bonnet is regularly supplied. Type 202 is furnished with

replaceable-type filters, automatic evaporative humidifier, combination fan switch and limit control.

Manufacturer: L. J. Mueller Furnace Co., 2005 W. Oklahoma Ave., Milwaukee, Wis.

ADJUSTABLE TEE for use with one-pipe circulating hot water heating systems increases heating efficiency.

The Thrush Adjustable Single Main System of Forced Hot Water Heat, according to the manufacturer, is a perfectly balanced single main system that eliminates the disadvantages of ordinary non-adjustable one-pipe (Continued on page 142)

*a file of
new ideas*

for smoother planning

of roof construction,

replacement,

repair!

Carey

has added cold process built-up roofing for bonded roofs

*i*f roof problems are your worry, file this information under "important": A completely developed line of Cold Process Built-Up Roofings is now available from CAREY.

MORE THAN 50 YEARS of experience in Hot Process Roofing backs up CAREY Cold Process Bonded Roofs. This technical knowledge assures you of fast, economical, *practical* roof construction in areas where Hot Process equipment is unavailable. Application of CAREY Cold Process Roofs can be made on any type deck (bonded when applied by CAREY Approved Roofers). Heating

equipment is unnecessary; fire hazards are non-existent. These CAREY Cold Process Asphalts are suitable for either mopping or spraying application, can be used with either rag or asbestos felts.

Call on CAREY whenever you need help on *any* kind of roofing problem on *any* kind of roof... our long experience is yours for the asking. Right now, of course, you'll want to...

fications for CAREY Built-Up Bonded Roofs. Eight of its 24 pages deal with the new CAREY Cold Process Bonded Roofs. You'll find it handy to have... a helpful reference book. Address your request for a free copy to Dept. A-7.



WRITE FOR YOUR FREE COPY
... of this information-packed booklet. It contains 35 detailed speci-

Carey

THE PHILIP CAREY MANUFACTURING CO., CINCINNATI 15, OHIO

In Canada: The Philip Carey Co., Ltd.
1557 MacKay Street, Montreal 1, P.Q.

Corrugated Asbestos Roofing and Siding
Asphalt Shingles & Roofings • Built-up Roofing
Careyduct • Asbestos Wallboard & Sheathing
Roof Coatings and Cements • Pipeline Felt
Asphalt Tile Flooring • Waterproofing Materials
Expansion Joint • Asbestos Shingles & Siding
Industrial Insulation • Rock Wool Insulation
Miami-Carey Bathroom Cabinets & Accessories

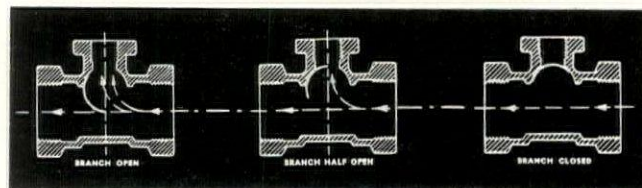
installations. As its key, it features the new Thrush Adjustable Tee. For use with one-pipe forced circulating hot water systems, this fitting is installed in the supply branch to each radiator to permit accurate control of radiator temperatures. Instead of the usual fixed restriction, it has a built-in movable diverter which may be adjusted to control the amount of hot water diverted from the main into the radiator. Easily adjustable with a convenient handle, flow of water into the branch can be completely cut off or regulated from a tiny stream to a full flow. According to the manufacturer, this new tee makes possible uniform radiator temperatures through the system or varied radiator temperatures in different rooms. If desired, it can be adjusted to provide lower temperatures in bedrooms, garages, etc. Another feature of the tee is that the flow through the main is increased, not restricted, when the

branch flow is cut down. When the branch to the radiator is fully closed, sufficient circulation will pass through the radiator to prevent freezing. Thrush Adjustable Tees are



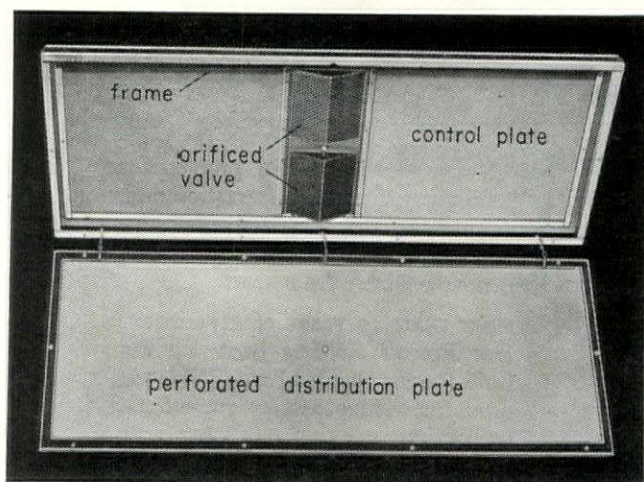
made in four main sizes: 1 in. main with branches either 1/2 in. or 3/4 in.; and 1 1/4 in., 1 1/2 in. or 2 in. main with branches 1/2 in., 3/4 in., or 1 in.

Manufacturer: H. A. Thrush & Co., Peru, Ind.



AIR DISTRIBUTION PANELS for uniform, no draft air distribution.

Multi-Vent air distribution panels, when installed with correct auxiliaries and controls, are said to yield uniform air temperatures and correct rates of air motion. Ranging in size from 2 x 4 ft. to 3 x 6 ft., the panels are designed to fit directly into ceiling ducts. They are composed of four major parts: control plate frame, control plate, orificed adjustable air valve and perforated distribution plate. The control plate frame, sealed with felt to prevent air leakage, is inserted in the overhead duct at the ceiling. Hinged to it to provide ready access to duct or plenum chamber is the control plate. The orificed adjustable air valve is centered on this control plate. This valve provides absolute displacement of static head and may be set for varying quantities of air to enter the conditioned space at varying velocities. Thus it produces the rate of air motion and degree of temperature needed for comfort at the breathing line. The perforated distribution plate, linked to the control frame, has approximately 4600 small holes per sq. ft. It accomplishes a wide, gentle, uniform spread and



dilution of the conditioned air, and simultaneously provides panel heating or cooling. It can be easily let down to permit access to the air valve adjustment or it may be removed for washing. A knock-out button also allows access to air valve adjustment. According to the manufacturer, air leaves the large Multi-Vent distribution plate and spreads out in all directions, its velocity being reduced to comfort zone ranges before reaching head height. In addition it is claimed that the panels, installed with correct auxiliaries and controls, and placed in balance for the seasonal c.f.m. requirements, result in very uniform temperatures. Multi-Vent Panels can be used

(Continued on page 144)

CHROMEDGE'S COMPLETE
TUBE-PACKAGING GETS MY VOTE!

CHROMEDGE FITS EVERY NEED—
RIGHT ON THE NOSE!

YOU CAN'T BEAT B&T'S
CHROMALITE FINISH
FOR LASTING
RUB-PROOF
BEAUTY!

From every angle CHROMEDGE offers more

CHROMEDGE advantages are all-inclusive—important to everyone who specifies, sells or uses decorative mouldings. For example, B & T's complete tube packaging protects the finish of Chromedge trims right up to the time of installation. In addition, Chromedge offers a wide choice of ready-to-ship stock lengths that fit every need... the biggest selection of practical designs... easy, low-cost installation on any part of every job... the famous, original Chromalite Finish that stands up longer under all kinds of wear, and does not rub off black. And Chromedge trims are designed, extruded and packed for shipment right at the B & T Metals Company plant—one source is responsible for the whole fabricating job! Write today for complete details on Chromedge Metal Trims.

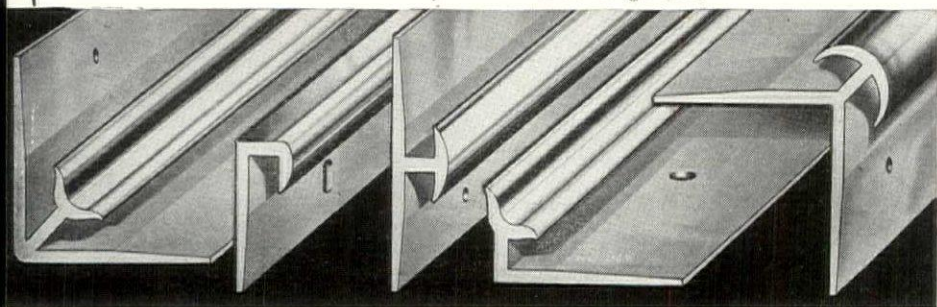
The B & T Metals Company
Columbus 16, Ohio

This attractive matched set of trims, for all materials from light weight wall covering to 1/2" in thickness, is typical of the famous Chromedge line!



NEW INSTALLATION DETAILS

We'll gladly send you B & T's new 6-page bulletin showing suggested detailing of CHROMEDGE trims in various applications—handy material for your reference files.



**Engineered for
equal efficiency
with OIL or GAS**

(AGA-approved)

**— converts to
either fuel
at low cost**

**Here's the answer to restrictions caused
by fuel shortages in your community:**

Mueller Climatrol 101-201 Convertible Furnace

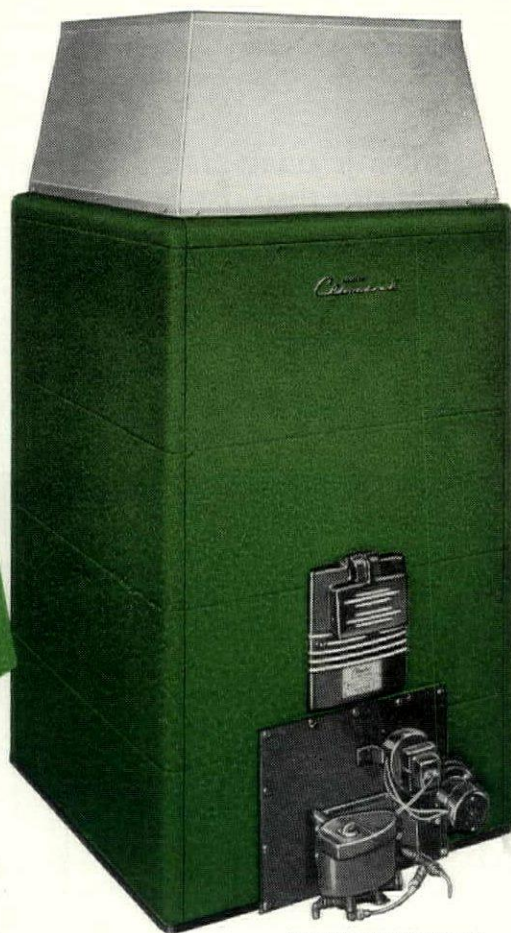
In spite of present fuel shortages you can design new homes with all the utilities you would normally provide in long-range planning. Thanks to the Mueller Climatrol 201 Convertible Furnace, there's no need to let temporary restrictions limit your clients for years to come.

If it's a gas shortage, you can install an oil-fired Climatrol for people who want gas and can't get it—exchanging the oil burner for a gas burner when the shortage is over. If it's a fuel-oil shortage, you can reverse the process.

With the Mueller Climatrol 201 Convertible Furnace, your client



The Mueller Climatrol 202 Winter Air Conditioner consists of the 201 Gravity Furnace (shown at the top of the page) plus a blower package. Like the 201, the Winter Air Conditioner converts from oil to gas at low cost without loss of efficiency. Being a reversible unit, the blower package may be arranged on right- or left-hand side.



Type 101-201 illustrated
equipped for oil.

can enjoy the benefits of automatic heat *at once* — with a unit designed to convert at low cost to the fuel of his preference when it is available. He gets the efficiency of an *oil-designed* job when he burns *oil* — and the efficiency of a *gas-designed* job when he burns *gas*.

Your recommendation of Mueller Climatrol is backed by the other great advantages of the Mueller line, including the "climate control" comfort of Climatrol, and the 90-year performance record of the Mueller name. Select Climatrol for every home-heating job, to protect the future comfort of your clients. Write for complete information today!

L. J. Mueller Furnace Co.

2001 W. Oklahoma Ave. Milwaukee 4, Wis.



MUeller
Climatrol

Reg. U. S. Pat. Off.

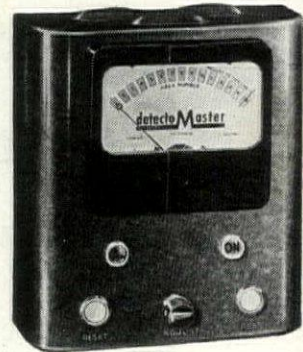
B-36

in stores, restaurants, offices, hotels, residences, etc., or in manufacturing processes and laboratories where absolute uniform temperatures and comparatively still air are required. *Manufacturer:* Multi-Vent Division, The Pyle-National Co., 1334 North Kostner Ave., Chicago 51, Ill.

AUTOMATIC ALARM SYSTEM for homes, farms, factories and other places requiring protection from fire or cold.

Detecto-Master is an alarm system for general use which instantly detects fire or cold, sounds a warning and indicates its location. Designed to protect homes, farms, retail establishments or any place where there is a hazard of loss from either fire or cold, it is precision-built for lasting, dependable performance. Detecto-Master consists of a compact control unit, which may be mounted in any central location, and a

series of 15 detector thermostats placed in areas where fire is most likely to strike. These tiny thermostats incorporate latest metallurgical and electrical developments, combine sensitivity, accuracy, simplicity and sturdiness. Rust-proofed for protection against the elements, they are preset at the factory for 20 to 200 degrees F. When the system is installed and connected to an electric circuit, a green light on the control panel indicates that the alarm system is on guard. In the event of temperature fluctuation, the thermostat opens the circuit and an impulse is flashed to the central control.

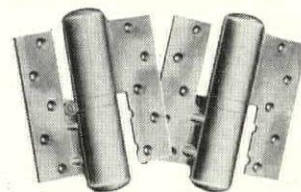


The green light goes out, a red light flashes on and a Klaxon horn sounds. At the same time, an indicator needle on the meter points out the area where the trouble is occurring. Detecto-Master has extra terminals and voltage supply for an auxiliary alarm, automatically reports back any circuit failure. Foolproof, there is nothing to get out of order. *Manufacturer:* Lord-Taber Co., Inc., Canandaigua, N. Y.

HYDRAULIC DOOR CLOSER resembles butt hinge.

Bakewell Hydro-Hinge is a new type hydraulic door closer built like a hinge. Eliminating all visible door closing mechanism, the spring and hydraulic units are completely concealed within specially designed butt hinges. Installation is the same as for conventional butts. Tamper-proof and non-leakable, Hydro-Hinge is adjustable for varying speeds, positive latching or silent closing. It is available in sizes and finishes for residential, commercial and industrial installations.

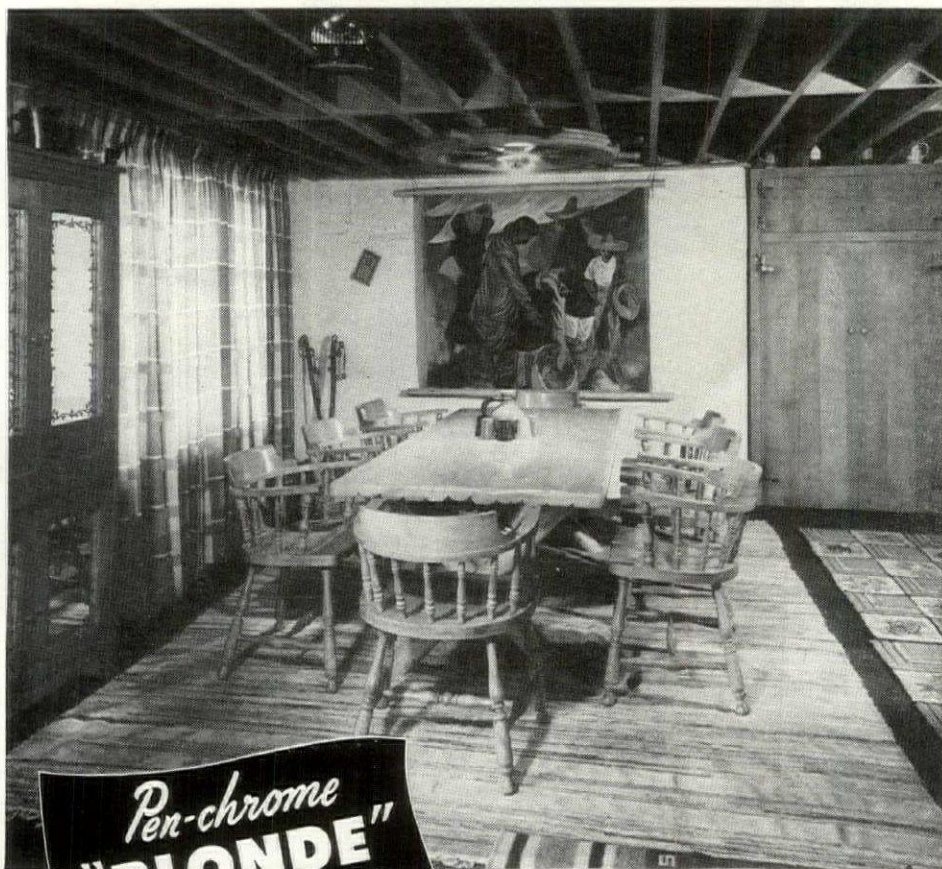
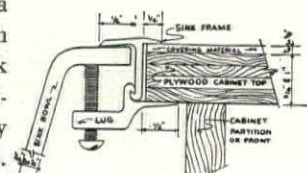
Manufacturer: Bakewell Products, 1201 Rio Vista Ave., Los Angeles, Calif.



PACKAGED SINK FRAME SYSTEM combines sink top, frame and bowl into watertight, self-sealing unit.

The Hudee Ideal Sink Frame System, featuring a self-sealing, watertight, sanitary sink frame, is said to eliminate virtually all problems encountered in cabinet sink installations. It consists of a sink frame, a set of lugs and screws with which the frame and sink bowl are secured to the cabinet top, and 4 temporary clips with leveling screws. These clips, one for each corner of the sink bowl cutout, hold the bowl in place while lugs are being attached. The inter-locking lugs and frame serve as sink hangers, while tightening of screws forces the bowl securely under inside flange of frame and pulls the outside flange tightly over the sink top covering. Installation is easy, fast and watertight. The Hudee frame is available in 15 stock sizes and can be used with standard plywood cabinet tops $\frac{3}{4}$ to 1 in. thick, including covering materials up to $\frac{1}{8}$ in. thickness. Frame comes in anodized or aluminized finish.

Manufacturer: Walter E. Selck & Co., 223 West Hubbard St., Chicago, Ill.



Pen-chrome
"BLONDE"
Wood Finish...

for Woodwork, Paneling, Trim, Furniture

Now you can achieve new and unusual effects in natural wood. Pen-Chrome "Blonde" Wood Finish, on new or resanded wood surfaces, offers a choice to complement any decorative scheme. Easy to apply. Dries to a lustrous, washable finish that retains fresh beauty after years of cleaning. Outstanding for all types of woodwork.



Immediately Available

MAPLE
SANDALWOOD
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LIGHT OAK
DARK OAK
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Request free sample and color card today on your business letterhead.

O'BRIEN

FINE SINCE 1875 FINISHES

THE O'BRIEN CORPORATION, 101 N. JOHNSON ST., SOUTH BEND 21, IND.

CORRECTION: Address of the Harrison Paint & Varnish Co., manufacturers of County Estate Creosote (B.R., June '47) should have been given as Canton, Ohio.

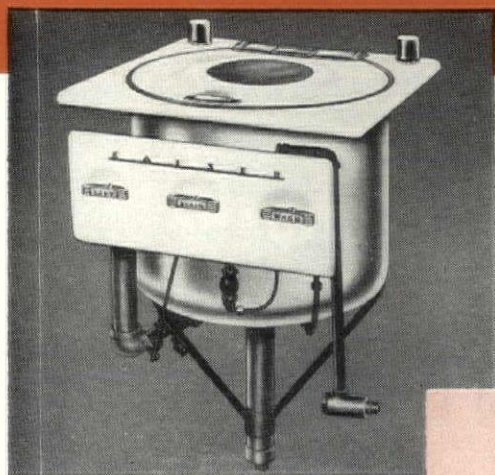
(Technical Literature, page 148)

ANNOUNCING

the dishwasher that wives want and husbands approve

The KAISER DISHWASHER

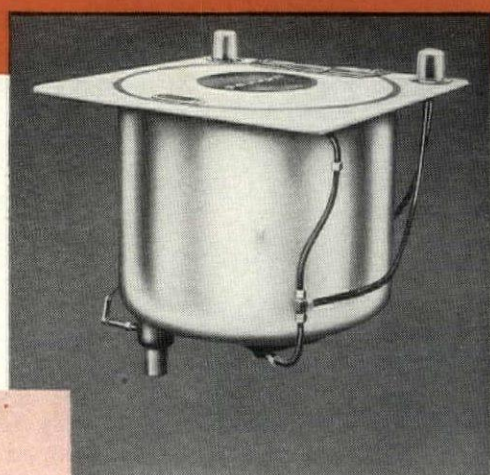
UNIQUE SIMPLICITY—NO MOTOR, WIRES, SWITCHES OR GEARS—INEXPENSIVE—LONG-LIVED



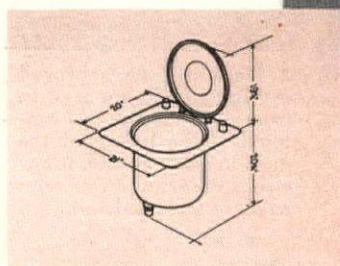
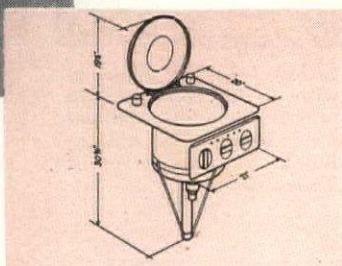
DELUXE and STANDARD BUILD-IN UNITS

(also available in free standing cabinets)

- Controls on De luxe 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 basin.
- 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.



DELUXE BUILD-IN: Height, top closed—30 $\frac{3}{4}$ " ; height, top open—50 $\frac{1}{4}$ " ; width—21" ; depth—20". Only two plumbing connections—to the hot water supply and the drain outlet.



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

GENERAL SPECIFICATIONS

- All models of the Kaiser Dishwasher are constructed of light-weight aluminum, which is rustproof.
- Washing basin 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. Basin 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.
- Operates from the natural pressure in the kitchen hot water pipe. Performance guaranteed on minimum 40 pounds water pressure. Jets in washing basin are designed to increase actual water circulation four times.
- Table service for average family 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. De luxe 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 wash-

ing . . . $\frac{1}{2}$ 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.

Kaiser Fleetwings Sales Corporation
General Sales Office
1924 Broadway, Oakland 12, California

Please send me for my file A.I.A. specifications sheet on the revolutionary, new Kaiser Dishwasher. No obligation, of course.

Name and Title _____

Firm Name _____

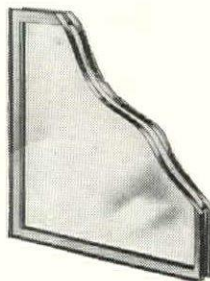
Street _____

City _____ Zone _____ State _____

AF-7-47

How to Install *Thermopane*

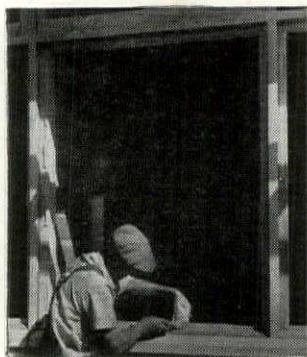
REG. U.S. PAT. OFF.



CUTAWAY VIEW OF
THERMOPANE UNIT

Because *Thermopane* is being used more and more in buildings of all types, you will welcome this step-by-step explanation of *Thermopane* installation. It requires no special skills or special tools. For more complete glazing details than illustrated below, check your Sweet's File or write us.

IN WOOD SASH



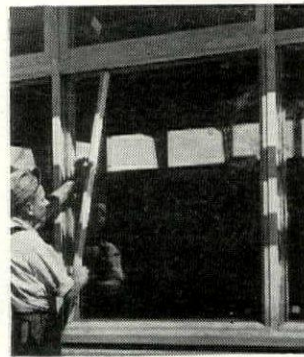
1. Be sure opening is square so unit will not bind. Bed sash with high-grade glazing compound free of corrosive agents before the *Thermopane* is inserted.



2. Place unit on approved setting blocks located in from each corner and centered $\frac{1}{4}$ the length of the unit. Press in evenly. Allow equal clearance between edges of glass and sash.

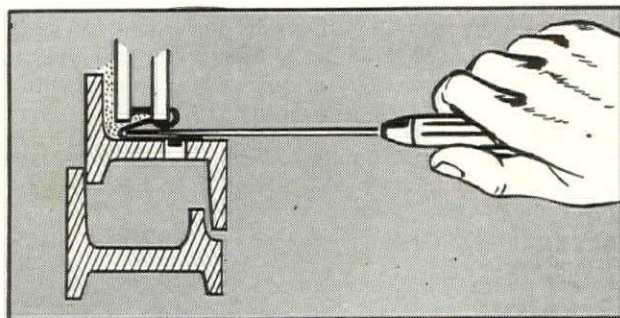


3. Fill voids on all edges with glazing compound to prevent air infiltration and water leakage. Do not use blocks at sides or top of *Thermopane*.



4. Cover perimeter with glazing compound before applying face stops. To avoid point pressure, do not toenail unless sash is rabbeted to receive stop.

IN STEEL SASH



Specially-designed L·O·F phosphor bronze clips are now available from L·O·F Distributors for installation in steel sash.

1. Bed sash with glazing compound.
2. Insert *Thermopane* unit.
3. Put clip on end of putty knife.
4. Insert clip between edge of *Thermopane* unit and steel section until clip lug snaps into hole.
5. Fill all edge voids.
6. Face finish with glazing compound.

STANDARD SIZES

Thermopane is made in more than 60 standard sizes, readily adaptable for new construction or remodeling—for Picture Windows, Window Walls, double hung wood window units and residential steel casements. Your L·O·F Distributor has most of the Picture Window standard sizes in stock. Libbey-Owens-Ford Glass Company, 2177 Nicholas Building, Toledo 3, O.



LIBBEY · OWENS · FORD

a Great Name in **GLASS**

ONLY L·O·F MAKES *Thermopane*

The Trend is to Blend...



You like Blended Coffee... You like Blended Tobacco...

...Now meet my New "Dutch Boy"
Blended Paint

It's true of so many good things . . . blending brings out the best.

And now the "Dutch Boy" brings out "Blended" Paint!

Here's a completely new line of "Dutch Boy" House Paint . . . in *colors and white* . . . blended by the experienced hand of the "Dutch Boy," whose fine paint has been specified by architects for generations. Blended of the right combination of the right ingredients to make homes lovely — and *keep* them that way.

In Colors or White
It's Blended just Right
To Keep Your Homes Bright



3 Special Blends for 3-Way Lasting Beauty...

As every architect knows, not one, but *three* different services are required of house paint. *Blending* gives the right paint for each purpose. *Blending* gives full beauty-life from all three.

So here's the "Dutch Boy's" 3-way answer:

- Bright *White*, blended to clean itself and stay white.
- Sparkling *Tints*, blended to stay fresh and true.
- Gay *Trim Colors*, blended to stay glossy and brilliant.

Each is as accurately blended as a doctor's prescription to do its own particular job . . . to play its part in *keeping* homes cheery and bright.

No higher quality paint has ever been sold under the "Dutch Boy" name.

These new "Dutch Boy" Blended Paints are the result of more than thirty years of weather testing with all types of house paint . . . the longest continuous, outdoor paint-testing project of its kind. They're blended to prove that, in colors as in white, "Dutch Boy" is *Good Paint's Other Name*.

MADE BY THE MAKERS OF THE FAMOUS "DUTCH BOY" WHITE LEAD

1. Dazzling White

Blended to Stay White:

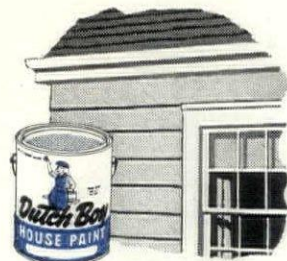
The beauty of this "Dutch Boy" Bright White is that it's *self cleaning*! The surface continually renews itself — permitting rain to wash away dirt. It covers amazingly well and gives a dazzling white exterior finish.



2. Sparkling Tints

Blended to Stay Right:

These fresh, lively "Dutch Boy" Tints are specially blended to keep their sparkling good looks . . . to assure lasting color and uniformity.



3. Gay Trim Colors

Blended to Stay Bright:

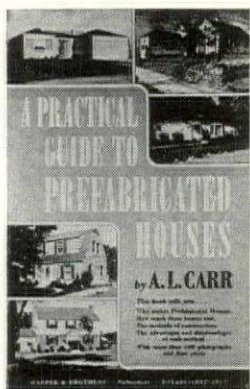
"Trim" is the word for the "Dutch Boy" Sash and Trim Colors. They're blended to hold their glossy brilliance—blended for true color permanence. Ideal not only for shutters and trim, but also for store fronts, railings, fences and decorative metal work.



Special "Dutch Boy" Blended Primer: An undercoat of exceptional sealing and hiding power that holds fast. When used under a finish coat of "Dutch Boy" Bright White or Tints, you get an outstanding two-coat paint job, even on unpainted wood.

* * *

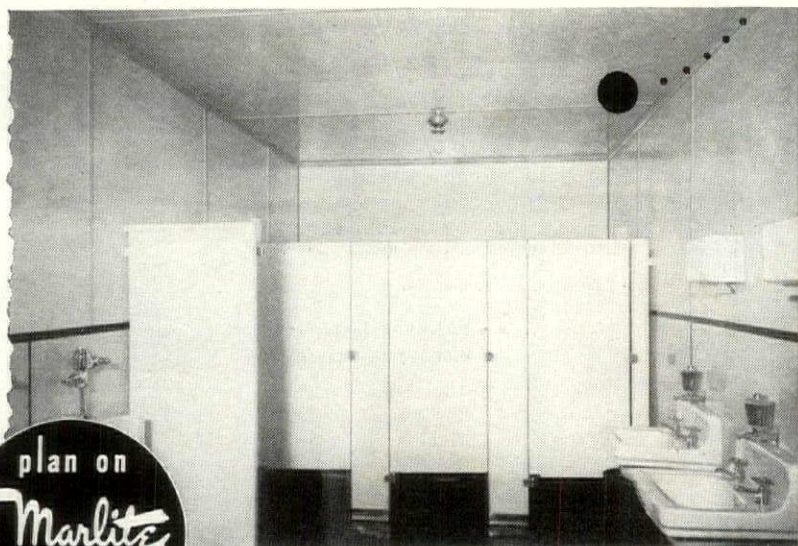
NATIONAL LEAD COMPANY: New York 6; Buffalo 3; Chicago 8; Cincinnati 3; Cleveland 13; St. Louis 1; San Francisco 10; Boston 6 (National Lead Co. of Mass.); Philadelphia 7 (John T. Lewis & Bros. Co.); Pittsburgh 30 (National Lead Co. of Pa.).



PREFABRICATED HOUSES. A Practical Guide to Prefabricated Houses by A. L. Carr. Harper & Brothers, 49 East 33rd St., New York. 111 pp. 6 3/4 in. x 10 1/4 in. Price \$2.75.

A comprehensive guide to prefabricated houses which are now available or about to go into production, this book gives background information on prefabrication, tells who makes prefabricated houses, what types, and for how much. Divided into two sections, part one is devoted to a discussion of the history of prefabrication, its advantages, the five different methods of prefabrication, the advantages and disadvantages of each. It also discusses the problems which confront the prefabrication industry such as antiquated building codes, transportation costs, merchandising, etc. Part two is an appraisal of the homes manufactured by some 21 leading prefabricators. Analysis is made of the prices, methods of distribution and erection, materials, construction methods, etc.,

The Public Be Pleased!



plan on
Marlitz
walls



You can design sanitation and cleanliness right into hotel and restaurant rest rooms with plastic-finished Marlitz wall and ceiling panels. Plan on Marlitz's sparkling clean beauty to complement any architectural treatment . . . and plan, too, on Marlitz's economy—it's easy to install and easy to keep clean. Adaptable to new construction or modernization, versatile Marlitz is at once attractive and practical. Although production of Marlitz is greater than ever before, the tremendous demand makes it necessary to continue allocation of orders for the present. Marsh Wall Products, Inc., 701 Main Street, Dover, Ohio.

FOR CREATING
BEAUTIFUL
INTERIORS



employed by each company. More than 100 photographs and floor plans show examples of prefabricated homes in all sections of the country. These range from small cottages to large houses, in both conventional and modern design. Also included in the book is a checklist of what to look for in buying a prefabricated house, and a directory of prefabricators.

WOOD CONSTRUCTION. Modern Building With Wood. Timber Engineering Co., 1319 18th St., N.W., Washington, D. C. 40 pp. 8 3/4 in. x 11 in.

A wide range of modern, light and heavy frame wood structures, employing the Teco connector system of construction, Lamella construction and glued laminated construction, are pictorially presented in this brochure. Featuring peacetime building with wood, the various types of buildings illustrated include: homes, exteriors and interiors of churches, amusement places, outdoor movie theater screens, various types of hangars, grandstands, stores, gymnasiums, warehouses, etc. One series of photographs show the step-by-step building procedure of the Teco trussed rafter which, according to the manufacturer, saves up to 400 bd. ft. of lumber in a one story, two-bedroom home. Other sections illustrate towers of various types; timber testing; laminated beams; laminated ship keels, etc. The last few pages are devoted to describing Teco Timber Connectors, Framing Anchors, Termite Shields, etc.

ROOFING. Built-Up Roofs Applied Cold! Flintkote Cold Process Roofing Applied By Brush or Spray. The Flintkote Co., 30 Rockefeller Plaza, New York. 14 pp. 8 1/2 in. x 11 in.

This booklet describes Flintkote's Cold Process Roofing for maintenance, re-roofing and new built-up roof construction. A complete and tested system for the cold application of proven materials in built-up roofing work, it may be applied by either brush or spray. Booklet discusses the system's advantages, compares features of the cold process with conventional roofings. It considers the characteristics of Flintkote Nu-Static Asphalt, the heart of the system, and illustrates typical cold process installations. A special section includes detailed Flintkote Cold Process Specifications for all phases of flat roof work: maintenance, re-roofing and new construction.

GLAZING. Tremglaze Mastic Glazing Compound For The Best Way To Glaze All Kinds of Sash. The Tremco Manufacturing Co., 8701 Kinsman Road, Cleveland, Ohio. 12 pp. 8 1/2 in. x 11 in.

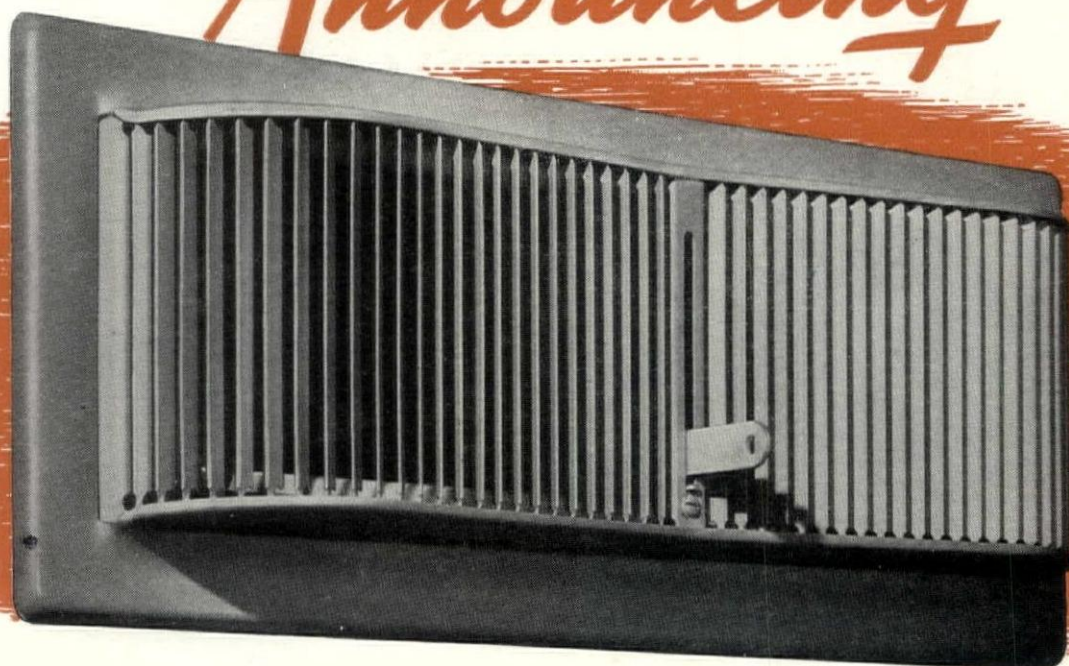
Based on research and practical experiences, this glazing brochure is devoted to the advantages, uses and other features of Tremglaze Mastic Glazing Compound. Stressing the fact that glazing has only one function—to seal the glass in the sash, it explains why putty and other mastic glazing compounds fail to accomplish this purpose. It describes materials and methods used in the manufacture of Tremglaze and colors available for every type of job. Other subjects covered are workability, labor costs, uses of Tremglaze in mill glazed wood sash, large skylights, double glazing, etc.

BUILDING PRODUCTS. New 1947 General Catalog, Southern States Iron Roofing Co., Stiles Ave. & Louisville Rd., Savannah, Ga. 36 pp. 8 1/2 in. x 11 in.

Southern States' new 1947 catalogue contains general information on the following building products: aluminum sheet roofing, shingles, metal frame homes and buildings; waterproofing paints; caulking compounds; cotton insulation; wood preservatives; steel roofing; asphalt roll roofing; asphalt shingles; galvanized gutters; roof maintenance materials; simulated brick siding; etc. Products are illustrated and described, text gives advantages, sizes, application data, prices, etc., of each.

(Continued on page 152)

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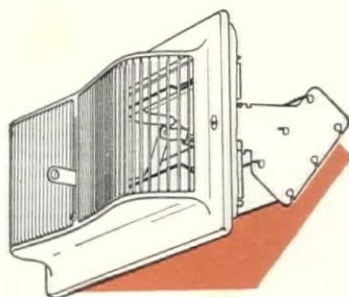
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6. Manual shut-off for home-owner convenience and fuel saving.

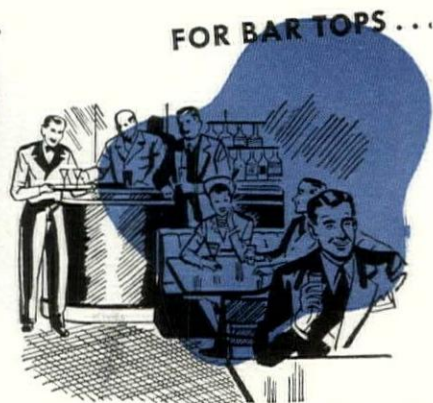
You'll want your clients to get full benefit from every one of these remarkable improvements—exclusive with the new Honeywell register. Write today for complete information. Minneapolis-Honeywell, Minneapolis 8, Minnesota. In Canada: Toronto 12, Ontario. Branches and distributors in all principal cities.



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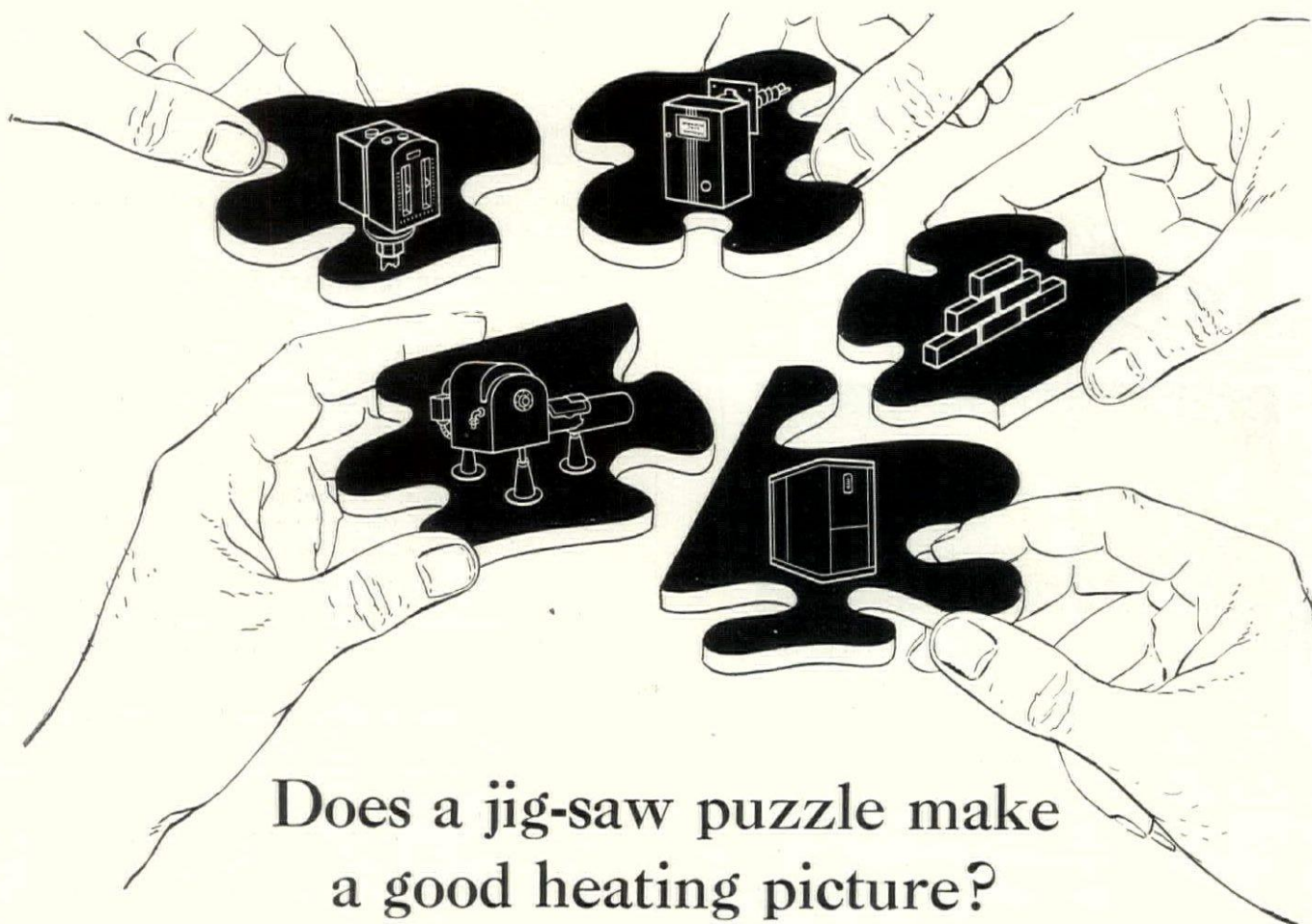
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SOME TYPES of heating equipment are like a jig-saw puzzle. Controls from manufacturer A. Oil burner from manufacturer B. Boiler from manufacturer C. Combustion chamber from manufacturer D. Then, it's left to the dealer to put the pieces together.

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G-E Boiler for steam
or hot water



G-E Warm Air
Conditioner



G-E Oil Burner

GAS-FIRED

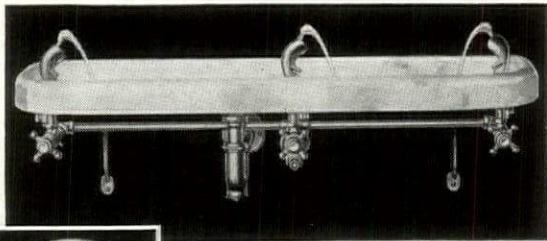
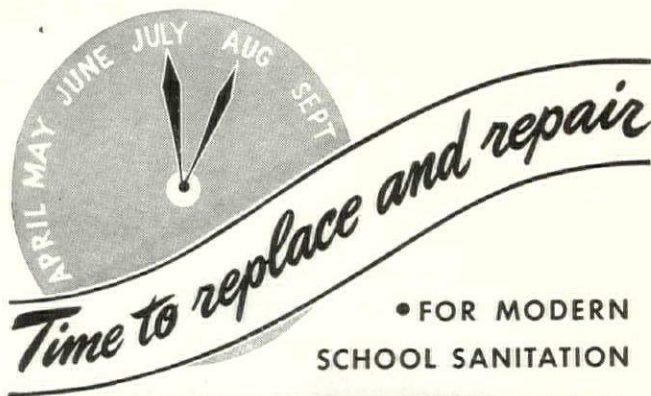


G-E Boiler for steam
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G-E Warm Air
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TECHNICAL LITERATURE



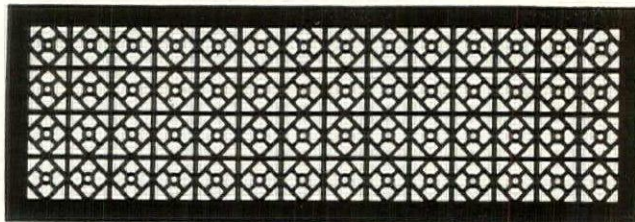
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ROBERT E. FAXON, 1728 Chevy Chase Dr., Beverly Hills, Calif.

ROBERT T. IRWIN, 902 College Court 513, Urbana, Ill.

ROBERT GORDON RICK, draftsman, 2710 Rosedale St., Houston 4, Texas.

THORNQUIST, WITTE & SMITH, architects and engineers, Suite 412, Einfeld Building, Burlington, Iowa.

REQUESTS FOR INFORMATION

THE FIRM OF SOTERO BALUYUT, FEDERICO S. ILUSTRE, PABLO D. PANLILIO, architects, planners, engineers and builders, 314 Ronquillo, Sta. Cruz, Manila, Philippines desires information on planning, building materials, equipment, etc., applicable to theaters, churches, small houses, stores and office buildings.

GENIA ELPERIN, architect, 26 Melchet St., Tel Aviv, Palestine, desires design data, specifications and information on materials and equipment for 600-pupil trade school. School will include: shops, classrooms, washrooms, garages, swimming pool, recreational facilities, farm and dairy equipment, etc.

A. PAUL, consultant, 144 Bloed St., Pretoria, South Africa, desires details and information on thermal insulation and new building materials.

E. RAMIREZ, architect and engineer, Laval 357, Buenos Aires, Argentina, requests quotations from manufacturers of prefabricated houses on 1,000 one-story units composed of living room, two bedrooms, kitchen and bath.

RESTAURANT ASTORIA, Cebu, Phillipine Islands, desires information and literature on architecture, construction methods, building materials and equipment applicable to the restaurant and hotel field.

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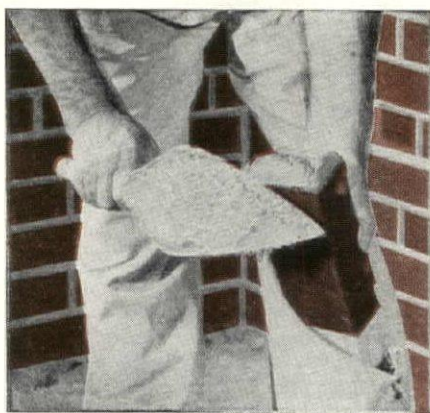
is EASY with BRIXMENT!

Study the pictures below and you'll see the contrast between the *usual* head joint and a *full* head joint. . . . It is hard to get full head joints, of uniform width, unless the mortar is so soft and workable that it will ooze up out of the head joint. Brixment mortar is so rich and plastic that the bricklayer can use *more* than enough mortar to fill the head joint, and still "place" the brick easily and accurately.

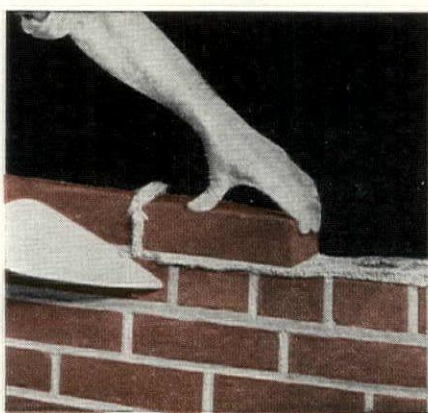
Brixment mortar has greater plasticity, higher water-retaining capacity and bonding quality, greater resistance to freezing and thawing, and freedom from efflorescence. Because of this combination of advantages, Brixment is the leading masonry cement on the market. Louisville Cement Company, *Incorporated*, Louisville, Ky.

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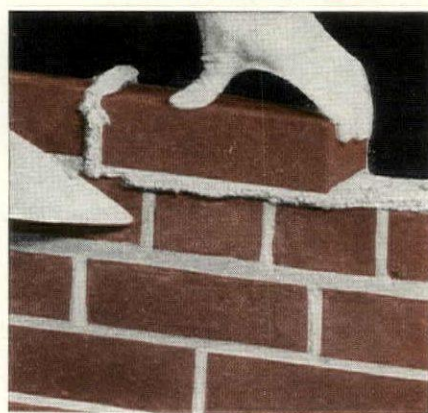
THE RIGHT WAY AND THE WRONG WAY—IN HEAD JOINTS



Plenty of mortar should be thrown on the end of the brick to be placed.

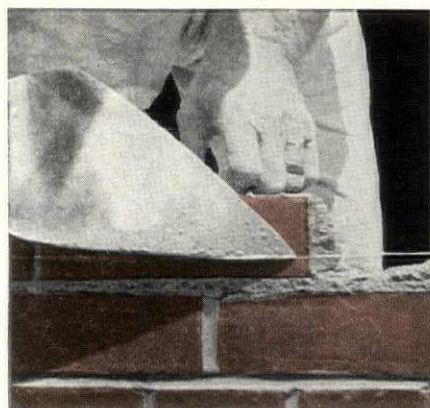


The brick should then be pushed into place.

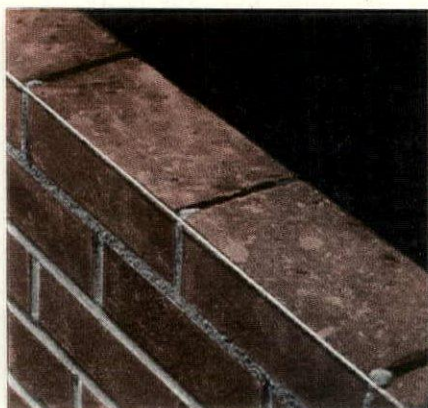


So that the mortar oozes out at the top of the head joint.

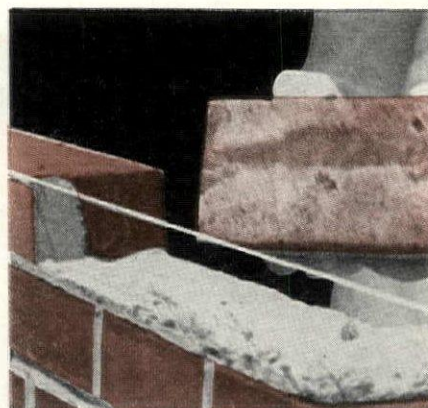
All head joints in both face brick and back-up work should be completely filled with mortar. One good method for doing this is to throw plenty of mortar on the end of the brick to be placed. (This should be done in such a way that the mortar is scraped off the trowel by the bottom edge of the end of the brick.) Then push the brick into place so that the mortar oozes out at the top of the head joint.



When a dab of mortar is spotted on one corner of the brick,



the mortar does not fill the head joint.

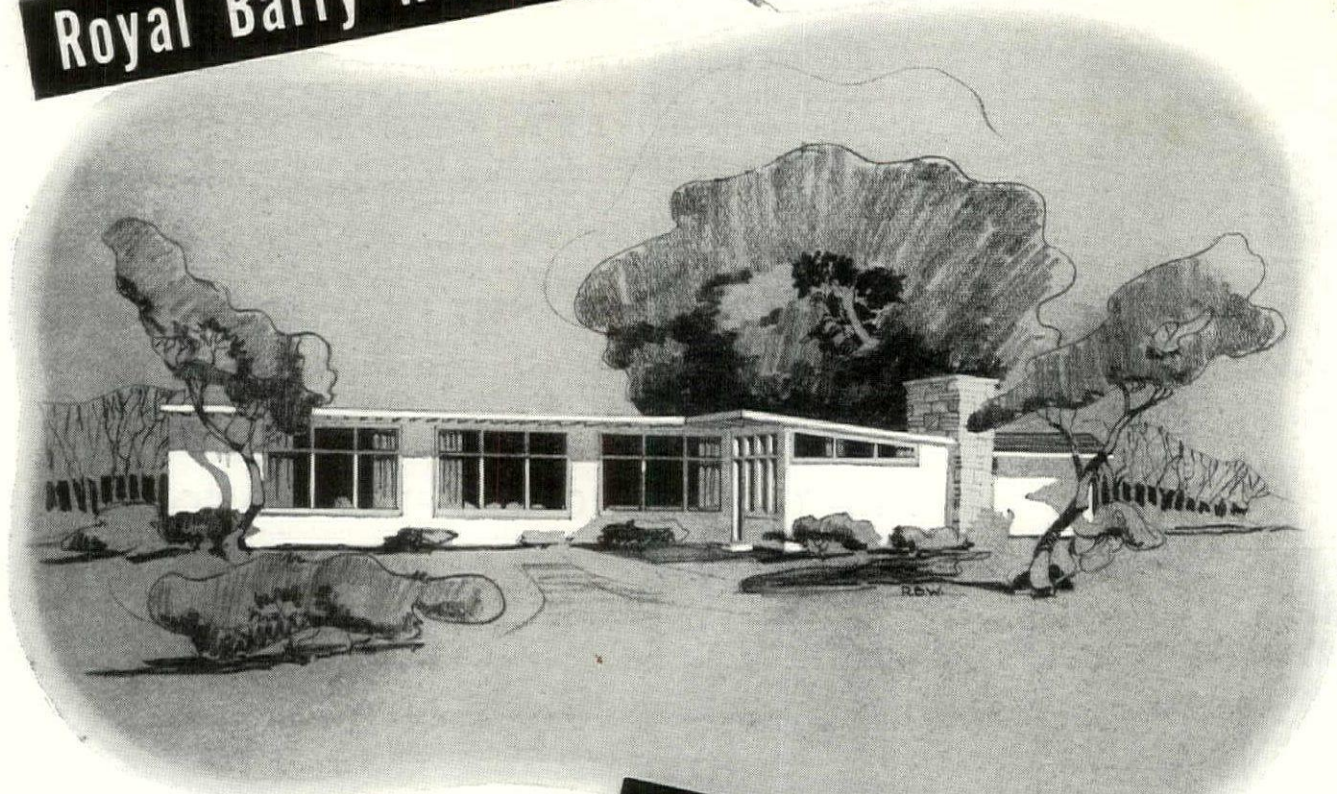


Only part of the head joint is filled with mortar.

If the head joints are not completely filled with mortar, in both face brick and back-up work, water may penetrate to the inside of the wall through openings in the joints.

A dab of mortar spotted on one corner of the brick is not nearly enough to fill the head joint.

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Architect
Royal Barry Wills
in his
Boston Studio

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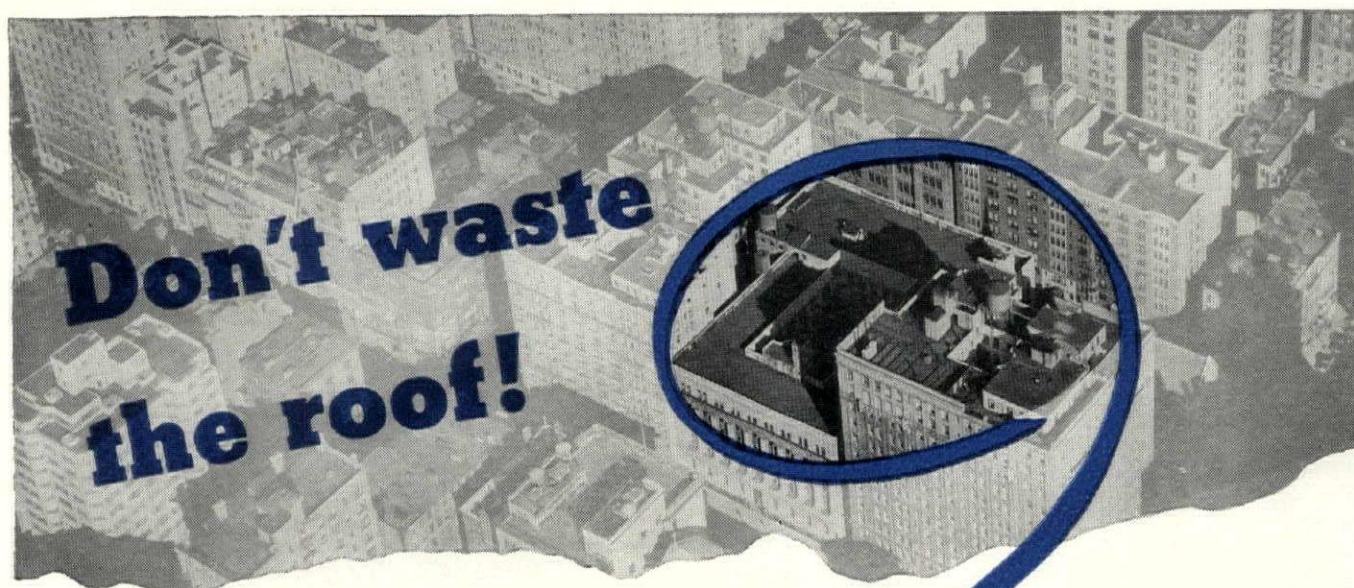
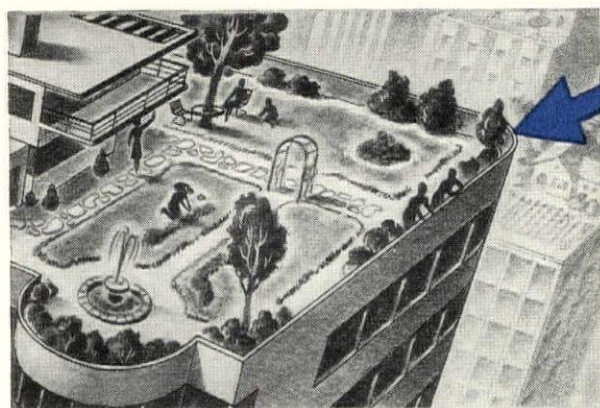


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Architects: Petroff & Clarkson

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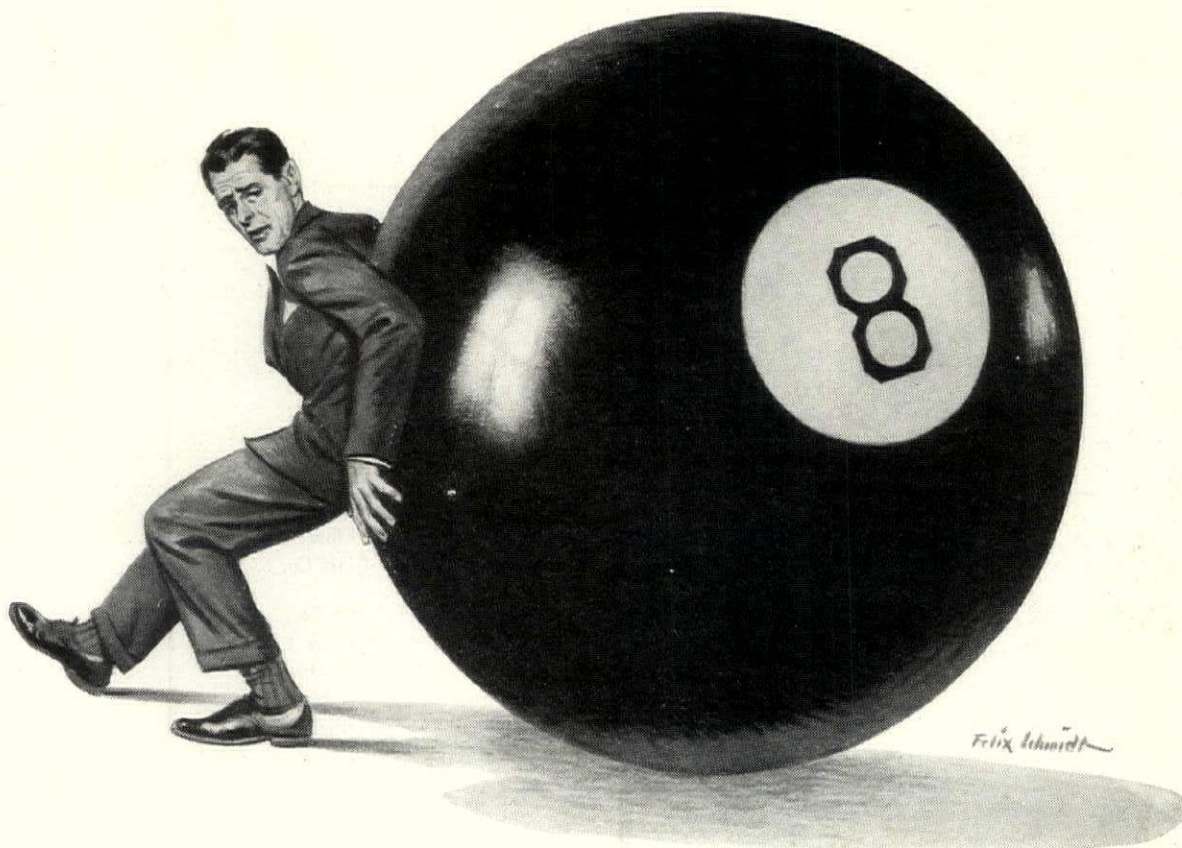
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*For a recently completed research study of the appliances owned and buying plans of TIME subscribers, write David Wallace, Research Director, TIME, 9 Rockefeller Plaza, New York 20, N. Y.

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SPECIFICATION AND BUYING INDEX

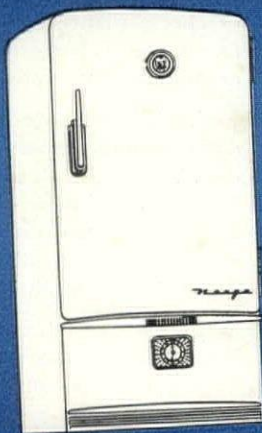
The advertising pages of FORUM are the recognized market place for those engaged in building. A house or any building could be built completely of products advertised in THE FORUM. While it is not possible to certify building products, it is possible to open these pages only to those manufacturers whose reputation merits confidence. This FORUM does.

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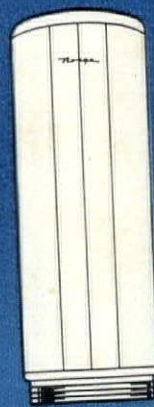
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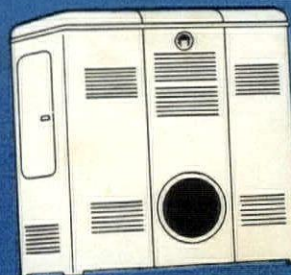
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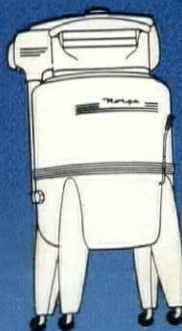
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WATER HEATERS



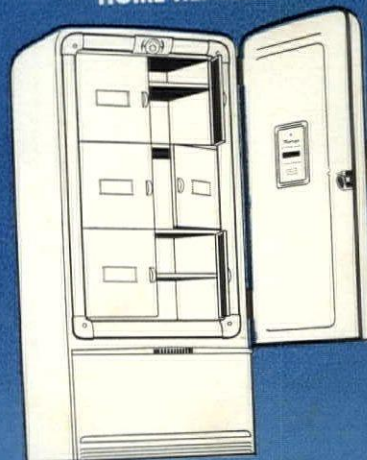
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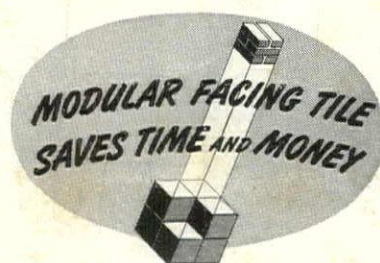
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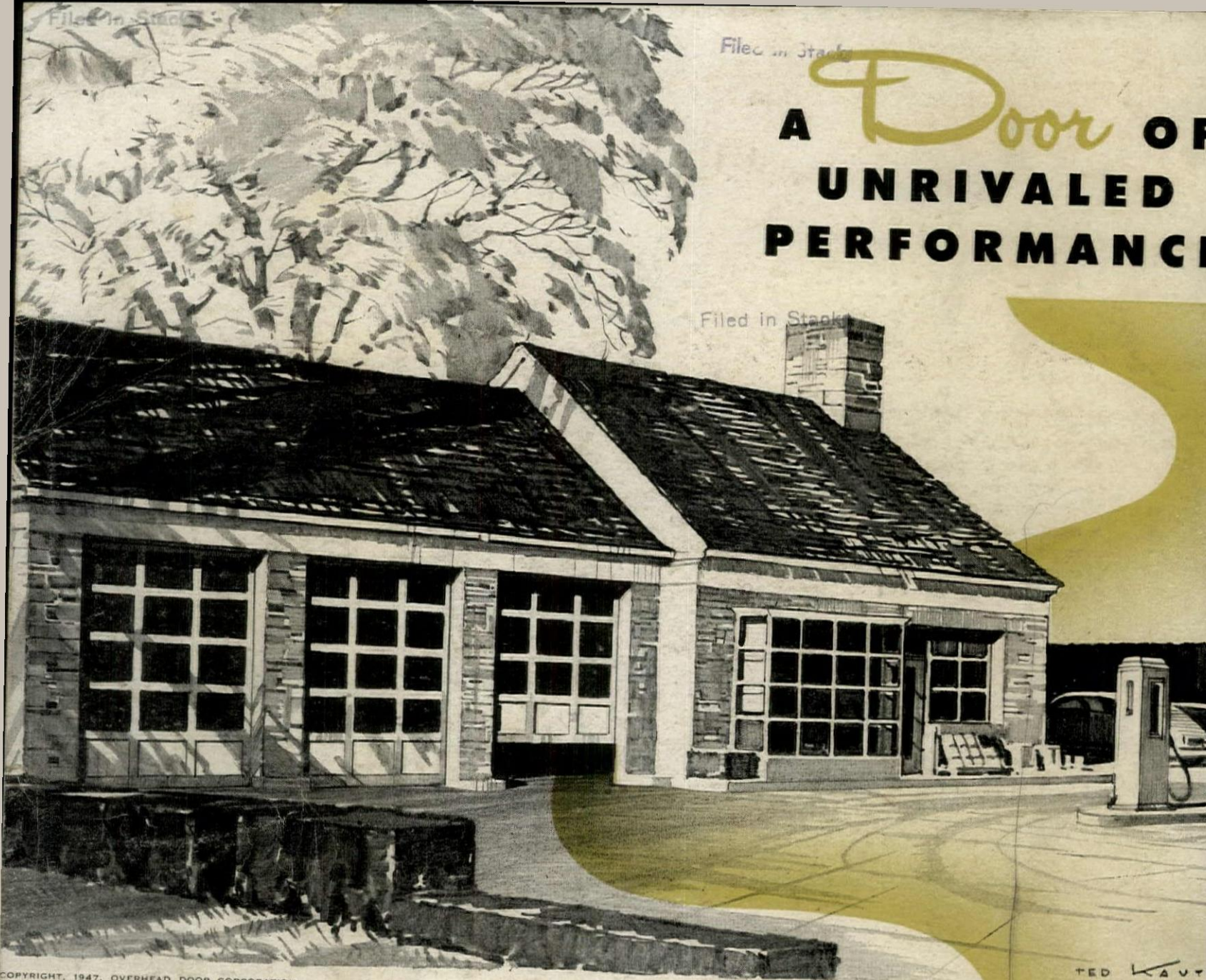
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