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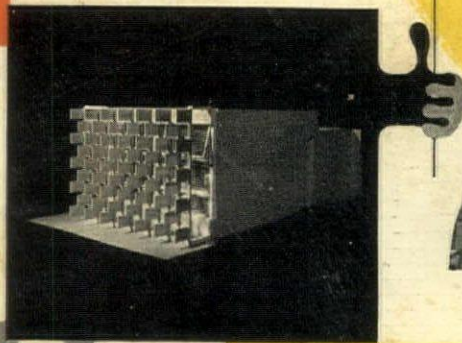
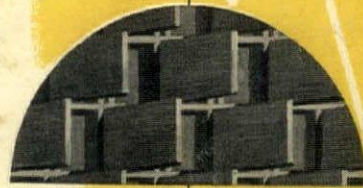
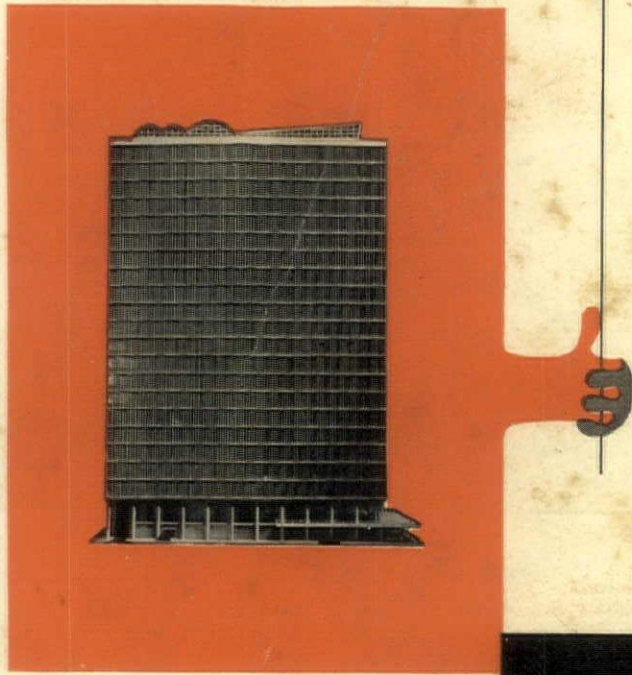
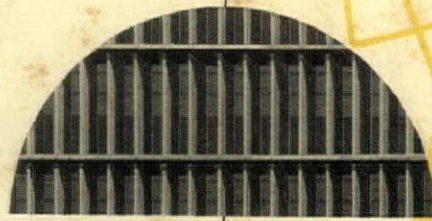
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Magazine of Building

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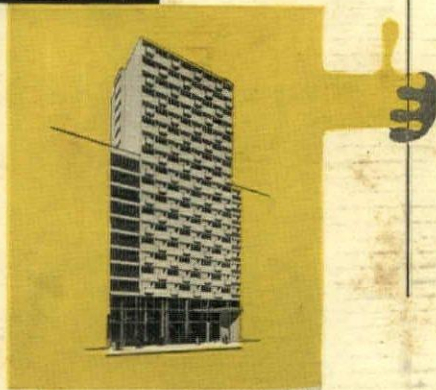
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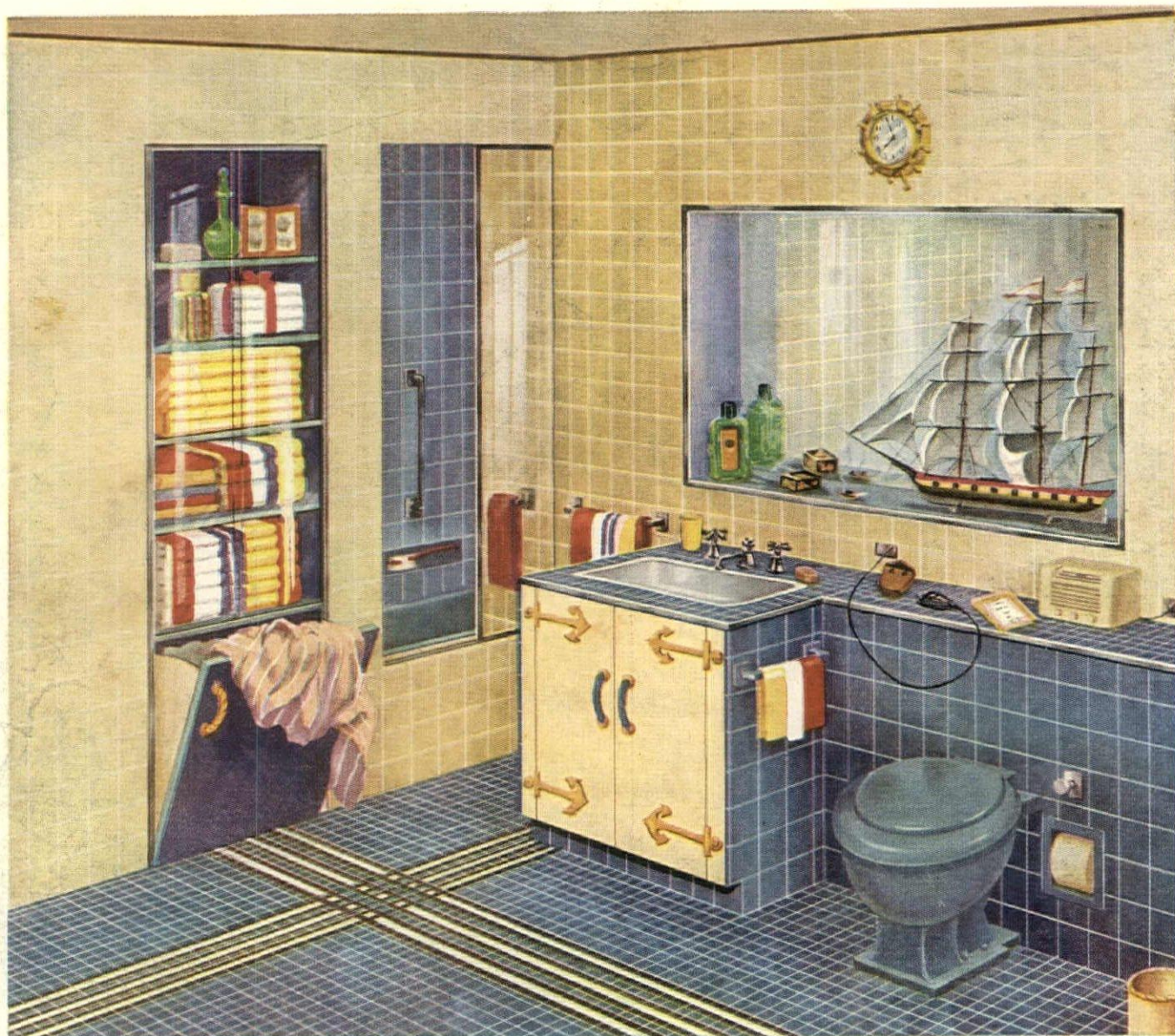


Bill English

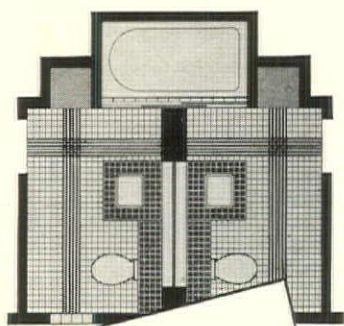
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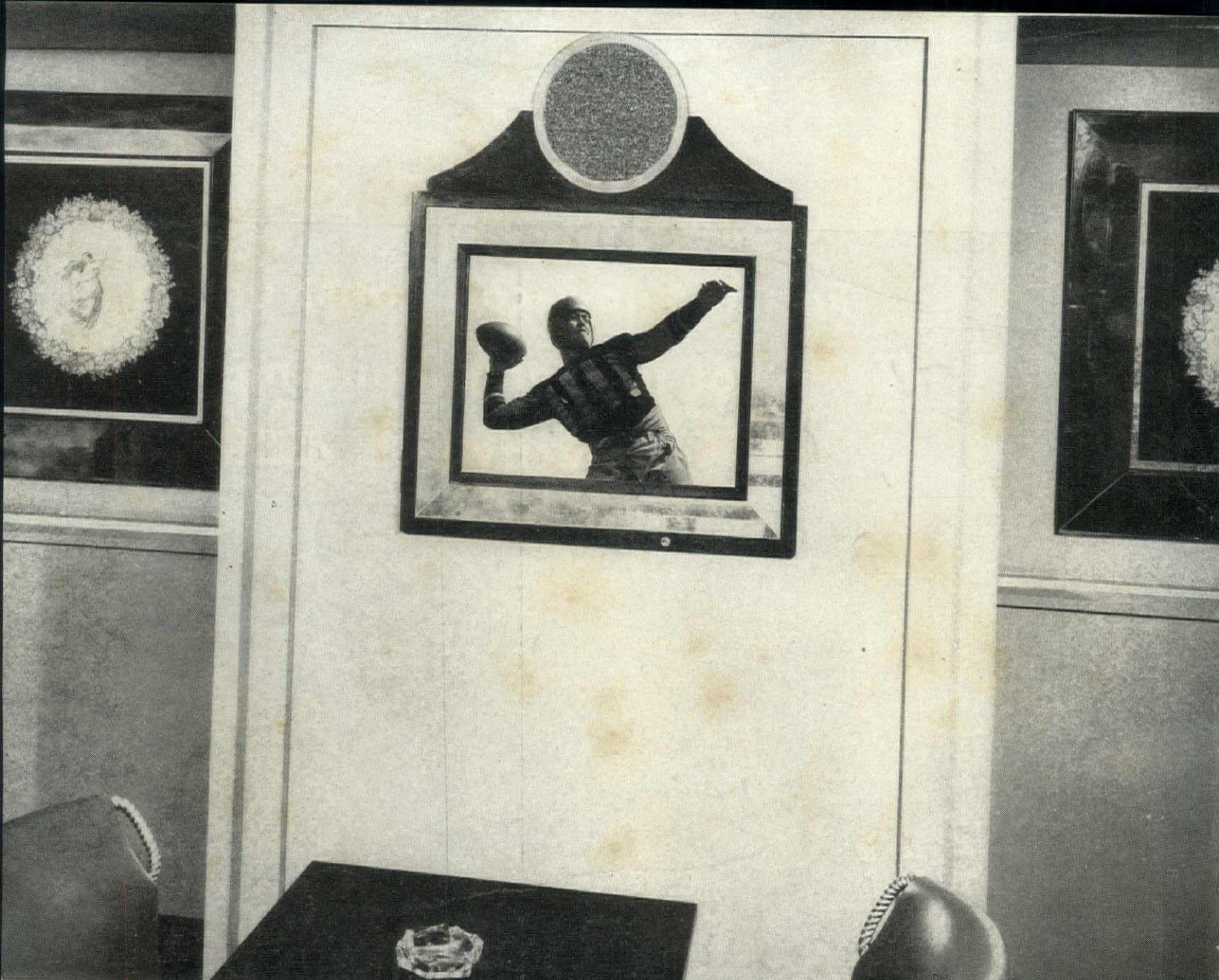


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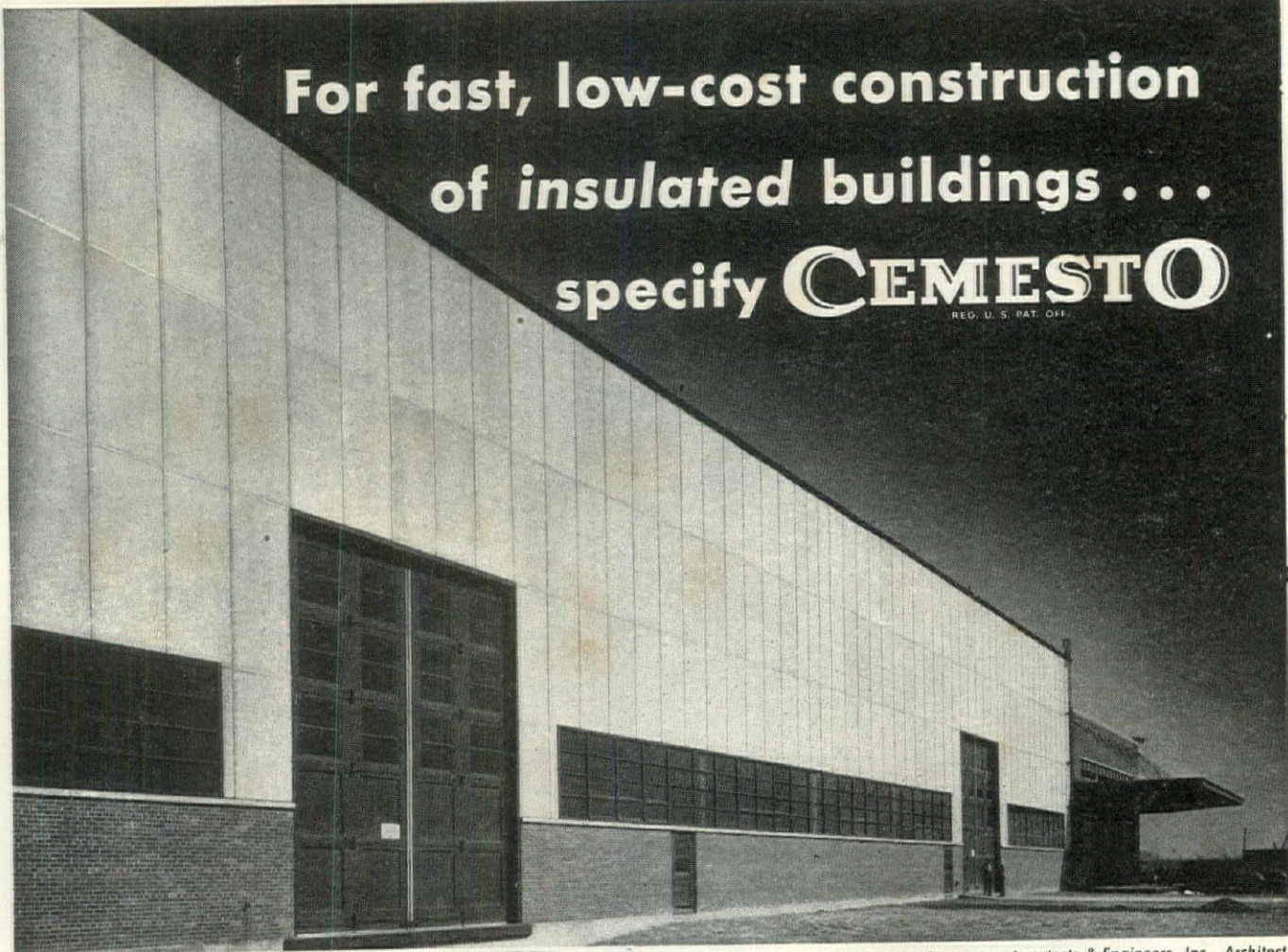
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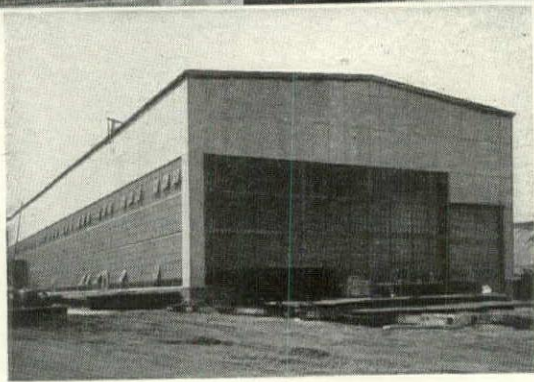
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The Architectural **FORUM**

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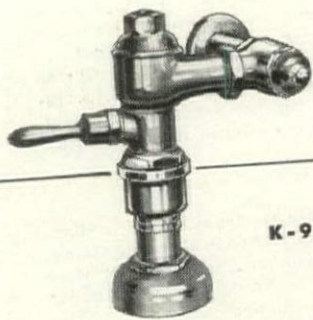
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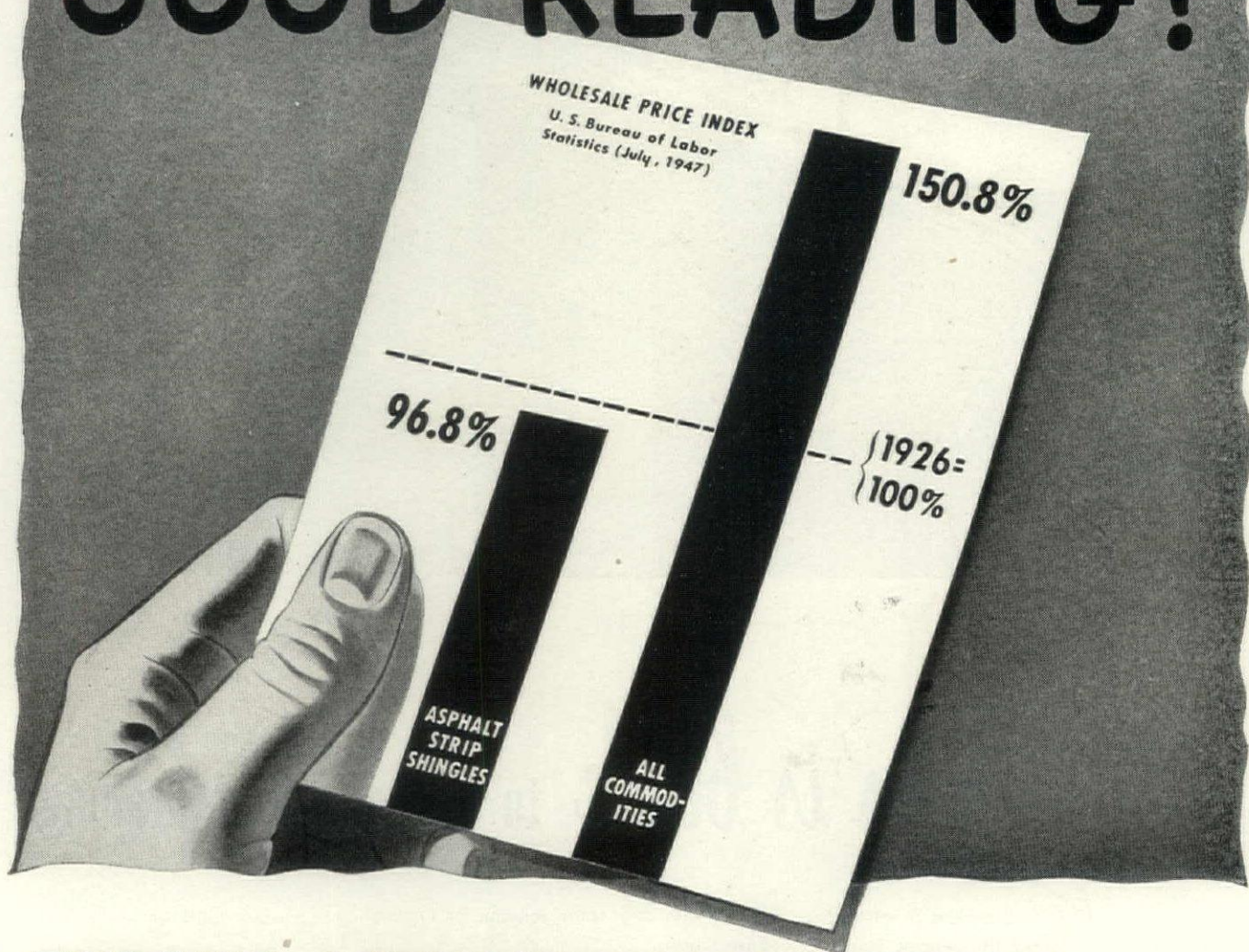
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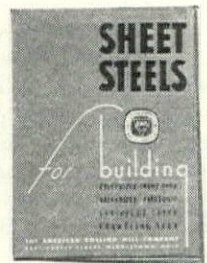
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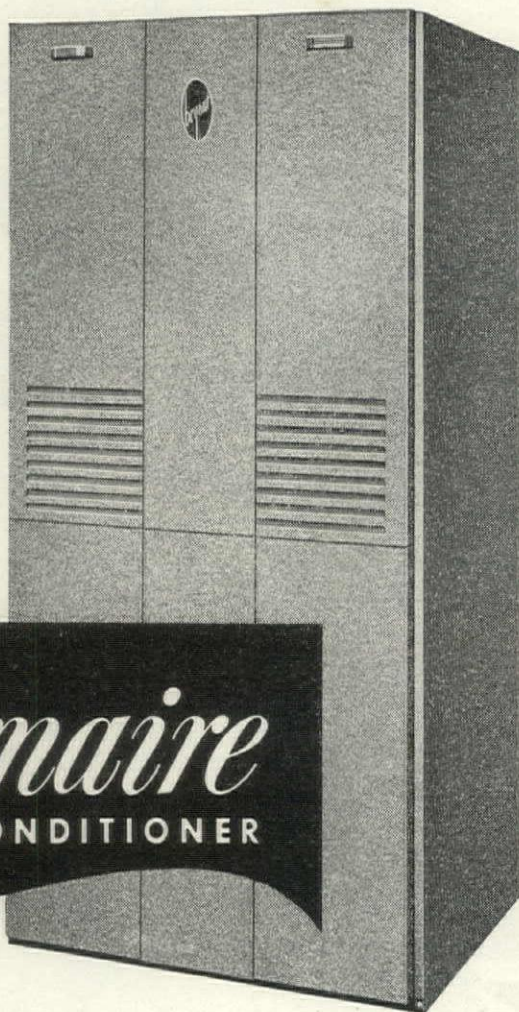
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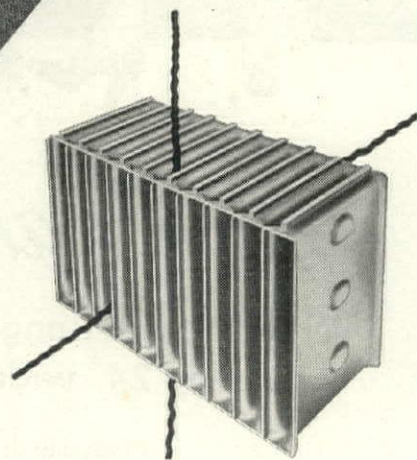
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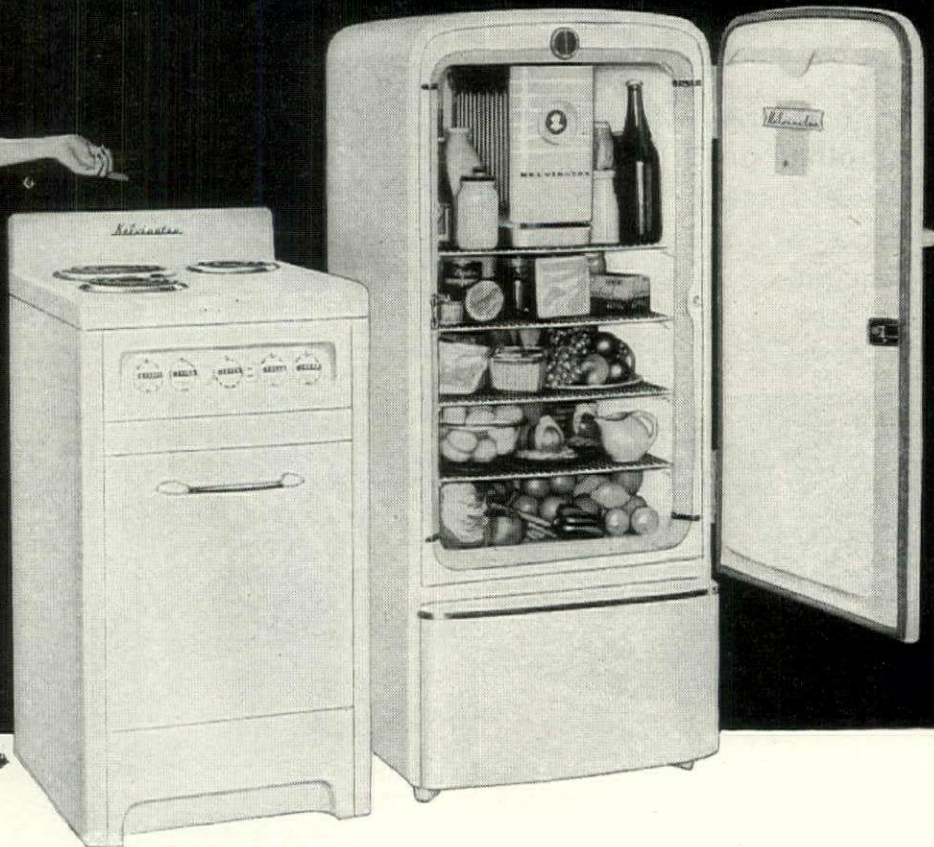
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NEWS

BUILDING MONTH. By now, the housebuilding business lay like a pallid, exhausted patient at the bottom of some vast medical amphitheater. It had been probed and analyzed (some of the specialists considered the body already a corpse and proposed dissection) until there was no secret of its circulation, digestion or excretion that had not been laid painfully bare for all to see.

Having nothing left to hide, housebuilding could only ask weakly that the specialists come to an agreement on the diagnosis. By the month's end, the spectacular news was that they actually seemed to be doing so.

The probe had begun with the TNEC investigations of the Building industry way back in 1939. It had continued with Thurman Arnold's pursuit of monopoly among both materials producers and building labor (Arnold quit in disgust when the Supreme Court ruled labor beyond the reach of the anti-trust laws). It had, directly and indirectly, loomed at many a wartime Congressional committee meeting, where the legislators decided who should do what about war housing. It had most recently been resumed by the press (there was scarcely a periodical which had not been impelled to give its readers the low-down on the Great Housing Shortage) and by a handsome new brace of Congressional committees.

A great deal of the decade-long probe had, necessarily, been a catalog of symptoms. And, as always happens, now one and now another of the symptoms had been held to be causing all the others. This tendency was apparent last month in Representative Gwinn's committee, which set out to pin the whole blame for today's troubles on the encrusted restrictions of building labor and got some unexpected straight talk from old trust-buster Corwin Edwards. It was equally apparent in Senator McCarthy's tour of investigation, now turning into an unenlightening attack on public housing.

But, above and beyond the confusion, an insistent area of agreement seemed to be forming about what was, after all, the matter with the patient (see FORUM, July '32, *et al*). *Fortune* had said it as well as anybody last August: "Every important disorder in the housebuilding industry is directly traceable to its picayune scale." This diagnosis was decisively confirmed by Edwards for the benefit of the Gwinn committee, and by Bill Levitt, an impressively non-picayune housebuilder, for the benefit of the Producer's Council (See page 10).

But if price-boosting restrictions thrive in housebuilding because the small housebuilder is too weak to fight them, what can help the small housebuilder get bigger? Bill Levitt said that changes in the distribution system to open wholesale buying economies to the big house manufacturer would help a lot. *Fortune* proposed RFC loans to finance promising merchant housebuilders as well as promising ventures in industrialized housing. (How reluctant private capital is to back the industrialized house can be gauged from the failure of the majority of factory-producers to mobilize the one-fifth private capital required to get an RFC loan under the new-dead Wyatt program.)

There was no doubt that the housebuilder could use plenty of help in getting bigger. But there were promising signs that the big housebuilder was doing plenty to help

himself. In the first place, there was the spectacular current rate of house production (see below). If the men who were building these houses were not yet all on the scale of Levitt, Gross-Morton, Byrne, Trousdale, Burns, Bohannon, etc., they were showing an accelerated trend in that direction. FORUM sampling indicated that the bigger housebuilders are now accounting for three-fourths of all houses built, as compared with their fifty per cent slice of the market before the war.

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HOUSES

BOOM

September starts reach 1925 peak.

In September housebuilders started about 90,000 houses. This is 30,000 more than they started last September, and as many as were started in the peak spring month of the 1925 boom. Houses finished in September totaled 77,000. This compares with 49,700 finished in September last year.

The seasonal decline that usually sets in about August had simply failed to appear. On the contrary, the housebuilding curve climbed higher and higher. Housebuilders seemed to have lost all hesitancy about the depth of the market; they were buying new land, announcing big new developments as fast as they were finishing houses. The unexpected and almost unprecedented rate of housebuilding meant that FHA's Title VI insurance ceiling would be reached before the end of November. The National Association of Home Builders hoped that Congress would, among the other jobs lined up for its special session, agree to boost the Title VI insurance authorization, now \$4.2 billion, by at least \$1 billion more.

LABOR PROBE

Congressmen hear about who shakes hands with labor on a shakedown.

"People are asking us how the Taft-Hartley law affects housing," said Representative Ralph Gwinn (Rep., N. Y.) setting out on the latest Congressional tour of the housing question. "We are going to show them. We will show them that it was written to open up the building trades to apprentices and non-union workers and to cut out the prohibitive dues and fees."

(Continued on page 10)

Representative Gwinn chairmans a subcommittee of the House Labor Committee, which is currently appearing, unannounced, in various cities to put the finger on restrictions imposed by the ten major building trades unions.

But the committee's first hearing, held in Washington, showed that Chairman Gwinn will have to point to more than labor if he tracks down all the villains in the piece. The star witness was a professor from Northwestern University, Corwin D. Edwards, an economist who had been chief-of-staff in Thurman Arnold's campaign to apply anti-trust laws to building labor.

Edwards immediately agreed that housebuilding is a high-cost industry because of the restrictions which rigidify the cost of manufacturing a house. "It is the only industry where the manufacturer buys retail and works out his design case by case."

Then Edwards began to move somewhat beyond the committee's program. Labor, he said flatly, "merely gets the headlines" as the agent of building restrictions. Actually, restrictions are a "vertical pattern, involving producers, wholesalers, contractors, retailers and labor." He said that in his work for the Department of Justice he had observed that usually all parties involved in restrictive practices have a stake in keeping building small and localized. Case in point: jobber-union-contractor combines to enforce the sale of plumbing fixtures on an installed basis only.

I CAN'T GET IT WHOLESALE

Let's squeeze out the extra profits, says big housebuilder Levitt.

Bill Levitt, who built \$12 million worth of houses last year and expects to build \$24 million more this year, wore the grin of a man who enjoys a fight. He eyed the Producers Council, assembled in New York for their annual meeting, like a champ waltzing easily toward a nervous opponent. Then he let go with a powerhouse wallop:

"The only real reason why the house manufacturer is in a primitive condition compared to every other manufacturer is

F. Roy Kemp



LEVITT: when will builders get bigger?



EDWARDS: who keeps building small?

the system of distribution of raw materials adopted by the companies largely represented in this room this morning."

There is nothing wrong with the housebuilding business, Levitt continued, that could not be cured if building were in the hands of large companies, instead of pica-yune operators who bumble along, unable to fight restrictions, outmoded building codes, predatory unions. But, Levitt said, housebuilders will not get bigger until they are granted the economies of mass purchase of the materials. He illustrated:

"Joe Smith and Tom Brown come all the way from Indiana to convince me to install automatic washing machines as standard equipment in all houses we build. The program for 1947 is, let us say, 3,000 houses. That's a lot of washing machines. All during the discussion a couple of other fellows have been present in the room, and every now and then one of them interjects a remark or so.

"Finally the deal is closed. Price, delivery, everything is all agreed upon. A short time later a proposal comes in—not from the manufacturer, not from the distributor, but from another fellow who goes under the name of 'Authorized Dealer.'

"Well, the first thing you know a carload of washing machines arrives on our railroad siding. That car was loaded in Indiana, and no human hand touched the contents until we, at Levitt, unloaded. The nicest thing about the washing machine people, however, is that no matter how long you do business with them, no matter how many carloads of washing machines they send you, they never send invoices to you—just washing machines.

Profit, Profit, Profit. "One day, however, we do get an invoice from this authorized dealer chap and we pay it. Naturally, he expects a profit. He then gets an invoice from the metropolitan distributor and he pays it. Naturally, they expect a profit. The distributor gets an invoice from the washing machine manufacturer and he pays it. Naturally, the manufacturer expects a profit. So far that makes three profits. But that's not all! As long as everyone else is

making a profit, we here at Levitt feel we should make one too, so when we put up that washing machine into the house package, we charge a profit. That makes just four profits that Mrs. Owner is paying for her automatic washing machine.

"That same situation obtains plus minus a profit here or there in every item of equipment or material used in the construction of a house."

Levitt asked: "Why should capital—invest its money in a business that starts off with two strikes against it?"

Oh, Mr. Petrillo. Levitt said he had no quarrel with the jobber or dealer who performs his economic function—capital investment, stocking and display of material for the benefit of the small customer. "But where the jobber's usefulness ceased to exist, where his very existence contributes to the high cost of housing, he unwittingly becomes a parasite.

"We at Levitt & Sons—and there are many more like us if you will let them be born—can perform the distributor's functions even more efficiently than he can since we coordinate them with overall house manufacture. We don't need him and he occupies pretty much the same position as Mr. Petrillo's standby musicians in a recorded broadcast.

"The solution to better values in housing lies in your hands, but it will take industrial statesmanship and guts to achieve it."

BIG & GETTING BIGGER

First check of how big housebuilders have grown during war years.

How far has housebuilding, conspicuous in a nation of industrial giants, grown up over the war years? Quite a lot. The FORUM's Research Department, taking the first close look at the size of the professional housebuilder,* since the Bureau of Labor Statistics made its study of residential builders in 72 cities in 1938.

What The FORUM saw was cheering to those who believe that housebuilders get bigger before housebuilding's profit gets smaller. The bigger housebuilders, men who build 10-or-more houses a year, are now building three-fourths of all houses. Nine years ago, they were building slightly less than half.

The smaller housebuilders are now building up only 15.1 per cent of the market—as against their 32.2 per cent in 1938. The rest of the houses—10.7 per cent—are being built, for the most part, by home owners acting as their own general contractors.

FORUM researchers made their calculations on the basis of an analysis of building permits for 1946-47 in 16 cities, geographically spotted over the U. S. and ranging in size from metropolitan Cleveland with a million-plus population to Gardena, California, with 5,909 inhabitants.

* Defined by BLS as a builder of two-or-more houses a year.

COST HOUSES

Virginia builder creates 181-house development from surplus barracks.

Portsmouth, Va., 181 Negro war veterans living in modern, new, FHA-insured houses for which they are paying at the rate of \$26 a month. This is due to the initiative of George T. McLean, a building contractor who dexterously related the problem of disposal of surplus war barracks to the largely unsolved problem of the enterprise production of low-cost housing.

When the U. S. Naval Shipyard in Portsmouth advertised for bids on the purchase of 10 H-shaped, two-story naval barracks, McLean's firm, Construction Associates, Inc., showed up as high bidder (\$2,650). Because McLean is a builder who also serves as chairman of the Portsmouth Redevelopment and Housing Authority, he is much aware of his city's need for low-cost housing. It didn't, therefore, take him long to discard the usual demolition-and-reconstruction operation in favor of a plan to turn barracks into single-family houses for veterans.

In negotiating the Navy for a 30-day stay on demolition, McLean and architect Fred A. Fay, went to work on architectural and engineering studies, started hunting for a building site. Before the end of the 30-day period, McLean emerged from his negotiations with: 1) a new housebuilding organization, the North Truxton Corp.; 2) a 70-acre site (next door to the best residential area in the city) which had been war-leased by the government as a trailer camp and already provided with water and streets; and 3) a precisely-engineered plan for cutting the barracks into sections and re-erecting them as single 4 1/2-room dwellings.

McLean's plan cut 181 houses out of the barracks (see cuts). He says: "The barracks had been built to high Navy specifications in the fall of 1941. The material, straight-grain Douglas fir, was of a superior grade—much finer than anything that can be bought today."

At the time the crane eased the first house section onto the waiting shovel-taxi-trailer, masonry foundations were already at the housing site a mile and a half away. Partitions, prefabricated from salvaged partitions in the barracks buildings were stacked up on the site. Plumbing pipes, pipe and other salvaged items were trucked in an orderly flow from the barracks site to the new housing job.

House units, McLean says, were moved to the new site at the rate of 11 per eight-day. The average house was completely finished in 30 days.

The \$3,800 purchase price included a 60 ft. lot, landscaping, gas range, automatic gas hot-water heater, kerosene heater and a Servel gas refrigerator. Connected to a bottle-gas installation. McLean estimates that the \$26 monthly

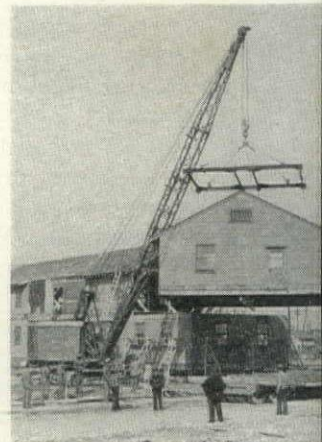
(Continued on page 12)



TEN H-SHAPED BARRACKS were sawed into 181 houses. Each side wing was cut five times; thus five 28 x 20 ft. sections were cut from each floor. First-floor sections had to be roofed. Roofing came from 28 x 112 ft. central wing—cross bar of H. This also supplied end walls.

CRANE lifted each unit to trailer. Cables were fastened to strongback bearing under floor girders and suspended from spreader rig to prevent distortion of frame in lift.

SHOVEL-TAXI-TRAILER hauled house units to new site, where another crane eased them onto already prepared foundations. Houses were moved at the rate of 11 a day.



payment is less than the rents paid by the new home owners in the slums where most of them lived before.

McLean thinks that what he has done ought to be done in a lot of cities. He says there are still plenty of barracks to be taken down, and he thinks he has demonstrated one way private builders can produce low-cost housing at a moderate profit.

WASHINGTON

CONTROLS BACK?

Special session on Marshall Plan may bring renewal of basic material curbs.

When Congress assembles for its special session in November, President Truman may ask for consideration of two measures important to Building: 1) Government allocation of steel among industrial users; 2) "Selective" price control.

Some government economists said that approval of the Marshall Plan (see p. 13) would make allocation of steel necessary. Failing this, they said, producers with the biggest pocketbooks—like the automobile industry—would take a lion's share. Producers of building materials would have to go on reduced rations. Other economists argued that an expanded foreign aid program would not cut into domestic steel supply much. When the foundry workers of France, England and Germany get enough to eat, these men said, they will be able to turn out more steel and iron products in their own plants.

Some thought President Truman might try to slay the inflation giant by asking Congress for "selective" price control. This would mean limiting the prices of major commodities at the first processing level. Although such a plan was being discussed by the President's advisers, there was general doubt that it would work. Wouldn't those further down the distribution line, the doubters asked, simply take up the slack, boost their own prices?

RENT BOOST

Flat increase in ceilings is likely.

Last month President Truman had the dubious satisfaction of being able to say I-told-you-so about the present rent control law. When the President was asked what he thought about Housing Expediter Creedon's approval of a flat 5 per cent rent increase in Louisville, he tartly observed that no other course had been possible. He pointed out that the present rent act sets up local advisory boards and makes their recommendations mandatory if properly documented.

So far, Louisville is the only city where a local advisory board has successfully petitioned an increase. The board based its recommendation on a new sewer rental ordinance, claimed to run between 2 and 4 per cent of the gross return from most rental properties.

Labor and tenant groups howled at the Louisville rent boost. (Said the machinists' union: "Creedon should be fired.") They claimed the Louisville board was stacked with landlords. In New York, the American Labor Party promptly said it would challenge any recommendations for rent increases made by Dewey-appointed boards. The boards, ALP as charged, are not representative citizens as required by law.

Not many boards seemed to share Louisville's opinion. (Creedon has asked all boards to report on how things are going, even if they don't seek a rent increase.) Of the 14 boards reporting so far, 12 said they thought housing is still so tight that rent control must be retained.

If this trend continues in the rent boards' reports, it will be hard for Congress to resist the demand for continued rent control. Best Washington guess: Congress will vote to extend rent control beyond its present expiration date of February 29, 1948; Republican leaders will tack on a provision calling for a flat increase in rent ceilings.

NEW JOBS

Creedon will boss atomic construction, HOLC's Dyke may move up.

Last month one housing chief left Washington and another was reported about to do so.

► Housing Expediter Frank Creedon said he had been asked to do a job which he thought would be more useful to the nation than his present one (supervision of the remaining rent control program is all that is left for the Housing Expediter to do). Creedon's new job is to take charge of a "large construction project in connection with atomic energy." Before he became Housing Expediter, Creedon worked for Stone & Webster in construction of the Oak Ridge plant.

► Federal Home Loan Bank Board Chairman John H. Fahey would, according to insiders, hand in his resignation shortly after Congress reconvenes for its special session. A fearless, unimpeachable administrator, old John Fahey had steered the HOLC, the rescue agency of depression years, to a completely unexpected profit for the government. Although savings and loan men had smarted under what they called Fahey's high-handed methods, all agreed that they had known no government boss less susceptible to "influence."

Washington gave Home Loan Bank Board member Nathaniel Dyke, Jr., the best chance of succeeding Foley as chairman. Dyke has had operating experience in the field, as head of the United Building & Loan Association, Fort Smith, Ark. He has also operated a string of lumber yards



DYKE

in Arkansas and Texas and now of millwork plant in Memphis. During war he earned the gratitude of the House by serving on the advisory board of the Office of War Mobilization & Reconversion.

OLD FIGHT

Senator McCarthy attacks housing

The Joint Congressional Committee on Housing on what's-holding-up-housebuilding last month turned into the old cat-dog fight between advocates of public and private housing. Holding hearings in Pittsburgh, Cleveland, Detroit and Indianapolis, Senator McCarthy (Rep., Wis.) showed up as anxious as any lobbyist (see p. 16) to discredit advocates of the W-E-T housing program.

In Pittsburgh, Senator McCarthy attacked a city policeman to remove City Solicitor Alpern because she insisted on special provisions for public housing. Calmer heads of the committee intervened, avoiding an embarrassing issue.

In Detroit, the director of the City Housing Commission, Charles F. Edge, refused to appear. He gave the newspaper a blistering statement: "I saw no reason for climbing on Senator McCarthy's back. I sent him a note. All the information available is on the record. I am too busy doing something constructive, which is more than they are doing on their side's junket."

By month's end, the much-touted committee seemed to be doing little more than adding to the already dense confusion of the public vs. private issue in housing. More direct light on what's really the matter with housebuilding was coming from within the industry itself (see p. 10).

MATERIAL

NAILS

Builders ask tighter export controls

Lack of nails may bring housebuilding to a dead stop in some areas within 30 days. So the National Committee on Building said, after a nationwide survey of rent building shortages.

The Committee found the northeast quarter of the U. S. hardest hit by shortage. Nails were unobtainable on the regular market at the regular price of \$5.00 a keg. But a new gray market seemed to have plenty at from \$9.75 to \$12.00 a keg. Some builders were using aluminum nails at 60 cents a pound.

Millwork is also extremely scarce. A survey showed. Midwest manufacturers of doors, windows, etc. can't get freight to move lumber from the west coast to plants. Gypsum products, plumbing pipe and soil pipe are also scarce in many areas.

In Washington, builders asked for tighter export control of nails. They charged two big lots of nails, one of 300,000 and another of 250,000, were shipped

American buyers because domestic
ners were not prepared to bid for
arge amounts in a single order.

MARSHALL PLAN

Europe needs four times as much soft-
wood as prewar export, less hardwood.

Every other domestic consumer, Build-
ers looked anxiously at the Marshall Plan
to see how much belt-tightening would be
needed. Figuring out how much of
American output Marshall Plan exports
can take is no easy job. Government
departmental committees are now
making the preliminary requests made by
European nations, and a representative
of the Housing and Home Finance Agency
is participating where building products or
materials going into such products are
concerned.

Information is as yet available to
show how specific products would be
affected by increased export. But govern-
ment experts say that the Marshall Plan's
net impact on domestic building mate-
rial supply would be far greater than its
direct impact. They mention these items:

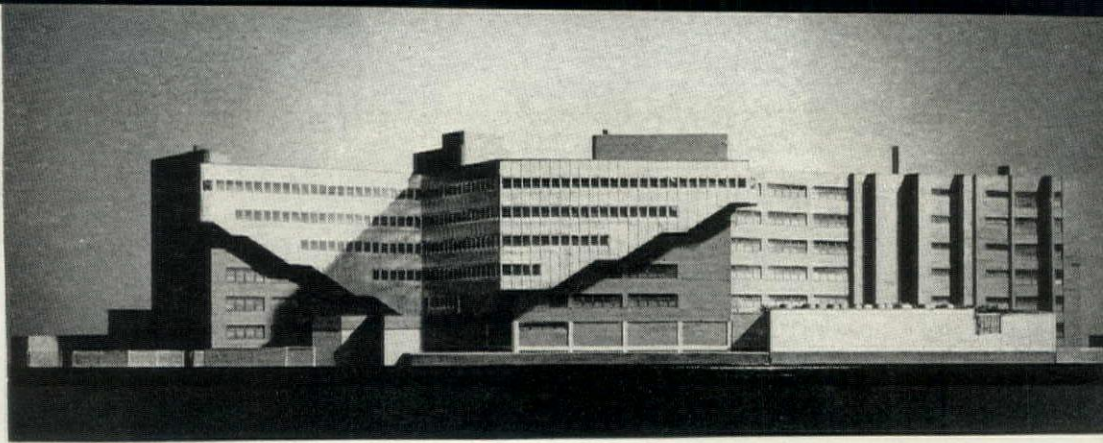
Iron and steel product requests for 1948
total over \$400 millions. This compares
with total U. S. exports of such products in
1947 of \$235 millions (about \$330 millions
at current prices). Requests include \$60
million worth of sheet steel, probably the
shortage item in the U. S.

Automobiles requested amount to \$168 mil-
lion for 1948 and \$367 million for the entire
period, 1948-51. The 1948 figure is equiva-
lent to about 16,000 new cars, compared
with total U. S. exports of less than 1,100
in 1939 and about 34,000 cars (new
and old) in the first half of 1947. Current
monthly deliveries of freight cars are about
10 per cent below the railroads' goal of
100 per month.

Machinery and electrical equipment worth \$150 million is
requested for 1948, and a total of \$500 million
is requested for the four-year period. Most of
this is believed to be for heavy generating
equipment rather than the equipment used
in residential and other construction.

Timber requests exceed prewar exports to
16 countries in both softwood and ply-
wood. Hardwood requirements are below
prewar exports. Softwood requirements
(including railroad ties) are estimated at
1,000,000 bd. ft. yearly for 1948 and 1949,
1,700,000,000 bd. ft. for each of the next
two years. This is four to five times the
average volume of 1934-38 exports to the
European nations. Plywood requests amount to
1,000,000,000 bd. ft. yearly in 1948 and 1949,
and 1,500,000,000 bd. ft. in 1950 and 1951. Prewar ply-
wood exports were negligible. Hardwood
requirements amount to 272,000,000 bd. ft.
in each of the first two years, and to
1,000,000,000 bd. ft. for the next two. A sub-
stantial amount of equipment for logging,
mill operations, and veneer and ply-
wood manufacturing is also requested.

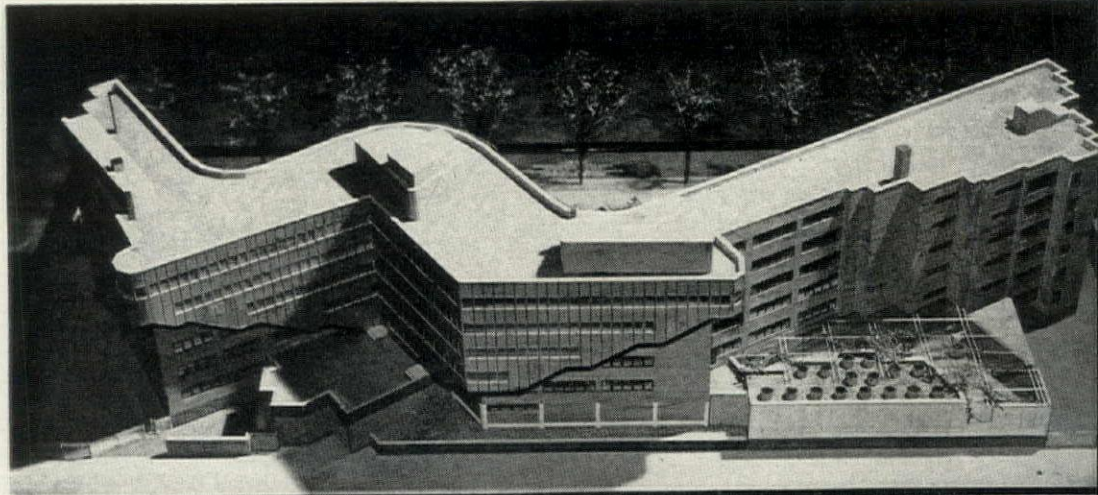
North side (rear) of building



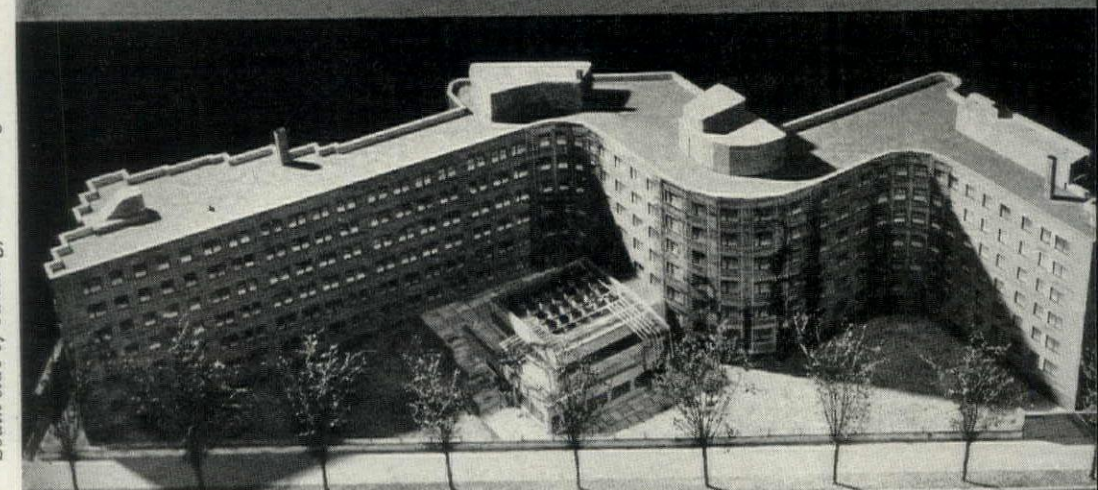
AALTO PLAN FOR M.I.T. DORMITORY: an undisguised expression of function.

Construction of a new senior dormitory
at the Massachusetts Institute of Techno-
logy started last month. The model
shows Finnish architect Alvar Aalto's plan
for a six-story building to accommodate
353 students. Aalto is now professor of
architecture at M. I. T. Perry, Shaw &
Hepburn, Boston, are supervising archi-
tects. The Aberthaw Co., Boston, is the
contractor.

The building is planned for a site over-
looking the Charles River basin from
Memorial Drive. In order to give a maxi-
mum number of rooms the river view (bot-
tom cut), Aalto gave the building mass its
combination zig-zag and serpentine form.
Service facilities are concentrated on the
north side of the building (above), where
Aalto has hung a cantilevered stair for
easy-grade floor-to-floor access.



South side of building, overlooking river



BUILDING MONEY

VETERANS REPAIR LOANS

VA unwraps new low-interest plan.

The Veterans Administration has not talked about it much yet, but it has an insurance plan for improvement and repair loans for veteran-owned homes that is considerably more attractive than FHA's Title I improvement loan plan. For the veteran, the VA repair loan means lower interest than he would pay on the FHA loan. For the lender, the VA plan means more latitude on the equipment items that may be included in the loan. While FHA, which once burned its fingers on ranges and refrigerators, has refused to consider any item not physically attached to the house for improvement loan financing, VA has specifically extended its improvement program to include such items as washing machines, dish washers, refrigerators.

New Bank Competition. As the VA repair and improvement plan goes into action, savings and loan associations can be expected to give banks some stiff competition in this rich small loan field. This is because the federally chartered savings and loan associations are now empowered to make unsecured repair or improvement loans up to \$1,500, under an act passed by Congress just before it adjourned last summer. This new authorization covers not only the VA repair loan, but also the FHA Title I loan and even repair loans not backed by government insurance. Heretofore, the federally chartered associations have been required to execute a real estate mortgage before extending such credit, placing them at a disadvantage with banks who make repair loans on the borrower's credit rating.

VA has not been beating the drums for its repair and improvement loan program for two good reasons: 1) it wanted to get the regular home loan program underway to take care of the veterans lacking any kind of housing; 2) it wanted to avoid any extra drain on short materials and equipment items urgently needed in new housing. With shortages eased and the major home loan program operating smoothly, VA thinks it is time to take the improvement program out of wraps.

Character Loans. The VA repair or improvement loan (Section 508, Veterans' Readjustment Act) works like the FHA Title I plan. That is, the lender puts all his loans in one basket and the government insures them all against loss amounting to not more than 15 per cent of the total amount. Thus a lender who builds up a \$100,000 volume of such loans could recover the total amount of any sour loan—up to the point where total claims reach \$15,000.

VA asks no security but borrower's good credit on improvement loans of not more than \$1,000. Loans of this amount are made at a 3 per cent discount, compared to

the 5 per cent discount under FHA Title I. The 3 per cent VA discount works out to a true interest of 5.7 per cent, and compares to the FHA Title I true interest of slightly over 9.7 per cent.

For repair or improvement loans over \$1,000, VA requires the security of a mortgage and limits interest rate to 4 per cent.

Although few veterans are aware of it, VA's Section 508 loan insurance plan can apply to loans covering the purchase of a house as well as to improvement and repair loans. The lender would simply lump such a mortgage loan into his whole basket of Section 508 insured loans.

Credit Stretch. For the veteran, a home loan handled under insurance instead of under the main VA-guaranty plan has the advantage of increasing his borrowing power. The government is permitted to assume a total liability for each veteran of not more than \$4,000. If the veteran buys a house under the guaranty plan, most lenders would want the government to back at least half the note. This means that if the veteran buys an \$8,000 house—and most houses cost that much nowadays—he would use up all of his government-backed borrowing power in a single stroke. But if the lender processes the \$8,000 home loan under the 15 per cent insurance section, it would use up only 15 per cent of the veteran's reserve credit—or \$1,200. Since this method has no special advantages to lenders over the regular \$4,000-guaranty home loan plan, only a negligible percentage of home loans has been handled under the insurance plan.

OPENING DAY tape-cutting by C. of C. president C. E. Naylor, Federated's Fred Lazarus, Mayor Oscar Holcombe, Foley's Max Levine. Building facade suggests some architectural embarrassment at absence of windows.



DESIGN

MECHANIZED STORE

Windowless Foley's opens in Ho

The first big department store built in the Twenties opened last month in Houston, Texas. Foley's, an old Houston store which moved up Main Street, is Federated Department Stores' experiment in mechanization to boost sales volume. It is the first department store to be built without windows, thereby salvaging considerable peripheral storage space and eliminating confused lighting effects, soot (a big problem to merchandising), and the yearly cost of window washing. (For complete presentation of plan, see FORUM, April '47).

The stores, mechanical devices for holding stock are based on technical studies conducted by William T. Snaith of the firm of Loewy Associates. They are intended to increase sales turnover per employee. The most spectacular is the parcel handling and conveyor system which routes parcels dropped at all parts of the store to a sorting room in the adjoining garage. Here parcels are either picked up in one bunch by a customer and stowed in his parked car, or loaded into drive-in delivery trucks.

Since horizontal expansion is prohibitively expensive for city stores, Foley's has provided for vertical expansion by building foundations that can carry twice as many stories as its present six and by all the space now for later elevators, escalators,



ern Architects Hold First war Congress

the International Congress of Modern Architecture assembled in Bridgewater, by little English riverport, it could among the delegates men in whose lay a major part of the rebuilding rope. These men had all been the ectural revolutionaries of the Twen- Now they had stepped forward to ll positions in the reconstruction pro- of a dozen countries.

change was reflected in the faces of delegates, and in the pace and character their reports. When the Congress had met together in the ominous year of its earnest discussion had been fab- d largely of theory. Now there was ely a delegate without the finished for a whole city, region—or even a n. Here and there, actual building begun—on the first neighborhood of the Milan plan, prepared by members, and on the great plan for reconstruction of Warsaw (FORUM, '46), among whose authors were members, Szymon and Helena as, now too busy to come to the meet-

w York planner J. L. Sert, president e Congress, emphasizes its importance e only international means for ex- ge of information among architects planners. "The countries are at differ- evels in the various fields. For example, Poland, where social legislation is far ced, technical knowledge is lagging. U. S., which can offer little to compare the far-reaching British city plans, can tribute greatly in technical knowledge. erland, untouched by war, has done replanning, but has made wonderful ances in detailed work and is producing tifully designed and finished building oment and fittings."

e seven-day Congress heard reports 18 nations, among which were new bers from India, Cuba, Eire. Working missions agreed upon a restatement of M aims, which is now being prepared ublication early next year.

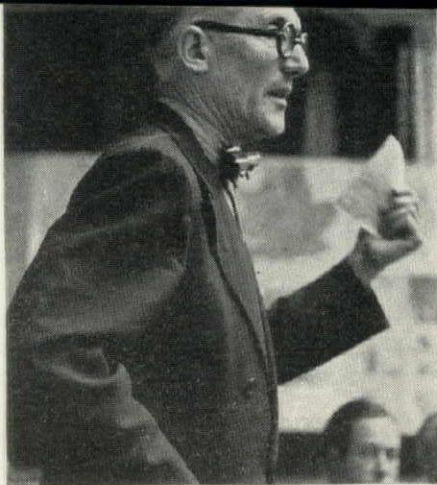
LOW-COST FURNITURE

useum of Modern Art, retailers join international design competition.

ough contemporary design has by now e a noticeable dent on the low-cost e, well-designed contemporary furni- is still a luxury item. Last month, with ala dinner in New York's Rainbow n and some fairly extravagant oratory, Museum of Modern Art launched a ect intended to get some low-cost con- orary furniture into production.

furniture retailers in 98 cities have ed the Museum in organizing an inter- onal competition in low-cost furniture

(Continued on page 16)



LE CORBUSIER, a commissioner of the French Reconstruction Board, reported on building progress in his 1,500 neighborhood in Marseille.

JAROMIL KREJCAR, author of plan for rebuilding Lidice, presented work of Czech Ministry on a national plan for reconstruction.

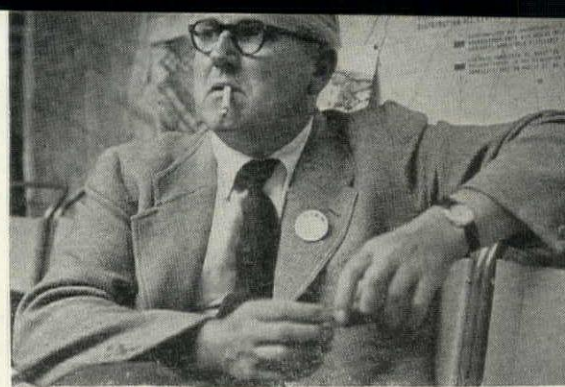


WILLIAM HOLFORD, an author of the City of London Plan, said that building of Stevenage, first "satellite town" in the London decentralization plan, is now underway.



P. A. EMERY, architectural adviser on reconstruction of Bizerte, said plan for rebuilding on new land is being opposed.

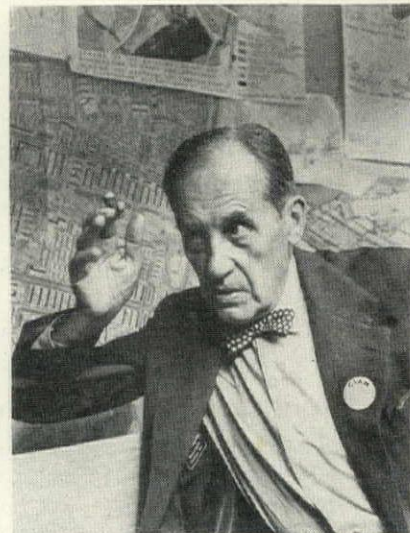
JOSE SERT, PAUL WIENER, U. S. told of their plan for steel-producing region in Peru, made for government as model.



G. VAN EESTEREN, city architect of Amsterdam, said sacked Jewish quarter is cleared, ready for rebuilding as a new city center.



MEN AROUND THIS TABLE will direct rebuilding of dozens of cities, plan new physical pattern of whole nations. Their Congress provides for international exchange of architectural information.



WALTER GROPIUS, Bauhaus-founder, has been advising on German reconstruction. Lack of money, he said, may forestall new street patterns in shattered cities.



design. The competition will seek designs adaptable to mass production and to the needs of the biggest market: moderate-income families who live in small houses and apartments. The Museum thinks such furniture should be non-bulky, easy to move, store and care for.

Both the retailers and the Museum agree that recent technological advances have supplied the materials, tools and production methods which make high-quality, low-cost furniture a real possibility. They see the competition as a way to discover experimental work now being done by many designers, and to make this work available to producers and distributors.

The competition will be open to individual designers of all countries and to selected research teams consisting of technological laboratories working in collaboration with outstanding designers. Terms of the competition will be announced by the Museum in November. Further information may be obtained from: Museum Design Project, Inc., 11 W. 53rd Street, New York.

POLITICS

REGRETS

How far left is Senator Taft?

When war building controls came to an end, some of the lobbyists who represent Building in Washington sensed an unattractive possibility. Large numbers of businessmen had willingly parted with dollars in exchange for assistance in threading their way through a wartime maze of priorities and price ceilings. With the decline of the federal government on Building's horizon, would the rank-and-filers' enthusiasm for representation in Washington suffer a proportionate decline?

For realtors' Herbert U. Nelson, who had no wish to close up his handsome K Street offices and go back to the old stand

in Chicago, and for housebuilders' Frank Cortright, a onetime Philadelphia housebuilder who rose to national prominence as an association chieftain during the war, there was an easy answer. Within a few weeks, these men had convinced themselves and, presumably, the majority of their membership that they were single-handedly saving the Building industry—indeed, the whole nation—from communism. Nelson and Cortright laid claim to this sizable role in national affairs by the simple device of assuring everybody that public housing and communism are simply



Life photo

NELSON: horrid shadow

two names for the same horrid thing.

Their resourcefulness in persuading their memberships that the shadow of Clem Attlee or even Joe Stalin lies across every public housing project covers a fairly wide range. It includes such light humor as the cartoon (see cut) which Frank Cortright brought back from his recent inspection tour of England, to dramatize for his members "what must never happen here." But it also includes such heavy-handedness as Nelson's press conference last month in

Senator Robert Taft's home town, Cincinnati. Nelson told the reporters (as he told the nation) that Senator Taft was "lined up with communism" because he was a co-author of the W-E-T housing bill.

To most newspaper readers, this was considerably funnier than Cortright's cartoon. But the conservative Washington Star was not amused. Said the Star:

"The National Association of Real Estate Boards, representing a cross section of the normally intelligent American business community, will wake up some day to the fact that this type of nonsense spread around by an executive vice president does NAR's credit no good. Mr. Nelson's brand of tripe has already helped to create the public impression that the realtor in America stands behind a stone wall against any sort of housing program except the housing that he gets a slice of."

By month's end, Nelson had decided to play softer music was in order. He told Senator Taft: "... I think it is bad for me to imply that you, our Republican leader, are following the Communist party line ... I regret it and I will not do it again."

MARKET

AVERAGE HOUSE

The average man can't afford it.

What is the average buyer paying for a new house today? Nobody knows for sure, but last month the Bureau of Labor Statistics figured out the basis for an estimate.

Not counting land, architectural fees and sales profit, the average cost of the single-family, non-farm houses being built in September was about \$6,000, BLS figures show. In 1946, average cost was \$5,670; in 1945, \$4,670; in 1940, \$4,065.

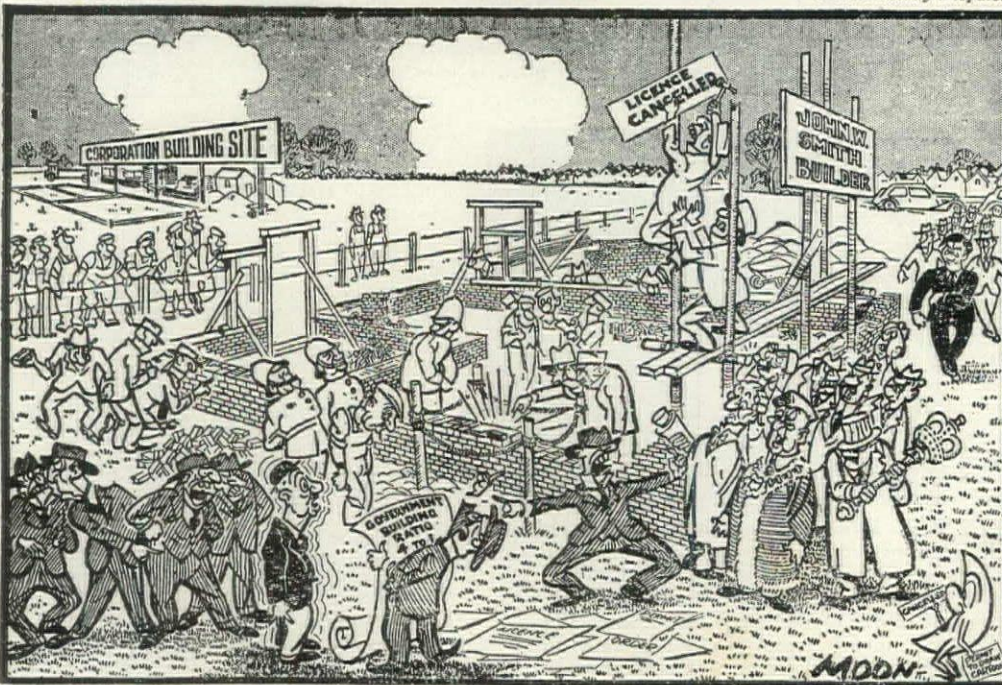
To estimate average selling price, BLS thinks it fair to add \$2,000, for land and profit, to the current average cost. (That's one of the more caustic government economic claims that this margin now runs as high as 40 per cent). Thus they say that the average house is now selling for about \$8,000.

The climb in average house cost is a good index of how the house market is adjusting to rising building costs. According to the BLS index, housebuilding costs have risen 50 per cent since 1940. But according to BLS figures, the average buyer is paying only 48 per cent more for a house. It seems to measure a fact apparent to even the most casual observer of the price market: the average customer is being forced to settle for a smaller house than he bought in 1940.

If the average buyer can afford to pay \$8,000 for a house, he is also a man earning at least \$60 a week. Since in September the average industrial worker's wage was \$50.42 a week, the average house, as has been frequently noted, seems to be out of step with its market. The Veterans Administration has said that the majority of veterans cannot afford to pay more than \$7,000 for a house.

BRITISH VIEW: the private builder who laid one brick too many.

London Sunday Dispatch





Something New and Interesting in FORMICA Patterns...

HERE are three new Formica patterns, provided in many shades and colors. They are attractive, novel and serviceable and supplement the linen patterns which were introduced by Formica some twenty years ago. The new line of modern, well harmonized, solid colors are in production and again available.

The patterns and colors have all the usual

Formica qualities. They do not stain with colored liquids; they are not spotted by solvents like alcohol or by mild acids or alkalis such as are present in fruit, or cleaning solutions; for horizontal surfaces they are available in the cigarette proof grade. And because of the wide range of colors and shades they will harmonize with any decorative scheme.

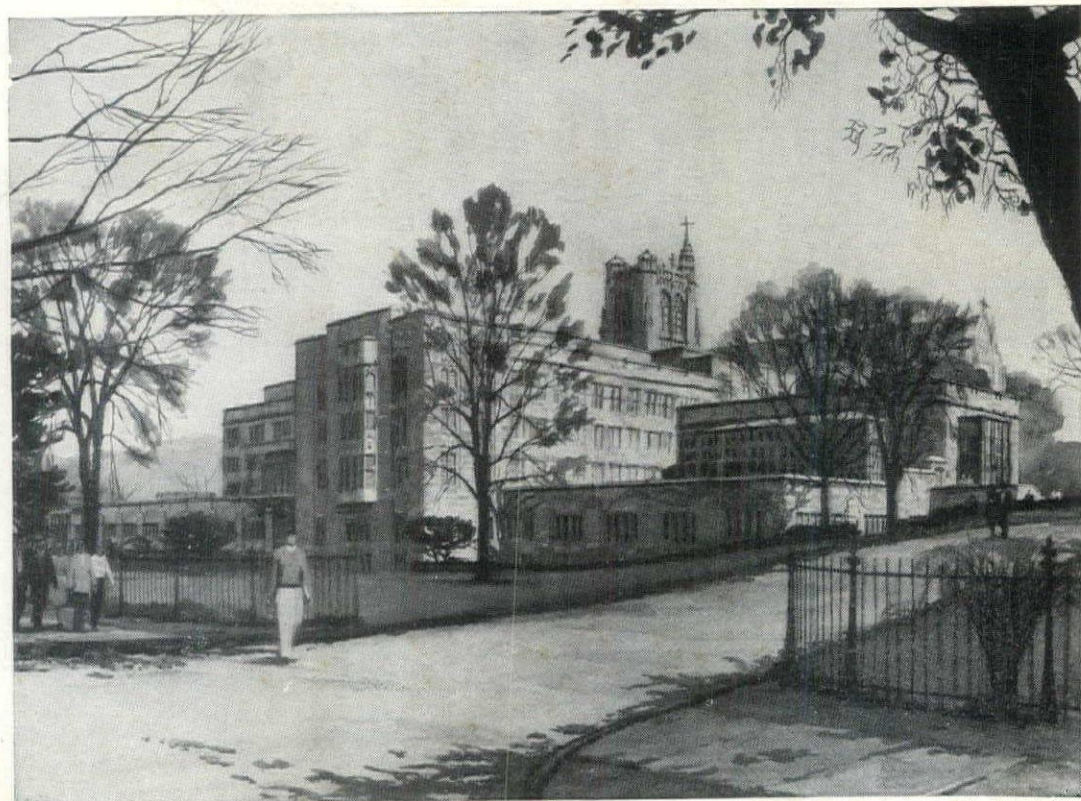
Reproductions of the entire range of colors are sent on request.

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Architects: O'Conner and Kilham, Jr. Engineers: Meyer, Strong and Jones. General Contractors: Turner Construction Co. Electrical Contractors: Ross Electric Construction Co.

For Flexibility and Economy

In the planning stage of any structure, look into the advantages of General Electric Fiberduct raceways . . . the adaptable underfloor system that permits the installation of new circuits and outlets at low cost, at any time, without ripping up floors.

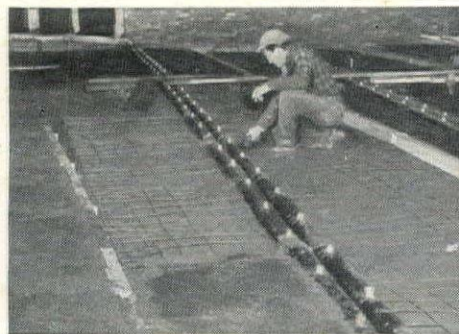
When new outlets are needed, the

Fiberduct raceway can be tapped and a new outlet installed in a few minutes.

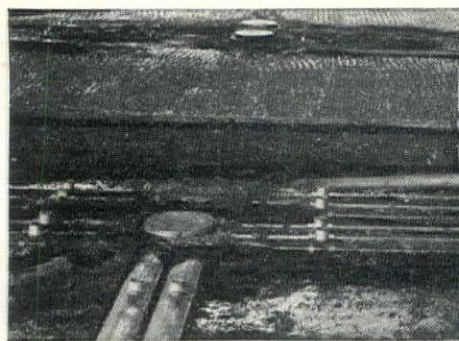
For advice on using Fiberduct, see your local General Electric underfloor specialist or merchandise distributor. For general information, write to Section C70-114, General Electric Company, Bridgeport 2, Connecticut.

General Electric Fiberduct underfloor raceways—nonmetallic, noncorrosive underfloor ducts, designed for electrical flexibility—will keep circuits readily available for changes at any time in Princeton University's Harvard S. Firestone Memorial Library, now under construction at Princeton, N.J. Throughout the life of the building, this Fiberduct system will keep circuits electrically young, by making possible easy and fast changes in its electrical system.

Noncorrosive Fiberduct raceways laid in the concrete slab, are always available for quick circuit changes and relocation of outlets. In large and small buildings, they cut the expense and time involved in electrical changes by eliminating the necessity of tearing up floors and laying new raceways.



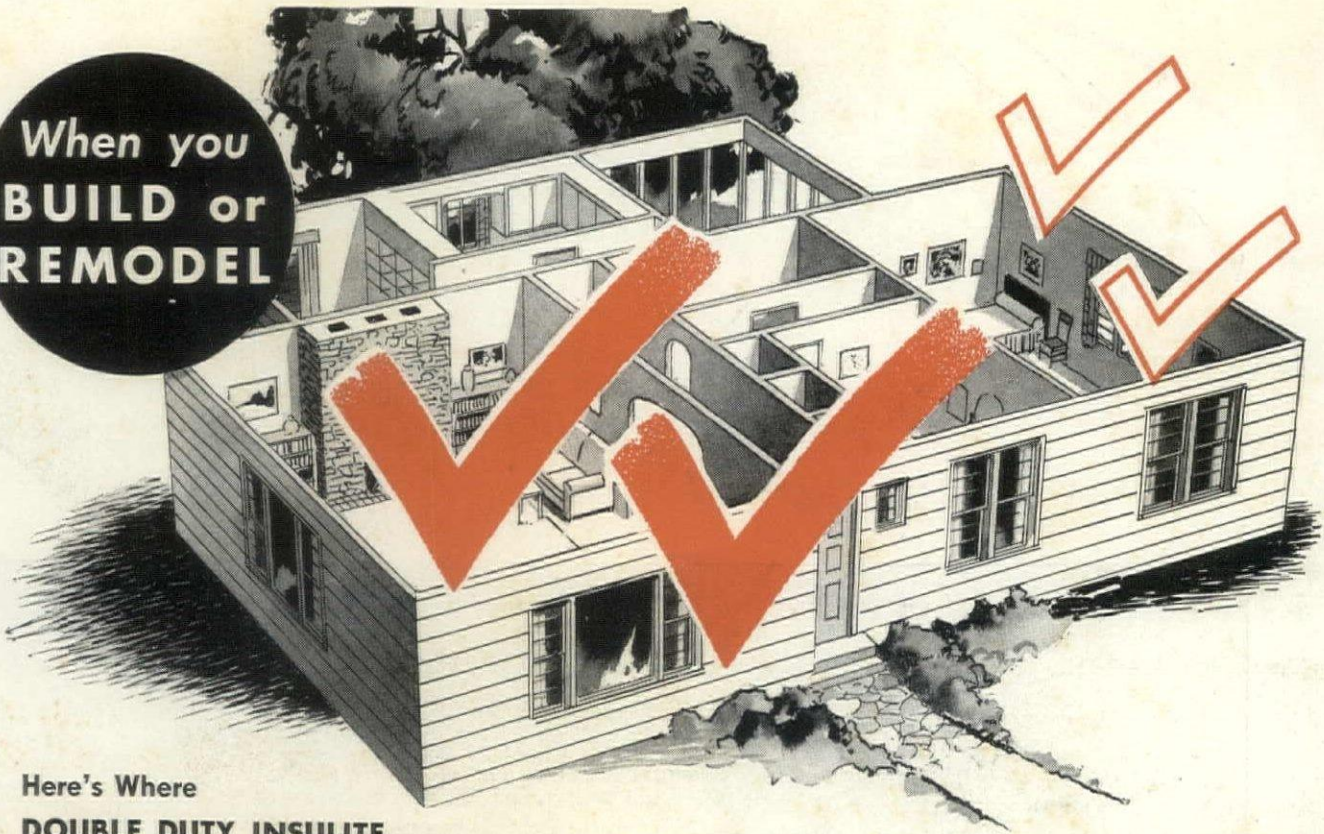
A typical double-grid, preset G-E Fiberduct installation is shown above.



Two double runs of G-E Fiberduct support needs of four different wiring systems.

GENERAL  ELECTRIC

When you
**BUILD or
REMODEL**



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**DOUBLE DUTY INSULITE
MEANS**

Double FOR THE MONEY!

Lift off the roof take a look at those outside walls. That's where double-duty Insulite gives double for the money, because it does TWO things for the price of one:

- (1st) IT BUILDS (2nd) IT INSULATES

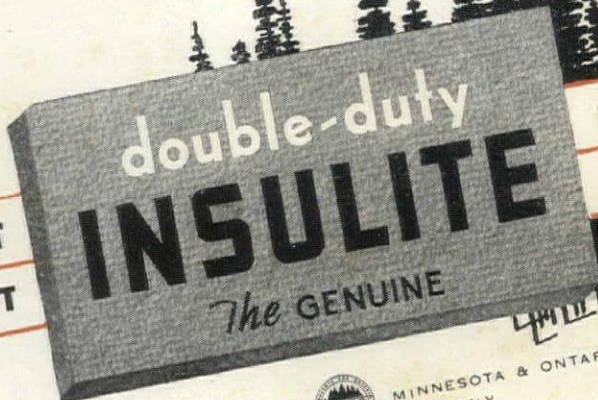
Insulite Sheathing builds a stronger weather-tight house. Insulite Lath provides a rigid plastering surface. The two together make a perfect "wall of protection." Each one *insulates* as it builds. Double usage from each material! That's double for the money to please and satisfy your clients.



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Double USAGE

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

**INSULATES AS IT
BUILDS AS IT**



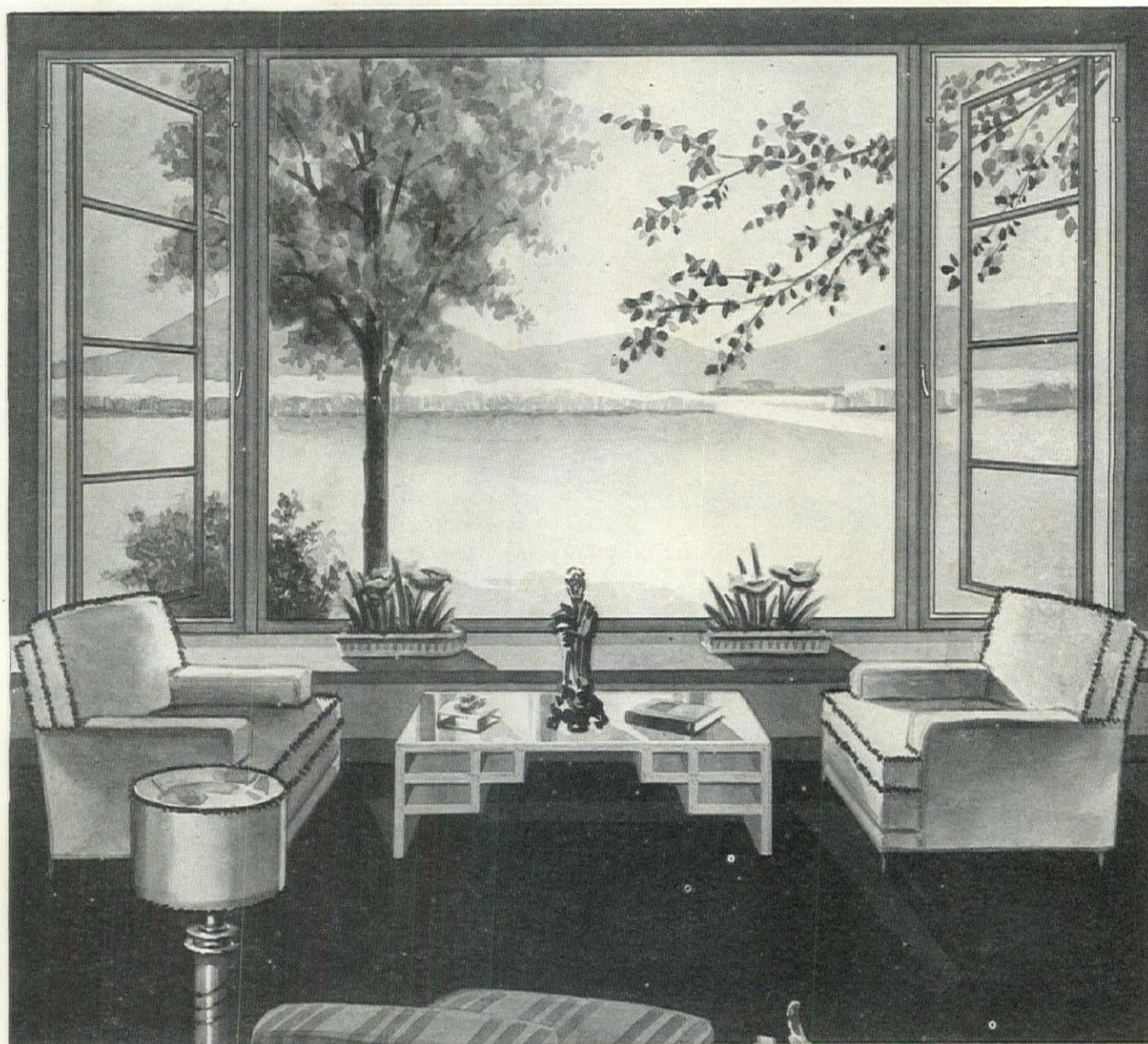
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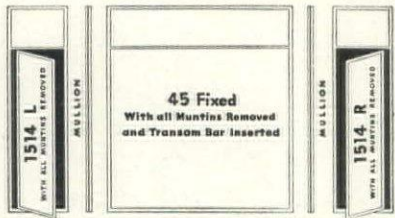
3 ADDITIONAL WAYS TO MAKE A PICTURE WINDOW from CECO Stock Casements!

There are many ways to combine Ceco casements. The three combinations shown below are five-lights high. A four-light-high combination is shown on the facing page. Here's how these windows are installed.

Picture Windows OF STEEL!

When we say that Picture Windows of Steel give you a better view, we mean that and more too. First, the trim lines of the steel framework increase the light area, so the view from the outside has less obstruction. Yes . . . more view gets in to you and, what is equally important, fresh air, too. That comes from controlled ventilation. We often put it this way: Picture Windows of Steel that breathe and are beautiful, too . . . that capture and control every stray breeze . . . that bring the outside fragrance into the home.

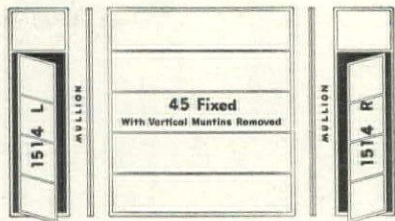
Here are other reasons why Picture Windows of Steel are preferred over all: They are made from easy-to-install standard Ceco casements. Gone are annoying delays in waiting for special framework. Because these windows always fit they are easy to operate . . . no sticking, warping, or swelling . . . no fitting, planing, or weatherstripping. And here is something you will like, too. The cost is lowest of all installed. So, specify Ceco Picture Windows of Steel . . . handsome and then some. Write for free literature.



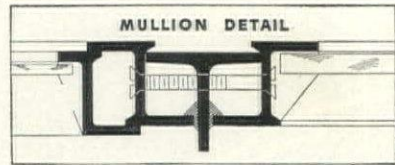
Remove all muntins and insert transom bar as illustrated. Combine windows with standard mullions.



Remove all muntins from Ceco stock casement 45-Fixed. Combine windows with standard mullions.



Remove vertical muntins from Ceco stock casement 45-Fixed. Combine windows with standard mullions.



Above is a detail drawing showing how the windows are combined by use of CECO Standard Mullions.

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See Ceco catalogs in Sweet's Architectural File or write for literature



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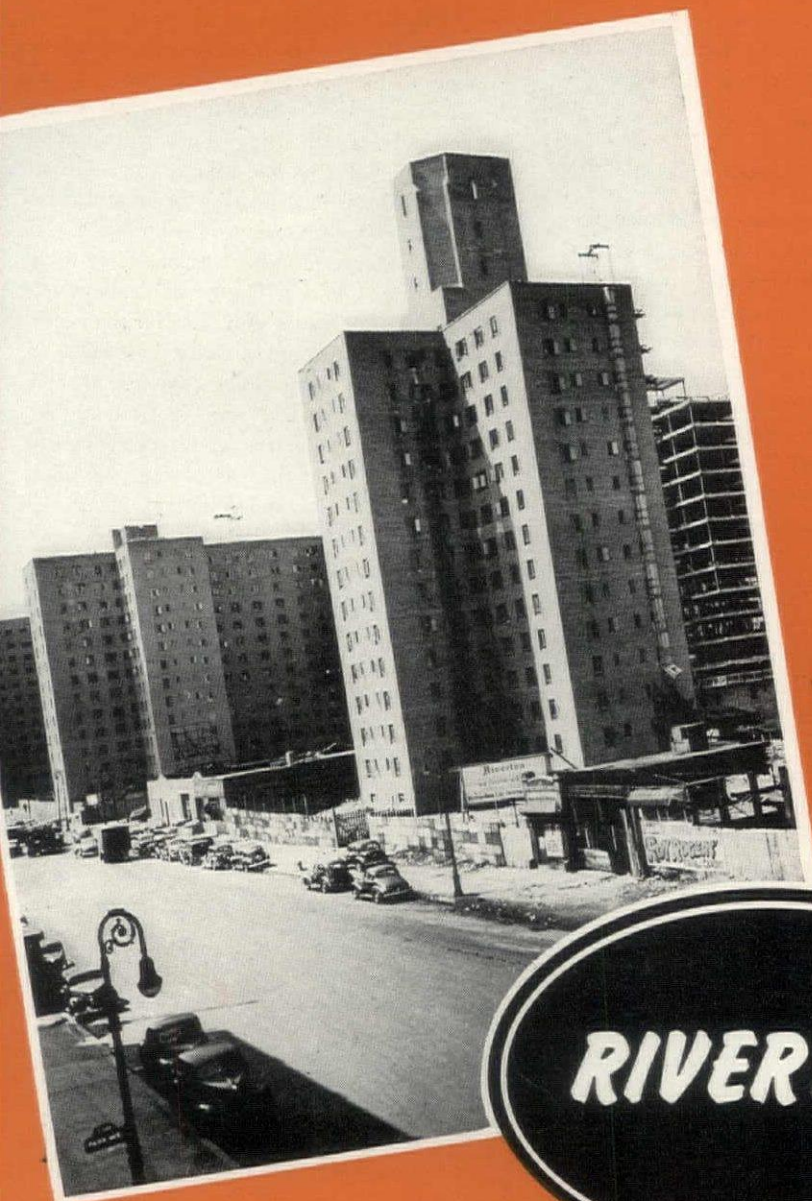
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LETTERS

IN MEMORIAM

Forum:

Howard's loss was a great shock to all of us—and his great charm, incisive mind and stimulating personality made that "us" include a very great many people.

Howard Myers did as much for the architectural profession as anyone in recent years. He was one of its greatest champions and his constructive criticisms and brilliant presentations stimulated it to its best efforts. His leadership in its progress towards new expressions and new ideas has had a major influence on the architecture of today.

Though you will certainly have a tougher job without him he has helped you all build up an organization that is able to carry forward forcefully the traditions that The Forum has established under Howard Myers' leadership.

JOHN W. ROOT, Architect
Holabird & Root

Chicago, Ill.

Forum:

... I am afraid there is little I can add to your splendid tribute. The world in general and the architectural profession in particular is the better because he lived. His talent and skills would have counted much in the perilous days ahead. Men of vision will be needed and he will be sorely missed.

DOUGLAS WILLIAM ORR, President
The American Institute of Architects
Washington, D. C.

Forum:

... His going leaves a great empty space at every gathering of our profession. We have lost one of our strongest and most constant advisers and our most steadfast friend.

Younger men will fill the gap, but they never will replace Howard. It can truly be said of him that every thing he touched in life he made better.

WALLACE K. HARRISON, Architect
Harrison & Abramovitz
New York, N. Y.

Forum:

Howard was a man of such proportions and such depth of wisdom that words—any words—sound a little trite in any description of his significance. Like everyone else, I was completely enchanted with his personality when I first met him. As I became better acquainted with him it became obvious to me, though he never used many words, that he was a man of profundity and impeccable integrity. The country has lost

one of its great leaders in the field of housing and planning.

... Personally I have one comfort, and that is that you will carry on in Howard's spirit.

BRYN J. HOVDE, President
New School for Social Research
New York, N. Y.

Forum:

... Howard Myers was one of the leaders of those in the architectural field who saw the need for a program of public housing to provide decent living quarters for low income American families.

He combined great gifts of vision and energy with unstinting determination to devote himself to the betterment of housing and living conditions in America. I am one of many, many who will miss him as a wise counselor, an energetic supporter, and a never failing friend.

NATHAN STRAUS, President
WMCA, Inc.
New York, N. Y.

Forum:

I know of no one who could give the courage and inspiration to go ahead in this very difficult field that Howard was able to give. His encouragement lifted you when you felt completely mired down by general apathy, by the complex problems facing the industry and by seemingly solid fronts of reactionary antagonism.

MRS. SAMUEL I. ROSENMAN
Chairman of the Board
National Committee on Housing, Inc.
New York, N. Y.

Forum:

His passing is a great loss to the publishing field and to all of us who valued him as a friend of courage, vision and great good humor.

FRANK W. CORTRIGHT
Executive Vice President
National Association of Home Builders
Washington, D. C.

Forum:

Howard Myers stimulated so much thinking and inspired so much action that it will never be possible for anyone accurately to measure his beneficial influence on the present or future generations.

It is pleasant, at this time, just to think of him as a friend. He was the most genuine friend a person could have.

FOSTER GUNNISON
Gunnison Homes
New Albany, Ind.

Forum:

... The tribute in the October issue is magnificent, and we can only add a heart-felt amen. Under the inspiration and influence of men like Howard, the c.q.—or civilization quotient—of a country is immeasurably enhanced.

M. LINCOLN SCHUSTER, Vice Pres.
Simon & Schuster
New York, N. Y.

Forum:

There are enough things to say about Howard to fill a volume, but in the brief space available it seems to me that you have said the essential in a very vivid way.

GEORGE HOWE, Architect
St. Louis, Mo.

Forum:

I think your piece on Howard is fine as far as it goes, but it leaves out one whole side of his interests and activities... the side that was concerned with public policy and politics in housing. Perhaps you don't realize what a unique role he filled in that field. There have always been architects and architectural editors who were sincerely interested in housing and tried to do something about it. On the whole, however, their political sense and taste for the necessary organizational activity has been in inverse ratio to the progressiveness of their viewpoint. Howard was just about the only person from the architectural world who, throughout the past decade or more, played an active and effective part in the housing world too. He kept in touch with the people in Washington, knew what the rows and issues were all about, organized the Architects' Advisory Committee of USHA-FPHA, sat through endless board meetings of NPHC, and in general contributed time, energy, editorial space, ideas, and responsible sympathetic leadership to the housing movement. Architects often complain that they have little say in the shaping or administration of housing policy. But they are much worse off in that respect today than they were when Howard was alive.

CATHERINE BAUER
Cambridge, Mass.

Forum:

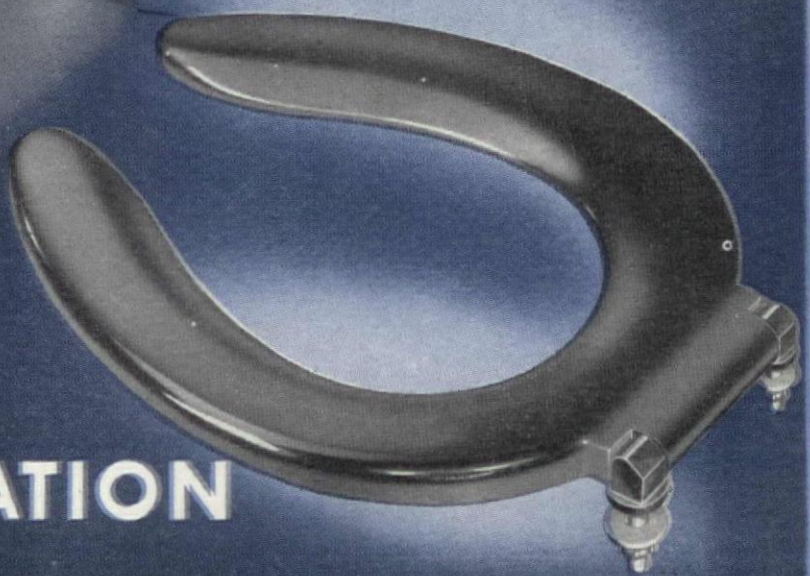
Your understanding of Howard Myers as a personality, a citizen, and a leader who moved quietly through the profession encouraging, reassuring, and guiding the latent talents of the young and old without

(Continued on page 24)

**Wherever
You Expect the Finest**



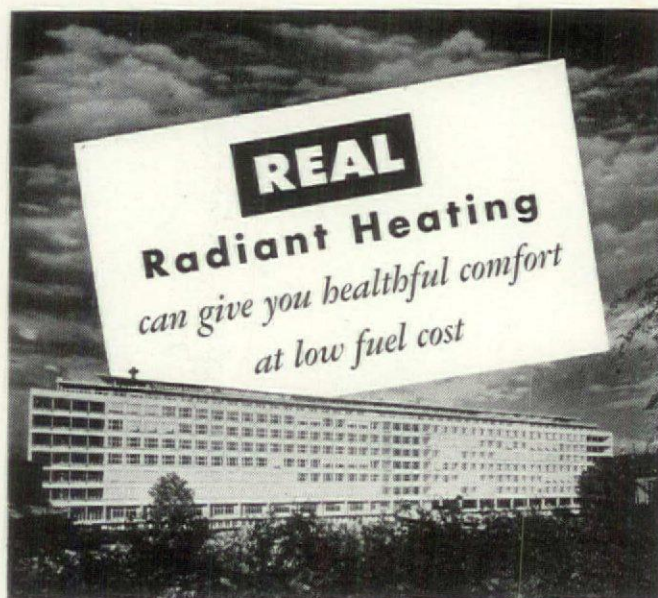
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Illustrated at right: Style 523-B Beneke Plastix Seat

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thought of his own personal glory but to the end result, has my compliments.

It was my pleasure and good fortune to occasionally enjoy his companionship.

The loss is not only yours and mine but everyone's—those who knew him—those who did not.

MAX ABRAMOVITZ, Architect
Harrison & Abramovitz

New York, N. Y.

Forum:

I was very much moved by the tribute to Howard Myers. I think that it is a magnificent testimonial, admirably deserved and fittingly presented. In a full and rich resume highlighting his distinguished career, you have conveyed for posterity the quintessence of his generous spirit.

The memorial that you have conceived to this great, lovable figure, is exactly the kind of record that he would have liked to leave. All of us who knew and cherished Howard Myers owe you a debt of gratitude.

BENJAMIN SONNENBERG

New York, N. Y.

Forum:

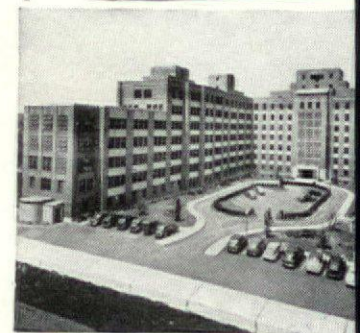
Vicky and I have been deeply touched by your tribute to Howard Myers. It is beautifully written as only one could write who knew his greatness of spirit in daily companionship. We were particularly touched by the part which brought out his genius for friendship. In the hearts of everyone of us who received the great gift of his friendship, his spirit and integrity will always be an inspiration. He set a standard which we shall try to work toward as long as we practice.

You expressed so beautifully how he made each one of us feel "somebody" because he thought we were, and also how he made us "feel at home in the world of ideas," but even beyond that, his boundless friendship somehow spread through us all. A warm, happy spark attracted his friends to each other because his electric current ran through us all. We have felt again and again a comradeship, a simple acceptance and confidence in understanding with otherwise strangers, just because Howard is our mutual friend. I said "is" because we can't realize he has gone and also because this current among us all is still very strong and will endure. We are all different and finer people for having known him.

SAMUEL E. HOMSEY, Architect
Wilmington, Del.

(Continued on page 28)

Hospital Saves on Cost of Heating



Delaware Hospital, Wilmington, Delaware. Heated by 6-zone Webster Moderator System of Steam Heating. Completed in 1942. No. 1, center, occupied in 1940. Architects: Massena & duPont, Wilmington, Delaware. General Engineers: Jaros, Baum & Bolles, New York. General Contractor: Turner Construction Co., Philadelphia. Heating Contractor: Benjamin F. Shaw Co., Wilmington.

When a hospital spends in the neighborhood of \$30,000 and more for fuel oil, that's big business. It calls for a "controllable" steam heating system and careful plant operation to effect maximum economies.

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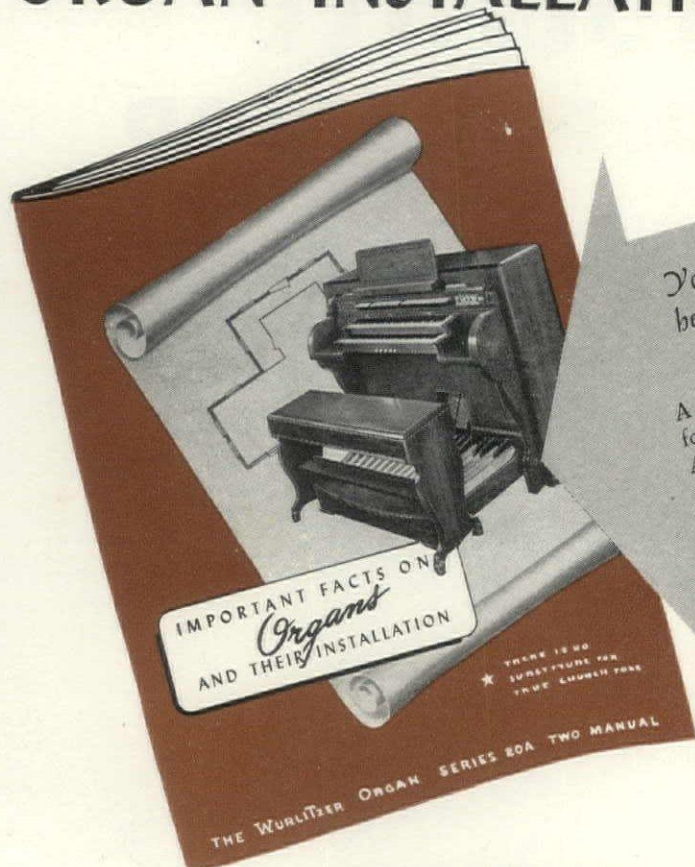
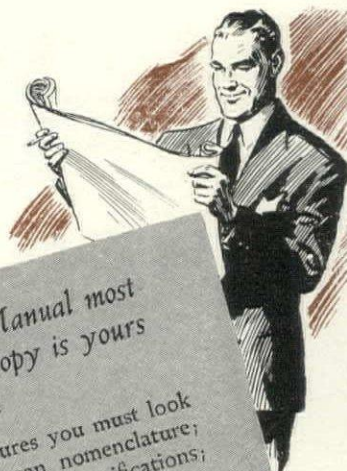
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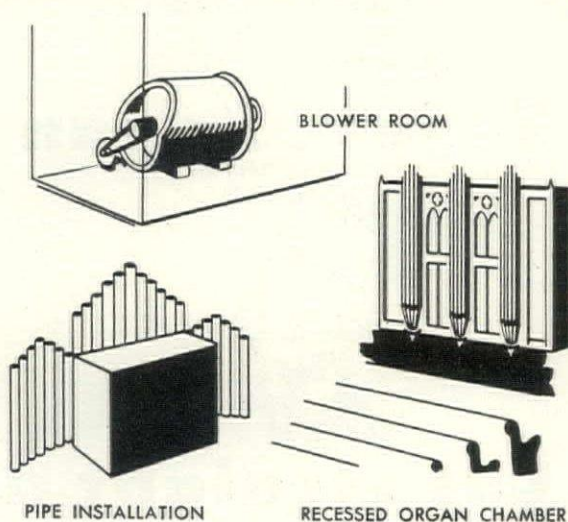
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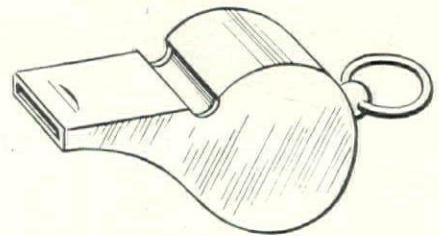
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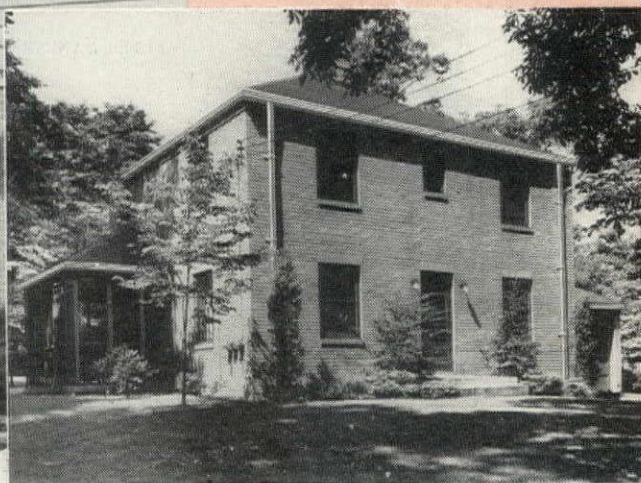
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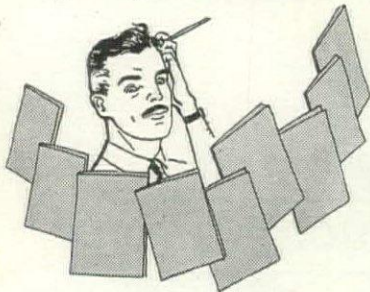
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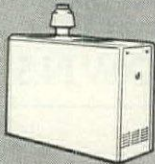
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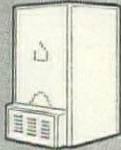
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Weir-Meyer Furnaces & Air Conditioners for GAS, OIL, COAL
Offices: Peoria 2, Ill. • Factories: Peoria 2, Ill. and Peru, Ill.



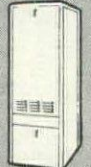
Gas-fired Hi-boy



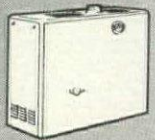
Gas-fired Air Conditioner



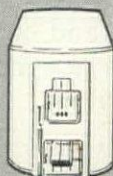
Gas-fired Gravity



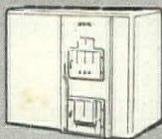
Oil-fired Hi-boy



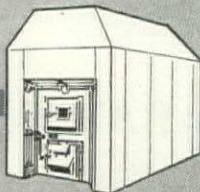
Oil-fired Air Conditioner



Weir Steel furnace



Coal-fired Air Conditioner



Industrial & commercial
heating equipment



Forum:

... I wish I could adequately thank the person who wrote this appreciation of Howard for saying exactly what I felt about him in a much better way than I myself could have found words for.

It will be a long time before another Howard Myers comes along and as far as I am concerned, it will be never.

ROGER ALLEN, Architect
Grand Rapids, Mich.

Forum:

... My own thoughts are merely that a vast void exists and that a very dear friend is gone.

WALTER SANDERS, Architect
New York, N. Y.

Forum:

... I almost feel as though I had written it.

WILLIAM J. LEVITT, President
Levitt & Sons, Inc.
Manhasset, N. Y.

Forum:

My closest contact with him occurred during the time that I occupied public office. He was truly a tower of strength; never had an axe to grind other than a good idea. From my experience of the man I am fearful that none of us could write the thoughts that we feel his memory is entitled to.

PHILIP M. KLUTZNICK
Chicago, Ill.

Forum:

THE ART OF ARCHITECTURE REBORN HAS LOST A POWERFUL DEFENDER. THE FORUM MUST KEEP ALIVE HIS GREAT LEGACY.

ERIC MENDELSON, Architect
San Francisco, Calif.

Forum:

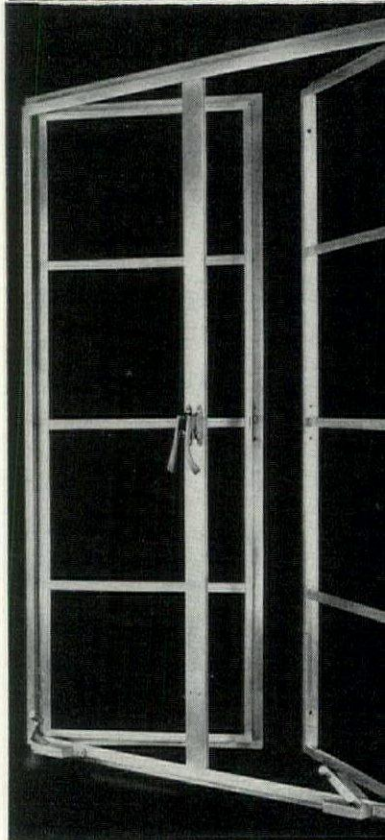
... We owe as much as anybody to Howard's kindness and support. Many of our opportunities have been made possible by what Howard and The FORUM did for us in our earliest days.

In my opinion, he has done more than any other man to make modern architecture accepted. Thousands of jobs could not have gone ahead if he had not created the atmosphere in which they could prosper.

The fact that he was generally loved by a profession not noted for a charitable viewpoint, is all the more remarkable when measured against his unquestioned effec-

(Continued on page 32)

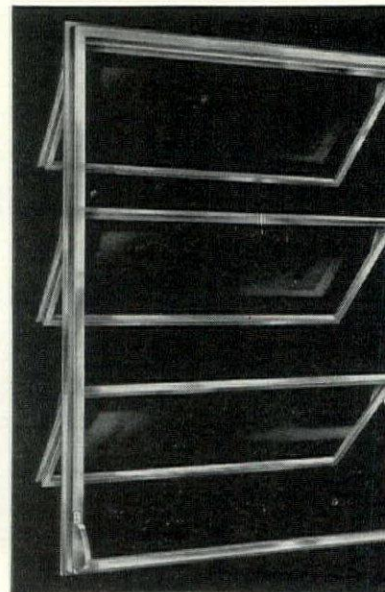
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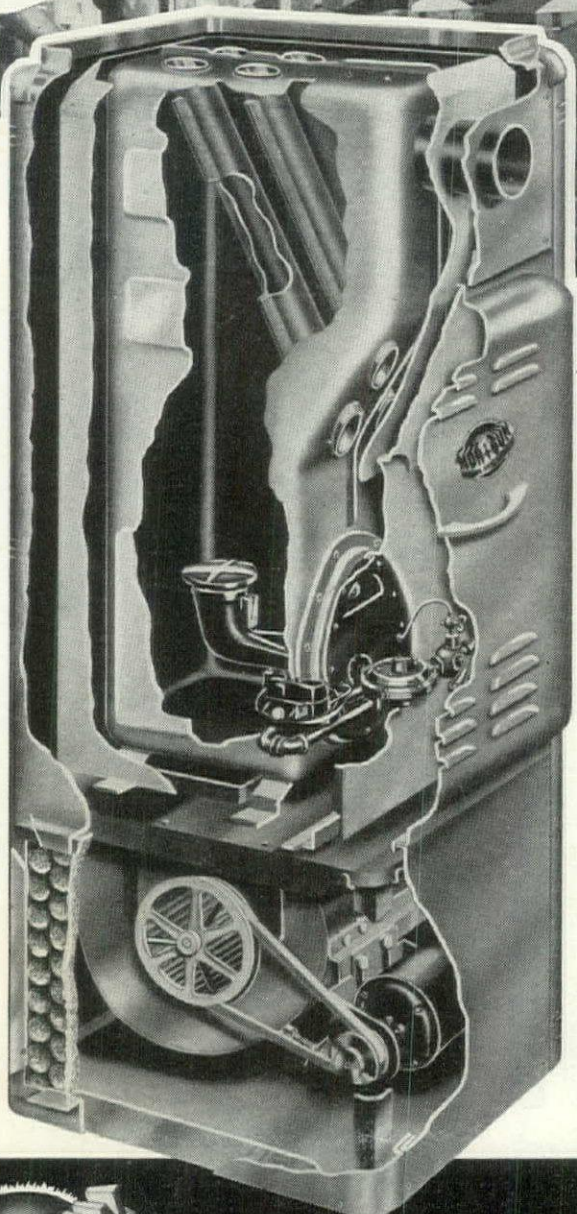
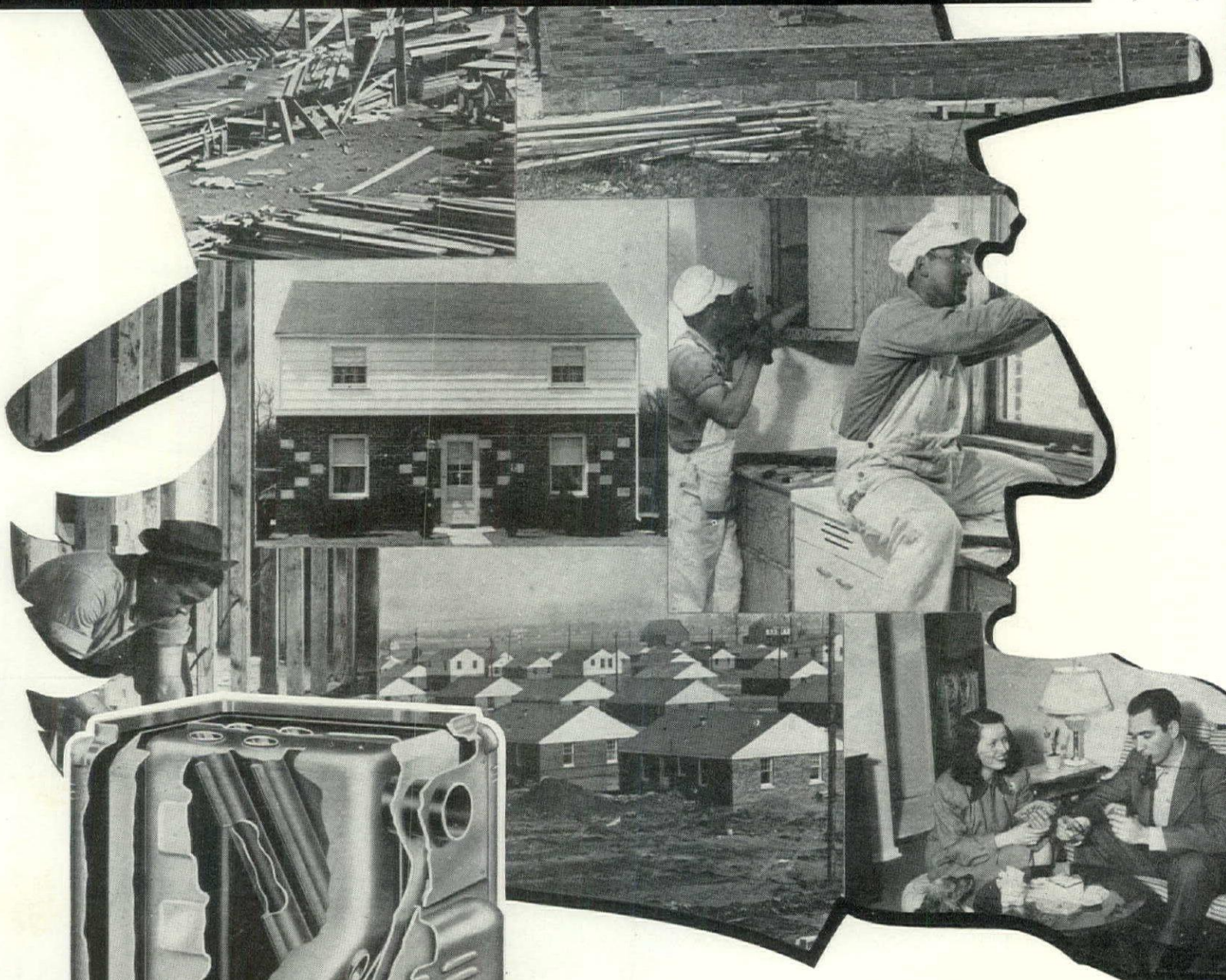


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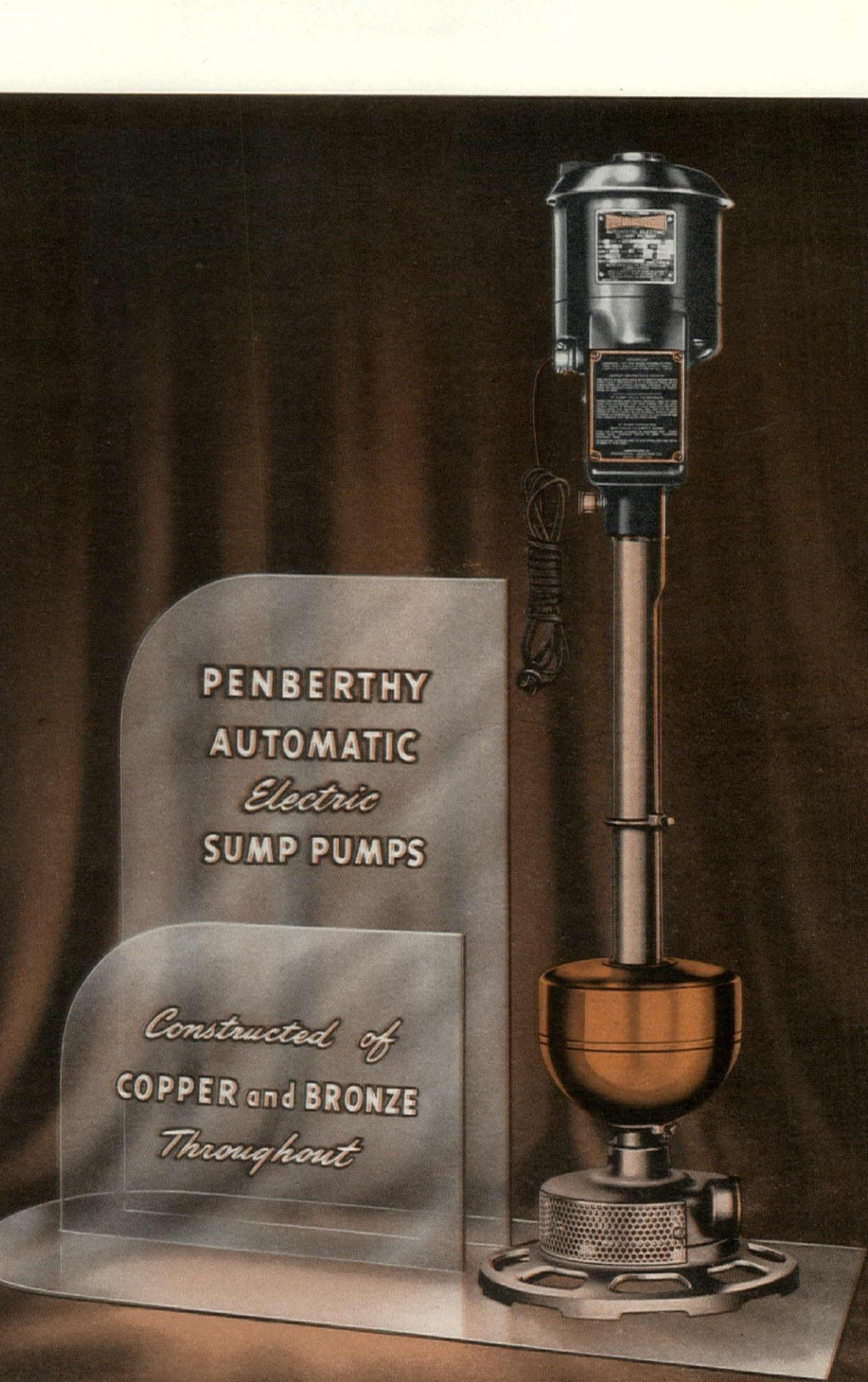
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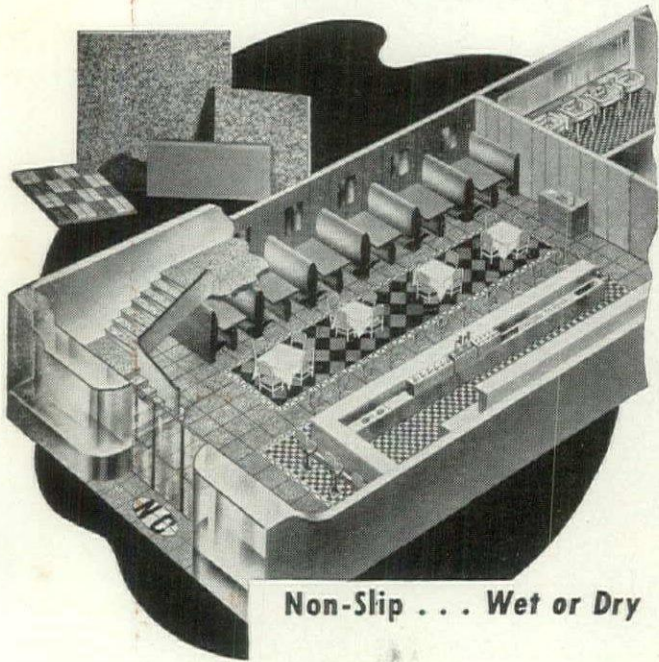
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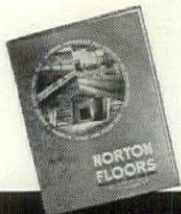
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NORTON

tiveness as a "missionary." I think that the face of America has measurably benefited by his having lived.

LAWRENCE B. PERKINS, Architect
Perkins & Will

Chicago, Ill.

Forum:

. . . To sum up his gifts to all of us, and for each of us to assess our personal debt to him will take a long, long time. I keep remembering and re-evaluating the times we were together and realize, for the first time, that the influence of a good man will never stop.

Without sentimentality, the best we can all do is ask ourselves in times of difficult decisions, where would he expect to find us?

RICHARD M. BENNETT, Architect
Loebl, Schlossman & Bennett

Chicago, Ill.

Forum:

. . . His memory will always be one of gayety, happiness and warm friendship. Life is not the same without him, and never will be.

SAM MARX, Architect
Marx, Flint & Schonne

Chicago, Ill.

Forum:

. . . Knowing and understanding Howard became part of one's architectural credo, and for that I am personally grateful.

ERNEST J. KUMP, Architect
Ernest J. Kump, Co.

San Francisco, Calif.

Forum:

. . . He was just a prince among men. As for his career, I firmly believe that he, more than any individual, has done more for architecture and for architects than any other person in this century. He was a power behind the scenes and a power only for good. Our world would be a lot better off today if there were more men made of the same stuff as Howard Myers. You and I are going to miss him.

ROBERT ALLAN JACOBS, Architect
Kahn & Jacobs

New York, N. Y.

Forum:

He was an outstanding figure in his field. Everyone who knew him will regret his passing.

J. EDWARD DAVISON
Bloomingdale's

New York, N. Y.

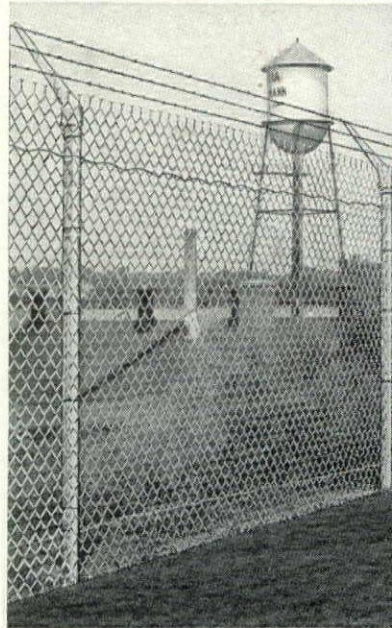
(Continued on page 36)

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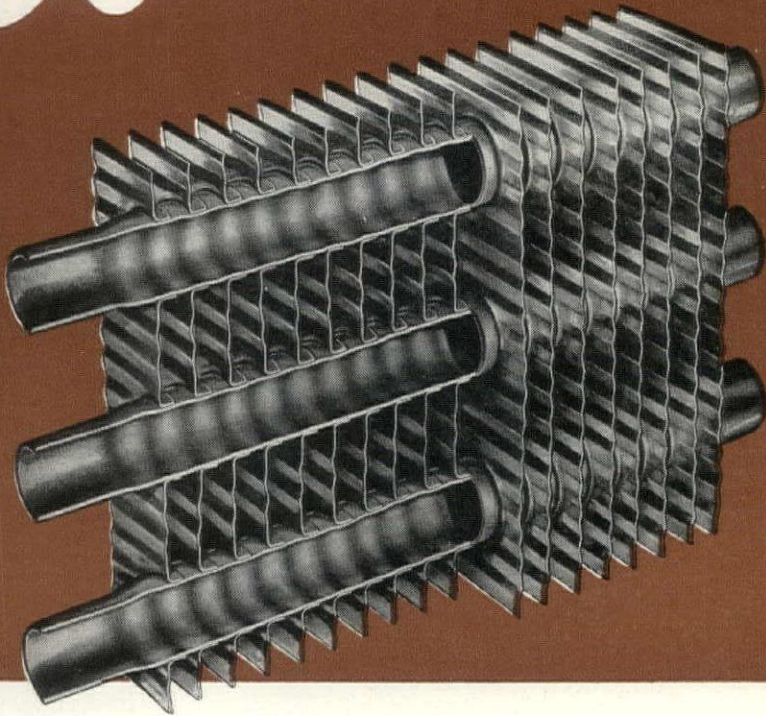
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- 2 CONSTANCY OF CONTACT
- 3 QUALITY OF CONTACT



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assure high *Quality of Contact* for maximum heat transfer to the secondary surfaces.

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Announcement

to those who sell, buy, specify or install
Douglas Fir Doors



EFFECTIVE August 15, 1947, all doors manufactured by member factories of the Fir Door Institute were placed under official F.D.I. inspection — to assure the highest possible degree of product quality and uniformity.

At the same time, revised industry standards were adopted by Institute members, those changes including new dimension specifications.

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1/8-inch less than net book height;
3/16-inch less than net book width.

These new sizes permit pre-fit stock doors to be installed without sawing, trimming, or planing — *saving on-the-job time and reducing costs.*

The official F.D.I. seal and grade-mark will be placed on every door coming under the Fir Door Institute inspection service — and *only* on officially inspected doors. Grades will continue to be indicated by the letters A, B, C and MR; and such grades will be maintained in strict accordance with the industry standard.

The official Fir Door Institute seal — reproduced in the heading of this advertisement — is a symbol of fine craftsmanship now backed for the first time by a rigid inspection. Specify Douglas fir doors by this "grade trademark" — your assurance of controlled quality and product uniformity.



FIR DOOR INSTITUTE

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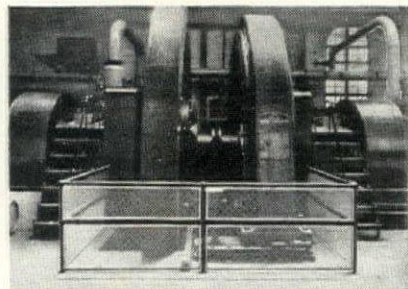
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plus light and air choose
WHEELING EXPANDED METAL**

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downstairs . .
.. all around
the house . .

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Product of a Unit of Union Carbide and Carbon Corporation.

Forum:

To me Howard Myers was an architect-builder extraordinary. He did much to make the world recognize the talents of men that might have remained hidden had it not been for him. The American scene was rendered more beautiful, more practical and more efficient as a result.

G. M. LOEB
E. F. Hutton & Co.

New York, N. Y.

Forum:

The news of Howard's death was a jolt. It is sort of like a tree suddenly being removed from a town square. And it is even more poignant when the fact that we all continue in the same pace on the same things is realized.

ROGER STURTEVANT, Photographer
San Francisco, Calif.

Forum:

Howard Myers was a great comforter and friend to all that he suspected capable of contributing towards higher standards of design. One could open one's heart and gull to him without fear of misunderstanding and his passing leaves a melancholy void in my life.

ANTONIN RAYMOND, Architect
New York, N. Y.

Forum:

Howard's death is a great loss to everyone. He was the unseen, unheard benefactor of many who are trying to uphold the standards and inspirational qualities of our profession. Howard is sure going to be missed.

. . . The many architects I have spoken to hope that The FORUM will carry on where Howard left off.

LOUIS I. KAHN, Architect
Philadelphia, Pa.

Forum:

. . . We will miss him as much as you. His wise, urbane and kindly influence in popularizing good architecture has been tremendous. I hope The FORUM will preserve that attitude.

TALBOT WEGG, Architect
Seattle, Wash.

Forum:

My own grief is so poignant that I am sure that you, who were much closer to him and who had the rare opportunity of being with him daily, must feel it as an overwhelming loss.

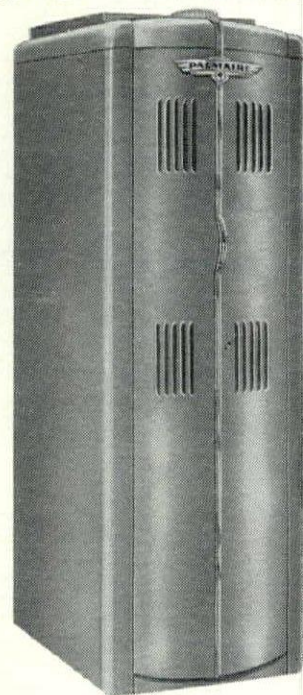
Even in the shadow of death, his dynamic personality and broad vision were like a

(Continued on page 40)

**Home-owners
CAN SAVE**
on floor space

when they
install a . . .

Palmaire
FORCED AIR
GAS FURNACE

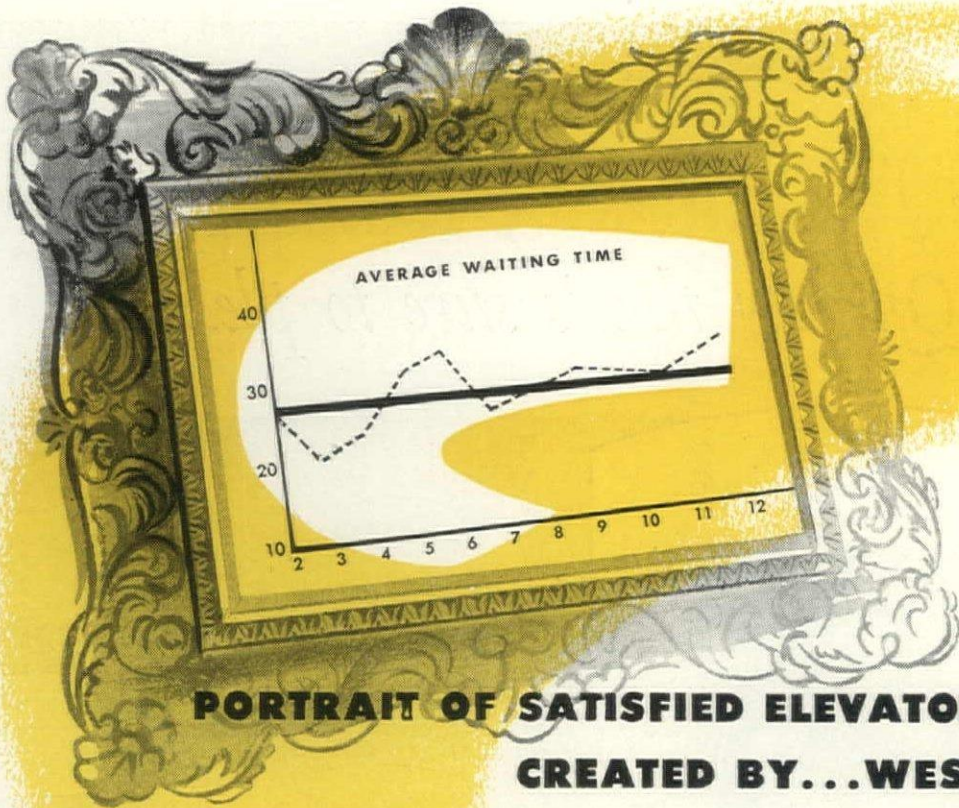


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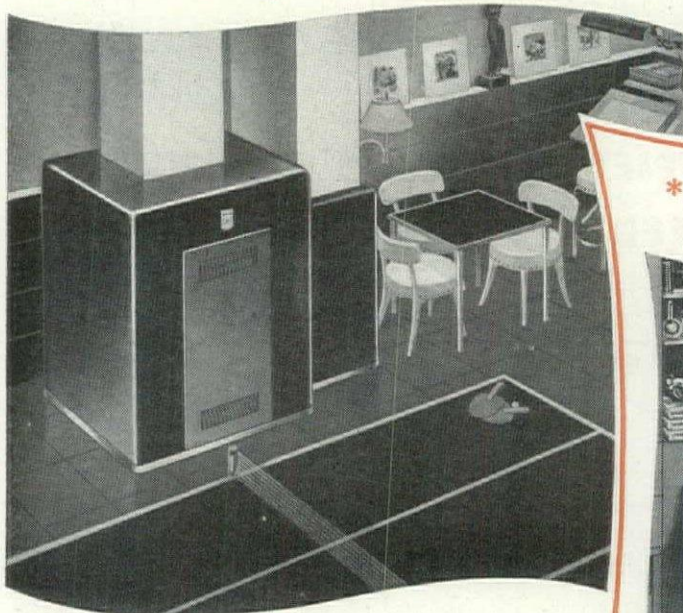
Westinghouse

ELEVATOR  DIVISION

J-98505

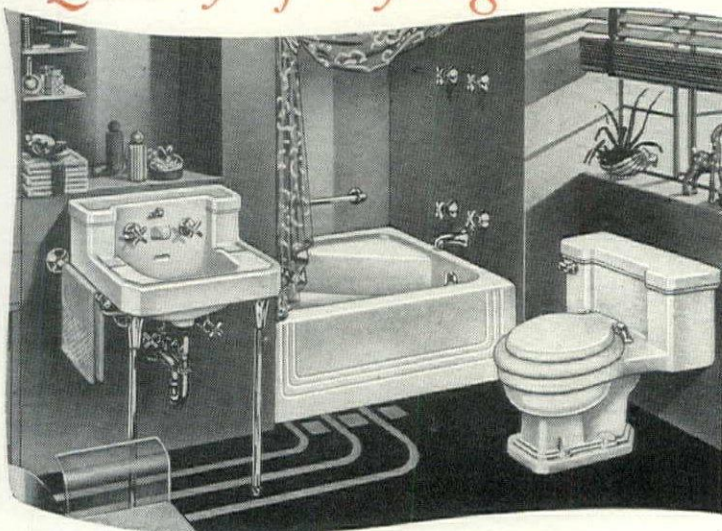
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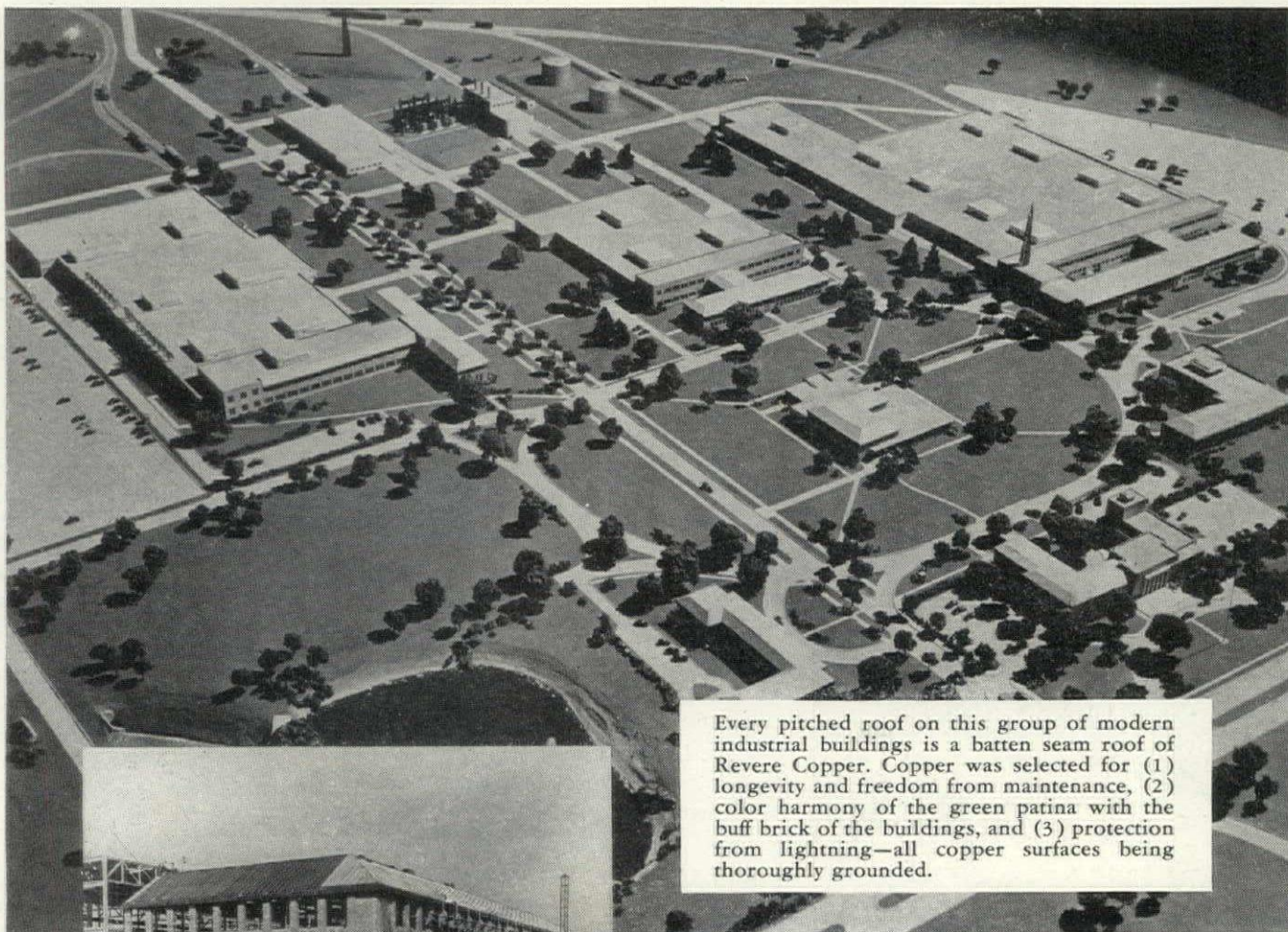
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*Revere's manual of sheet copper construction, "Research Solves Problems of Stress Failures in Sheet Copper Construction," contains 96 pages of important new facts which enable you to design or install copper roofs, gutter linings and flashings that give *extra* years of service. It has been widely distributed to architects and sheet metal contractors and should be in your office files. In all matters of sheet copper construction, it will pay to turn to this manual first.

Revere materials are available from leading distributors throughout the United States. A Revere Technical Advisor, Architectural, will always be glad to consult with you without obligation.

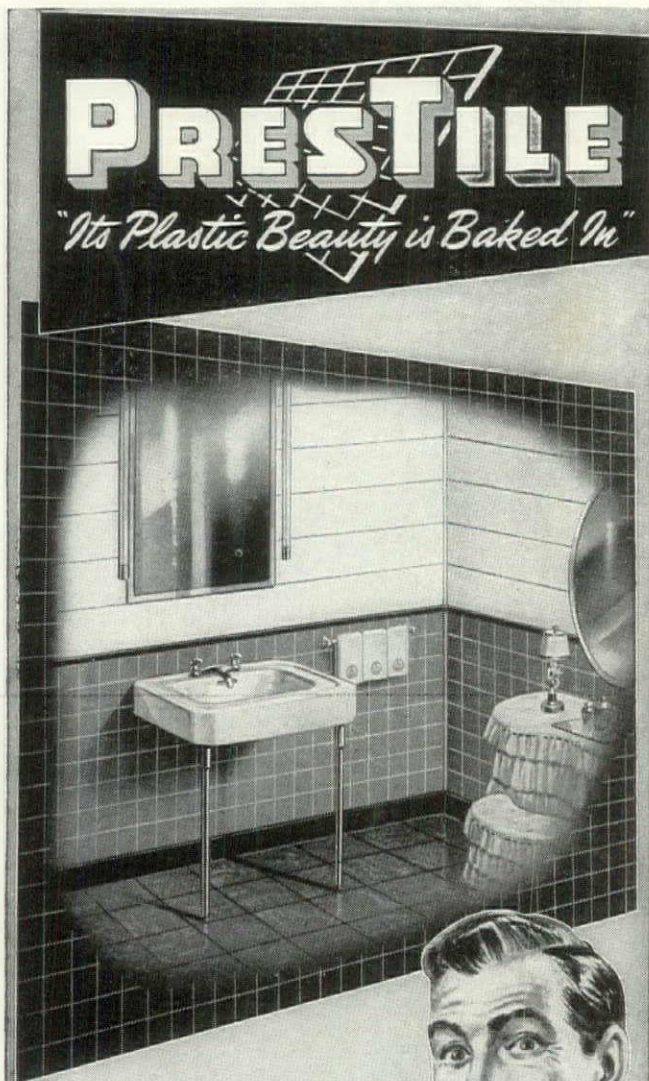
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breath of fresh air and will always be an inspiration to me. My associate, Raymond Schwab, joins with me in this expression of condolence. I am sure that his memory will be a life-long inspiration to each of you.

JAMES F. EPPENSTEIN, Architect
Chicago, Ill.

Forum:

It has been said that he was a great editor, a builder of ideas, a leader in the building field and a very human being—and that's why I will remember him—he was a very human being.

DON HATCH, Architect
New York, N. Y.

Forum:

... It will be hard to fill his place as a friend of architects.

THEODORE C. BERNARDI, Architect
Wurster, Bernardi & Emmons
San Francisco, Calif.

Forum:

... We have all lost a great friend.

HENRY L. BLATNER, Architect
Albany, N. Y.

Forum:

... He was a great guy.

GEORGE FRED KECK, Architect
Chicago, Ill.

AND LIFE GOES ON

Forum:

The seven houses published in your September issue are the finest examples of contemporary architecture I have had the pleasure of seeing recently. They are certainly the answer to the "chicken-coop" critics.

I could almost have predicted the results from a list of the architects. Another proof that "modern" is not a "style" to be copied by a draughtsman.

The interiors are especially attractive and worthy of the attention of your correspondent Fred Shallow, whose criticism is too often deserved.

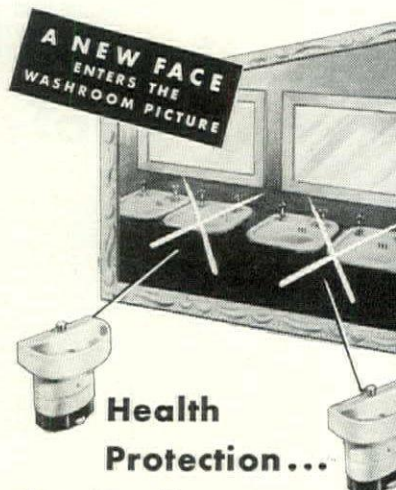
Previously you've published many houses that deserved the epithet "cow shed" but more like these will certainly be a boost for "our" architecture.

JOHN GRASON STEFFEY
Hagerstown, Md.

Forum:

In the August 1947 issue of The Architectural FORUM on page 69 there is reproduced an approved F.H.A. form of

(Continued on page 44)



Health Protection... Greater Economy and Convenience

The washroom picture throughout the country is rapidly being influenced by an unusually practical and sanitary Washfountain—THE BRADLEY DUO.

All types of public buildings, institutions, schools, stores, and industrial plants are installing DUO-Washfountains to cut washroom maintenance



Typical sanitary DUO installation—safeguards health, reduces maintenance, wins goodwill.

costs, improves sanitary conditions, convenient and reduces hot and cold water consumption.

One DUO takes the place of Conventional Washbasins

One DUO Washfountain serves

people simultaneously with individual sprays of clean, running water. Tiresome, dripping faucets are eliminated by automatic foot-control which safeguards hands from contact with washbowl and faucet contacts. Installation and maintenance expenses reduced to a minimum since one easily cleaned DUO sprayhead replaces faucets, and piping and plumbing connections are cut in half. Learn more about the sanitary, sturdy, economical DUO. Write for latest illustrated DUO Washfountain Bulletin No. 464. BRADLEY WASHFOUNTAIN CO. 2235 W. Michigan Street, Milwaukee 1, Wis.

Bradleys are Nationally Distributed Through Plumbing Wholesalers.

BRADLEY Duo Washfountain

THERE'S A NEW

Corner

ON THE MARKET



Now you can free your doorways of **BULKITIS** in the "door closer corner!"
NEW YALE COMPACT DOOR CLOSER has been voted the world's most beautiful closer

You've always hated the door closer corner — for there has never been an attractive door closer. They've all had *bulkitis* — which means too big, too bulgy, too clumsy — ugly!

Now comes the Yale Compact Door Closer — the one that architects from coast to coast have voted the world's most beautiful door closer. A new operating structure — rotary piston checking — makes possible an equally powerful, yet 36% smaller door closer — without bulgy "hips". Closing is controlled over the full closing swing,

two-speed adjustment at the latch.

It's a door closer to make any door proud. Brackets, too, are handsome. Priced no higher than ordinary closers with *bulkitis* — it is your answer to the door closer problem.

FREE: Data Sheets and 4-Page Folder illustrating simple operating method, leakproof feature, famous Yale workmanship, "hold-open" device, etc. "Quality Checking Chart" proves Yale Compact Door Closer leads all other makes on 17 quality points. Mail coupon now.



More Beauty . . . Smaller Size
 Smoother Action . . . Same Price

TRADE **YALE** MARK

Compact Door Closer

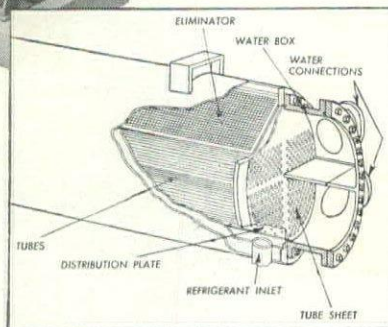
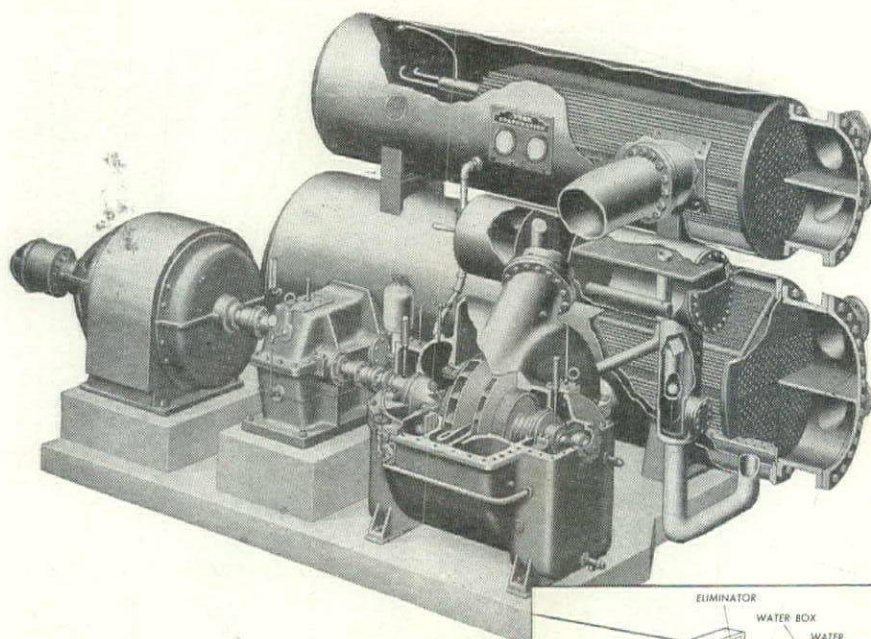
THE YALE & TOWNE MANUFACTURING COMPANY
 Stamford, Connecticut

Please Send Me Free 4-Page Folder and Data Sheets on
 Yale Compact Door Closer.

Name

Company

Address



For High Efficiency and easy maintenance...the YORK TURBO COMPRESSOR SYSTEM gives you "TROUGH TYPE" Cooler

York's famous "trough" cooler is constructed of non-ferrous tubes and tube sheets in a double shell of fusion-welded steel plate.

It's this inner shell or "trough" that makes all the difference, making the entire compressor system readily accessible for operation and maintenance. Tubes are submerged in a refrigerant bath. The open top of the "trough" is covered with a copper eliminator through which suction gas passes into the annular space between outer shell and tub, to be drawn off at the bottom for return to the compressor.

In providing this full-flooding effect,

high heat transfer is secured without the use of a liquid circulating pump. Liberal passages for suction gas assure minimum pressure drops, low gas velocities and hence, minimum burden on the compressor. Bottom suction connection permits compressor location virtually at floor level. Complete accessibility and easy maintenance result as well as a low center of gravity for the complete system.

The "trough" cooler, and many other exclusive design features of the York Turbo Compressor, will reward your careful study. May we send you the whole story?

York Corporation, York, Penna.

For Competent, Authoritative Assistance...

QUICK!

**CALL ON THE FACTORY-TRAINED
EXPERIENCED YORK ENGINEER
IN YOUR NEIGHBORHOOD**

York-trained, seasoned specialists in refrigeration and air conditioning, located at district headquarters throughout the United States are assisting architects, consultants and contractors . . . in planning, purchasing, installing and maintenance.

In the North Atlantic area for example, District Manager Christensen, Headquarters, New York, and his staff of twenty one sales engineers devote their full time to the problem of York customers in this region.



A. CHRISTENSEN
District Manager

Assisted by:

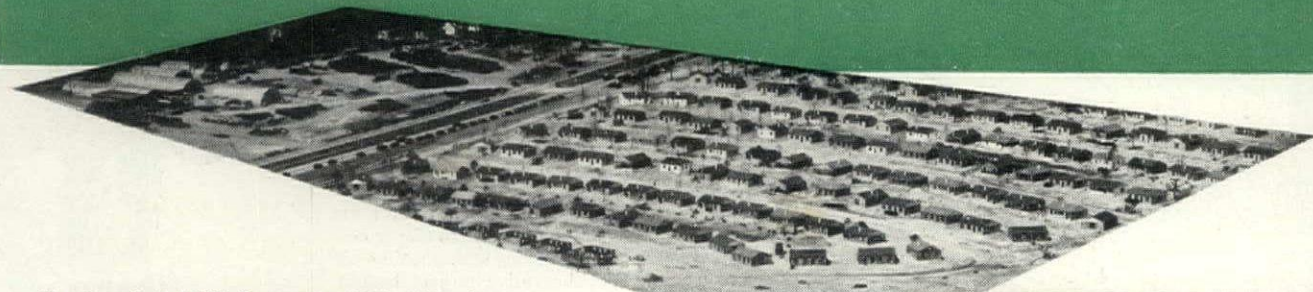
R. K. Serfass,	J. W. Floreth
Sales Manager	C. P. Foley
W. Allen	W. S. Galazzi
A. N. Barnes	L. J. Jacobson
H. W. Coon	J. Krsnak
A. J. Cordrey	W. S. Levings
L. S. Davis	E. Lilygren
(Mgr. Boston)	P. L. Sackett
W. G. Davis	E. Spencer
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YORK Refrigeration and Air Conditioning



HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

BYRNE'S BIG HARUNDALE PROJECT FEATURES REYNOLDS *Lifetime* ALUMINUM CLAPBOARD SIDING



Most of 1,190 homes will also have Reynolds Lifetime Aluminum Weatherboard on Gable Ends . . . some have Reynolds Lifetime Aluminum Shingles!

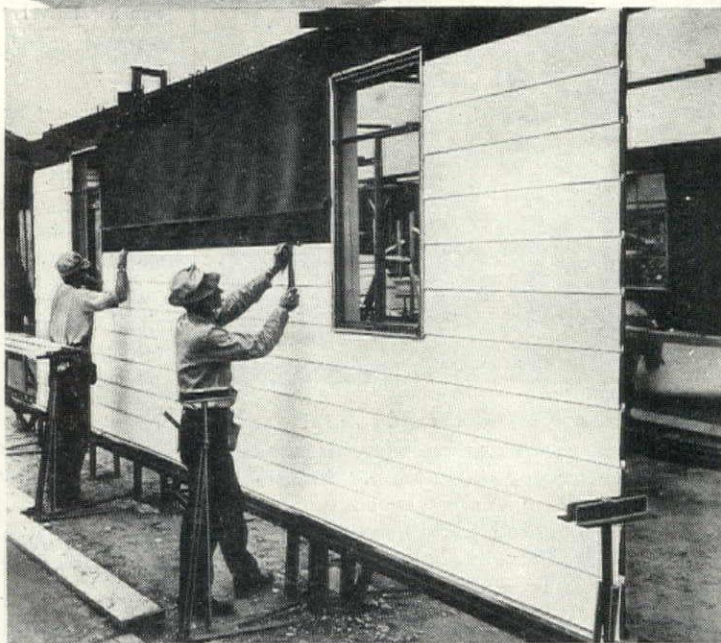
Byrne is a byword in modern on-the-site mass fabrication. And the Byrne Organization has proved "on the site" the advantages of Reynolds Lifetime Aluminum Clapboard Siding...advantages both in application and in customer satisfaction.

Byrne has found that aluminum clapboard lends itself particularly to shop assembly of entire wall sections. And though other siding materials are represented in finished houses, the houses with aluminum clapboard outsell them all. So with about half of the 1190 houses completed as this is written, the plan is to build practically all the rest with Reynolds Lifetime Aluminum Clapboard Siding.

And that's not all! Most of the Harundale houses now built have Reynolds Lifetime Aluminum Weatherboard on the gable ends...all those to come will have it. Some have also been built with Reynolds Lifetime Aluminum Shingles (at an extra charge)...and the "SOLD" signs are up on these!

Whether you're designing, building or selling... you can do it better with Reynolds Lifetime Aluminum. See Sweet's Architectural and Builders Files... or write for A.I.A. file brochures, Reynolds Metals Co., Building Products Division, Louisville 1, Ky.

PRICES AGAIN REDUCED . . . through increased demand, improved production. Remember, the base price of aluminum is 30% below prewar.



Assembling the wall panels on conveyor lines in the shop. This is Reynolds "Texturized" clapboard finish, prime-coated white at factory. Byrne also uses Reynolds Lifetime Aluminum Casement Windows.



Loading complete roof on special truck. Reynolds Lifetime Aluminum Weatherboard Siding on gable end. Louvre also of Reynolds Aluminum.



Porch being applied to the completed house, showing Reynolds Lifetime Aluminum Clapboard Siding with its final (second) coat of paint.

IF YOU SEE RUST
YOU KNOW IT'S NOT
ALUMINUM

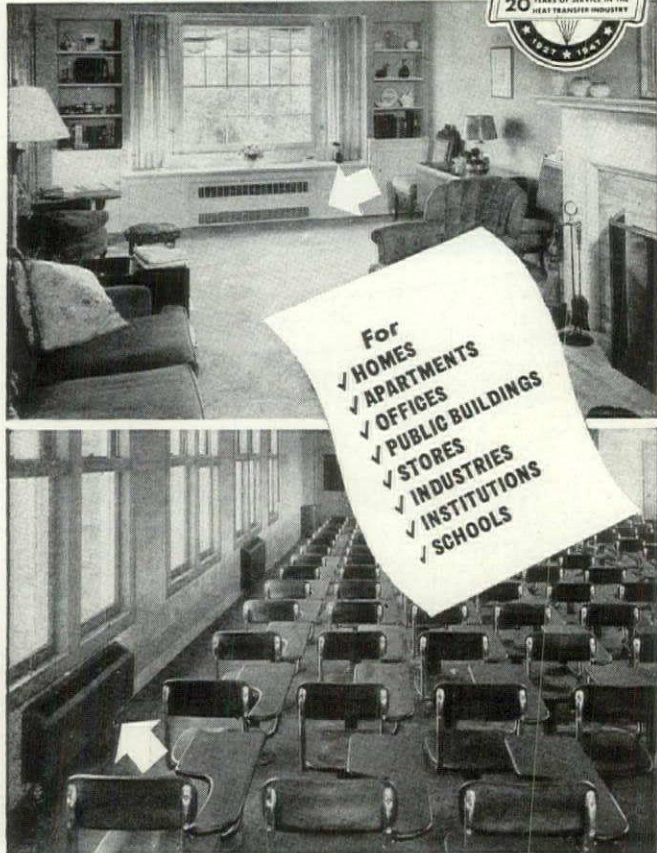


REYNOLDS
Lifetime ALUMINUM
BUILDING PRODUCTS

REYNOLDS *Lifetime* ALUMINUM BUILDING PRODUCTS

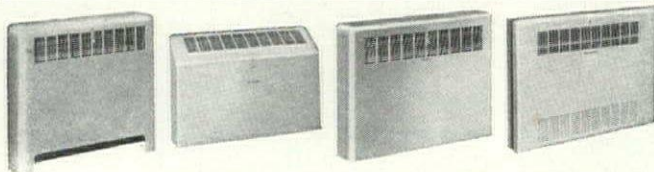
SHINGLES • CLAPBOARD SIDING • SHEET ROOFING & SIDING • WINDOWS • CEILING PANEL • GARAGE DOORS • REFLECTIVE INSULATION • UTILITY BLDGS. • ROOFING ACCESSORIES

**For Every Application
"STREAMAIRE" CONVECTORS
by YOUNG**



For
 ✓ HOMES
 ✓ APARTMENTS
 ✓ OFFICES
 ✓ PUBLIC BUILDINGS
 ✓ STORES
 ✓ INDUSTRIES
 ✓ INSTITUTIONS
 ✓ SCHOOLS

• An increasing number of architects and contractors are specifying "Streamaire" Convectors because they give extras that spell heating satisfaction. "Streamaire" Units are highly efficient and truly economical. They respond instantly to modern thermostatic controls . . . are engineered to circulate warm air by controlled convection, to level off temperature peaks by natural radiation. "Streamaire" Convectors are easy to specify, easy to install because they're standardized in four types, packaged individually to prevent damage. To aid identification, cartons are marked with model number and size. "Streamaire" Cabinets enhance the beauty of modern interiors. Fronts are removable for cleaning. Write today.



Free Standing, Type C, no wall recesses required. Wall Hung, Type WS, sloping top, no blocking of air. Wall Hung, Type W, easy to clean, one-piece panel. Partially Recessed, Type S, easy to install in recesses.

**YOUNG
HEAT TRANSFER
PRODUCTS**



YOUNG RADIATOR CO.
Dept. 157-L Racine, Wis., U. S. A.

AUTOMOTIVE AND INDUSTRIAL PRODUCTS

Gas, gasoline, Diesel engine cooling, radiators • Jacket water coolers • Heat exchangers • Intercoolers • Condensers • Evaporating coolers • Oil coolers • Gas coolers • Superheating 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 •

application for mortgage insurance. This form shows a total estimated requirement for the construction of a project of \$706,429. It also shows in estimate of annual operating costs an estimated assessed value of \$242,000. The disparity between the estimated cost and the estimated assessed value would seem to call for an explanation.

JOHN A. CAHILL, President
City and Suburban Homes Co.

New York 17, N. Y.

The assessed valuation of new residential buildings for tax purposes is usually related to actual land and construction costs (exclusive of carrying and financial charges and legal and organizational expenses) which totaled \$668,959 for FORUM's hypothetical project of 94 dwelling units. In suburban communities where a project of this size and type would normally be built, assessed valuations range from 35 to 65 per cent of actual current costs. Thus, with a ratio of 36 per cent, FORUM's illustrative project benefits from a relatively low assessed valuation.—Ed.

Forum:

The recent action, in the courts, of the Province of Quebec Association of Architects to restrict the activities of engineers in building design and construction, is of particular interest at this time, when frequently the professional approach of trained technicians to their work is maintained with difficulty.

Such friction between the architectural and engineering professions can only result in a loss of prestige to one or both of the contending parties.

It is a tribute to the modesty of the engineering profession, that the structures which have made the creative conceptions of celebrated architects possible, and which have made their reputations secure, have been designed structurally, mechanically, and electrically, by engineers who are anonymous, or generally unknown to the lay public.

There are license laws for engineers and architects designed for the public's protection in safety, health and sanitation, and in freedom from eyesores. There should be no facts at issue between the professions; if either the practicing engineer or architect feels impelled to invade the field of the other, let him meet the legal requirements, and qualify for license in the field which he desires to enter. If this course is followed, engineers and architects can cultivate the mutual respect of trained specialists for each other, a respect which will establish them more firmly in the minds of a public confused with the high cost of building, and bewildered by the press agented importance of such vocations as crooners, band leaders, and movie stars.

ERIC FLEMING, Architect & Engineer

New Brunswick, N. J.

**IT'S NOT
PUPPY LOVE**



Women Really Want Electric Water Heaters!

• Surveys* show women want Electric Water Heaters because of the following advantages: (1) SAFE (frustrationless, flameless); (2) CLEAN (smokeless, odorless); (3) ADAPTIVE (short hot water line)

(no flue or vent); (4) TROUBLE-FREE (as electric light); (5) ECONOMICAL (plenty of water all the time at low cost).

Be sure the homes you build offer all the advantages—install modern Electric Water Heaters.

*A NEMA survey revealed that there were three times as many women preferring Electric Water Heaters as owning them.

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 • HONSTREAM • JUD WHITEHEAD • KELVINATOR • MONARCH • NURGE • PEMCO • REX • RHEIN • SEIDELHUBER • SELECTRIC • SMITHWAY • THERMOGRAY • THERMO-WATT • UNIVERSAL • WESTINGHOUSE

IN A HOUSE WIRED FOR AN ELECTRIC RANGE IT'S

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

**Will the house
you build today
be a "dog"
tomorrow?**



F. RojanKovsky

● Your reputation is being established in the houses you build today! To be sure they are modern, and will *stay* modern for years to come, *wire them for modern Electric Ranges!*

Survey after survey proves that Mr. & 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 #6 and one #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.



TO KEEP THEM MODERN...

wire your houses
FOR ELECTRIC RANGES



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

A-B STOVES • ADMIRAL • CROSLY
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GENERAL ELECTRIC • GIBSON
HOTPOINT • KELVINATOR • LEDO
MONARCH • NORGE • QUALITY
UNIVERSAL • WESTINGHOUSE

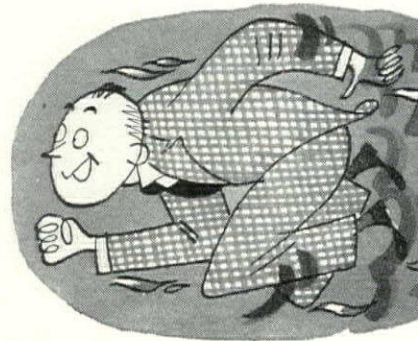
Sid was sick of shortages—so...



1. . . . he finally decided to convert to aluminum.



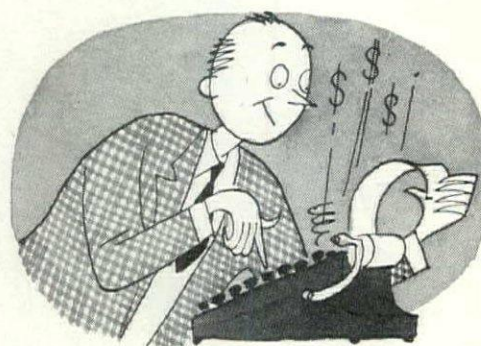
2. His competitor, Carl, just laughed. "Aluminum can't be adapted to Sid's product," Carl chortled.



3. But Sid was off like a fireball. He'd learned that alloys of Kaiser Aluminum could meet almost every condition of operation. And it could be drawn, spun, brazed or joined.



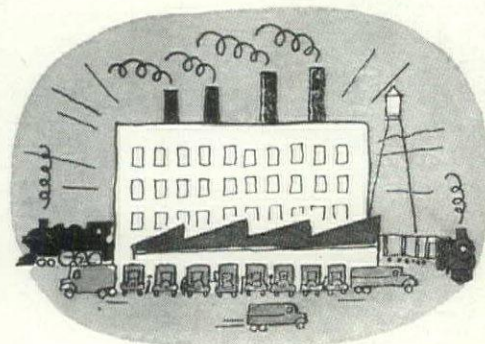
4. "So alright, he did it," shrugged Carl, "but the cost will break him."



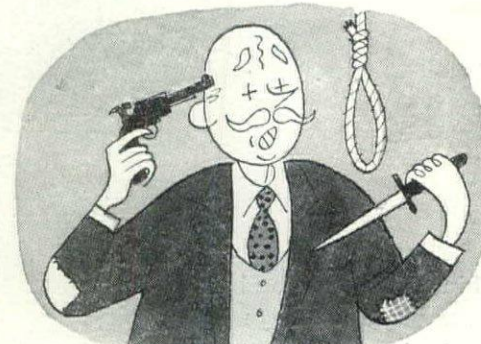
5. But foxy Sid found that though aluminum costs a little more to begin with, savings in handling, fabricating, finishing and shipping more than made up the difference.



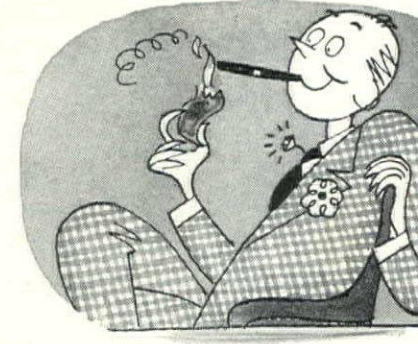
6. Still, die-hard Carl wouldn't budge, siree, he'd wait for the metal he always used.



7. Meanwhile, Sid's product sold like popcorn at a circus. Folks preferred aluminum products. Result: Soaring production cut costs still further.



8. Now, would you rather be Carl?



9. . . . or Sid?

MORAL: Alert manufacturers—making everything from general appliances to residential buildings, from garage doors to heating and ventilating ducts—are speeding production, nailing down new markets . . . by converting to *Kaiser Aluminum*. The problems solved by them can help *you*. So call in a Permanente engineer *today!*

Ready to serve you—today . . .

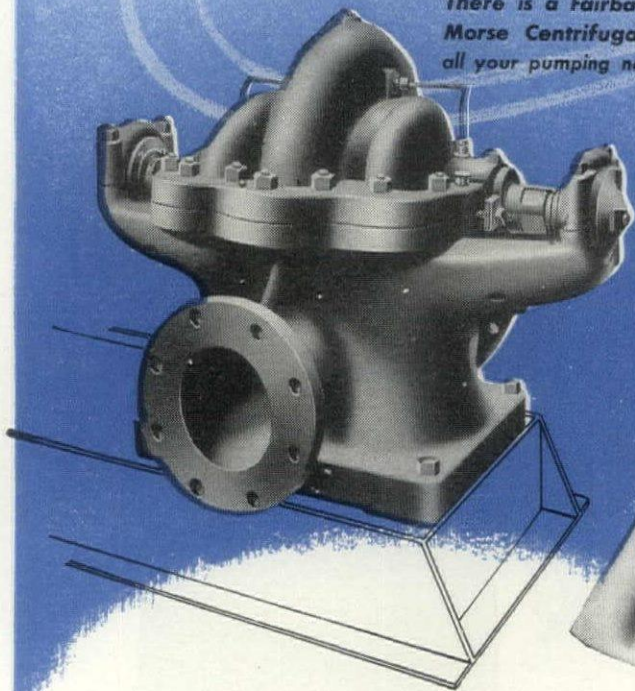
Kaiser Aluminum

a Permanente Metals product

DISTRIBUTED BY PERMANENTE PRODUCTS COMPANY, KAISER BLDG., OAKLAND, CALIFORNIA . . . WITH OFFICES IN: Seattle • Oakland • Los Angeles • Dallas • Wichita • Kansas City • St. Louis • Atlanta • Minneapolis • Milwaukee • Chicago • Cincinnati • Cleveland • Detroit • Hartford • Buffalo • New York City • Philadelphia • Washington, D. C.

HERE TODAY—STILL HERE TOMORROW!

There is a Fairbanks-Morse Centrifugal for all your pumping needs.



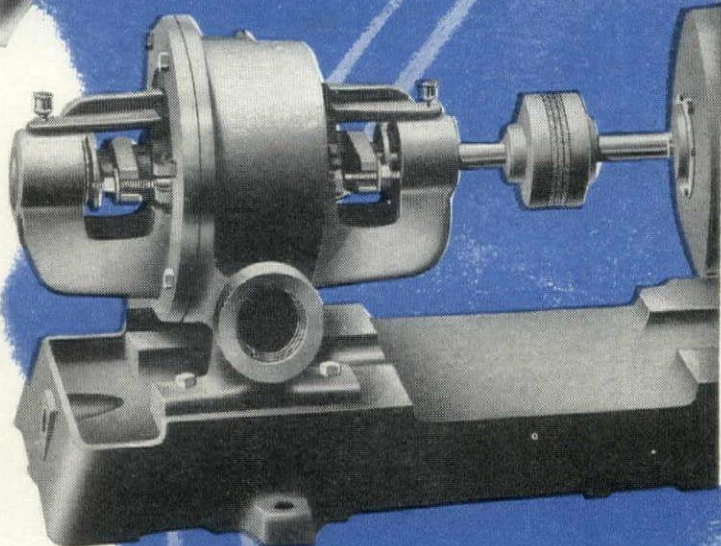
Fairbanks-Morse-Pomona deepwell turbine pumps. Oil or water lubricated; open or closed impellers—as your job requires.

The values in doing business with one of the hundreds of well-established, progressive Fairbanks-Morse pump dealers are many:

First, of course, you gain immediate advantages from the intensive research, skilled productive techniques and well-developed service organization that have long been identified with the Fairbanks-Morse name.

Too, you gain the long-term advantages of continued aid in keeping your pumps on the job—continued benefits from the widespread, quickly available Fairbanks-Morse dealer organization.

For a pump that's to give high efficiency year after year, buy from the dealer who will stand by you, year after year. See your Fairbanks-Morse pump dealer for all your pumping requirements.



Famous Westco turbine-type pumps have exclusive advantages for service involving small capacities, high heads and low speeds.

FAIRBANKS-MORSE



A name worth remembering

DIESEL LOCOMOTIVES • DIESEL ENGINES • PUMPS • SCALES • MOTORS • GENERATORS • STOKERS • RAILROAD MOTOR CARS and STANDPIPES • FARM EQUIPMENT • MAGNETOS

because of Steel Pipe

**Mrs. America
has time to live**

No potentate's wife—just an average American homemaker—yet she's free as the wind!

The real emancipation of womankind began when some distant ancestor first diverted a stream of water to his cave through a hollow log.

Now—pure water flows like magic at the touch of a tap, for drinking, bathing, laundering. Now—uniform heat carries to every corner of the home. Now—modern sanitation helps to keep the family in good health. In every phase of Mrs. America's life, pipe has had a hand in reducing the drudgery of housework, in permitting more leisure hours, in assuring comfort and well-being.

Steel pipe made it possible—just as it has made possible many other advances toward a better life.

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

COMMITTEE ON STEEL PIPE RESEARCH of American Iron and Steel Institute, 350 Fifth Avenue, New York 1, N.Y.



STEEL PIPE MAKES IT POSSIBLE!



... better living through pipes of steel for plumbing and heating purposes.

ARKETEX • ARKETEX • ARKETEX • ARKETEX • ARKETEX • ARKETEX • ARKETEX • ARKETEX • ARKETEX • ARKETEX

Look how

ARKETEX

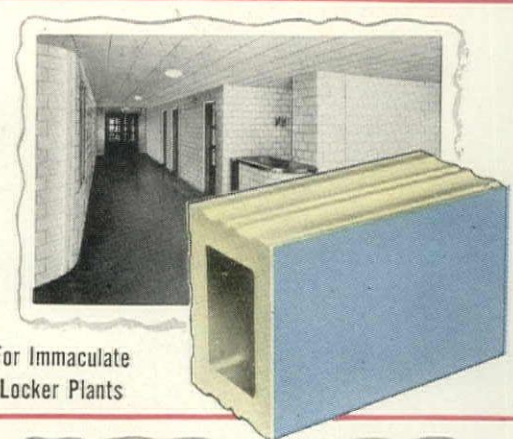
CERAMIC GLAZED STRUCTURAL TILE

fits into your picture!

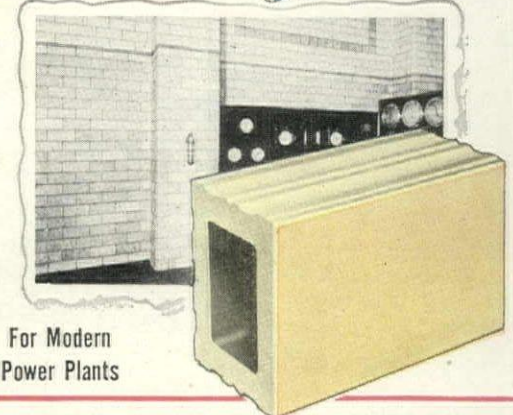
Your picture will be "completed as planned" with versatile, beautiful Arketex Ceramic Glazed Structural Tile.

Arkotex, with its wide range of sizes and textures, in your colors, is ideal for interior and exterior use... for partitions or load-bearing walls. The first cost is the only cost — Arketex is a permanent wall and finish all in one.

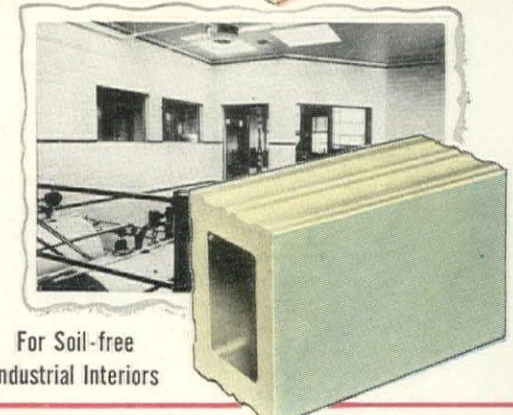
ARKETEX
"First with the Finest"
 CERAMIC GLAZED STRUCTURAL TILE



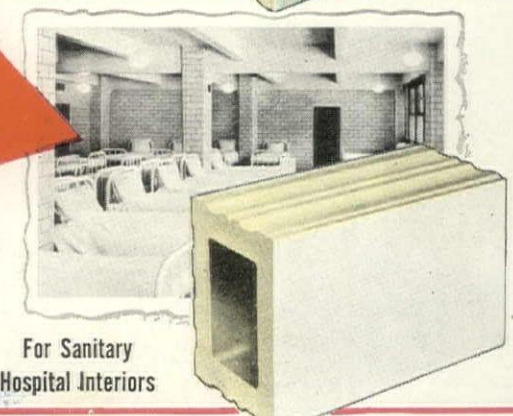
For Immaculate Locker Plants



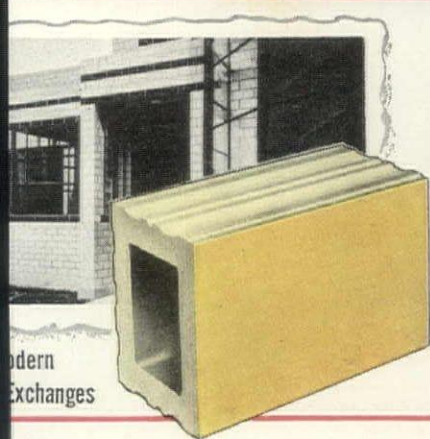
For Modern Power Plants



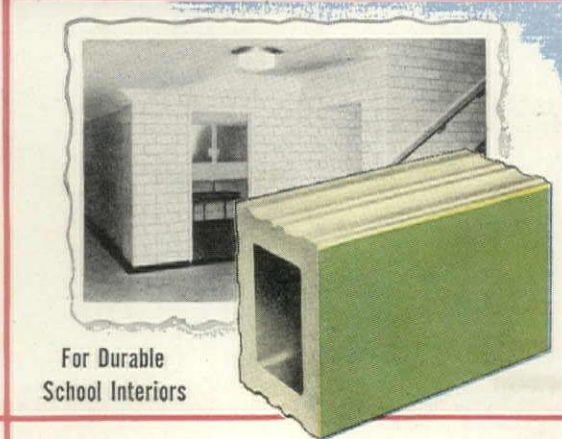
For Soil-free Industrial Interiors



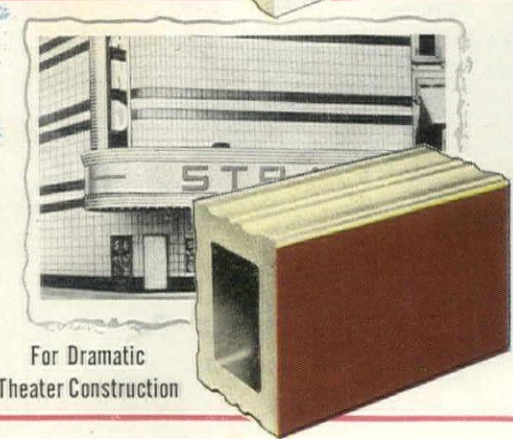
For Sanitary Hospital Interiors



Modern Exchanges



For Durable School Interiors



For Dramatic Theater Construction



Playroom by Abraham & Strauss, Brooklyn, N. Y.

Keep summer in your basement...

That picture is no mirage, madam! It's *your* summer furniture moved downstairs and put on a Kentile floor. And just look at that floor! Full of musical notes, games, ideas—gay in color foyers, into things

Kentile, you see, is laid tile by tile (not sheets). You combine dark, light, plain or marbelized squares and strips into countless colorful combinations—creating your own design to suit your own need. For instance, both the interiors photographed are made of Fleecy Cerulean and Travertine tiles with White and Toledo Red strips. And with them you see some of the new *ThemeTile*, a wealth of new motifs you can add—notes, dots, petals, stars, clever silhouettes.

Moreover, Kentile has an unsurpassed service reputation—can last for decades. It's virtually proof against scars and stains—just swish it clean with soap and water—renew its luster with easy waxing. And, you'll like the "feel" of Kentile—its sense of sureness and ease. Remember, too, Kentile's so moisture and alkali resistant it's used even on concrete in contact with earth. Your dealer can help you create a colorful Kentile floor or, if he can't supply you, write David E. Kennedy, Inc., Brooklyn 15, N. Y.

Toys by F. A. O. Schwarz, N. Y.

NEW... ThemeTile
Newest idea for floor personality—tiles with gay silhouettes, dots, stars, petals—set right with Kentile. Ask to see the new ThemeTile.

KENTILE
Asphalt Tile

with a floor that also sells



This "Post" ad shows the world Kennedy's newest development in asphalt tile—*ThemeTile*. They are now part of the Kentile line—

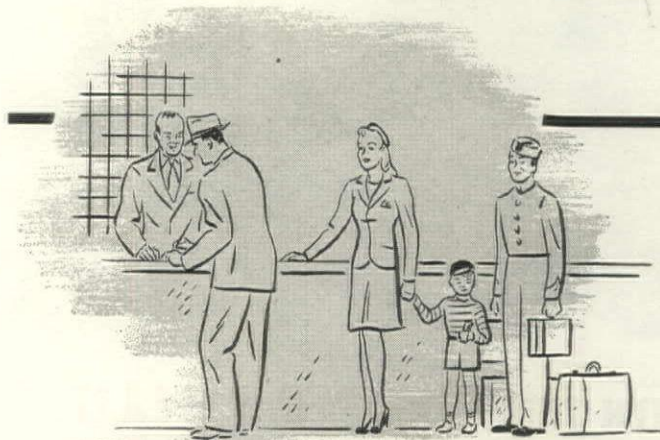
THIS SATURDAY EVENING POST AD IS IMPORTANT TO YOU...

die-cut silhouettes, dots, stars, petals all assembled in tiles that can be laid just like any other Kentile—can be worked into patterns in a thousand different ways. This is an important style trend in flooring, and as the public sees *ThemeTile* illustrated in these national ads they will ask you use these tiles in your floor designs.

* If you haven't yet received a full-color *ThemeTile* data folder, write for your copy now. The folder illustrates every *ThemeTile* in full color and describes the method of use.

DAVID E. KENNEDY, INC.
80 Second Avenue, Brooklyn 15, N.Y.
324 Fourth Avenue, Pittsburgh 2
1211 NBC Building, Cleveland 14,
1355 Market Street, San Francisco 3
Bona Allen Building, Atlanta 3
452 Statler Building, Boston 16,
58 E. Washington Blvd., Chicago
Ring Bldg., 18th & M Sts., Washington

Only Sloan *can say this:*



**63% OF ALL HOTELS* ARE
SLOAN EQUIPPED—**

**90% OF THESE ARE
EXCLUSIVELY SLOAN!**

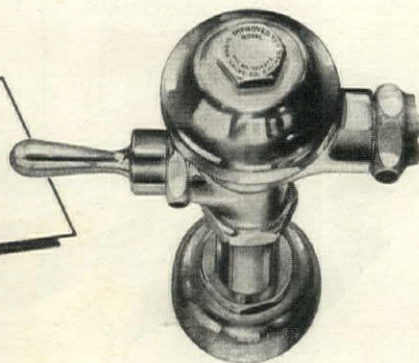
There are several reasons for Sloan's pre-eminence. For one thing, maintenance costs are reported as low as $\frac{1}{4}$ of 1c per valve *per year*. Then, too, Sloan Flush Valves save water; they protect public

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.

*Hotels of 100 rooms or more.

sloan *Flush* valves



"IF YOU WANT TOP PERFORMANCE FROM THIS FLUORESCENT TUBE"



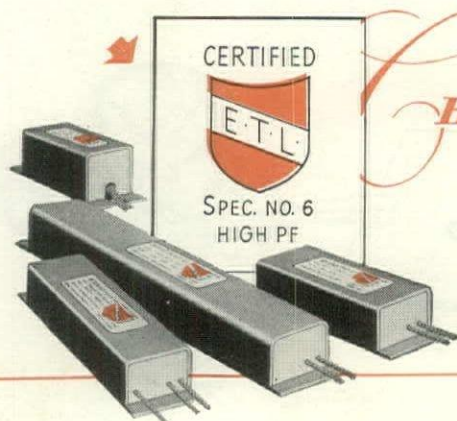
YOU'LL GET IT WITH THIS **CERTIFIED BALLAST!**"

The word "CERTIFIED" on a fluorescent lamp ballast tells you instantly that here is a product that gives you the greatest possible efficiency in operation and performance of fluorescent lighting.

Leading ballast makers and lighting engineers put together a set of exacting specifications that assure quiet operation, proper ballast

temperatures, most light and longer life from fluorescent lamps. Famous Electrical Testing Laboratories, Inc. test, check and re-check CERTIFIED BALLASTS against these specifications . . . give it the ETL mark of approval. Insist on CERTIFIED BALLASTS in the fluorescent lighting equipment you sell . . . give your customers the protection they need and want.

CERTIFIED FLEUR-O-LIER MANUFACTURERS, RLM STANDARDS INSTITUTE and CERTIFIED LAMP MAKERS have solved their ballast problems by writing CERTIFIED BALLASTS into their specifications.



CERTIFIED BALLAST MANUFACTURERS

Makers of Certified Ballasts for Fluorescent Lighting Fixtures

- | | | |
|---|--|---|
| Acme Electric Corporation
Cuba, New York | General Electric Co.
Specialty Transformer Division
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Q. Is there an efficient and inexpensive method of insulating plumbing pipes in exterior walls to prevent freezing?

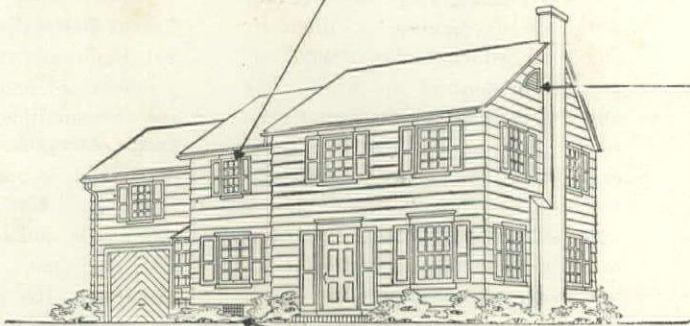
A. See Balsam-Wool Application Data Sheet Sec. C, No. 2.

Q. How can the proper louver size be established for use in gable walls to ventilate attic spaces?

A. See Balsam-Wool Application Data Sheets Sec. E, Nos. 1 and 2.

Q. What is the most practical method of insulating floor construction built above grade over an unexcavated area?

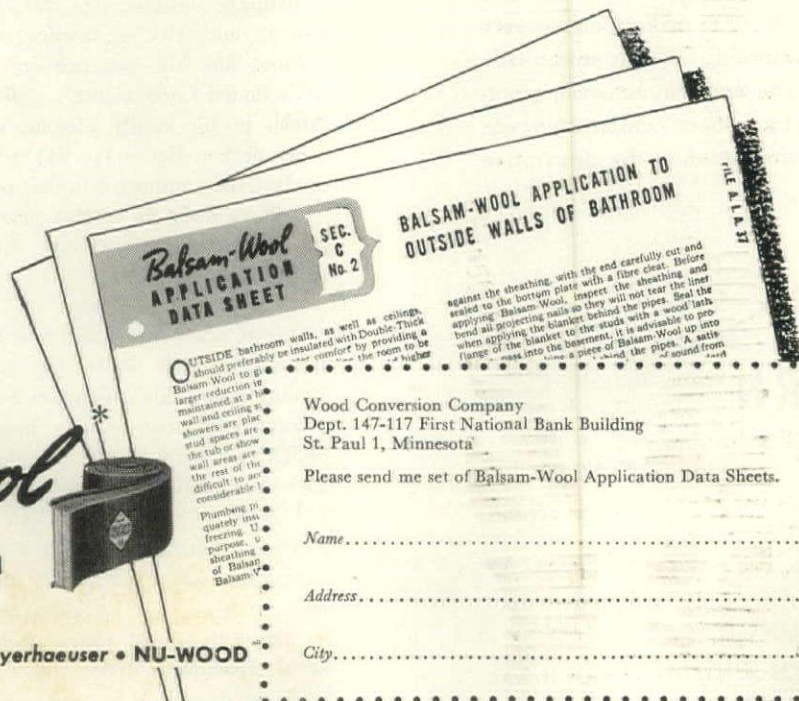
A. See Balsam-Wool Application Data Sheet Sec. C, No. 3.



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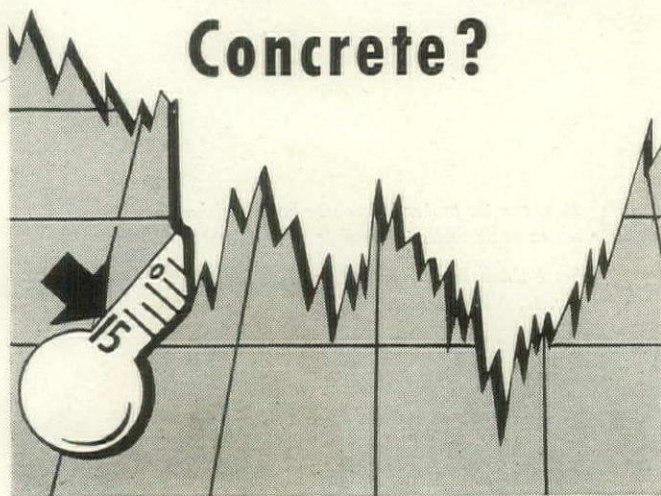
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FORUM

Behind the scenes with FORUM contribu

The Men who Made Her Famous

More than any other single group, the architects of Brazil are responsible for her prestige today. Novelists, poets and scholars she has: but they write in Portuguese, a linguistic cul-de-sac which makes them inaccessible to most of the world. She has sculptors and painters: but their work needs an architectural reference frame. She has scientists and technologists: but their work is seldom photogenic. Thus it fell largely to the architects—and largely to the younger progressive men at that—to dramatize Brazil's amazing renaissance. And most of these men are represented in this month's list of FORUM contributors.

J. Vilanova Artigas, (p. 94) has just completed a Guggenheim Fellowship in this country. He is both an alumnus (1938) and a professor of Sao Paulo's School of Architecture . . . **Francisco Bolonha**, in his gay shelter for a mineral springs at Araxa (p. 68), displays a lyrical quality characteristic of much Brazilian work . . . **Alvaro Vital Brazil**, whose youthful looks belie it, has many large projects to his credit (p. 106). Most recent plum: first prize in a competition for Rio's wealthy Jockey Club . . .

Though not yet forty, **Roberto Burle-Marx** is already one of the world's great landscape architects. A brilliant designer (p. 90), he is also an authority on tropical horticulture, has his own nursery near Rio's famed Copacabana . . . **Daniele Calabi**, in his coolly elegant small house at Sao Paulo (p. 94) reflects the Italianate influence in that region . . . **Olavo Redig de Campos** practices in Rio where his Youth Center (p. 88) is located . . .

One of Brazil's best and best loved architect's, **Lucio Costa** (p. 92) is famous among his colleagues for his extravagant modesty. As head of SPHAN—the National Service for the Preservation of the Historic and Artistic Patrimony—Costa has played a distinguished role in protecting the country's fine old Colonial architecture . . . As a staff architect for one of the social service agencies, **Carlos Frederico Ferreira** has had a hand in designing several housing

projects similar to huge Res (p. 104) . . .

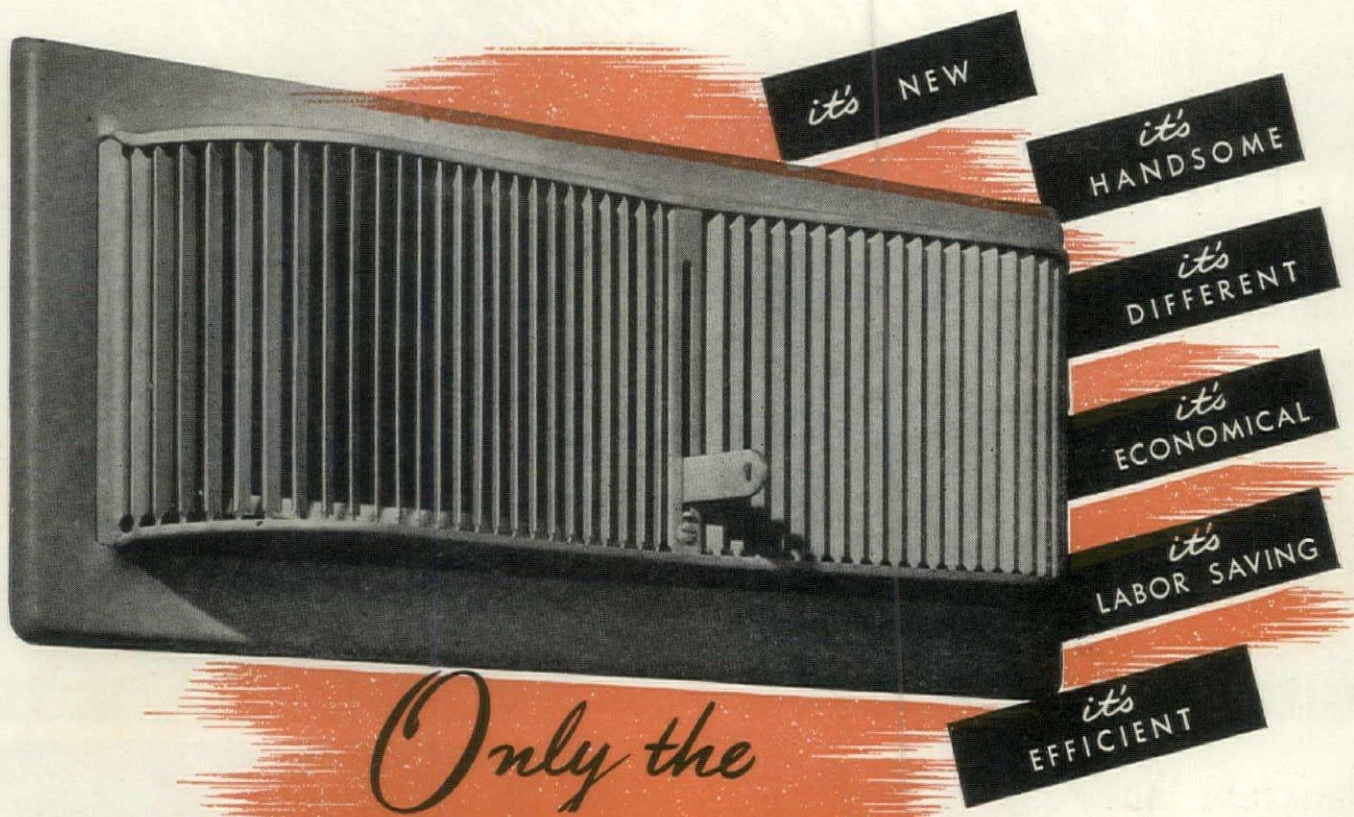
Miguel Forte, **Jacob Ruchti**, **Galiano Ciampaglia** are a trio of Sao Paulo architects who have a number of residential jobs including the small house on p. 95. **Lucjan Korngold**, (p. 101), a native of Poland, is now practicing in Sao Paulo . . . **Rino Levi** is a native Sao Paulo and one of the country's first and most consistent modern architects. His prize-winning house (p. 86) and own house (p. 94) are recent examples of his work . . .

Attilio Correa Lima (deceased), **Uchoa Cavalcanti**, **Jose Theodoro Silva** and **Alberto de Mello Florenzano** are joint designers of what will be one of the country's largest housing projects—the 4,038 unit Varzea Carmo Residential City (p. 102). **Eduardo Kneese de Mello** (p. 11) is president of the Sao Paulo chapter of the Brazilian Society of Architects and is, incidentally, a descendant of a federalist refugee from the U. S. War . . .

Warm, friendly and immediately active, **Henrique Mindlin** is Rio bred and educated. Of his many projects, built and building (p. 96) he is proudest of his prize-winning design for a modern addition to a neo-Classic (not colonial) Ministry of Foreign Affairs . . . **Alcides Miranda** is a SPHAN architect whose city hall (p. 89) and school (p. 90) are excellent examples of modern work designed for historic towns . . . is a graduate of Rio's Beaux Arts . . .

Jorge Machado Moreira, who is a designer of the brilliant office building for the Rio Grande do Sul Railway Company (p. 111), is himself a native of that southernmost state of the same name . . . **Oscar Niemeyer** is a mild-mannered little chap with a sad face and youthful figure . . . the fact that he is, at 40, one of the world's greatest architects. His position is solidly based on such structures as the Ministry of Education, the Brazilian Pavilion at the New York Fair and the beautiful group of buildings at Pampulha, Niemeyer . . .

(Continued on page 58)



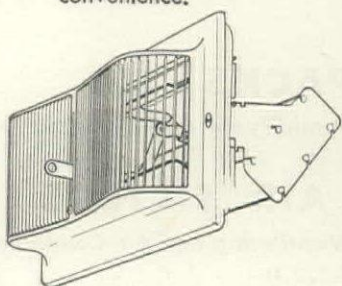
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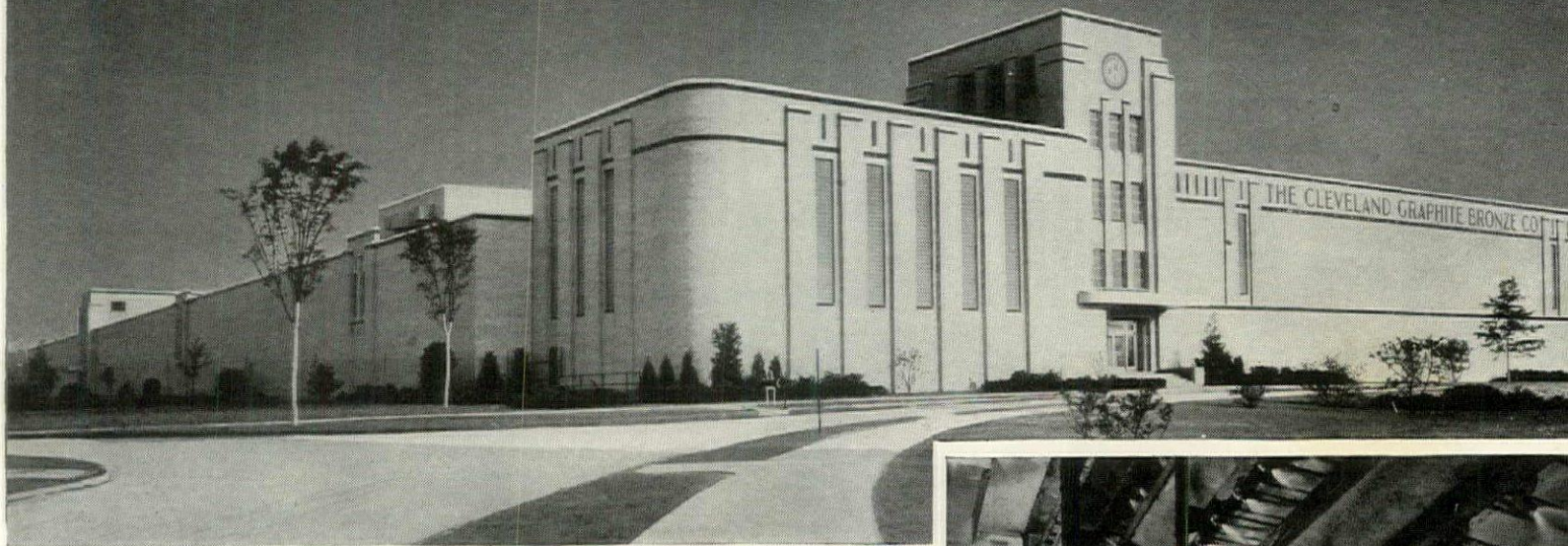
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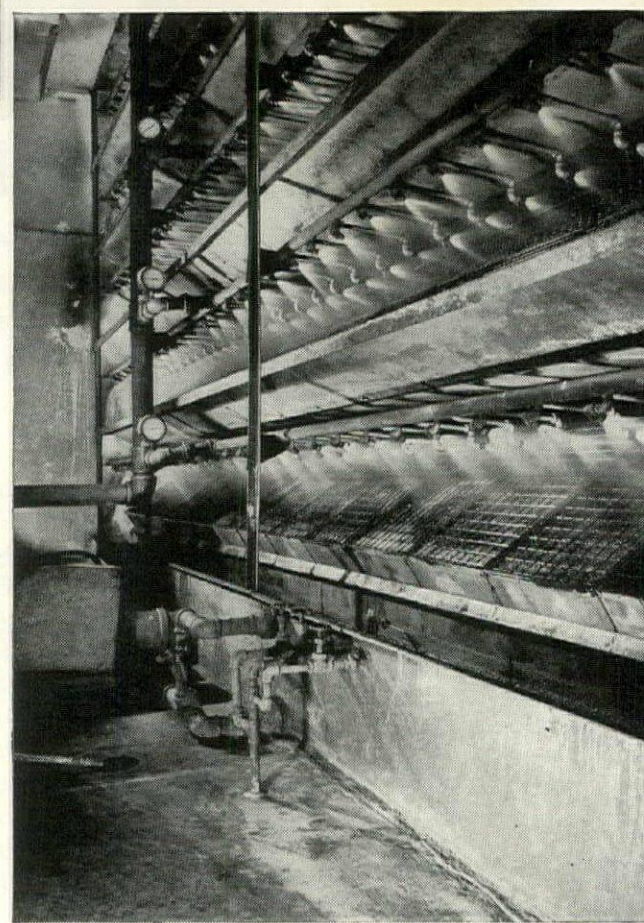
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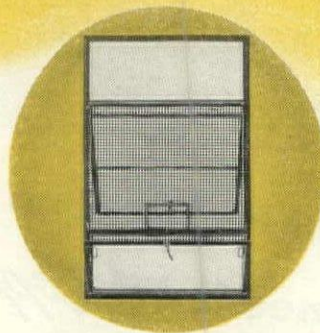
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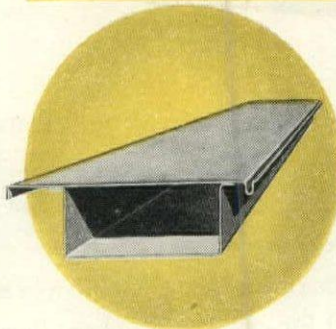
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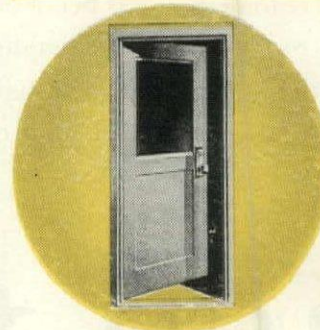
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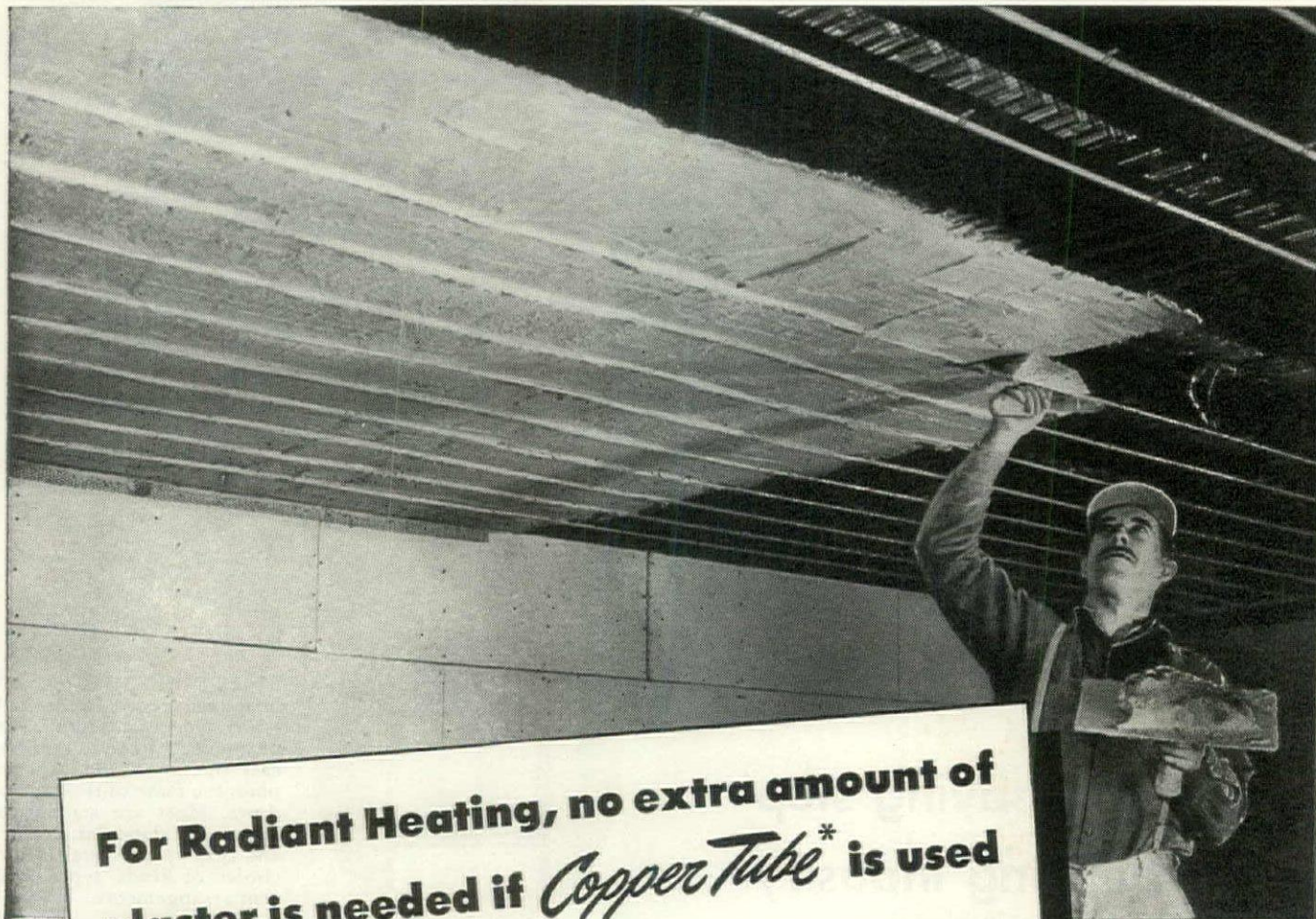
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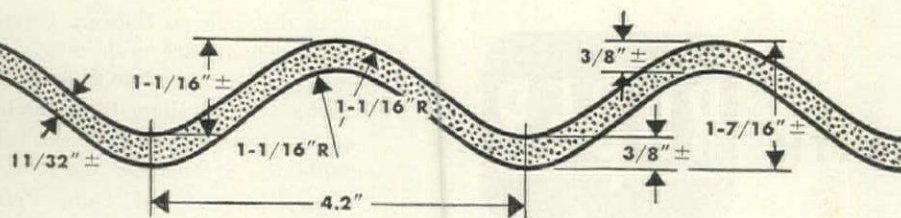
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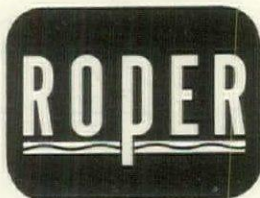
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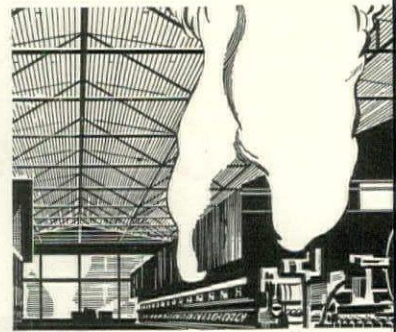
this year came to New York to help design the UN Headquarters. His prize-winning design for an Aviation Center (p. 76) was the focus of an international scandal when the Dutra government suddenly "discovered" his well-known Communist affiliation, cancelled his contract ...

Afonso Eduardo Reidy, co-designer with Moreira of the office building on p. 111, is a native of Rio. In addition to his work with the well-run Housing Department of Rio, he finds time to do many jobs on his own (p. 108) ... **Jose de Souza Reis** is the architect of a Methodist Church, another of the modest, yet very skillful modern buildings erected in the old SPHAN-controlled town of Ouro Preto ... **Paulo Antunes Ribeiro**, a native of the capital and a graduate of its School of Beaux Arts, has developed a new variation in the famous brise-soleil for his Foreigners' Hospital (p. 85) ... The Brothers **Roberto—Marcelo, Milton and Mauricio** are another of Brazil's natural wonders. Aside from a striking apartment house in which they all live, (p. 100) these three young men have to their credit some of Rio's best and biggest buildings. Famous for their office buildings, they are currently completing a new terminal for the Rio airport (p. 78) ...

F. F. Saldanha is the popular president of the Brazilian Society of Architects. Unlike many of his colleagues whose work is based largely on governmental jobs, Saldanha's practice has mainly been for private clients (p. 101) ... **Herminio de Andrade Silva** is the architect of the seaside Restaurant and Bathhouse shown on p. 70 ... The country house on p. 95 is the collaborative work of **Renato Soeiro, Renato Mesquita, Jorge Ferreira and Thomaz Estrela**. Among the youngest of the Brazilian professionals, their work shows many points in common with similar buildings in this country ... **Aldary Henriques Toledo** is an architect in Rio whose Roosevelt Grammar School (p. 83), now under construction, promises to be a handsome addition to the city of Barra Mansa ...

Commonly credited with the design of the first modern house in Sao Paulo, **Gregori Warchavchik** has lately done a big, showy beach house for Count Raoul Crespi at Guaruja, near Rio (p. 96).

Chloethiel Woodard Smith, American architect who was for a year the FORUM representative in South America, was of invaluable aid in the preparation of this issue, third in the FORUM's series of studies on contemporary architecture in the Republics of South America.



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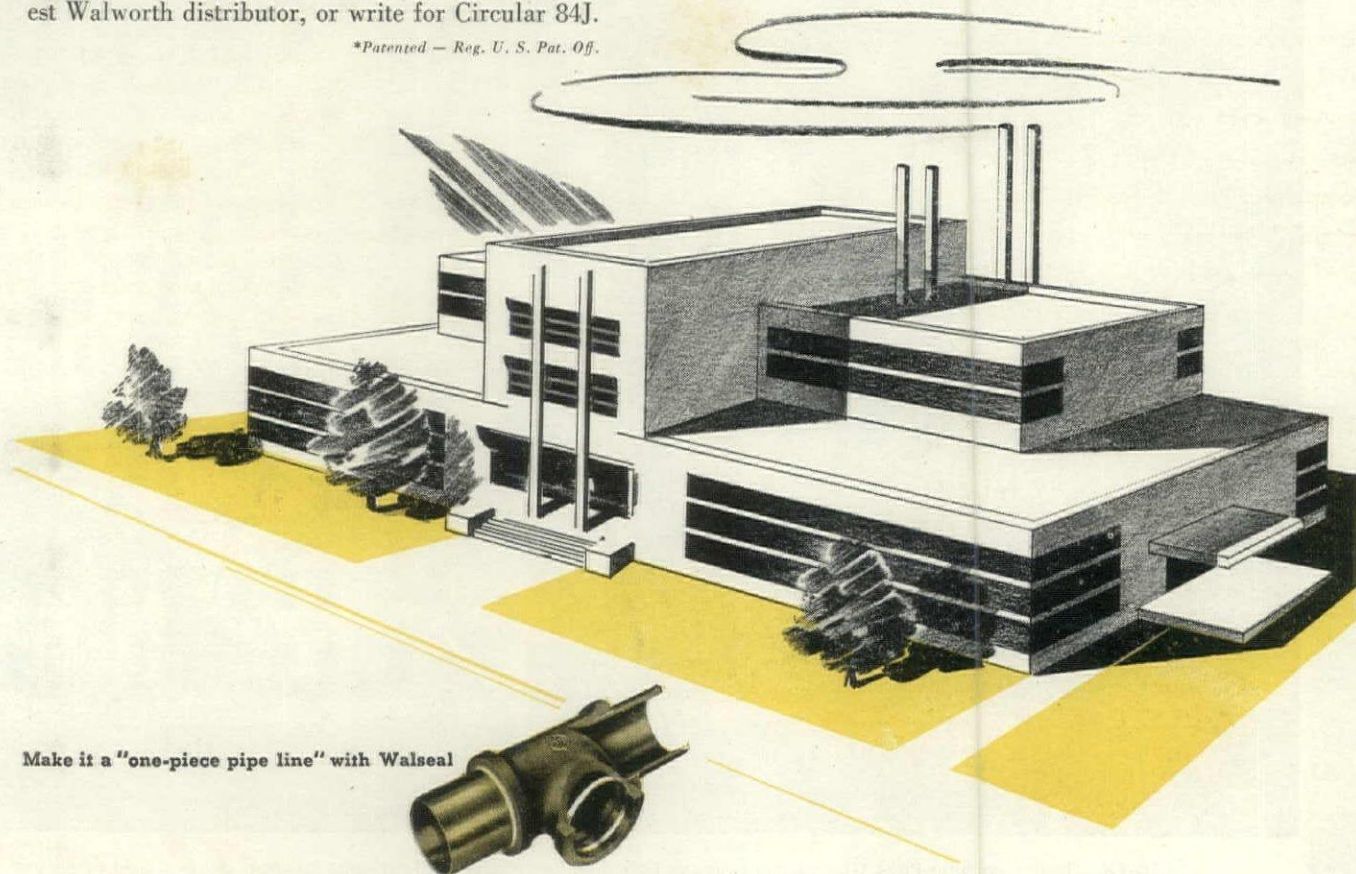
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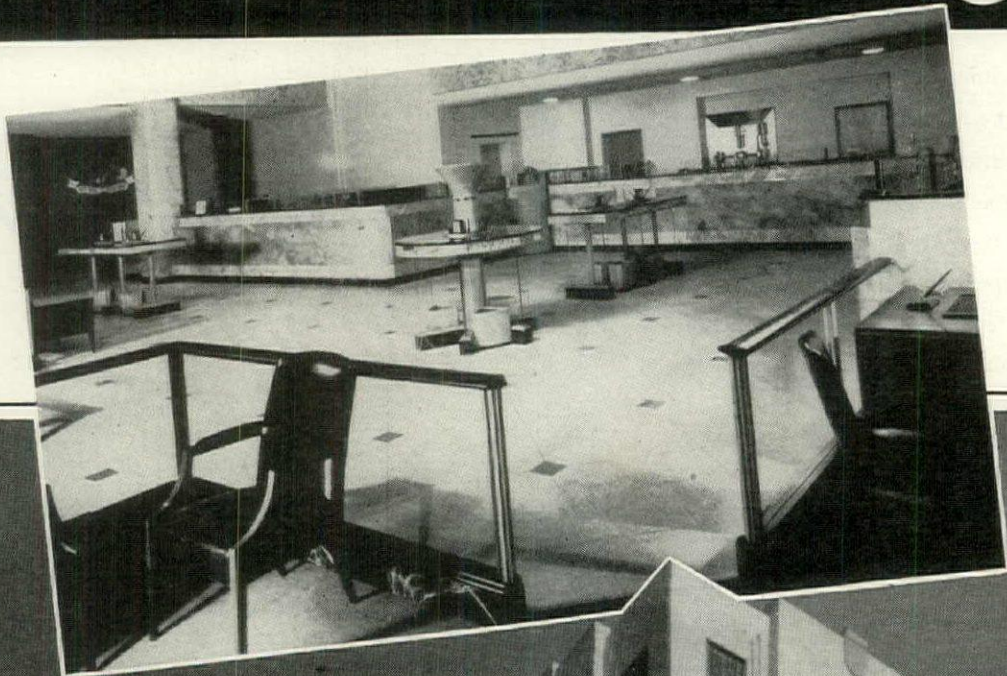
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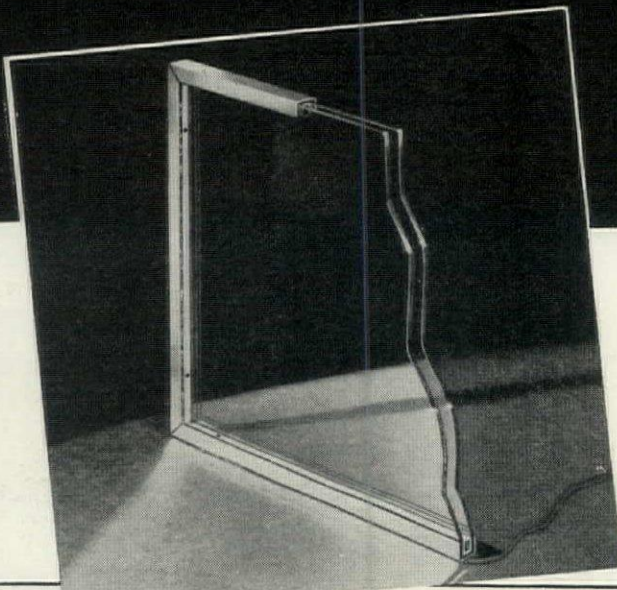
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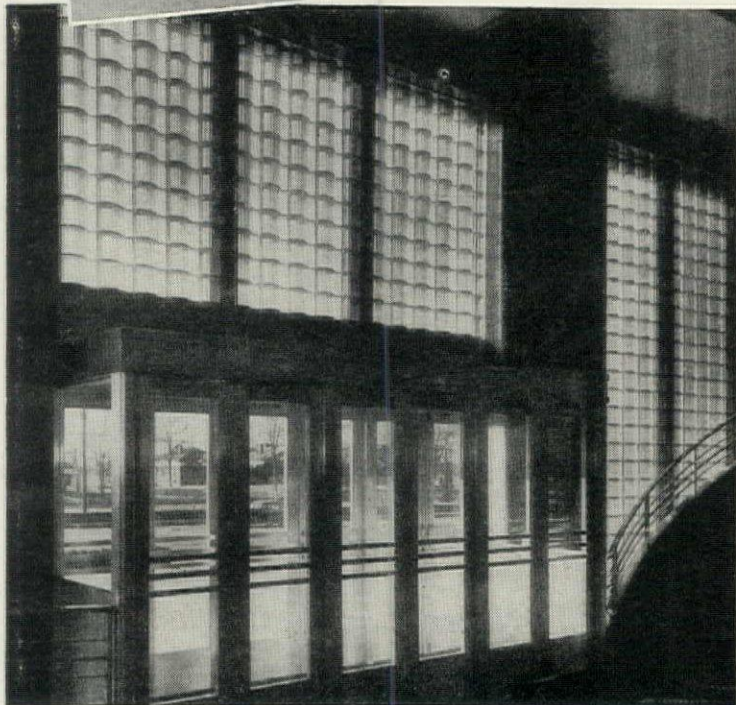
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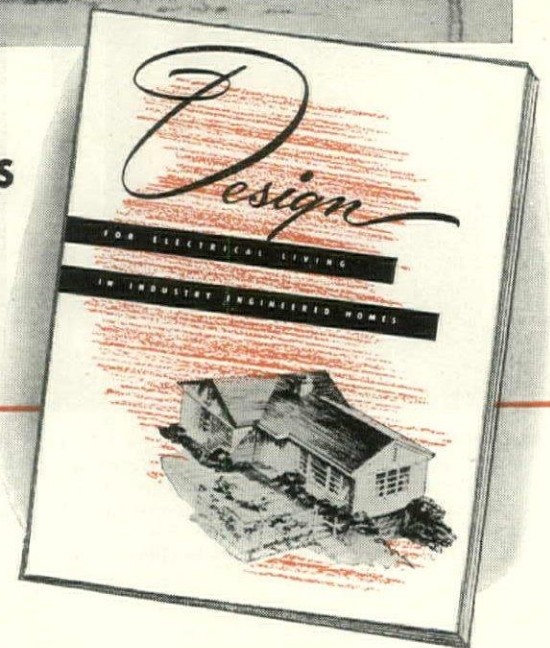


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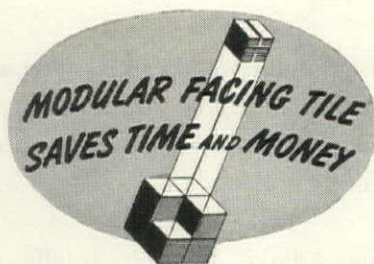
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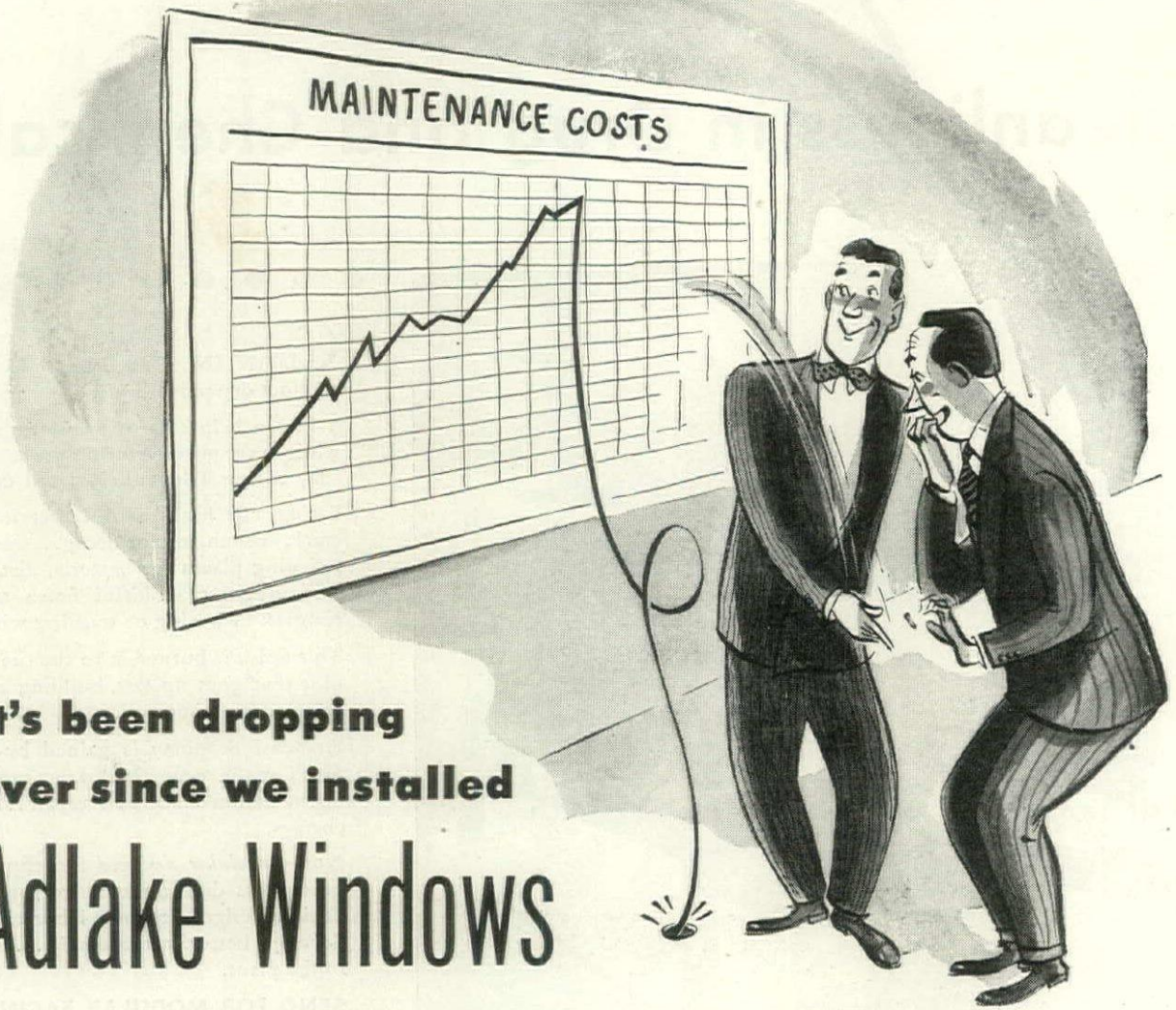
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Magazine of Building



BRAZIL

MAIN LOGGIA

MINISTRY OF EDUCATION,

RIO DE JANEIRO

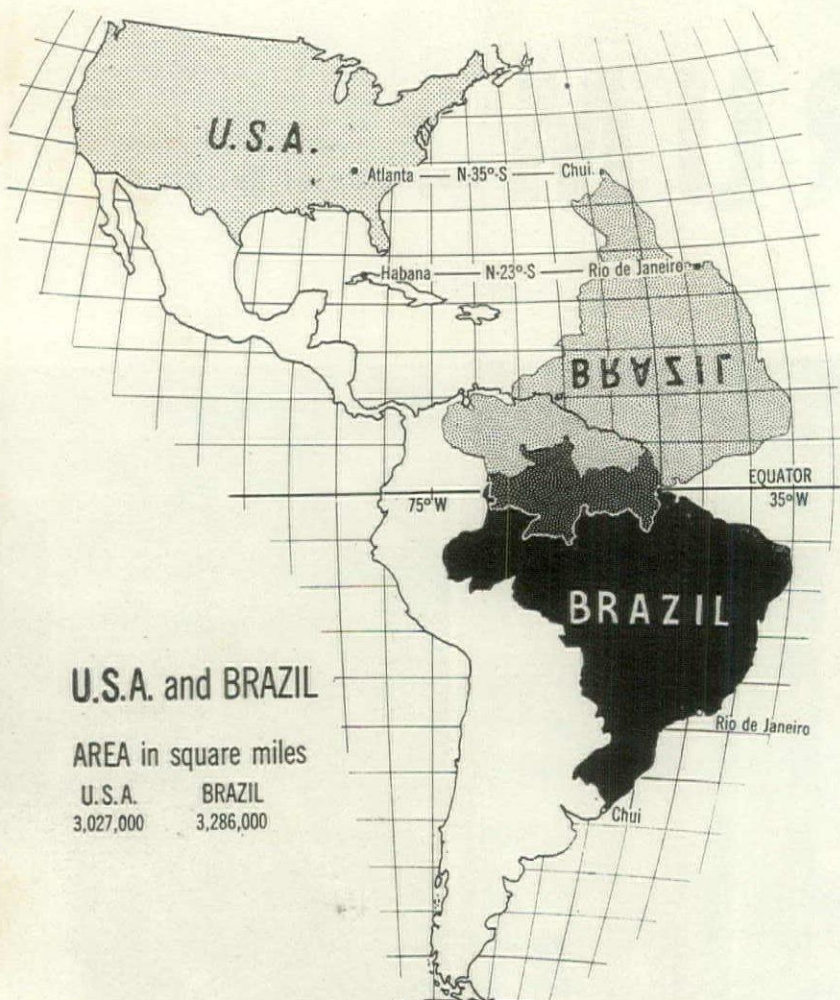
THE UNITED STATES OF BRAZIL is a land of immense and

heartbreaking contrasts—easy to caricature but difficult to penetrate and understand. Brazilians themselves have a way of illustrating these paradoxes. In Rio, they will tell you that the steel doors of the modern jails are carefully painted to look like wood and jailers are warned not to slam them, lest the prisoners be too rudely reminded of their confinement. In many back-country towns, the sick, poor and insane are kept in jails because there is no other place to house them. Brazil today shows many such contradictions and they spring from many sources—geographic, historical and cultural. In fact, Brazil is a century the senior of the USA: in size, she is larger. Her territory extends from the Equator, where the Amazon holds in primeval captivity the largest and richest undeveloped area on the globe, to the cool uplands of the grain-and-cattle raising south; from the Atlantic Ocean 2,600 miles westward to the Andes. In this vast area dwell 46,000,000 persons of Indian, Negro and European descent. They speak Portuguese—the “language of the tomb,” as they call it—and are thus separated from their neighbors by language as well as geography. Brazil is in many ways an island, which, even today, falls into three broad zones of development. First, there is the urban seacoast in which wealth, industry and population are concentrated. Behind this lies a wide belt of upland farm country, with its great plantations and backward peasantry. North and west of this lies the desert and beyond it all the jungle, with its untapped riches and frightened, malaria-ridden aborigines.

But these are, after all, merely statistics which neither explain nor describe Brazilian culture today. Four and a quarter centuries of struggle for democracy and independence have shaped Brazil what the travelogues call a “colorful” history (one of its principal colors being blood). But they have also produced a rich, complex culture which especially in recent years has attracted international attention. One of the most notable (though not necessarily the most important) expressions of this cultural renaissance has been Brazil’s new architecture. Since the Ministry of Education Building in Rio was first photographed, it has been apparent that a spectacular architectural development had occurred below the Equator. To North Americans, smug in their technological wealth, this phenomenon is especially intriguing. How does it happen that a “backcountry” country can suddenly produce so vibrant and up-to-date architecture?

Brazilian architects have a simple answer: Their work is an expression of cultural maturity, not technological wealth. They seem both surprised and unimpressed by the sensibilities which their recent work has created in this country and Europe. (Seen in the flesh, they are a modest, soft-spoken and surprisingly youthful set of men.) They are quick to point out that not all Brazil is built in this image and that—as yet—only a small portion of their countrymen have access to such buildings. Nor do they claim any special credit as architects: on the contrary, they feel that the spade work was done by those intellectuals—writers, poets, painters and musicians—who brought about a complete re-orientation of Brazilian culture in the years after World War I.

Their problem was two-fold: to overthrow a long tradition of meek submission to French and Italian influences (a sort of spiritual colonialism which led Brazilian writers to write in French and boast that their French was as correct as that of the best Academician); and to replace it with standards rooted in the native culture—in the people, the climate and traditions of Brazil itself. But in this process, the Brazilian intellectuals seem to have miraculously avoided two pitfalls. On the one hand, they never resorted to any nationalistic embargo against

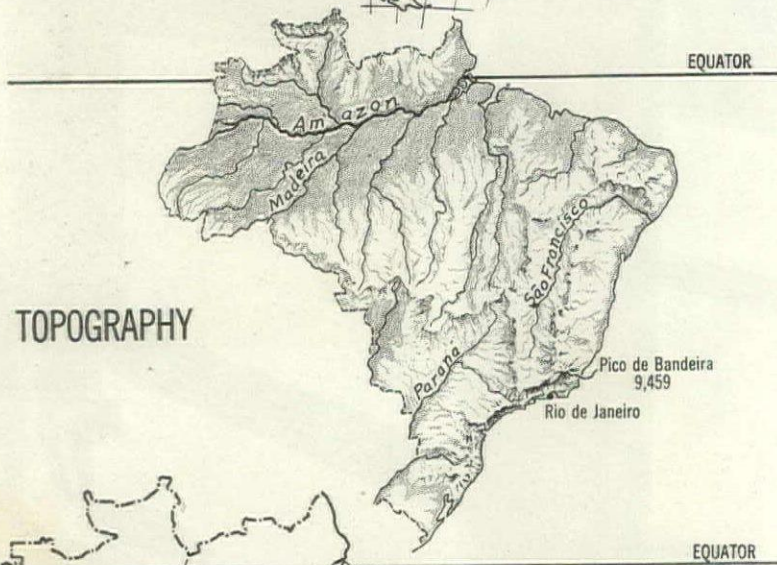


U.S.A. and BRAZIL

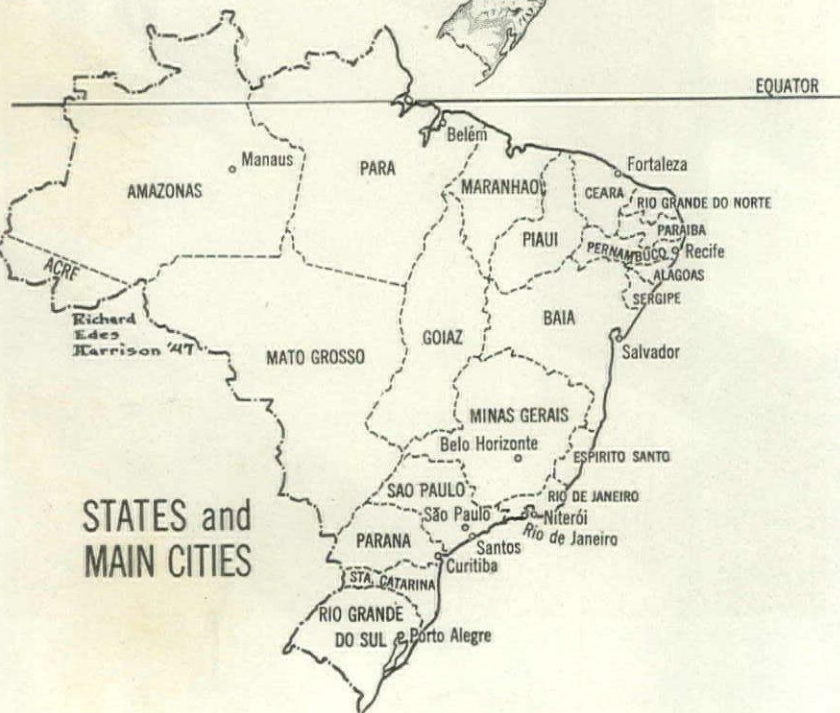
AREA in square miles

U.S.A.	BRAZIL
3,027,000	3,286,000

TOPOGRAPHY



STATES and MAIN CITIES





*Brazil is divided into three parts
—an urbanized seacoast,
an agricultural hinterland
and a primeval wilderness.*

just because they came from overseas. Nor did they, on the other hand, allow research into Brazil's past to degenerate into barren archaeology.

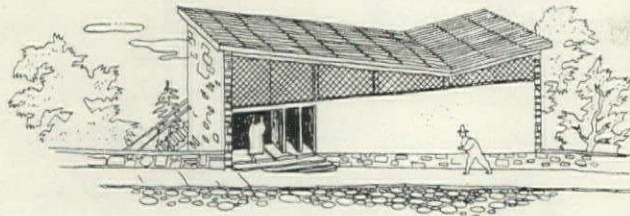
How cannily they have steered the craft between Scylla and Charybdis is well illustrated by the work of the *Service for the Protection of the National Historic Artistic Patrimony*. SPHAN is a government agency to which is entrusted the restoration and maintenance of fine colonial towns like

Ouro Preto (center, right). But unlike similar anti-modern societies in other countries, it has neither tried to turn the clock back nor to stop it. Individual old buildings are restored with archaeological precision: but if the town needs a new building, SPHAN will not permit a copy. Rather it designs structures which—like Jose Reis' little Methodist church in Ouro Preto (insert) or Niemeyer's tourist hotel in the same town (p. 71)—attempt not to *look like* but to *harmonize with* the illustrious neighbors.

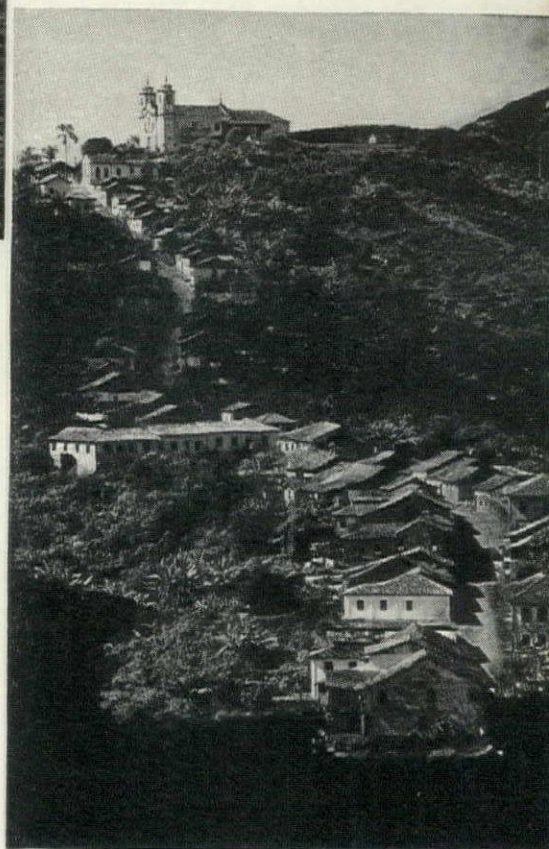
Far from being an accident, this deliberate policy of fostering architectural continuity instead of mere imitation has been the great contribution of SPHAN to contemporary Brazilian architecture. Oscar Niemeyer, the director, is an almost perfect expression of this policy. The country's leading archaeologist, he is also one of the most distinguished modern architects. Other governmental agencies, using the competition system, have followed Costa's lead. And in such an environment a whole generation of architects has matured. If their work is intelligible to us of other countries, it is because these men have never made the mistake of turning their backs on international architecture. But if, at the same time, their work shows a special quality which makes it intelligible only at home there and nowhere else, it is because they have loved their land and their people. The result, as this issue will show, is an architecture of which any nation might be proud.

Copacabana is a glittering facade for Brazil's largest city.

Typical of the old provincial towns is Ouro Preto, now a national monument under government control.



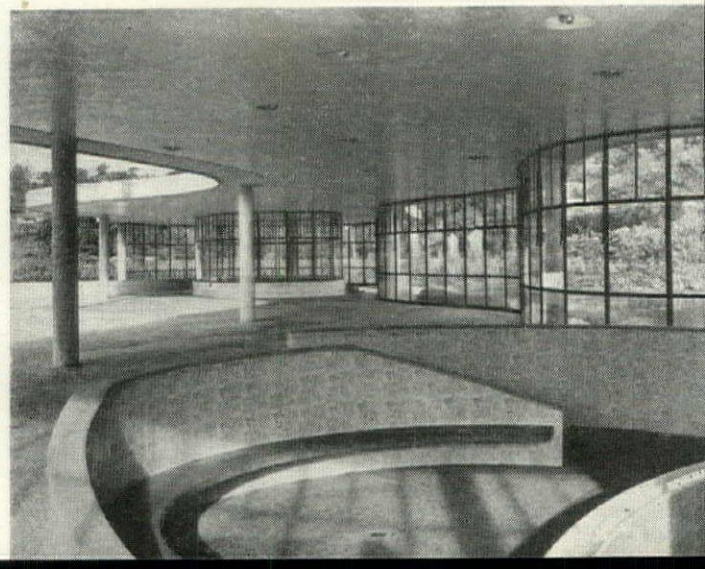
Large portions of the country—where man's greatest hazard is the malarial mosquito—are still unsettled.



G. E. Kidder Smith photos for The Museum of Modern Art

Charles Perry Weimer, photo





RECREATION AND TRAVEL

Travel inside Brazil is still extremely difficult by road or rail,* and travel between the big cities is largely by air. Because of this, travel by Brazilians *inside* Brazil has until recent years been negligible and is even now confined to a narrow strip along the coast. This has in turn given certain characteristics to sports and recreational facilities in the country. Today these are largely urban and upper-class affairs. Most of the tennis courts and soccer fields, the yacht and jockey clubs, are in or near the big cities; and most of these are accessible only to the wealthy.

In recent years, however, there has been an effort to distribute recreational facilities more evenly, both geographically and socially. In the cities there are beginning to appear public bathing beaches, swimming pools and yacht clubs. Niemeyer's famous lakeside group at Pampulha is the most distinguished example of this trend—theater, restaurant, yacht club and dance pavilion designed as a unit. The

* Unlike Argentina, with her good roads and railroad network (FORUM, Feb. '47).

new public housing projects and public schools make fairly elaborate provisions for sports of all sorts. Then there are new hotels such as those at Ouro Preto and Tijuca. Both of these are recreational projects. The first is designed to accommodate visitors to one of the historic Colonial towns now controlled by SPHAN. The second, a resort hotel owned and operated by one of the government agencies for its employes, is located in the mountains behind Rio. It is designed to offer pleasant, low-cost vacations to white collar city workers.

A hotel of a different type—designed primarily for foreign (as against local) travelers is the huge new project designed for Rio by Henrique Mindlin (p. 75). The appearance of structures of this type is related in the most intimate way to developments in travel, exemplified by the Roberto brother's buildings for the new Rio airport (p. 78) and by Niemeyer's prize-winning design for a huge new aeronautical research center (p. 76).



Kurt Klagsbrunn photos

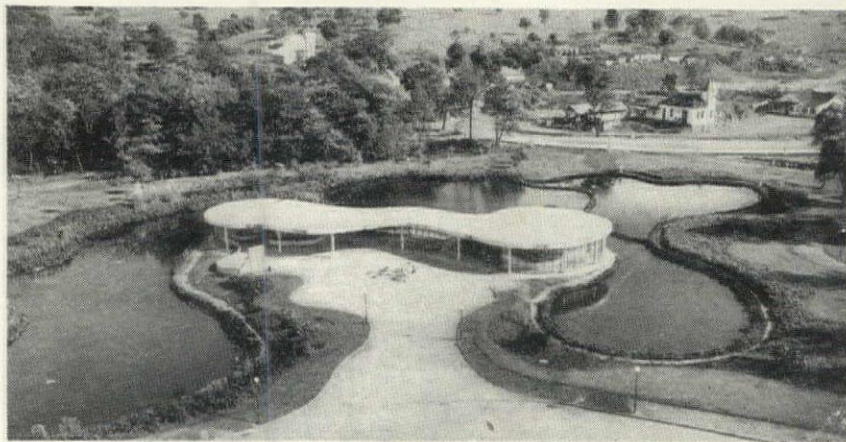
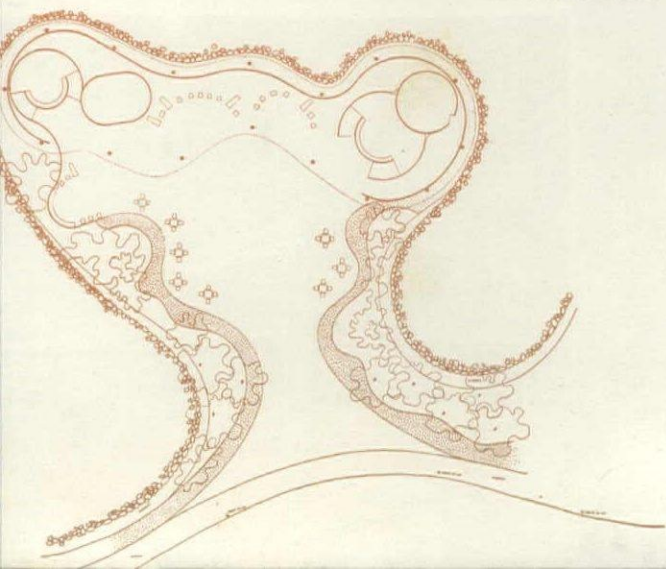
SULPHUR SPRINGS PAVILION

FRANCISCO BOLONHA, Architect

ROBERTO BURLE-MARX, Landscape Architect

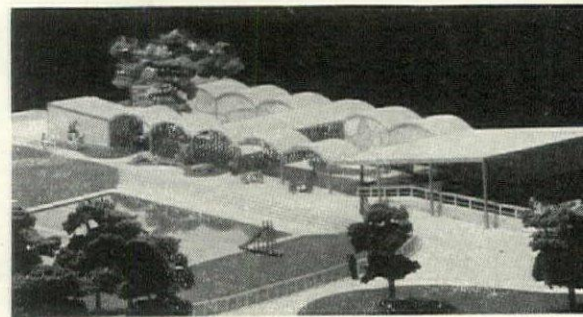
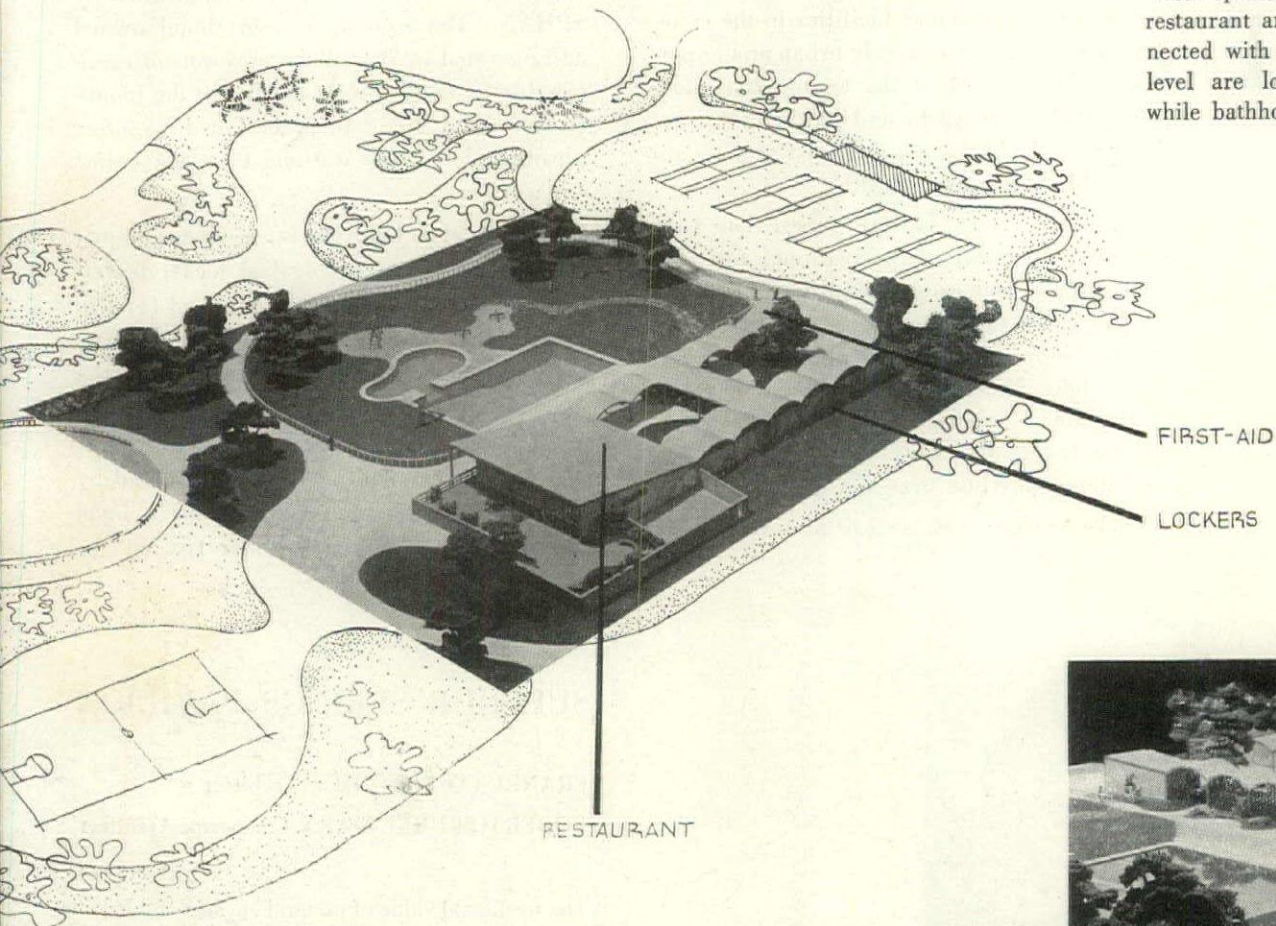
The medicinal value of mineral springs and baths may today be open to some question but they still offer people the world over an excellent excuse for a pleasant outing. It is very much in this mood that Bolonha has developed this charming pavilion. Set in a park in the tropical town of Araxa, Minas Gerais, the structure is nothing more than a free-form shelter for some recently-discovered sulphur springs. It stands in the middle of a man-made pool in which, during the course of construction, some of Brazil's first fossils were discovered. These skeletons furnished Burle-Marx with the motif for the tiles used around the springs proper as well as for a black and white design in the mosaic paving.

Built, like almost all new work, of reinforced concrete, the pavilion has a steel and glass wind screen to cut off an unpleasant winter wind. Only the lower two thirds, however, are glazed.



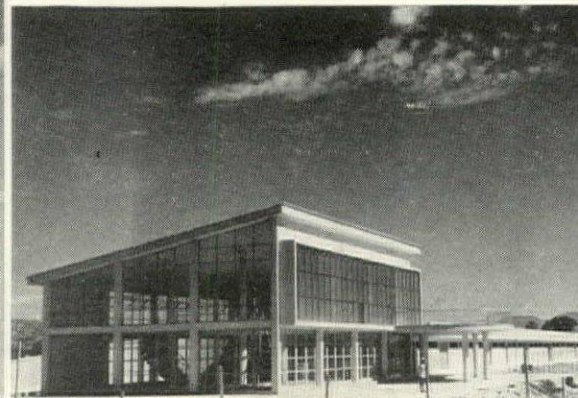
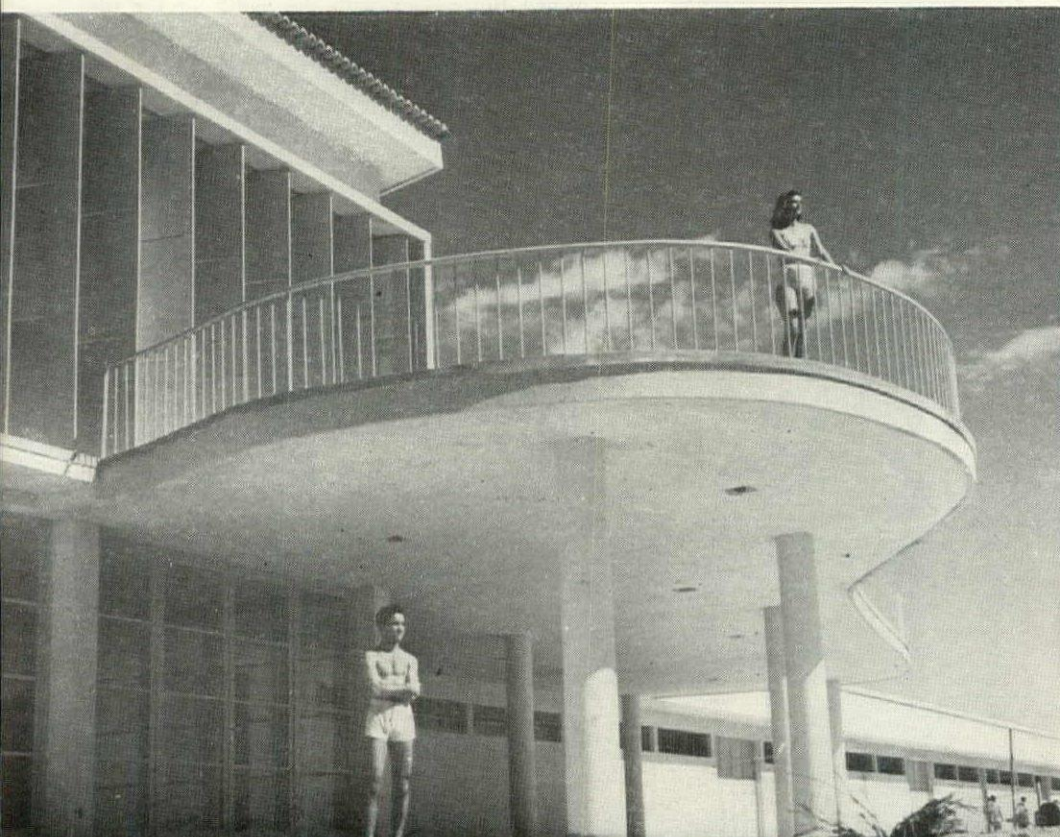
RECREATION CENTER FRANCISCO BOLONHA, Architect

Barreiro do Araxa, where this club will be located near warm springs spa not far from the town of Araxá. In addition to the bathing facilities there will be a swimming pool and an equipped sports field. The clubhouse itself is a two-story building on two levels, commanding a good view of the lake. On the upper level water sports are featured. The upper level contains a restaurant and kitchen, a ballroom and a terrace. The lower level is connected with the lower level by ramps. On the lower level are lounge, bar, cloakrooms and washrooms. The bathhouses occupy the arched wing at the rear.



SUBURBAN SPORTS CLUB HERMINIO DE ANDRADE SILVA, Architect

This municipal recreation center is located in the suburb of Rio de Janeiro. It is being constructed by the Federal government, and flanks the Avenida 1, a great arterial highway leading to the interior of the country along the shore of the Bay of Guanabara. To date, the restaurant and bathhouses shown here are the only completed buildings. The ultimate grounds to include a yacht club, athletic field, playground, first aid station, parking lot, garden and water supply.

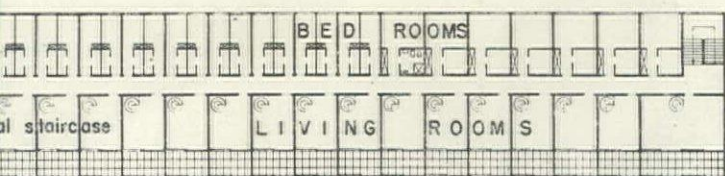
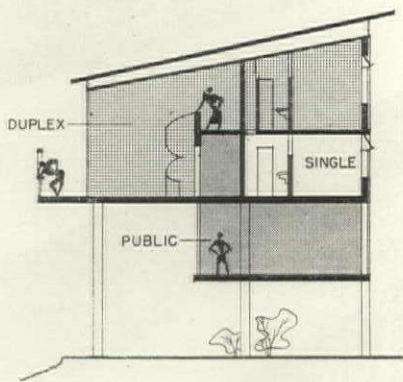




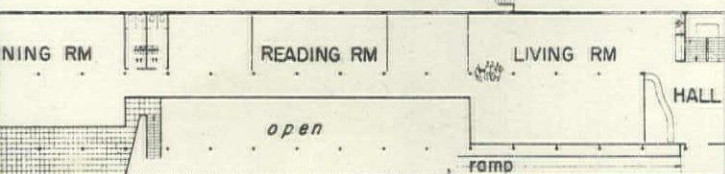
TOURIST HOTEL

OSCAR NIEMEYER, Architect

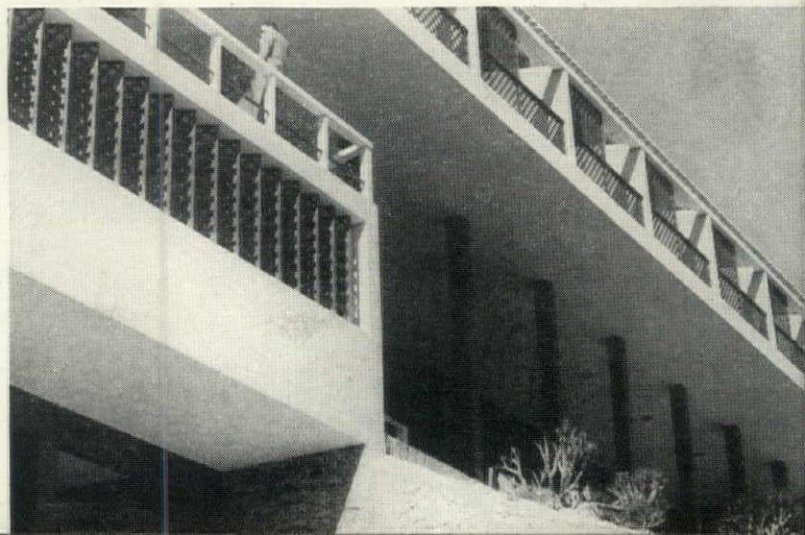
Located in the 18th Century town of Ouro Preto, this modern hotel holds its own handsomely but, at the same time, blends pleasantly with its baroque surroundings—another instance of SPHAN's adroit combination of the new and old. This photograph showing only half of the building was taken from a point directly in front of the central terrace. The ground floor is only partially enclosed and connects with the public rooms on the second floor above by means of ramps. The central corridor on the third floor is flanked to the north by a row of ordinary bedrooms. To the south are the two story living rooms of the duplex apartments, an arrangement which eliminates the fourth floor corridor.

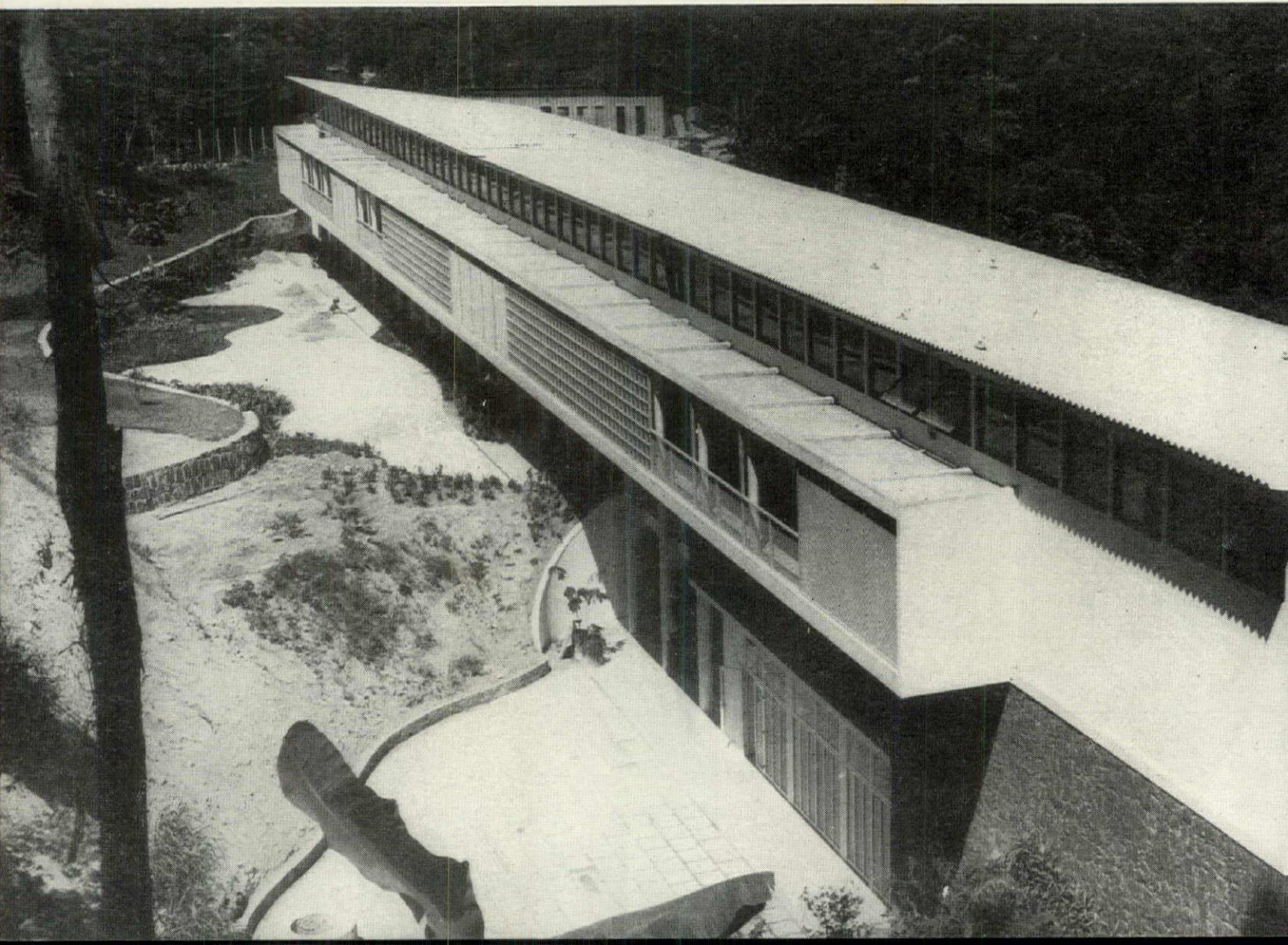
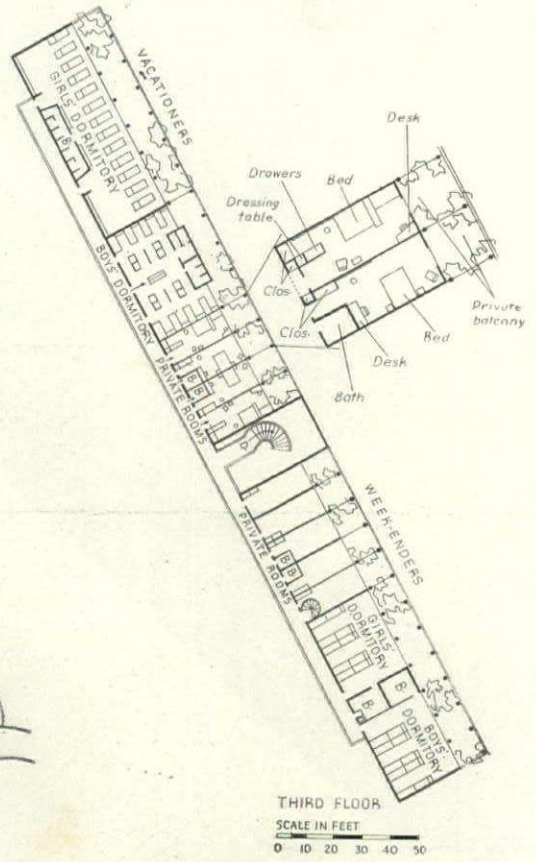


FLOOR



FLOOR

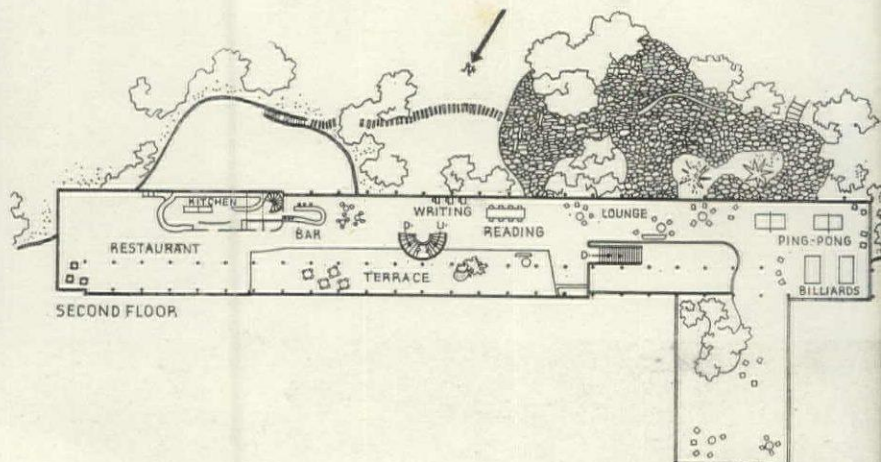
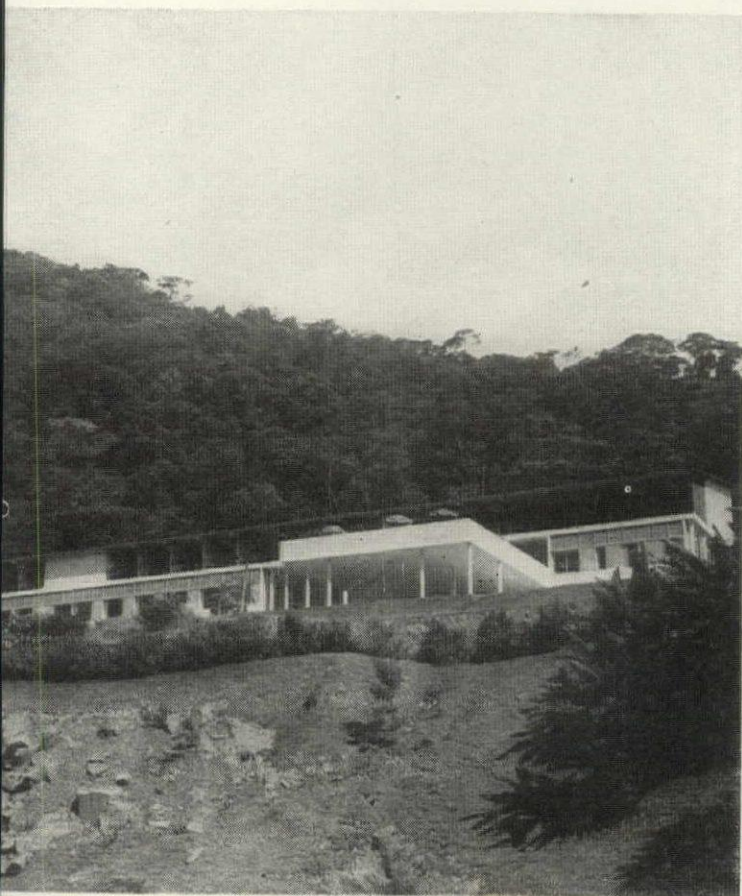




SMALL RESORT HOTEL AT TIJUCA

MARCELO, MILTON and MAURICIO ROBERTO, Architects

Overlooking a stream and the garden city of Tijuca, 20 minutes from Rio de Janeiro, this small suburban hotel is part of a vacation colony built by the Institute of Reinsurance for its white collar workers. The three-story structure was built into the north side of a hill; hence the first floor, containing garages, nursery, laundry and other services, is accessible only from the north. Entered from the south, the second floor is a great open reception and recreation area with a dining room, bar and kitchen at one end and a projecting terrace at the other. Sliding shutters on the north may be opened to the view or closed to the direct sunlight. On the third floor private bedrooms and dormitories with a total capacity of 83 are protected from the sun by a covered north terrace extending the full length of the building (photos, left). Clerestory windows under the corrugated shed roof admit south light to the sleeping and dressing rooms (below).

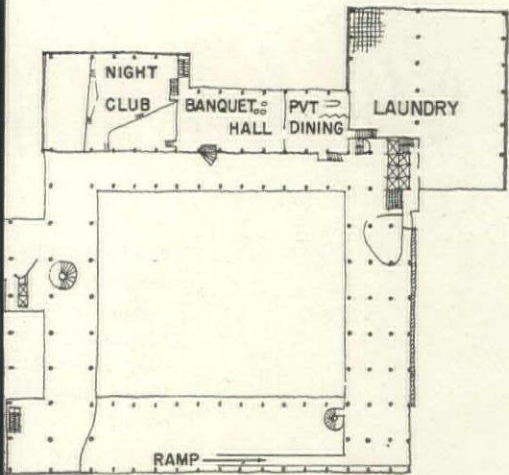




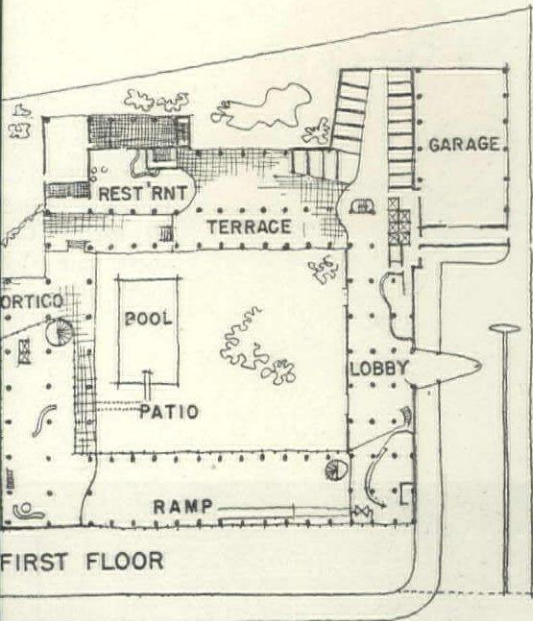
LUXURY BEACH HOTEL

HENRIQUE MINDLIN, Architect
BURLE-MARX, Landscape Architect

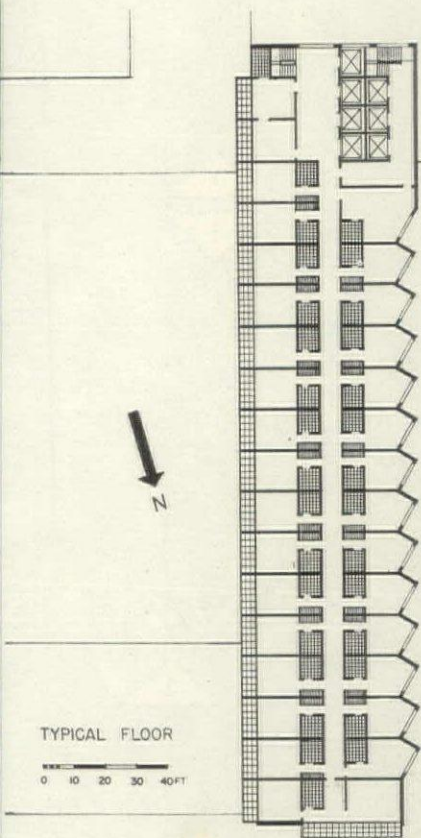
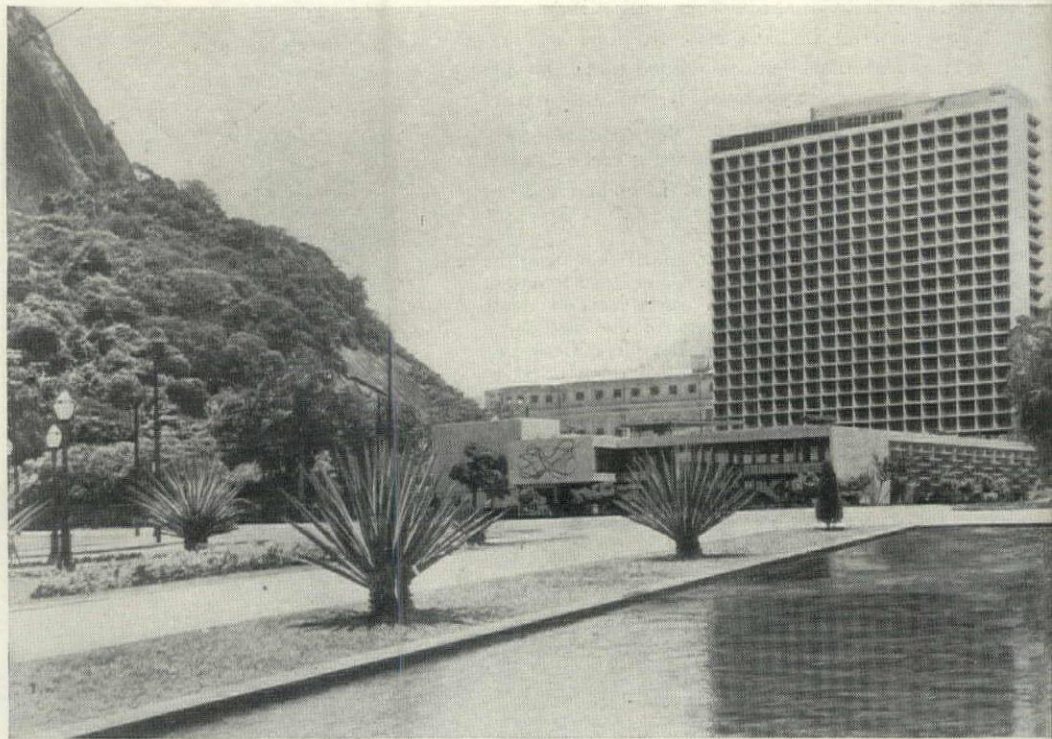
Occupying a five acre site at Praia Vermelha, a small strip between the bay and the ocean, this hotel project will develop the first beach in Rio de Janeiro located directly on the Atlantic. The property is near a huge rock that separates Praia Vermelha from Copacabana, is also convenient to the Sugar Loaf Mountain cable car station. Planned to accommodate 600 persons in the tall bedroom structure, the design places public rooms in two-story wings encircling a central patio. The north wing contains a 250 ft., banquet and ballroom. The bedroom structure, topped by a roof garden and night club, faces the Atlantic on one side, downtown Rio and Corcovado Mountain on the other. All rooms on the ocean side have balconies. On the other side the exterior wall of each room is canted for a better view of the city and protection against the afternoon sun.



SECOND FLOOR

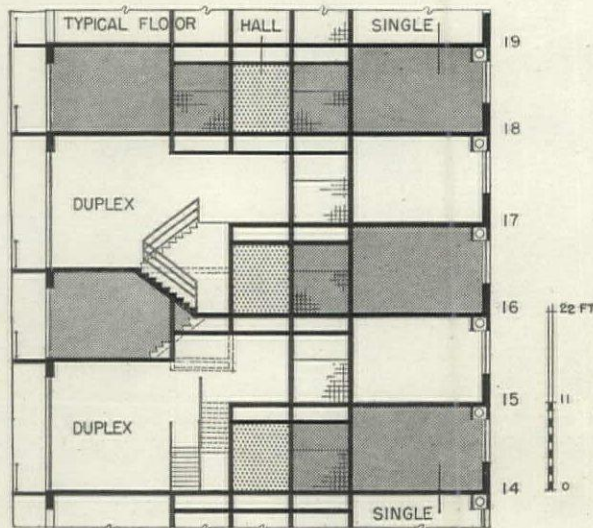


FIRST FLOOR



TYPICAL FLOOR

0 10 20 30 40 FT



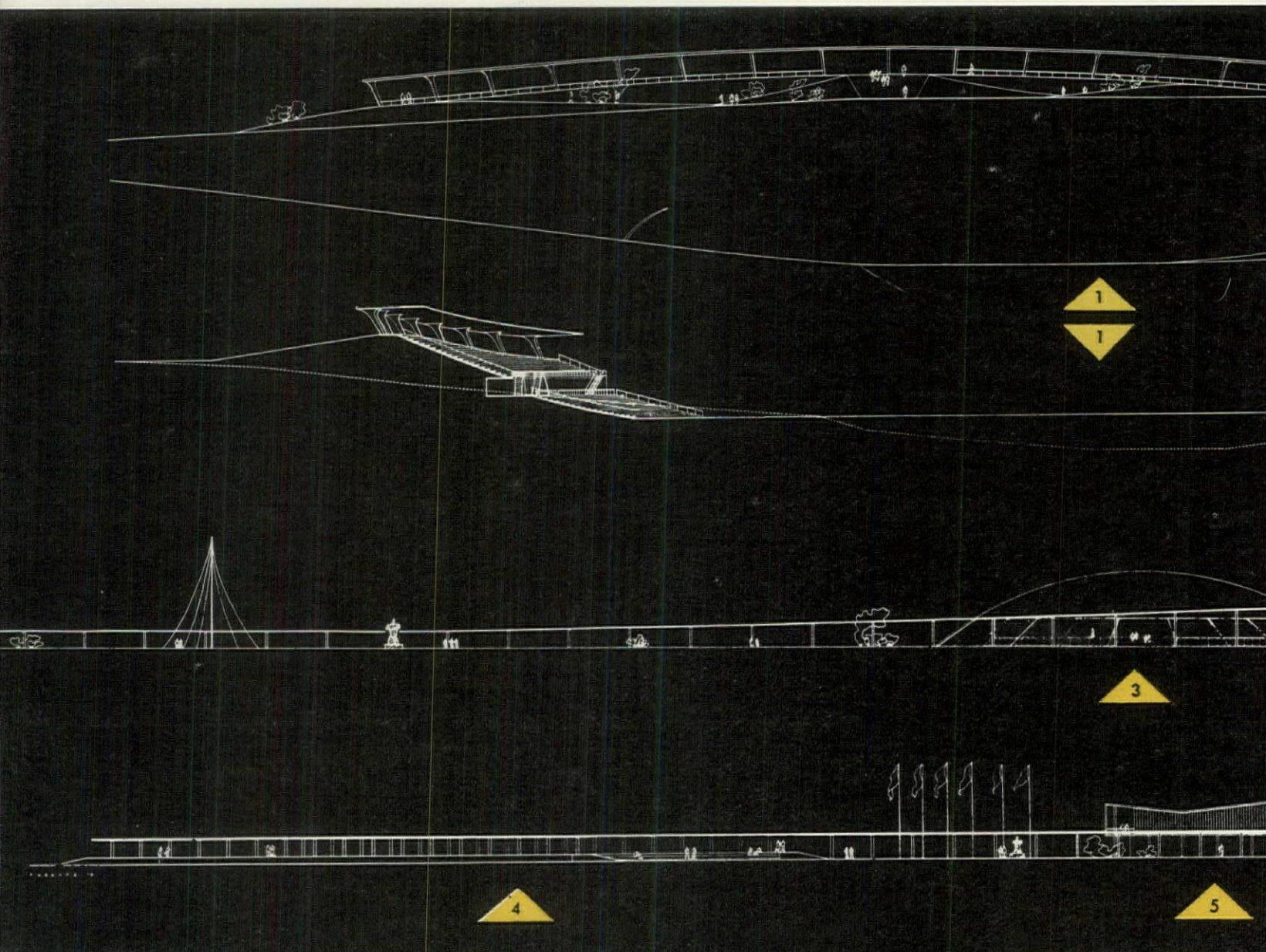
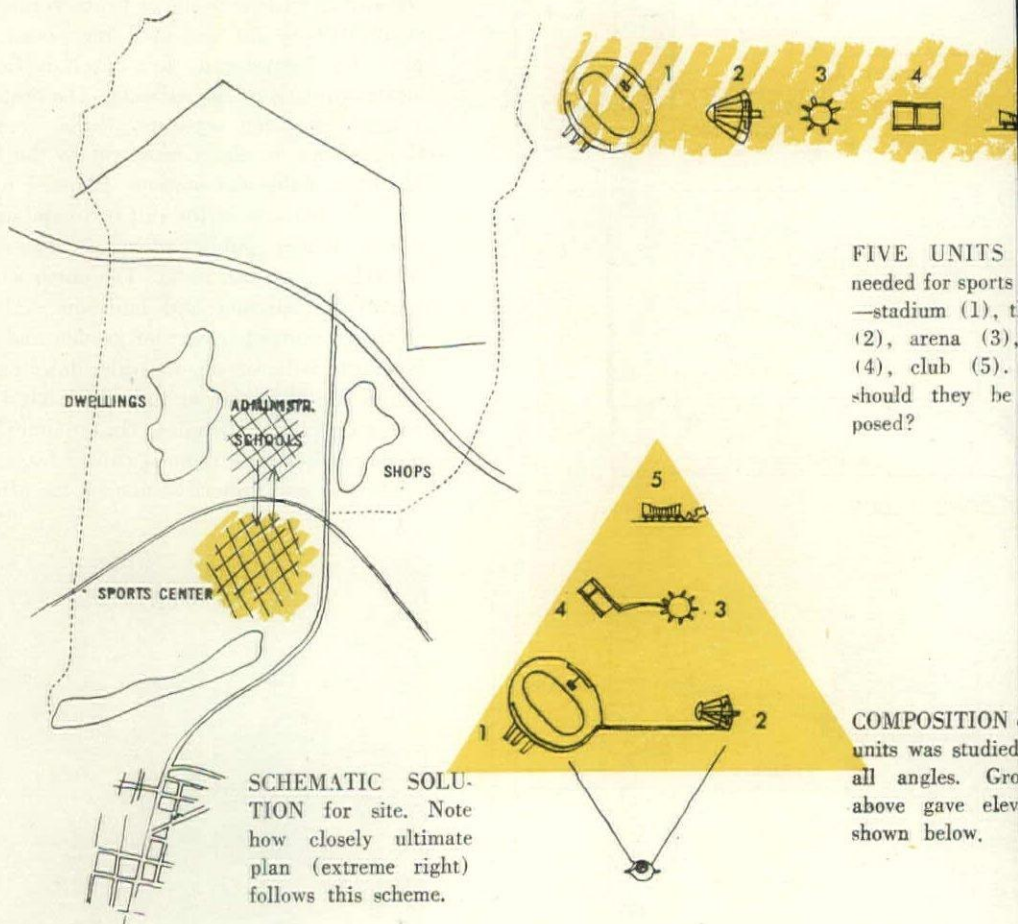
Still under study is an alternate scheme for the 14th to 18th floors. It is suggested that these be comprised of duplex apartments as well as standard hotel rooms. In order to obtain cross ventilation without departing from the central corridor scheme of the rest of the building, Architect Mindlin has devised an ingenious split level plan which leaves four stories on the side of the block facing the city, three on the ocean side as shown in the section at the left. This makes possible the elimination of two corridors. Single rooms on the duplex side are alternately at corridor level or dropped a half floor.

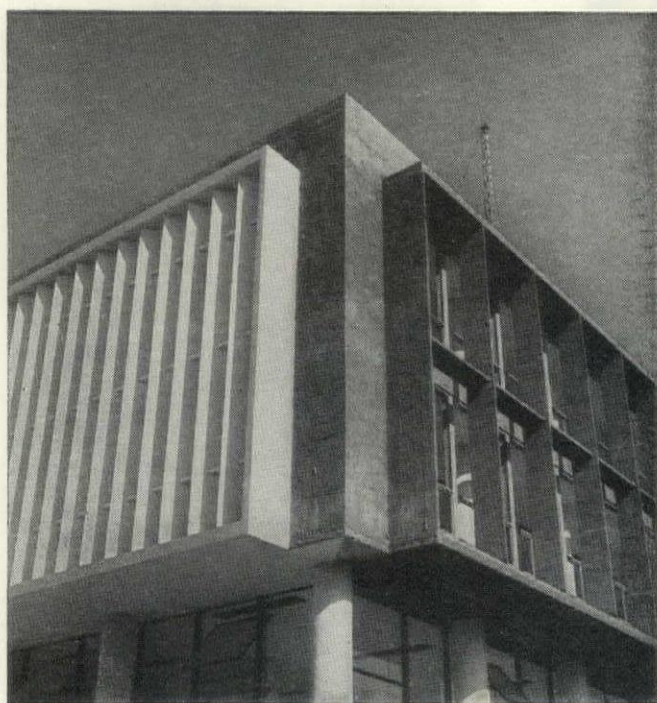
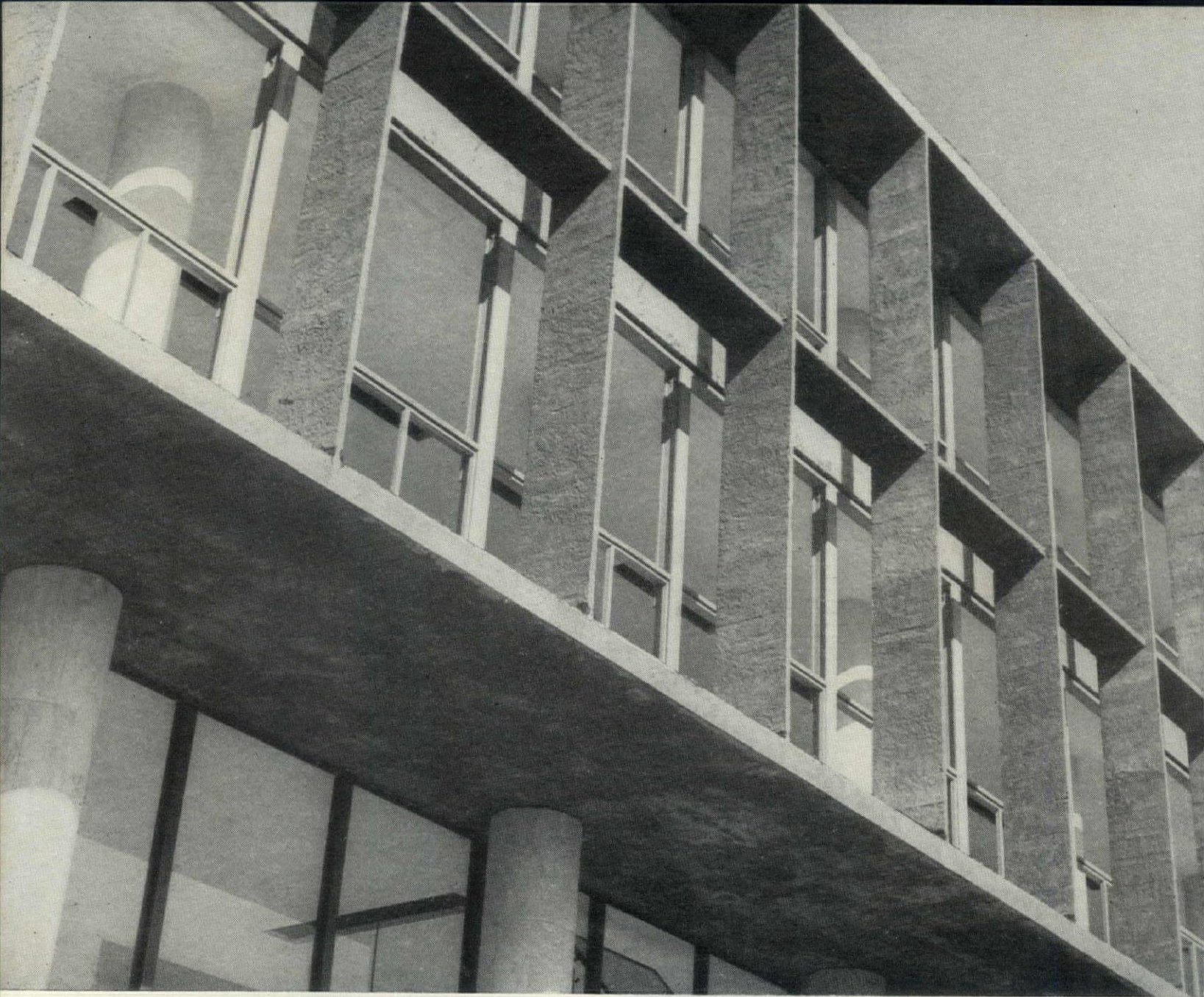
NEW TOWN FOR BRAZILIAN AERONAUTICAL CENTER

OSCAR NIEMEYER, Architect

In his designs for the government's proposed Aeronautical Research Center,* Niemeyer's great talents are admirably displayed. At every level, the drawings show his confident yet unobtrusive mastery of plan and structure. As a site planning problem alone, the conditions were formidable: an undeveloped plateau, some 68 miles northeast of Sao Paulo, was to be developed into a complex of schools, laboratories, workshops and airport, together with all living and recreational facilities for a student body and faculty of 4,000. His sketches (right) show not only how the various elements were disposed for ease of circulation but also how these same elements were studied for visual relationships. Here a highly-developed set of esthetic criteria is evident. The individual buildings—all of them reinforced concrete in the plastic tradition of Freysinnet and Maillart—are so related that from any point of view they afford lyrical and daring compositions. Yet structural efficiency and honest plan are nowhere sacrificed for mere display. Instead a real integration of form and content is achieved.

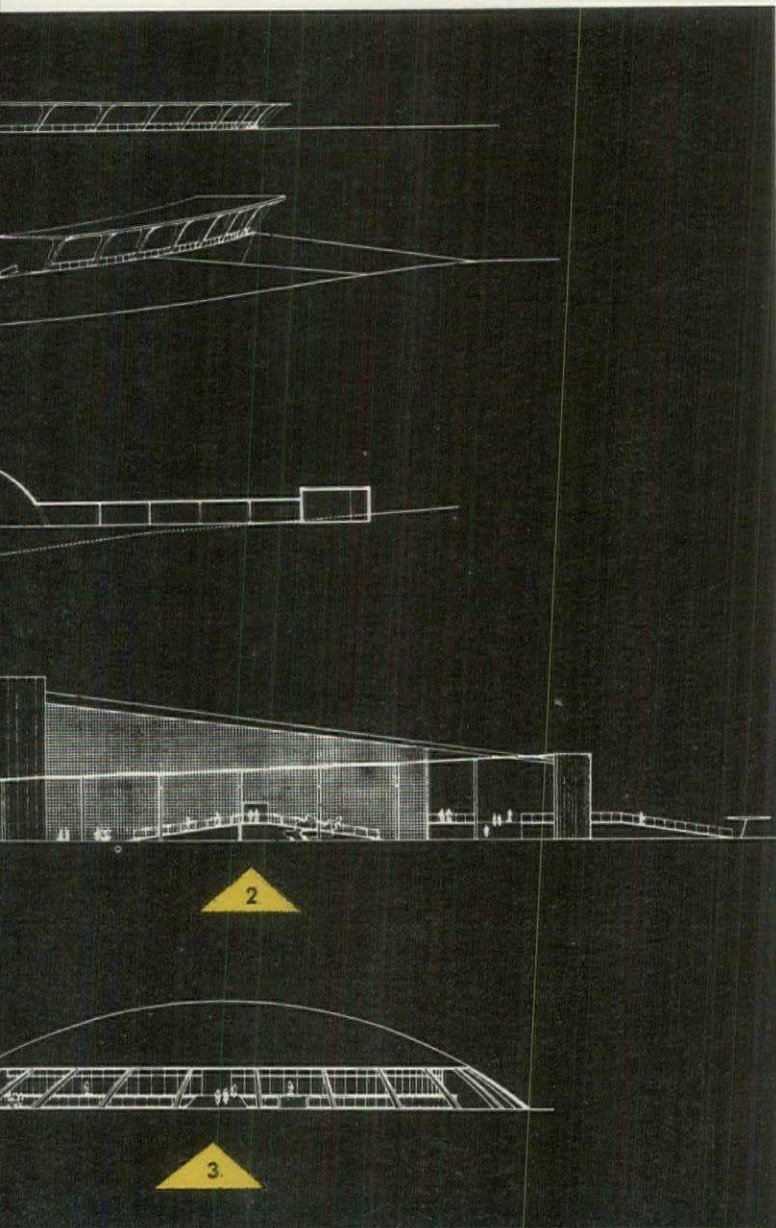
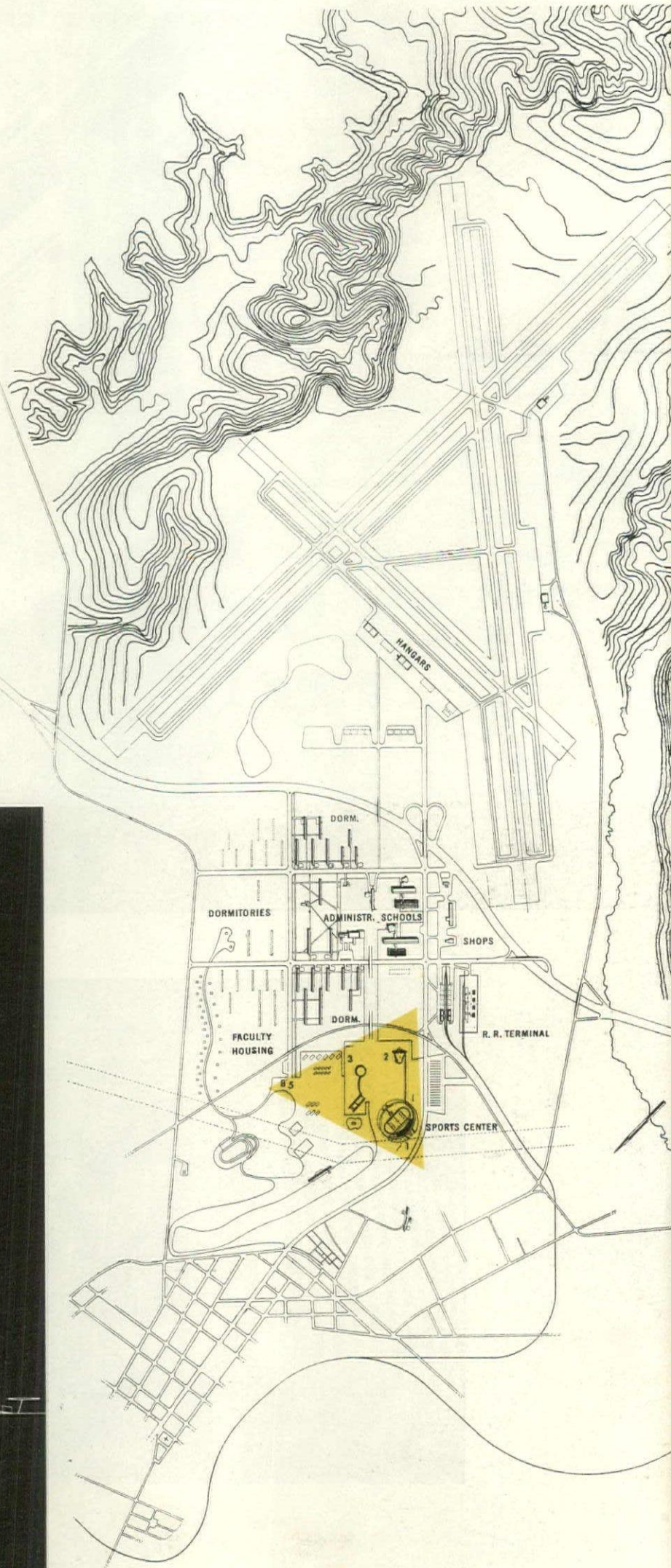
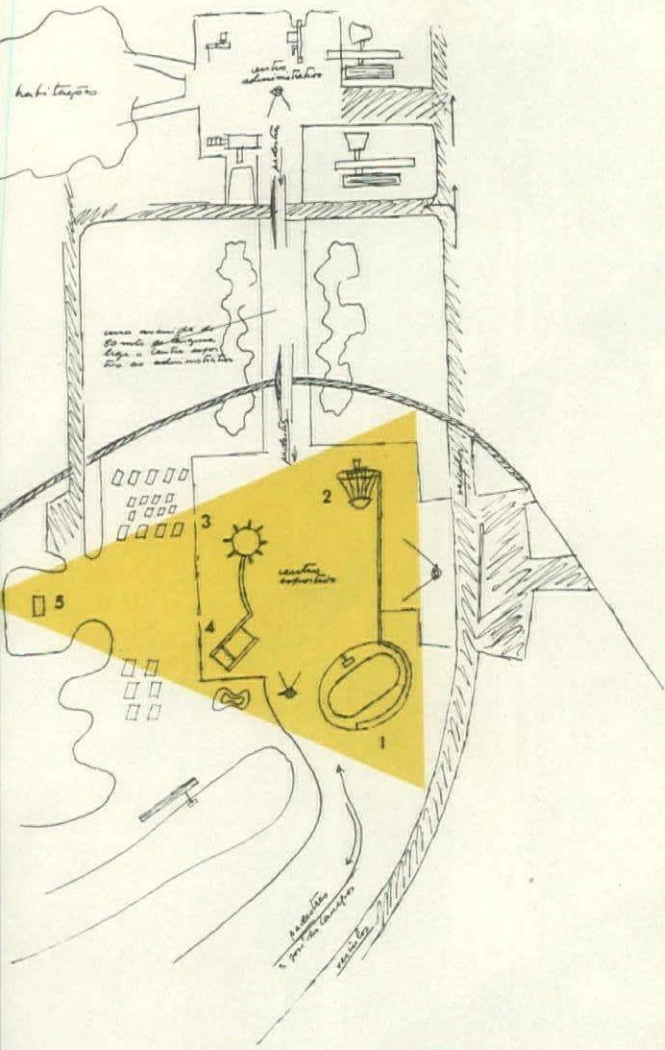
* At present a center of controversy. Having won the competition, Niemeyer was given a contract to design the project. Last spring, the government suddenly cancelled the contract because of the architect's political beliefs. However, it still prefers Niemeyer's design, wants some other architect to develop it. So far no one has stepped forward to take the assignment.





GRILLWORK of precast reinforced concrete panels on west facade (above and below) will later be fitted with adjustable louvers of asbestos cement, which may be closed in the afternoon to protect the setting sun. Upper floors at north end of building (left) are screened by permanently fixed louvers.





AIR TERMINAL BUILDING

MARCELO, MILTON and MAURICIO ROBERTO, Architects

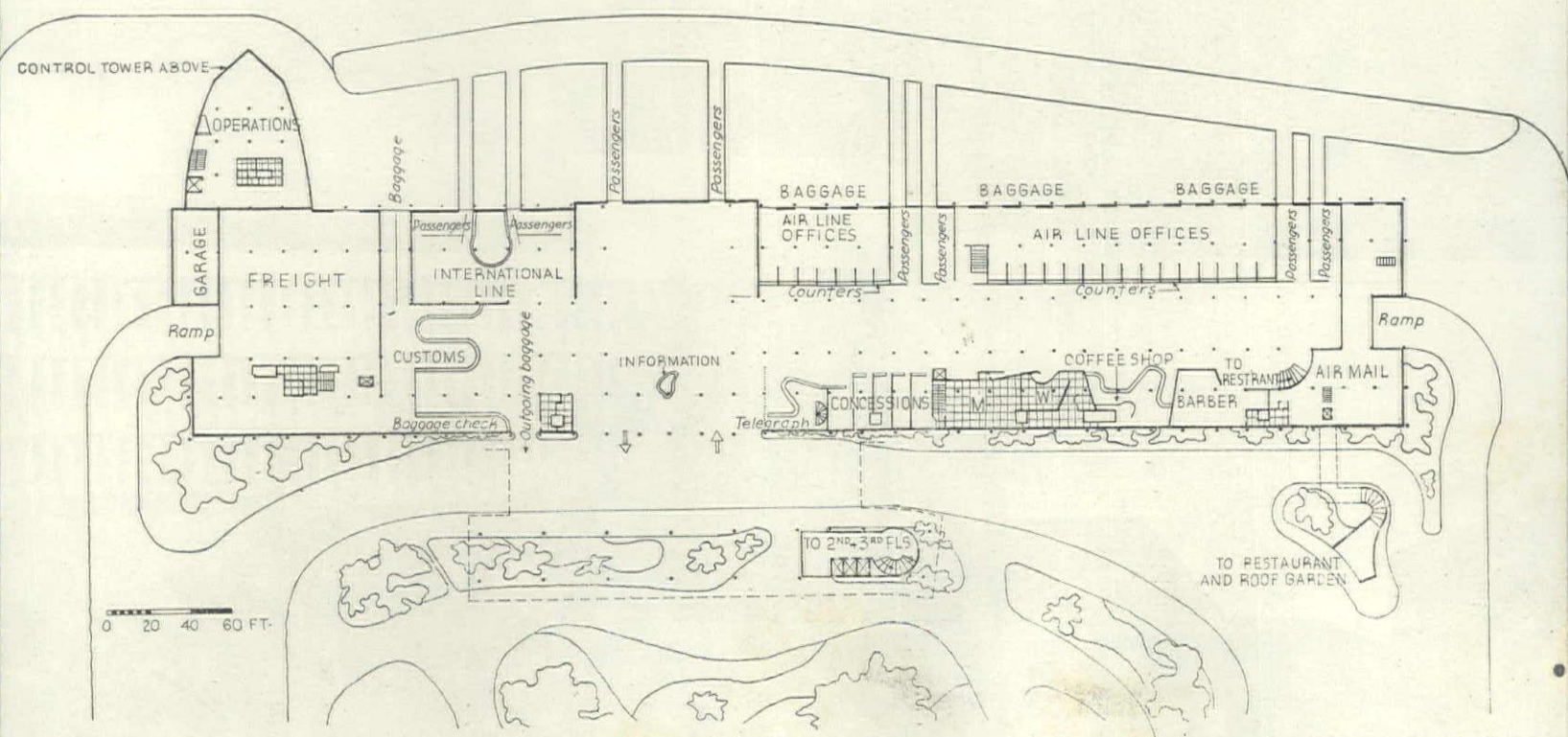
Five minutes from the City's center, Rio's air terminal building is a 115 x 640 ft. rectangle whose interior space arrangement closely follows the U. S. and European patterns, but whose exterior treatment is completely native.

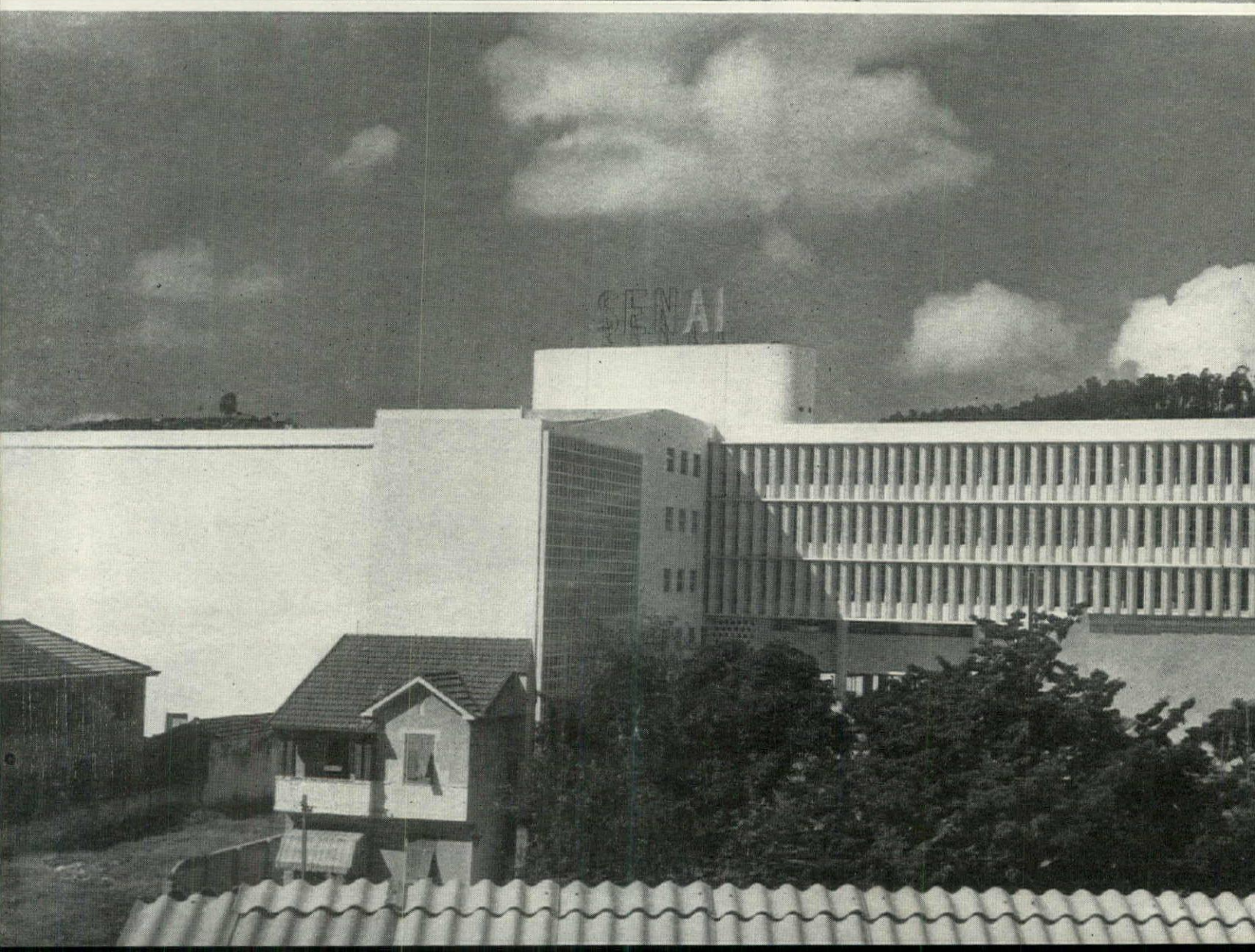
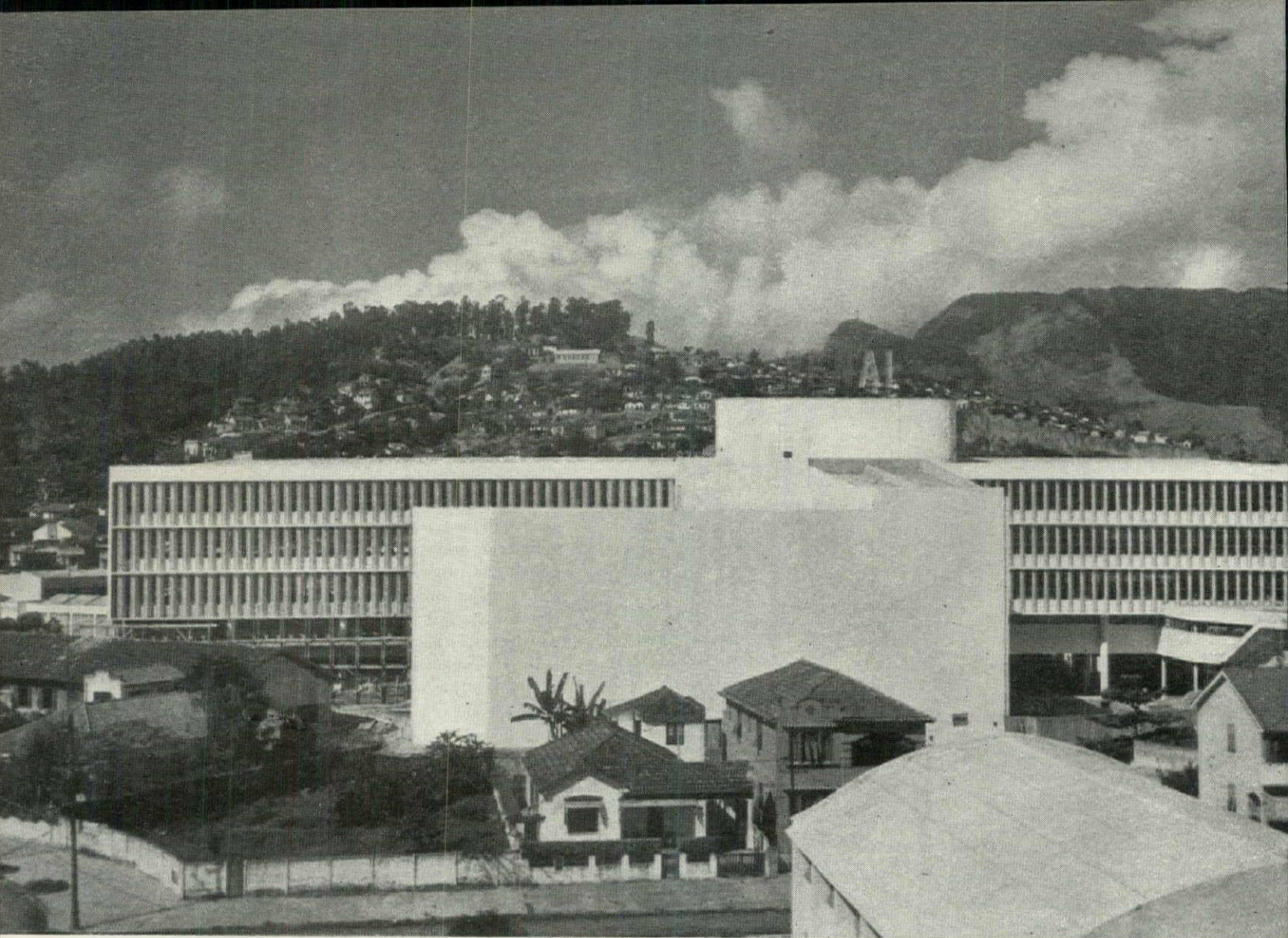
On either side of a large waiting room, the first floor provides all the public services required of a terminal, including ticket counters for 12-15 air line companies. Below is a basement used primarily as a truck concourse for freight and mail deliveries. Above is a 1,000-seat mezzanine restaurant, two floors of offices and a richly landscaped roof garden. In its present stage of construction, the upper floors and garden are accessible only by interior stairs. However, two small buildings to be built on traffic islands and connected to the front of the terminal by bridges will contain elevators and stairs for the use of office workers and sightseers. Their addition will relieve congestion in the terminal proper.

Exterior walls of the building are completely glazed and, where needed, are protected by various types of sun-breakers. Since the north end receives the full strength of the sun most of the day, its upper floors are shielded by huge vertical louvers permanently set to screen out all direct sunlight. The western facade, containing the main entrance, is free of sun in the morning but is hit by bright sunlight during the late afternoon. Its upper floors will therefore be protected by adjustable louvers of cement asbestos set within the projecting concrete framework shown in the photographs, opposite. While the ground floor has no such vertical louvers, it enjoys the partial shade afforded by the protection of the second floor slab beyond the structural columns.



SCULPTURE in reinforced concrete, these stairs connect the telegraph booth (near main entry) with a second floor office.





EDUCATION AND WELFARE

The present day structure of Brazil's social system reflects, more than anything else, her long centuries of Colonial status. A colony for 300 years, ruthlessly exploited by Portugal, Brazil won her independence only in 1822. And even after independence, the semi-feudal society of Dom Pedro, technically and economically backward, restricted the development of popular education. Only with the overthrow of human slavery (1888) and the rise of the Republic (1889) could the concept of universal free education and public welfare service begin to operate.

The nation has about 43,000 free primary schools in a system which is slowly being federalized; about 4,600 middle grade schools (secondary, industrial, normal, etc.) of which a large portion are private; four universities; and a number of separate institutes. Yet half the nation is still illiterate; and in this context, the most important educational instrument is still the army. Every year tens of thousands of conscripts from all over the country begin

a two year term of military service. Their uniforms and equipment are the butt of affectionate jokes throughout the nation; but here all conscripts learn to read and write—for many the only education they will get.

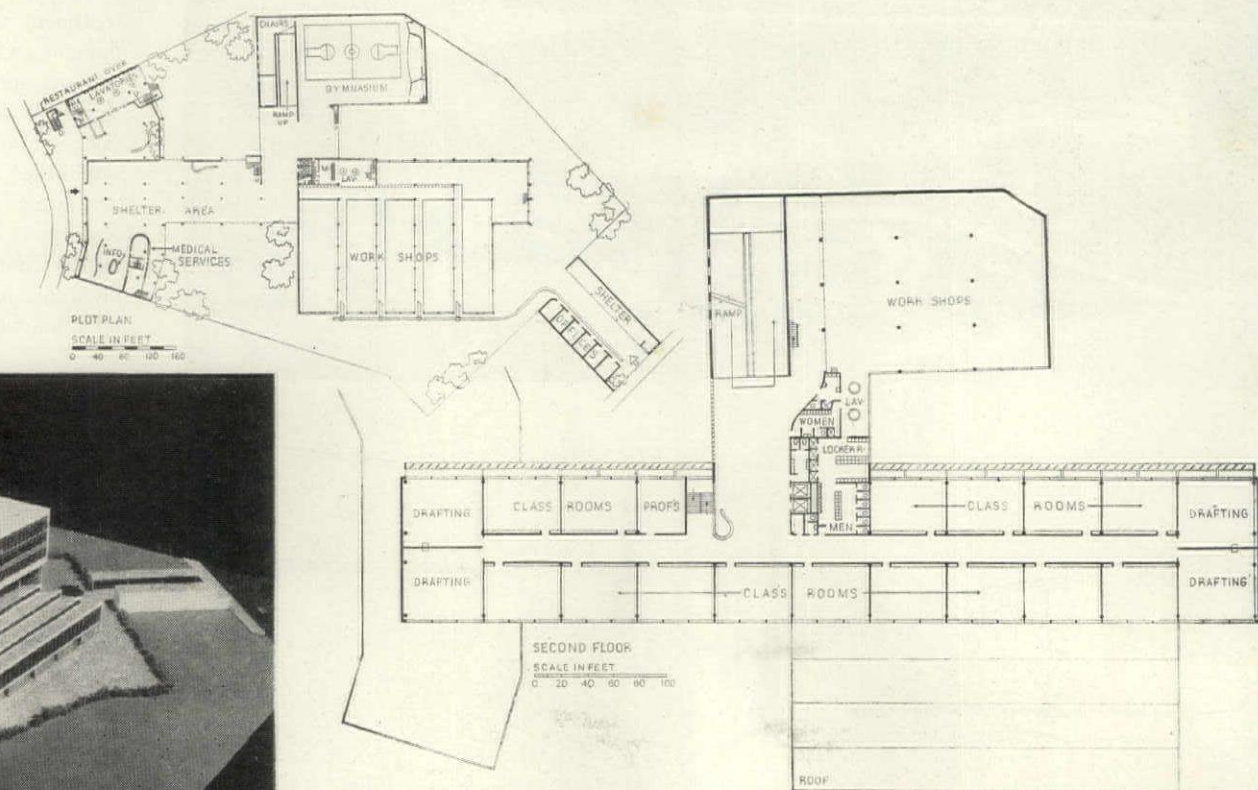
In some respects, Brazil's public health system is more advanced than our own. The social insurance laws, for example, provide for sickness and disability insurance, medical care and hospitalization. In practice, however, many factors operate to restrict this service—especially in the rural areas. And in spite of great expansion in the past few years, the country is still sadly understaffed and under equipped. On the average, she has only 0.56 doctors and 1.8 hospital beds per 1,000 persons. (Comparable U. S. ratios: 1.2 doctors, 9 beds.) No one is more aware of this than the Brazilians themselves; and if the admirable buildings in this section are any index, they will before many years have schools and hospitals second to none in both quality and quantity.

NATIONAL HIGH SCHOOL

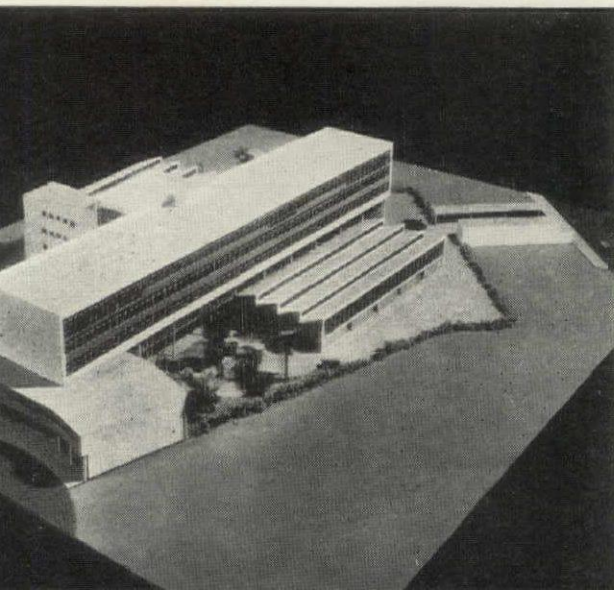
Located in an industrial section of Rio de Janeiro, this vocational high school is design to accommodate 1,400 students in two daily shifts. In general facilities, it conforms quite closely to U. S. standards: architecturally it is, if anything, better. Using an awkward and restricted interior plot, the architects have organized the major elements for maximum effectiveness. Heavy machinery shops, an auditorium and gymnasium have been placed across the center of the plot

in a north-south line. At right angles to this, but stilted off the ground, they have placed the classrooms and light machinery shops. All these elements are connected vertically with continuous ramps. This arrangement frees a large portion of the grounds for recess periods, and gives the majority of the classroom and shop area desirable (southern) orientation. The classrooms along the north are equipped with vertical *brise-soleil*. The building is of reinforced concrete throughout.

CELO, MILTON and MAURICIO ROBERTO, Architects



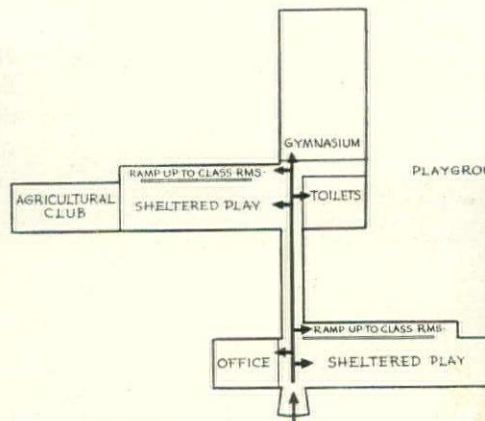
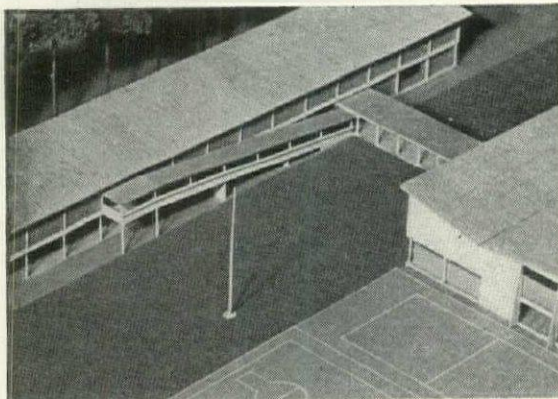
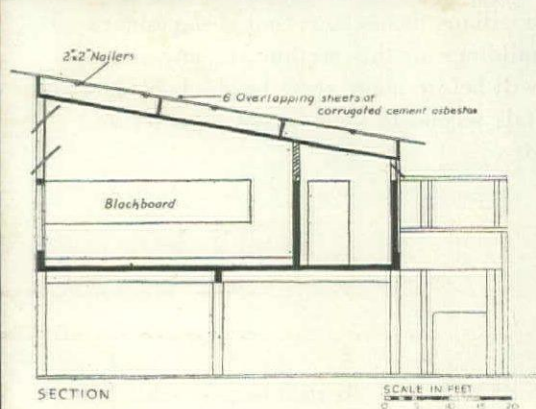
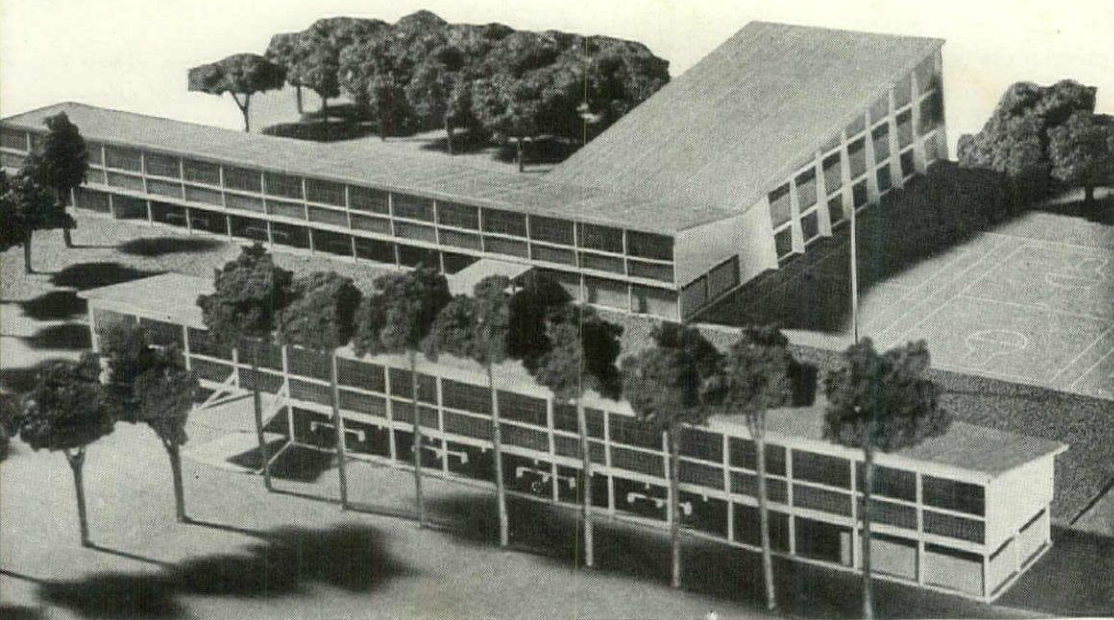
Five photos



SCHOOL FOR INDUSTRIAL T

CARLOS FREDERICO FERREIRA, A

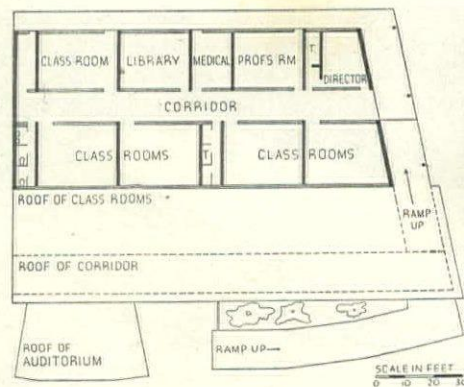
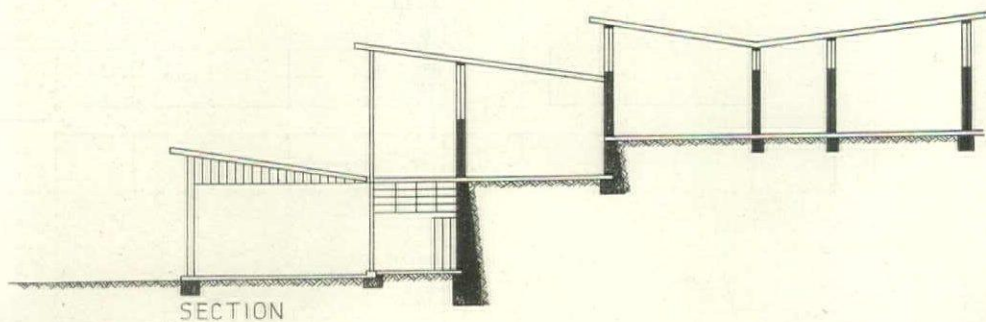
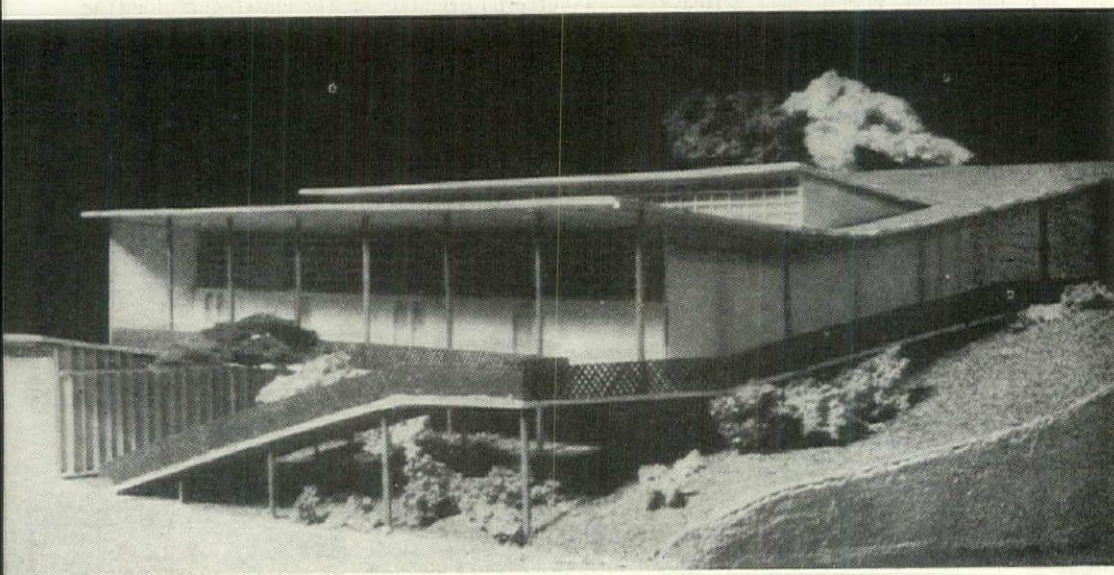
Planned for Santo Andre, the largest in center in the state of Sao Paulo, this primary consists of two individual buildings connected by a covered way. The plan places administrative and athletic activities on the ground level, leaving the second story solely for classrooms. Ramps connect the two levels. Five scores of concrete tile comprise the spandrels, with two factory type windows used above. The primary school is planned as part of a housing project by Ferreira, who is a government staff architect responsible for some of the largest low cost housing projects in Brazil.



SMALL PRIMARY SCHOOL ON A HILL

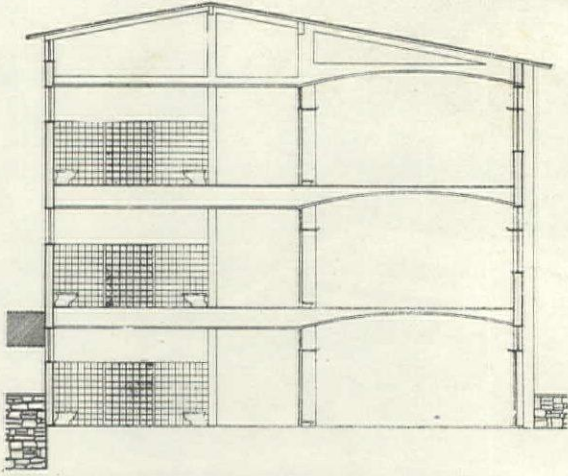
ALCIDES ROCHA MIRANDA, A

This primary school projected for SPH, which Miranda is a staff architect, will be located in one of the Brazilian towns that has been entirely under the jurisdiction of this agency. The treatment represents a good blending of modern thought and Brazilian colonial architecture. The building site naturally suggested a drop level plan. Access is provided from the front by means of a ramp—a design feature that seems to have established itself in the national architecture. Like the larger Ferreira school (above), in this school the classrooms are adjacent to the principal's office and faculty room. The four classrooms at the upper level depend exclusively on the light for illumination.

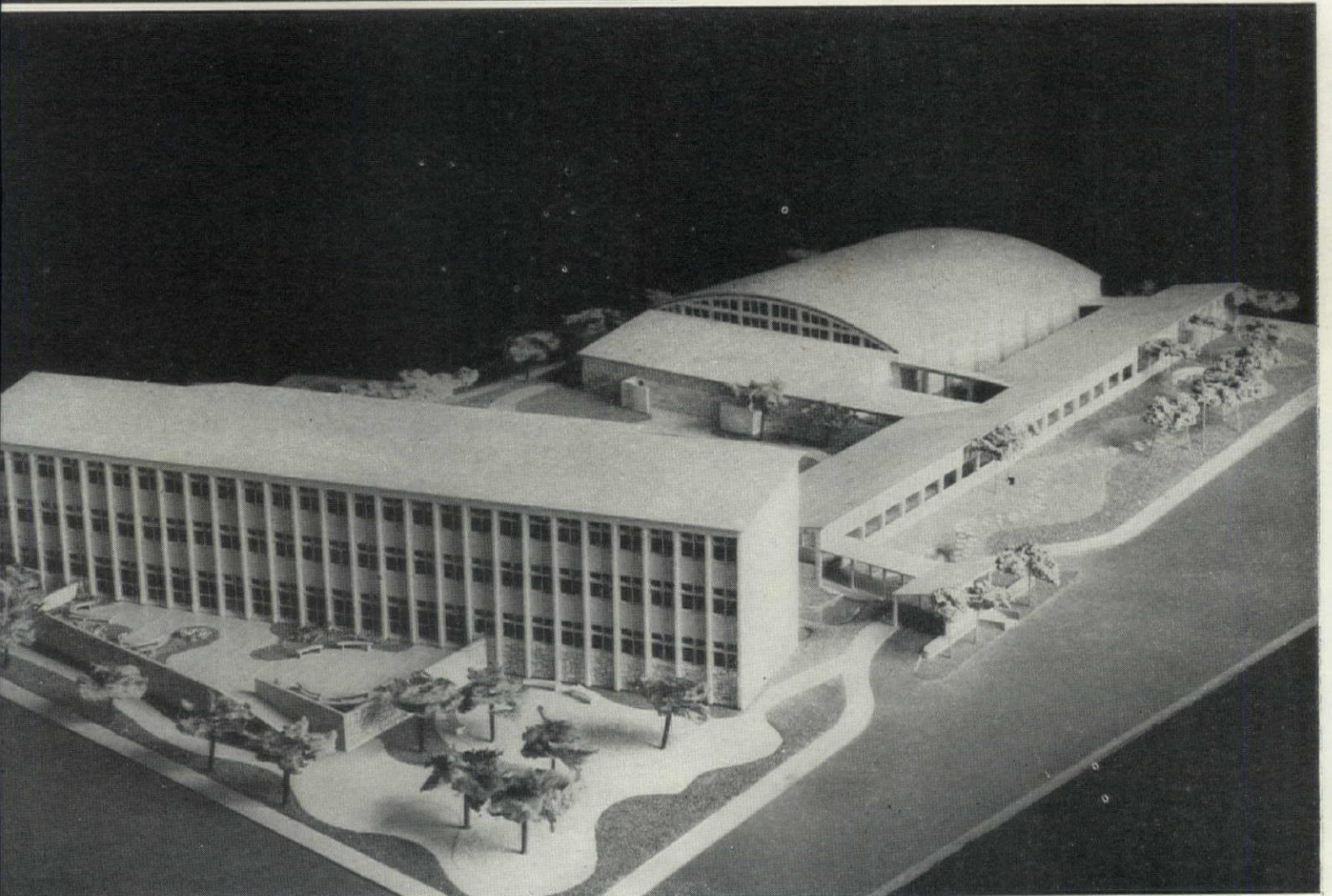
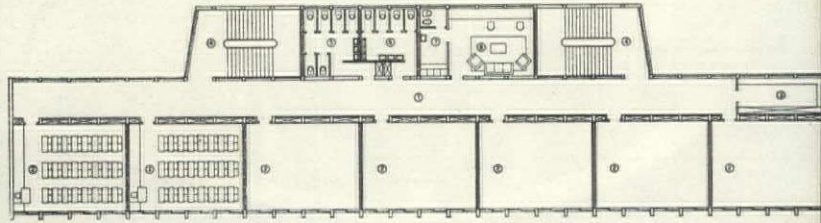
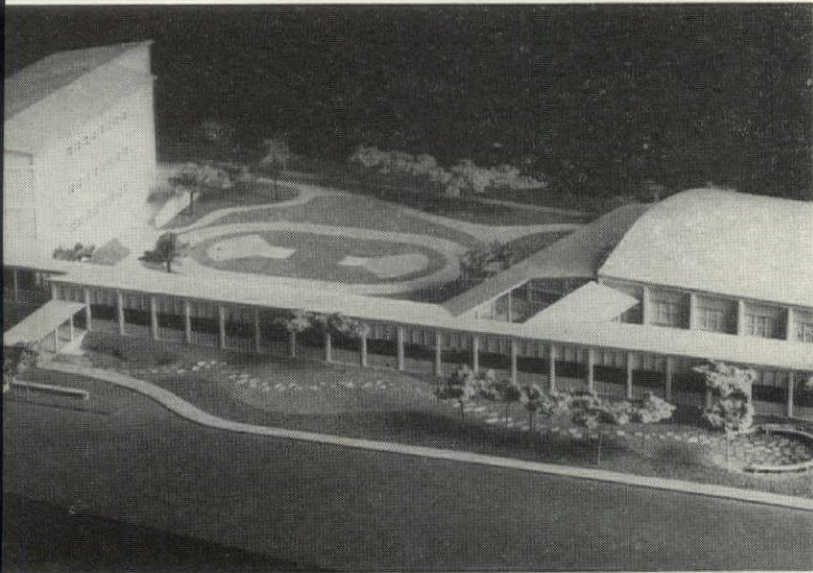


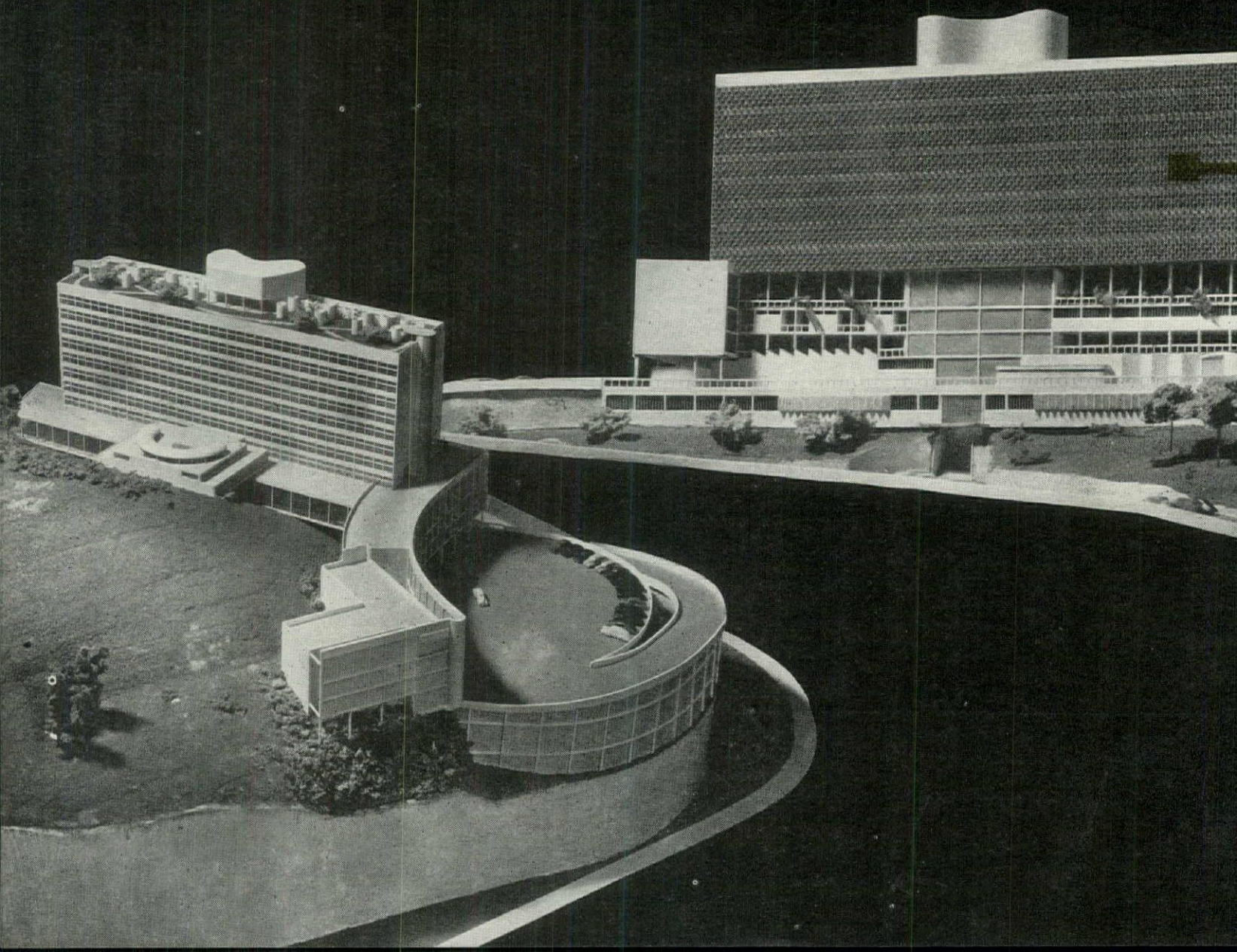
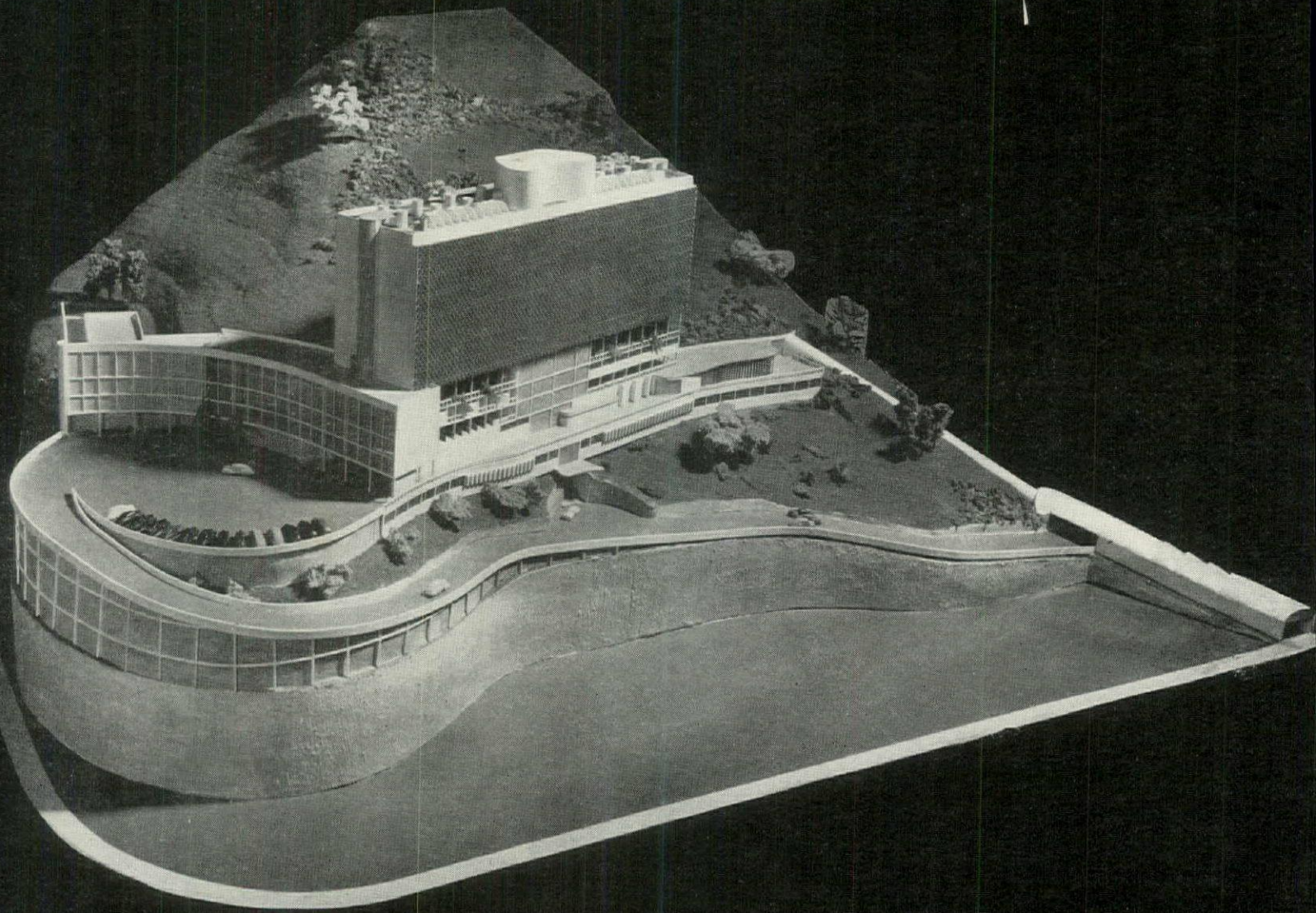
URBAN PRIMARY SCHOOL

ALDARY HENRIQUES TOLEDO, Architect



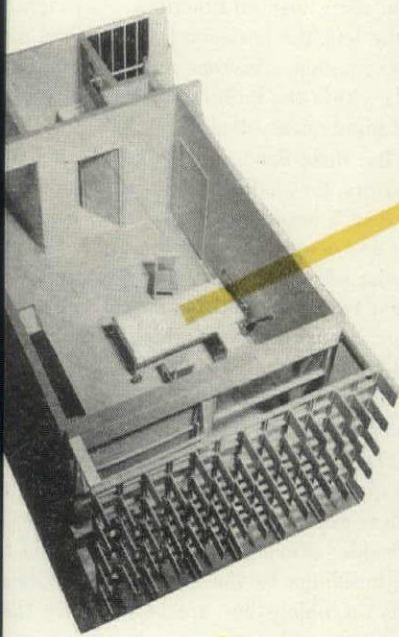
To be known as the President Roosevelt School, this educational group in Barra Mansa was carefully planned to make full use of a flat, urban site. The architect, in an effort to avoid a forbidding appearance, has designed the grounds with a lake and an abundance of planting. The gymnasium-auditorium will be isolated at the rear of the lot but connected to the main building by a covered walk. The classroom building is placed at an angle to the street for maximum sunlight, with the intervening triangle treated as a walled playground. Museum, library and vocational classrooms occupy the ground floor for convenience sake. Two stairs, a study room and the washrooms are housed in the projecting portion at the rear of the school building. The classroom section of the structure has hinged arch framing which is expressed in the vertical, projecting ribs of the facade. A traffic bay at the side of the property makes possible off-street loading and unloading of passenger vehicles, with a porte cochere extension of the covered walk to provide weather protection.



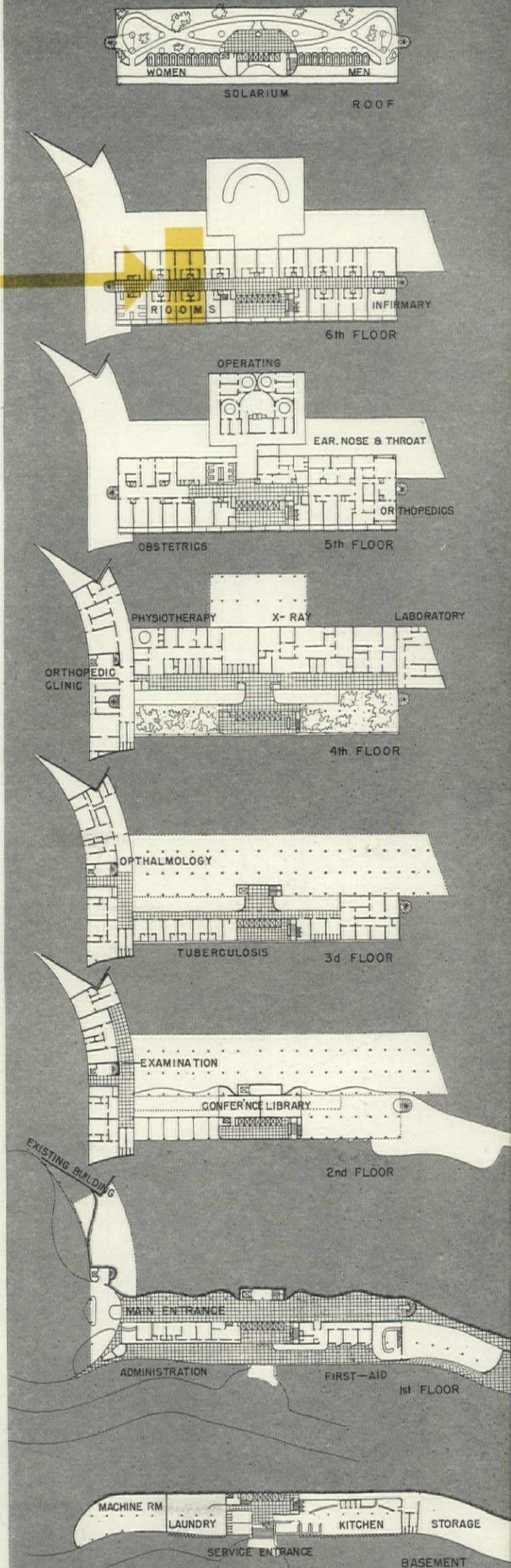


FOREIGNERS' HOSPITAL

PAULO ANTUNES RIBEIRO, Architect



It is expected that this handsome and imaginative hospital project in Rio de Janeiro will be largely supported by Rio's American colony. The design incorporates a small existing building located on the motor court. To tie in this structure with the main edifice, the architect plans to extend the facade of the five-story out-patients' wing to screen it. Main access for patients and visitors is from the motor court. The service entrance is in the center of the main building at ground level, feeds directly into the kitchen, laundry and utility rooms on the same floor, with a secondary pedestrian ramp located at the other end of the building. The first floor has generous public space, administrative offices and emergency facilities. Except for the central elevator and stair block and the out-patients wing, the floor above is a vast loggia open from front to back. The third floor of the main building is devoted exclusively to the treatment of tuberculosis, is served by a private elevator and stair from the main lobby. On the fourth, or treatment floor, a modified version of the loggia reoccurs, this time landscaped. The fifth floor accommodates the obstetrical and orthopedic departments and has, in addition, an interestingly planned surgical wing. Its round operating rooms and central sterilization area recall William L. Pereira's design for the Memorial Hospital in Los Angeles (FORUM, Nov., '45). Floors above have typical central corridor planning. The building is topped by a pleasant roof garden and a series of individual sun traps for patients. Ribeiro has worked out a unique device for sun protection on the main facade. This consists of a building-wide screen of operable vertical baffles set far enough away from the structural wall to create a passage between. Rooms, however, are equipped with supplementary venetian blinds.



MATERNITY HOME FOR UNIVERSITY HOSPITAL

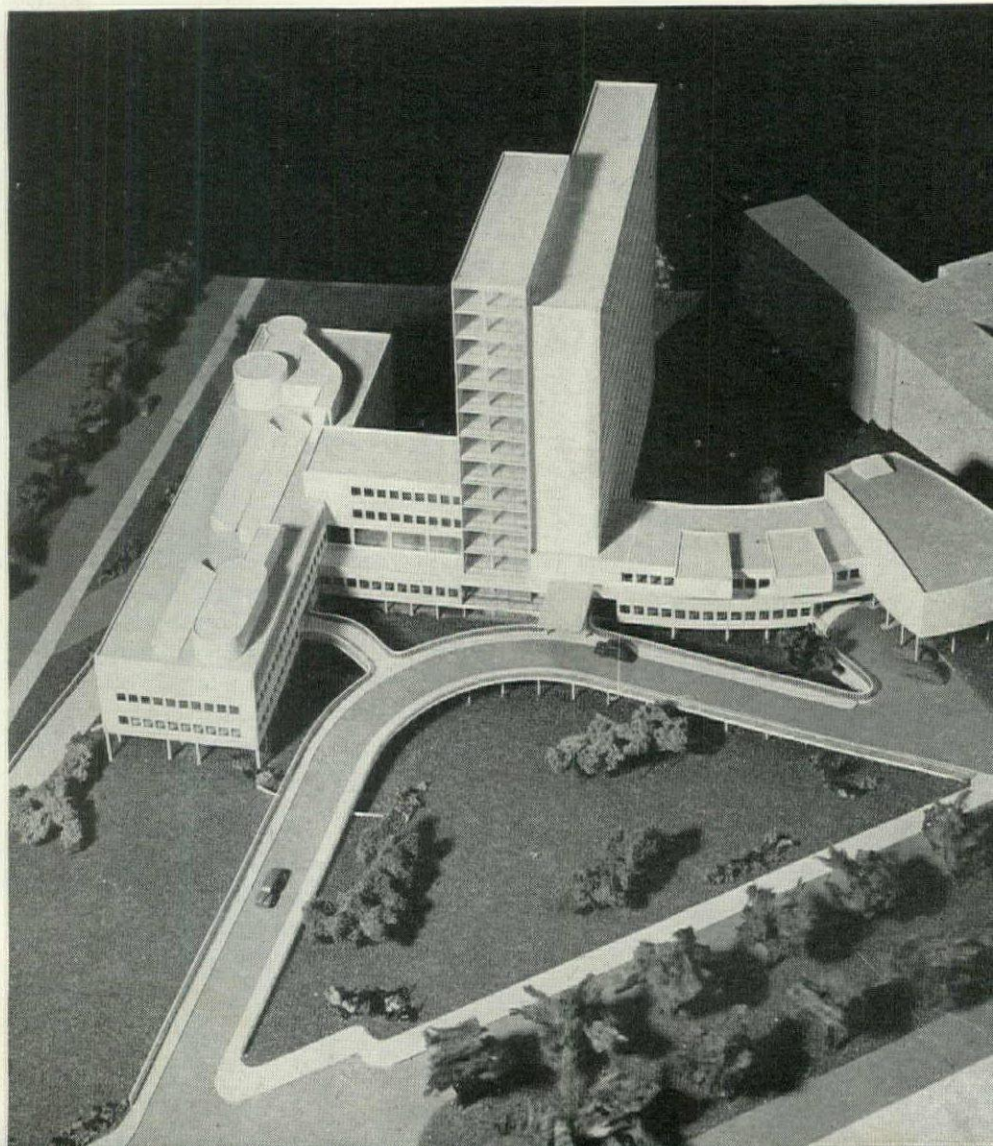
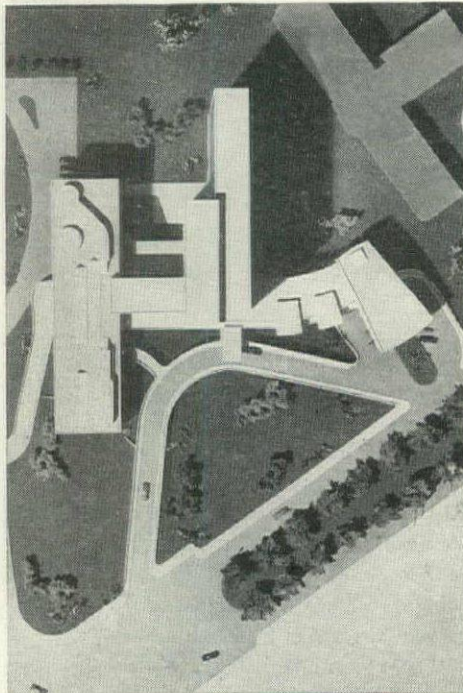
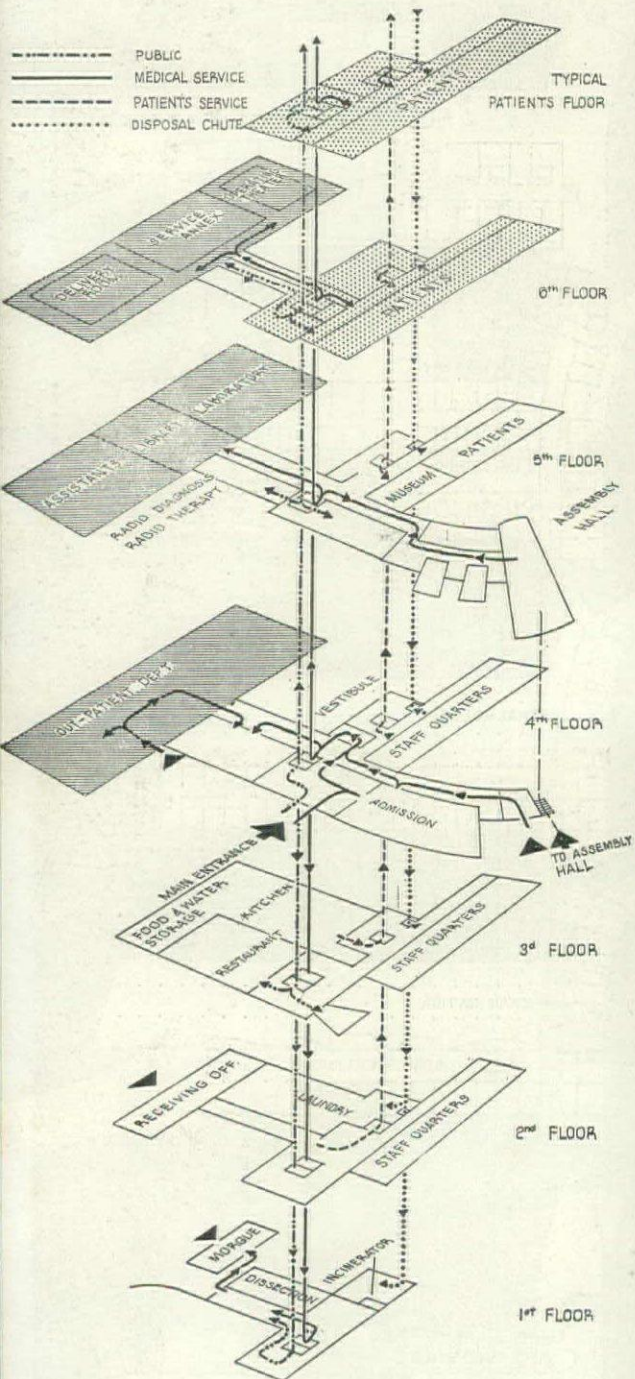
RINO LEVI, Architect

Located on a steeply sloping site in Sao Paulo, this prize winning design takes advantage of a 69 ft. drop in elevation to help solve the complex circulation problem encountered in the planning of any hospital. The fourth floor is the main floor, entered at four points along the elevated one-way drive. The first entry leads to the wedge-shaped, over-head lecture hall, the center of the hospital's teaching facilities. Beside it is the first-aid entry, wide enough for the parking of ambulances.

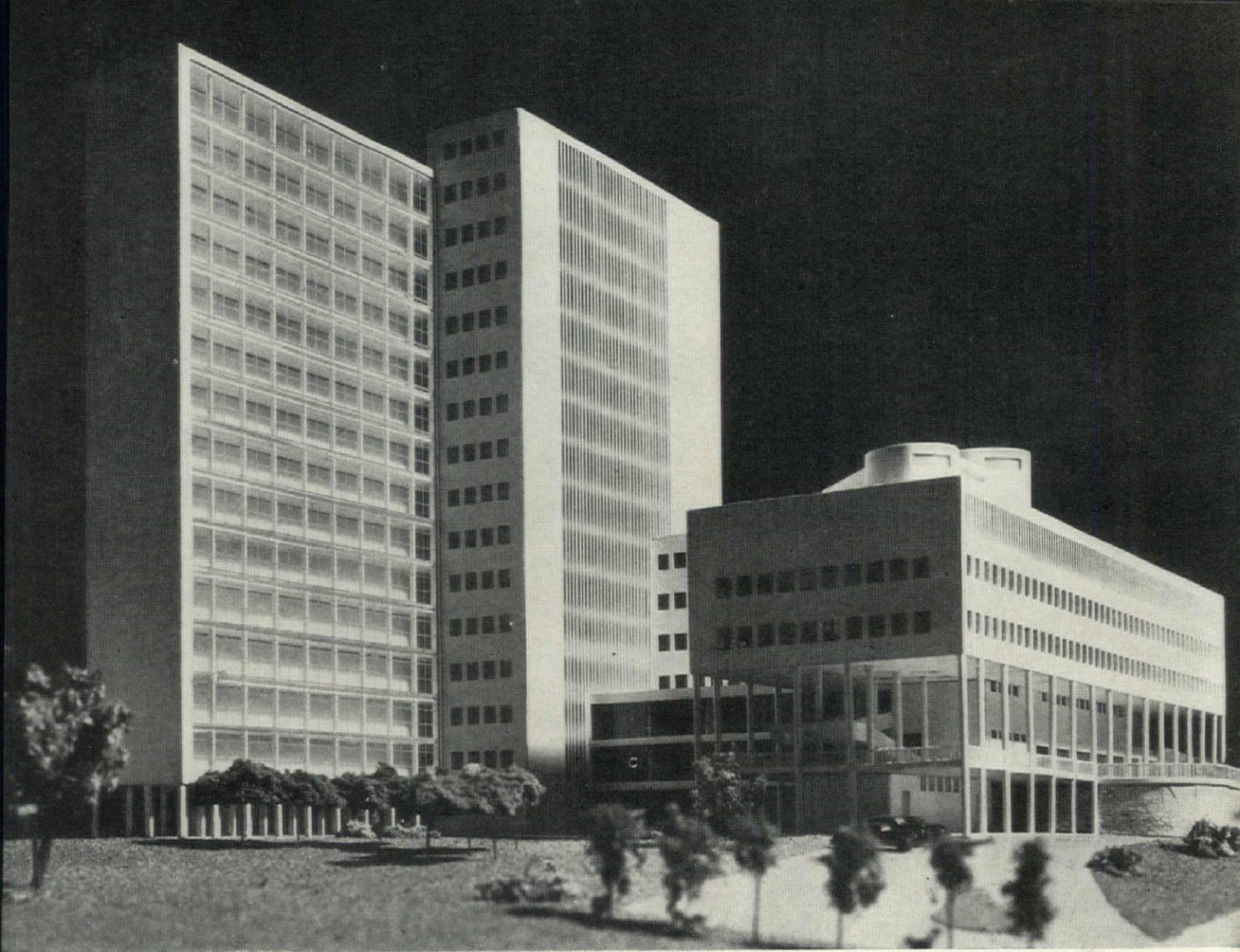
Beneath the 16-story in-patient wing is the hospital's main entrance. The fourth floor serves the out-patient department in the low wing to the south. Two floors below in the same wing, the service facilities are accessed via a ramp from the side street; and a morgue, another floor down, has its own driveway and parking lot to isolate this department from other hospital functions. As diagrammed to the left, the horizontal and vertical circulation of patients, visitors, meals and other materials within the buildings is carefully planned and highly controlled.

First three floors of the central wing contain quarters for staff, students and nurses. The balance is occupied by a bedroom and nursery unit and a ward and nursery unit. These consist of one nursery floor sandwiched between two post-natal floors and two pre-floors, an arrangement which minimizes transfer and simplifies administration. Wards include a room for 108 beds; private and semi-private rooms, a maximum of 112 beds; nurseries, 54 cradles each. In a pinch, the 68 beds in the quarters floors could be converted to patient accommodations.

Besides playing an important part in fitting the buildings to the site's irregularities, the stilts on which they are built permit the surrounding gardens to extend without interruption under the buildings and driveways in conjunction with the generous use of glass. They give the whole project a pleasant feeling of lightness and transparency.



Laboratoire de Fotoptica



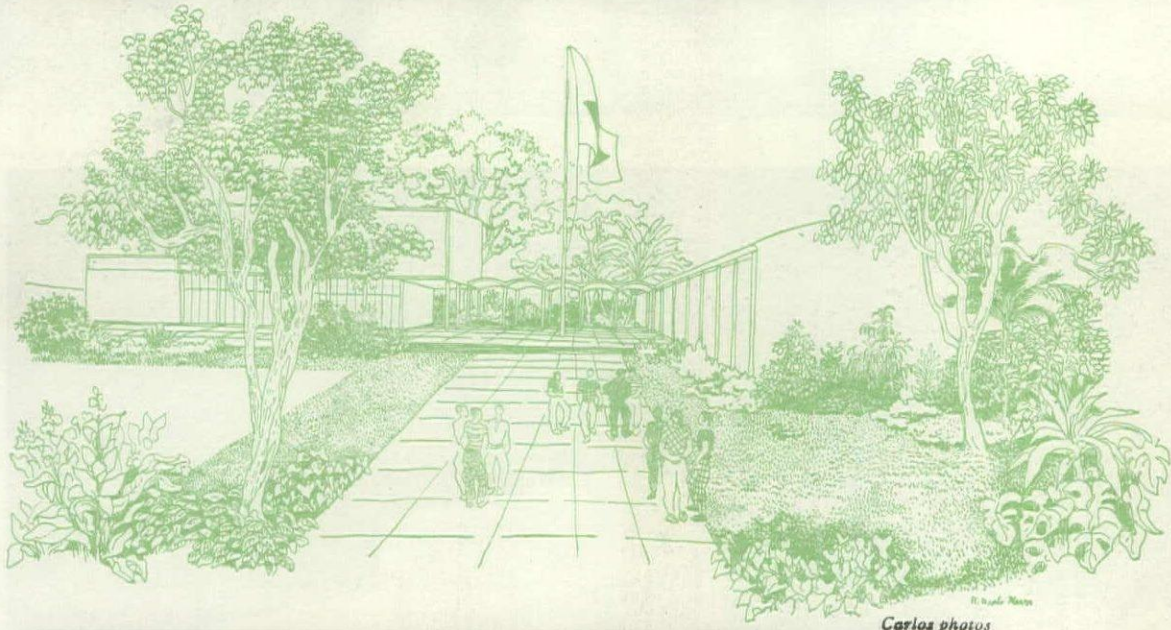
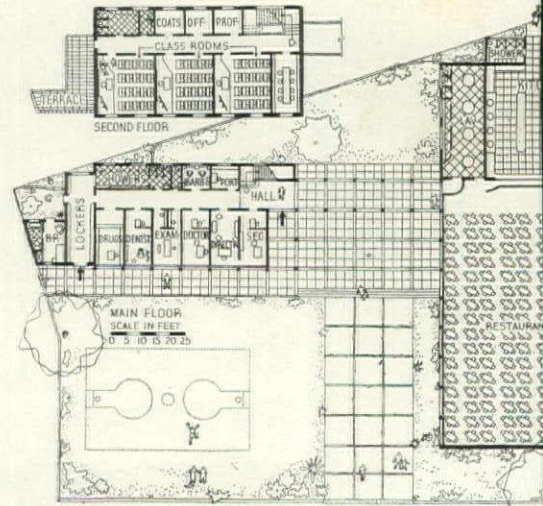
Leon Lieberman photos



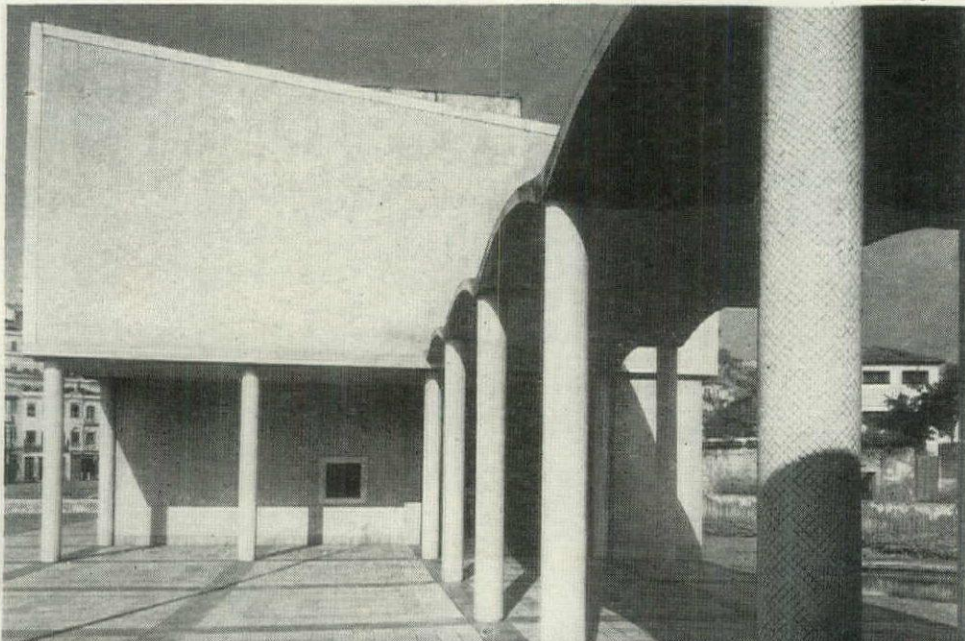
SOCIAL CENTER

OLAVO REDIG DE CAMPOS, Architect

Within easy reach of the commercial section of Janeiro's waterfront, this building group houses a service institution for the benefit of workers and their families. It offers low-priced meals, medical and dental care and elementary school classes. Schoolrooms and medical offices occupy the two story building. This connects with the one-story restaurant by means of a covered walk. The plaza between the two was planned for civic demonstrations. Like most of his other work, this design by architect de Campos shows a marked Italian influence.



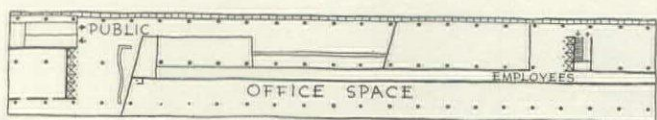
Carlos photos



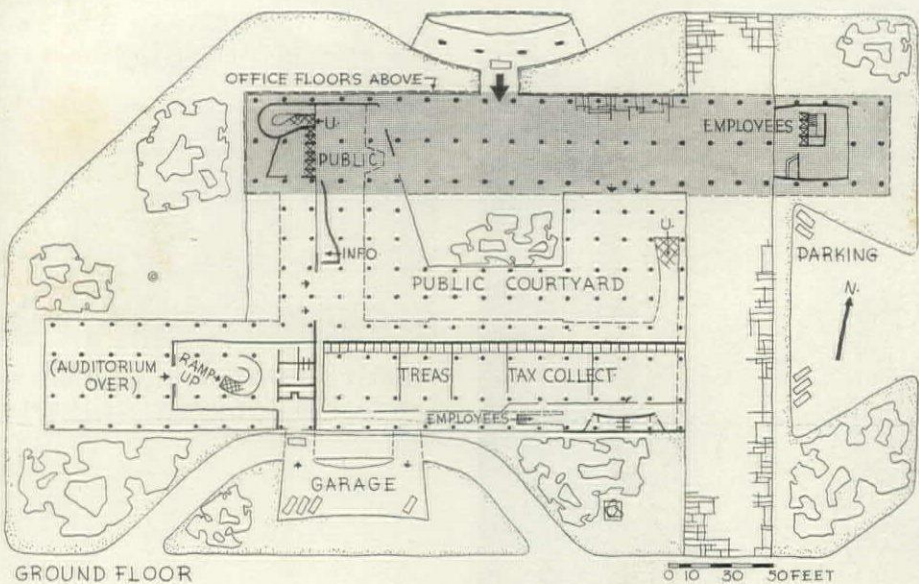
FEDERAL OFFICE BUILDING

AFFONSO EDUARDO REIDY, Architect

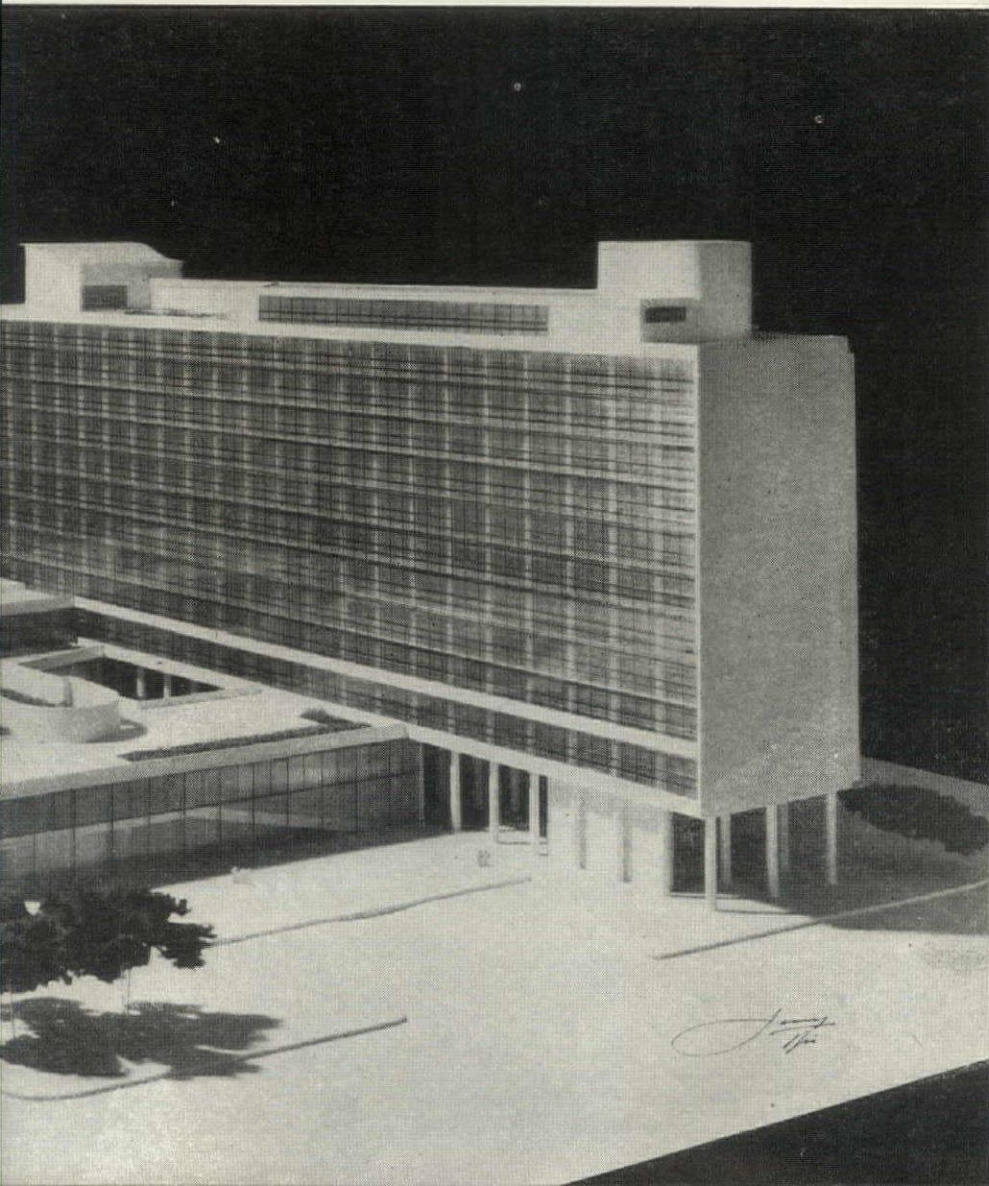
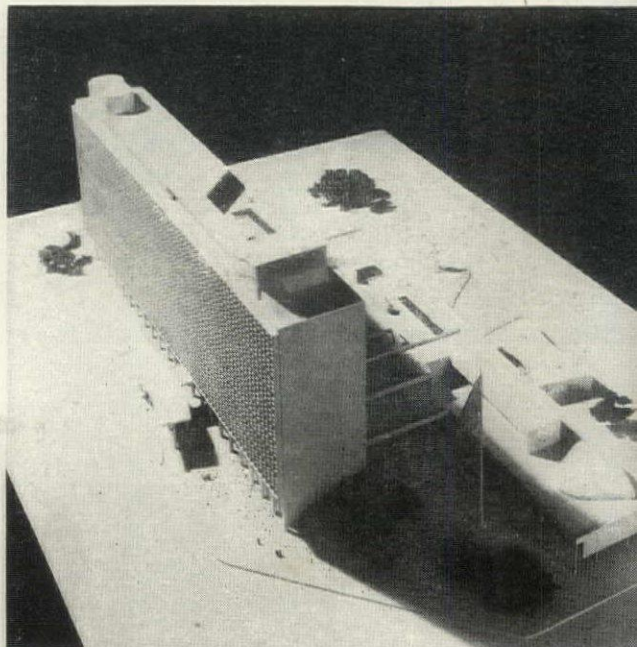
Planned for the Federal District of Rio de Janeiro (physically and governmentally comparable to our own District of Columbia), this office building will house all the agencies connected with the territory that can be efficiently centralized. The ten story building containing the general offices, is supported on stilts on an east-west axis. The southern facade, (in Brazil, the shady side), is entirely of glass while the northern exposure is protected by *brise-soleil*. The offices of the Prefect, occupying an individual wing, directly adjoin the auditorium and board meeting room in the two story southern portion of the building. A restaurant is located in the eleventh floor penthouse.



TYPICAL FLOOR



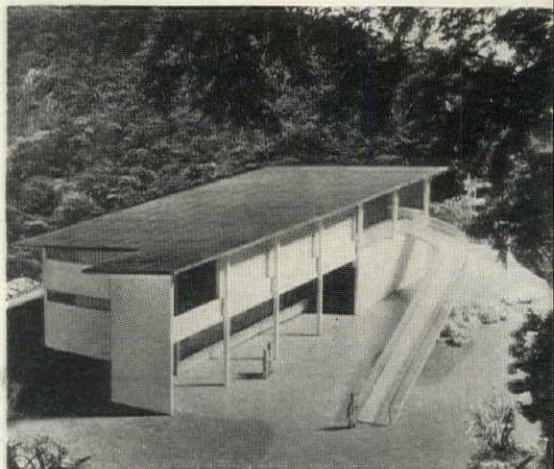
GROUND FLOOR

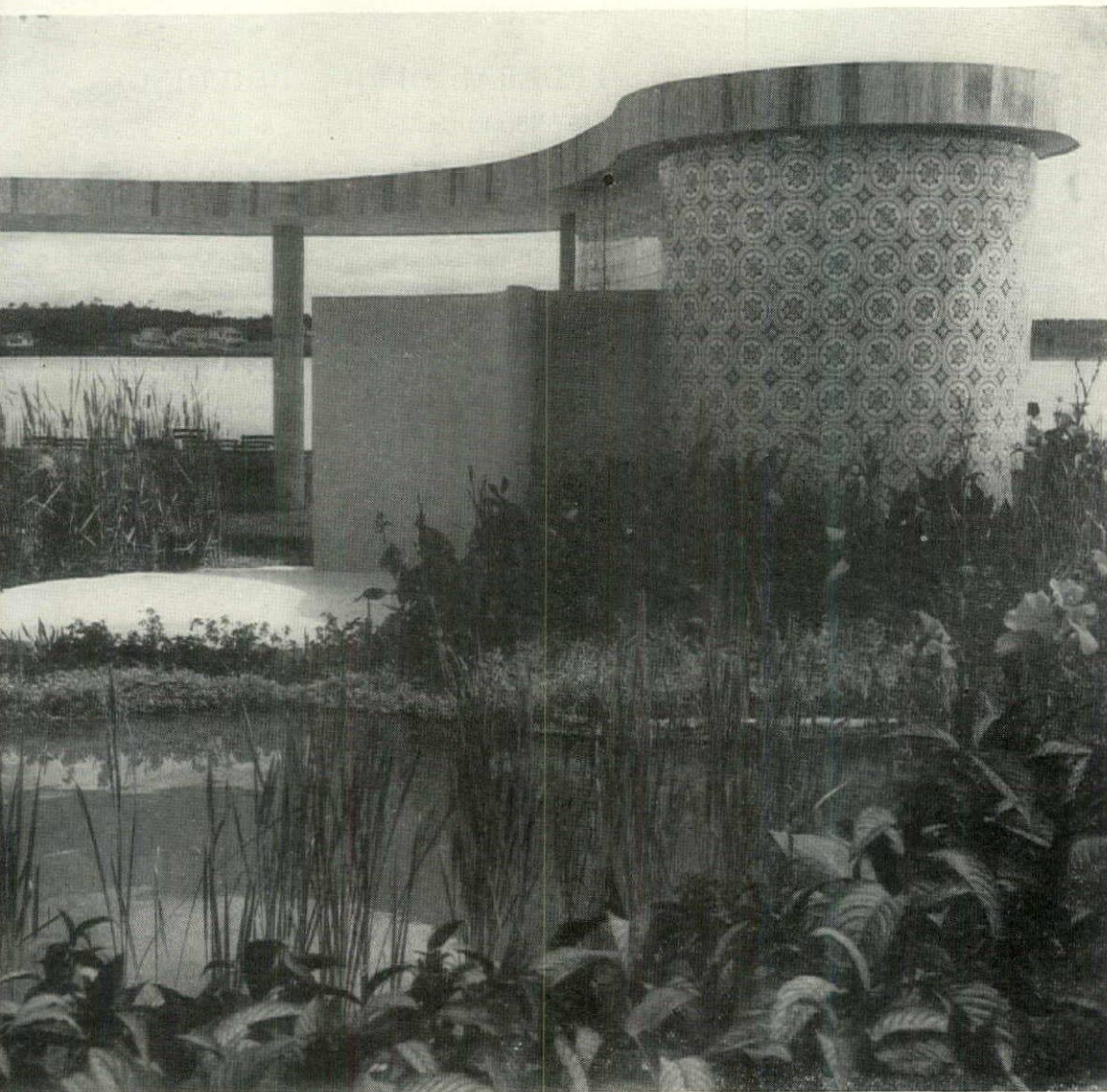


TOWN HALL

ALCIDES ROCHA MIRANDA, Architect

Another SPHAN project Congonhas do Campos, this excellent model illustrates an architectural idiom particularly compatible with the region. The checkerboard effect of the facade, achieved by placing columns outside the walls creates a handsome pattern.





Marcel Gautherot photos



ALMOST JAPANESE in its use of form and texture, the detail above is from the garden of a house in Rio by Lucio Costa.

BUILT ON AN ISLAND in an artificial lake, Niemeyer's lovely little cafe at Pampulha has been sensitively landscaped by Burle-Marx. Detail left shows platform for dance orchestra, facing open-air dance floor across a curving moat.



UR GARDENS BY ROBERTO BURLE-MARX

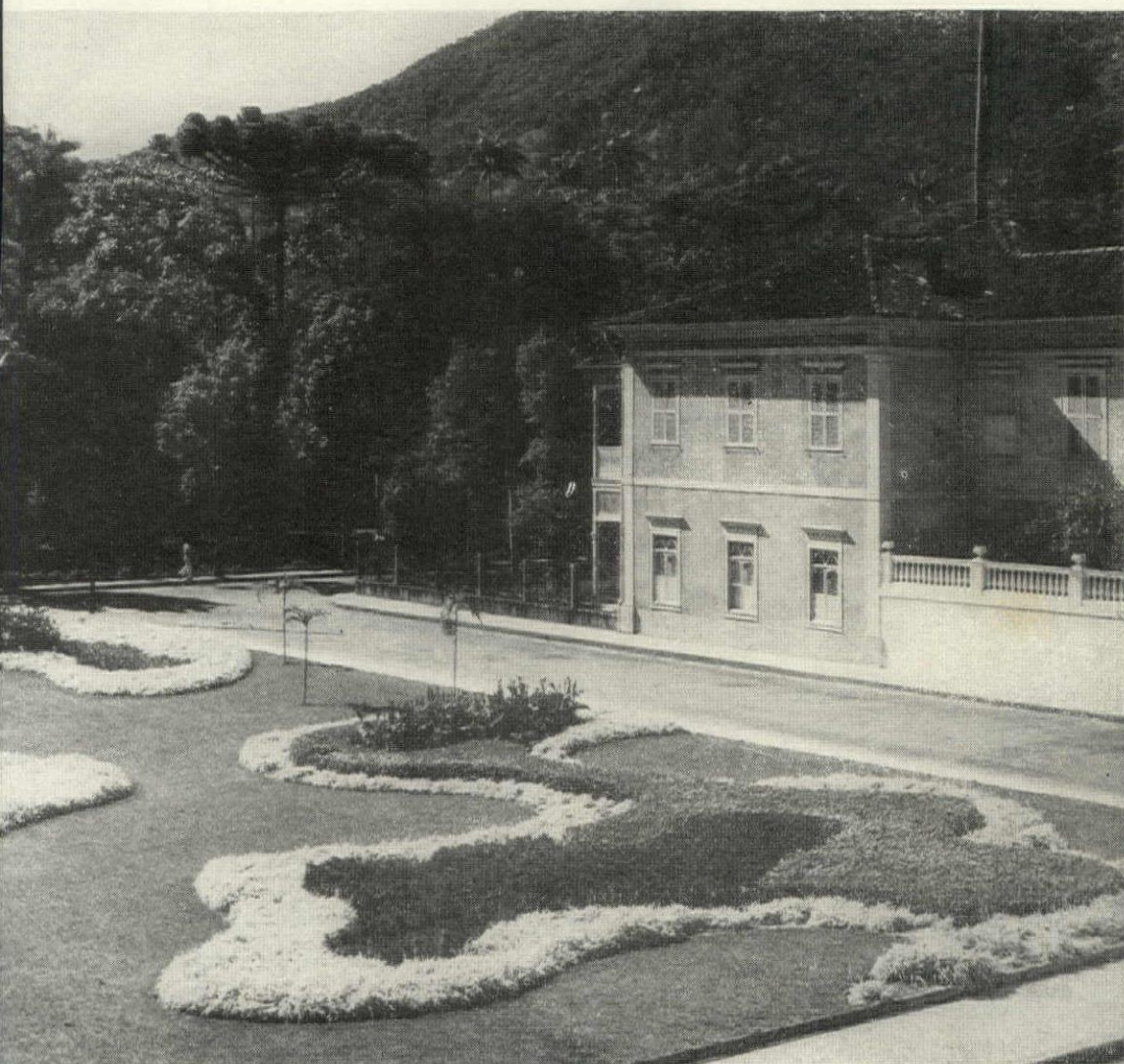
sureness and maturity of modern Brazilian design is nowhere better illustrated than in the gardens of Roberto Burle-Marx. As in the case of buildings which they frame, these gardens are the result of the painstaking re-examination—by the Brazilian professionals themselves—of their past and the actual conditions of the present. These gardens are obviously of the present day. They do not represent any vulgar, nationalistic excommunication of foreign influences: but neither do they show that slavish following of European standards which so corrupted Brazilian design during the early part of the century.

In one respect at least Burle-Marx's work closely resembles that of men like Church or Eckbo in this country. There is the same emphasis on native plant material, on simplicity of construction and upkeep. There is, finally, the same insistence that the design be useful—an integral extension of the building and not merely a pretty picture frame for the street scene.

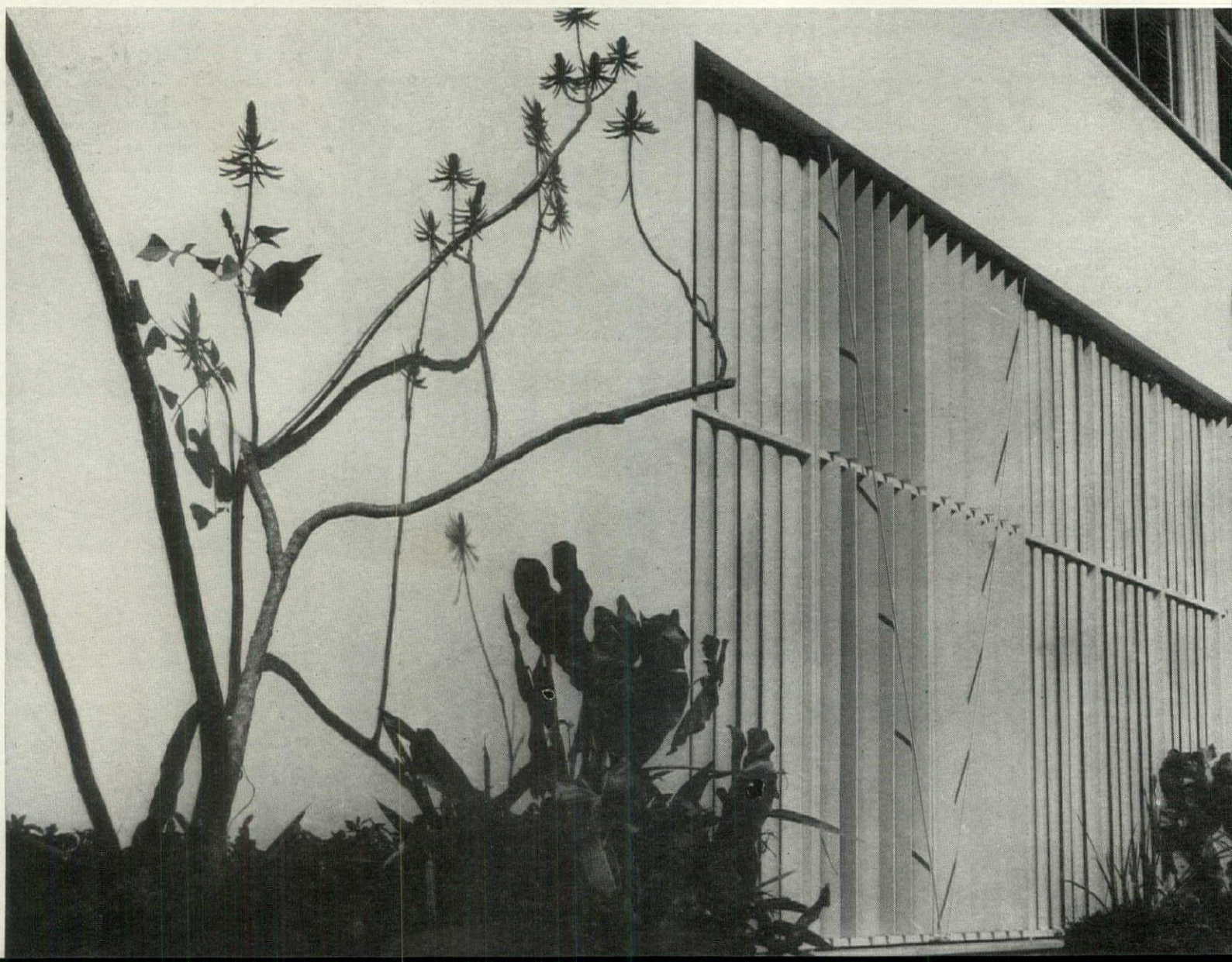
Burle-Marx, in addition to being the country's leading landscapist, is a painter of ability, a successful horticulturist and a plant explorer (he has brought many jungle plants under cultivation). He has acted as landscape architect on practically all the outstanding buildings in the Rio area.



DRAWING BY BURLE-MARX shows how he works. A study of an actual city park, all trees and plants are accurately drawn as to size, shape and foliage.



A NEW DESIGN for an old square in front of the City Hall at Petropolis. Here an almost Baroque pattern is executed in red, yellow, silver and green foliage plants, densely bedded after the Victorian fashion.



LIVING

Relic of the stormy days of the Conquistadores, the characteristic upper-class house plan of Central and South America always turned its back upon the outside world. Its blind exterior walls and open interior courtyard, its barred doors and few windows, were thus as much a measure against an unruly population as against a difficult climate. This fortress tradition is very persistent, even in contemporary Brazil. Thus, although petty pilferers are probably no more numerous in Rio than in Atlanta or Chicago, many Brazilian houses take extravagant precautions against them. These are all the more paradoxical when it is remembered that open planning, orientation to sun, breeze and view are quite as popular there as elsewhere.

In all upper-class residential work, Brazil's democratic architects have to combat another hangover from the past—the treatment of domestic servants. Like most Latin American countries, Brazil has no color bar. Unlike her neighbors, however, she had the institution of slavery, of which—60 years after its aboli-

tion—there are still unpleasant vestiges. This leads to demands for isolation of all types of service from the main circulation systems of the building. In a small house this may be merely awkward but in a large apartment it means a clumsy and expensive duplication of all sorts of facilities—stairs, corridors, elevators, etc. Thus the architects have economy as well as ethics on their side in their campaign against prejudice.

The influence of the U. S. A.—surprisingly small in most types of Brazilian buildings—is perhaps most clearly seen in their apartment and multi-family housing projects. Yet even here, the impact is more evident in plan than in any detail of construction or appearance. Indeed, their best buildings show standards which are, if anything, superior to ours. Few urban apartment houses in the U. S. A. show such careful attention to proper orientation and breeze. Their space standards are more generous than comparable units in U. S. A., their construction is good and their site planning is of very high order.

URBAN RESIDENCE

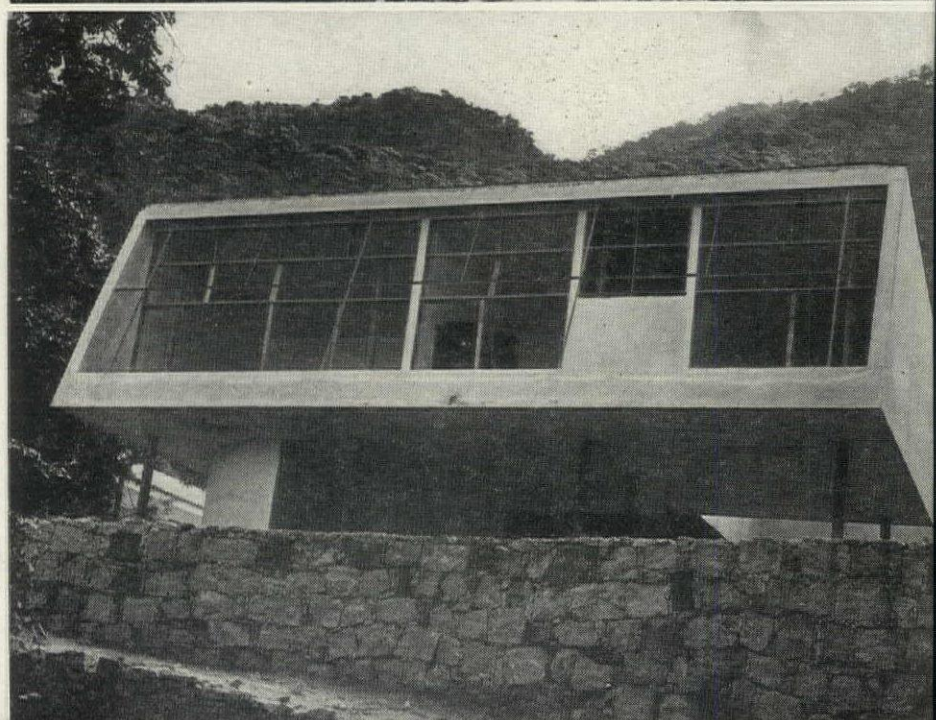
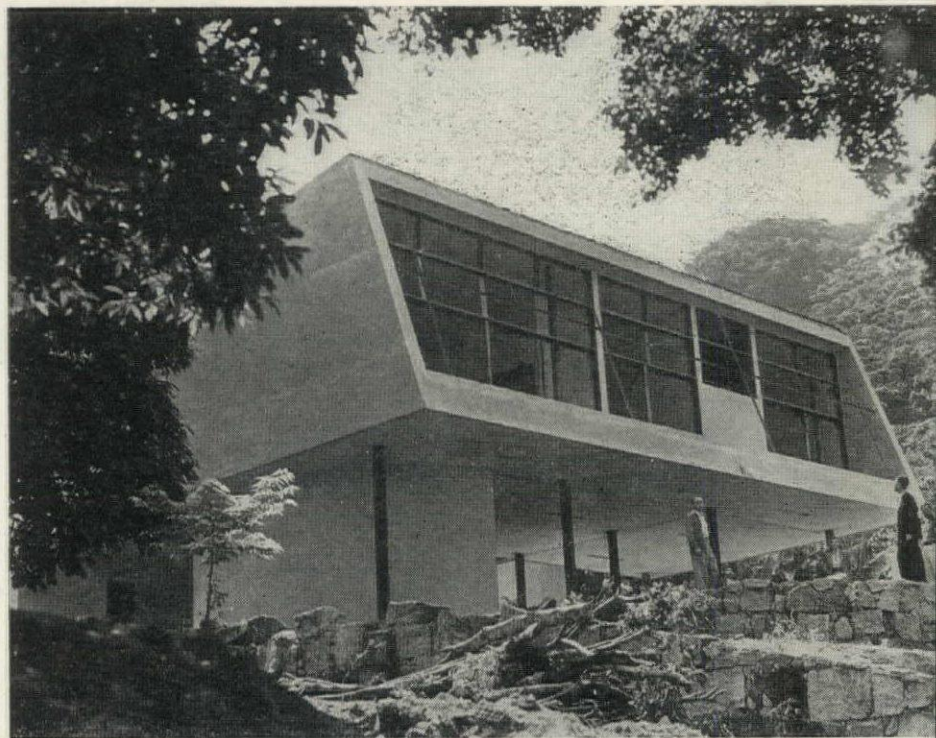
LUCIO COSTA, Architect

American architects who can scarcely imagine restoration of Colonial Williamsburg being entrusted to an outstanding modern architect should study the career of Lucio Costa who has done just that in Brazil. As head of SPHAN, he has supervised restoration of many of the nation's historic towns. An educator, he has played a decisive role in the training of Brazil's most outstanding young architects. And as an architect himself he has designed such houses as this one in Rio (facing page). In all three spheres he has shown skill and initiative and a rare ability to integrate the best of the past with the best of the present.

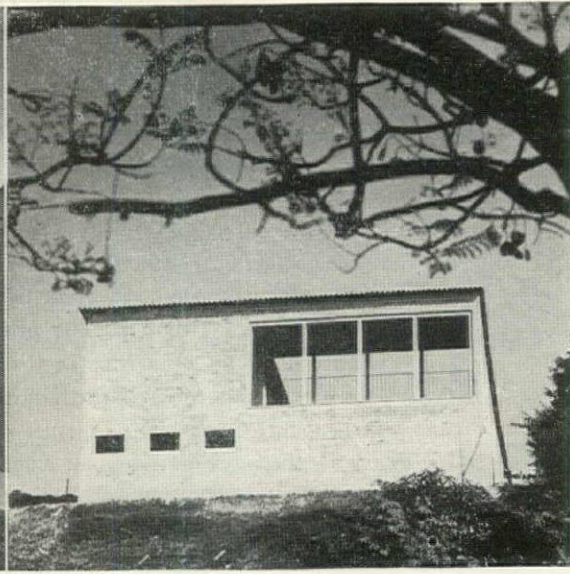
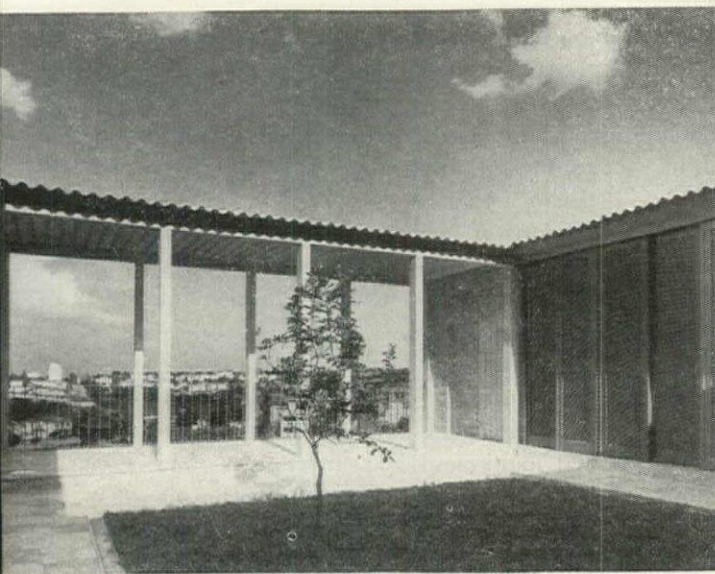
ALL HILLSIDE HOUSE

LUCIO NIEMEYER, Architect

Currently under construction in the hills back of Rio de Janeiro, this house has been bodily raised one story above the garden level. Aside from providing a sheltered sitting area and carport, this permits the architect to achieve maximum glass areas towards the view without the necessity for elaborate protective devices. The sloping steel frame will carry sunshades which roll down from the top. A curving concrete wall supports and partially encloses a stairway to the living level.



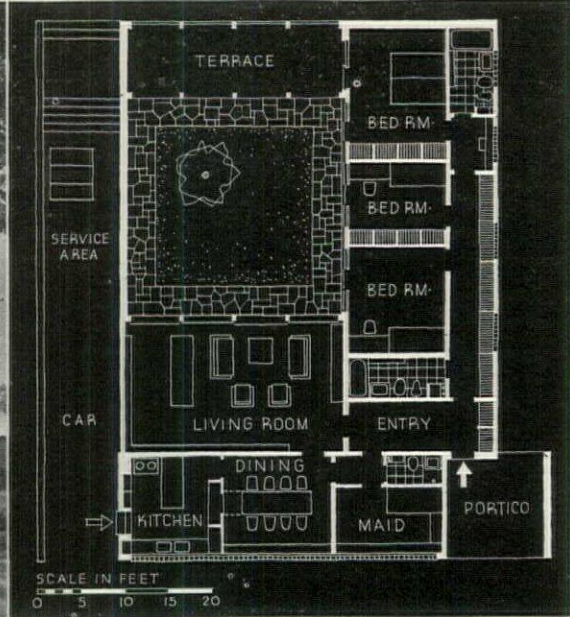
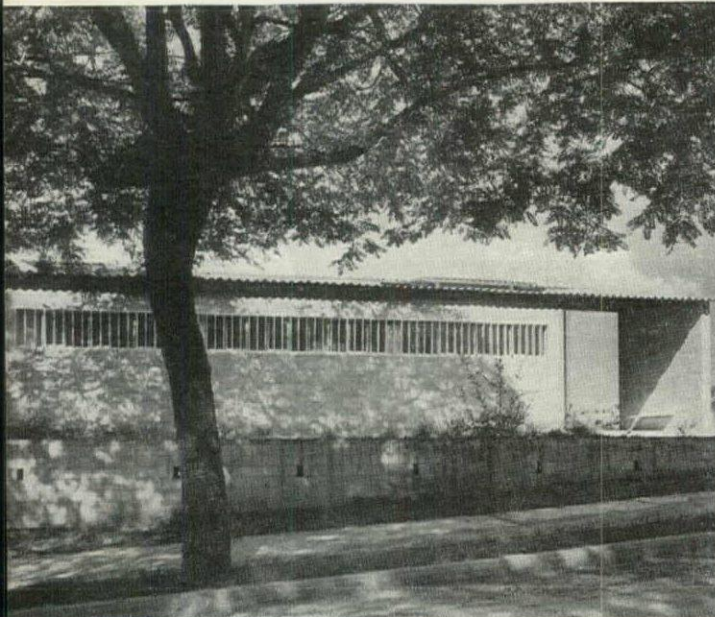
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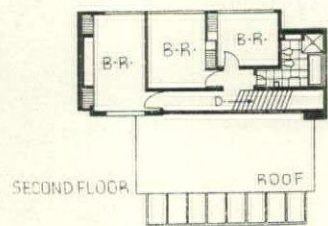
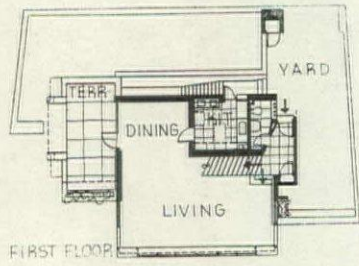
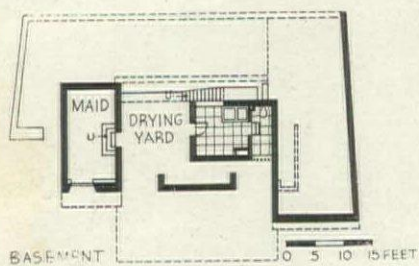
COURTYARD HOUSE

DANIELE CALABI, Architect

Achieving utmost privacy, the living and bedrooms of this L-shaped Sao Paulo house open only to the courtyard which, in turn, opens only to the splendid valley view. The high windows of the other rooms are protected from the sun by vertical louvers. In its eminently simple plan, the house has a cool, classical character reminiscent of a Roman atrium, doubtless the result of the architect's earlier experience in Italy.



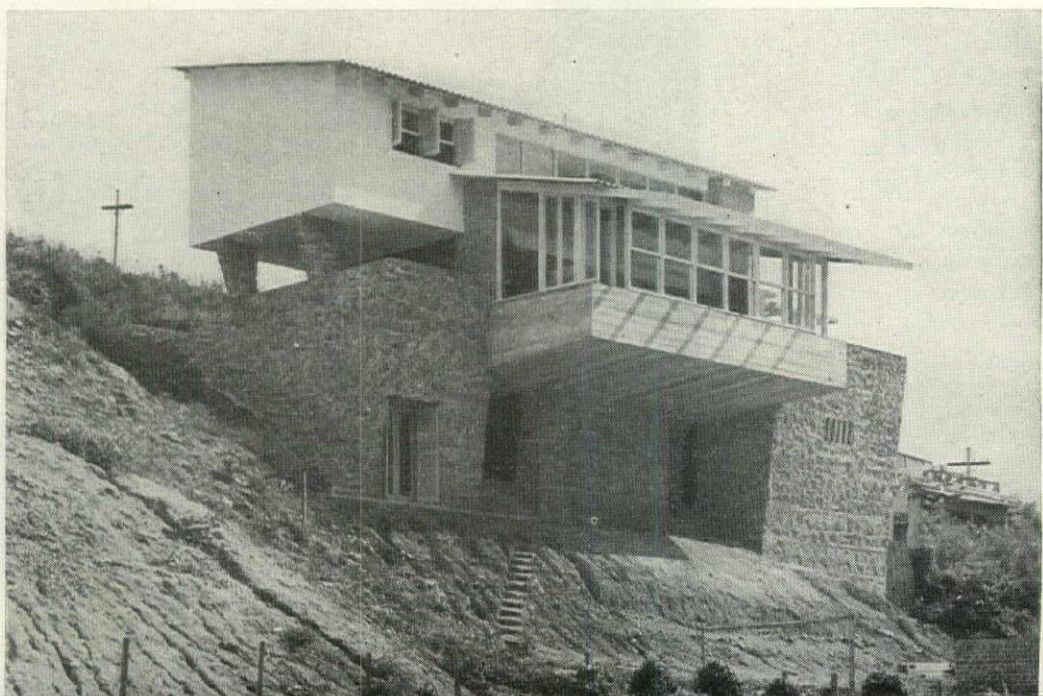
P. C. Scheier photos



THREE-STORY HOUSE

J. VILANOVA ARTIGAS, Architect

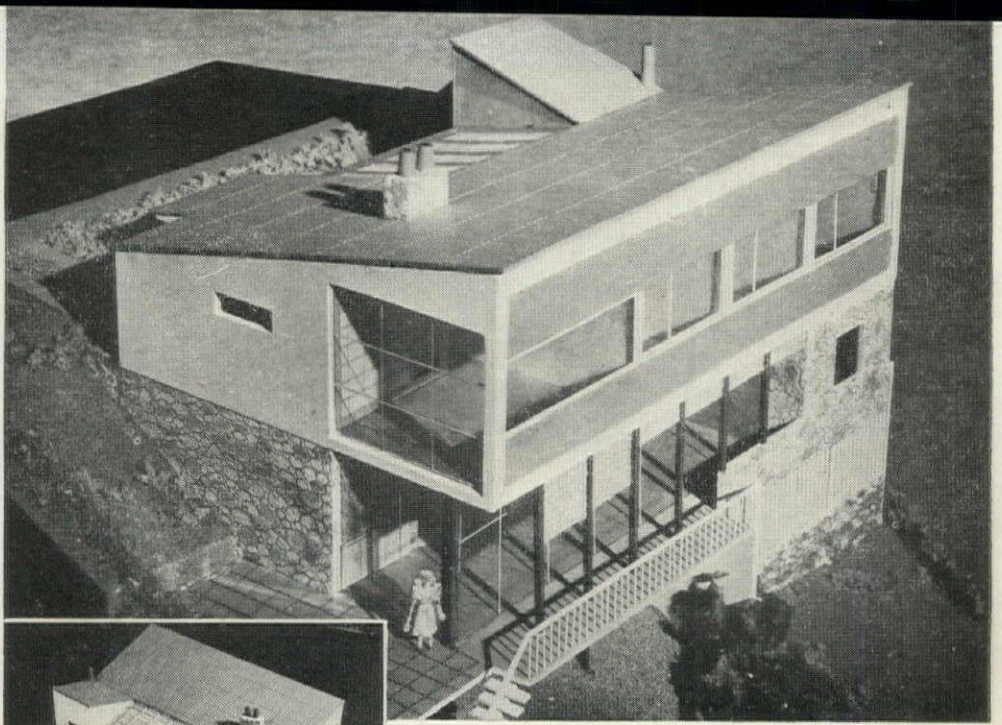
This Sao Paulo hillside house is supported by massive foundations of poured stone and concrete as a giant truss which carries the entire house. While the framed living floor is cantilevered and opened wide to the view, the bedroom wing of reinforced concrete and brick faces the street—both for orientation and protection against the prevailing night breeze. The design and construction are economical—note, for instance, the concentration of all plumbing around a single three-story stack—although the cost of \$12,000 (1943) is expensive in Brazilian terms.



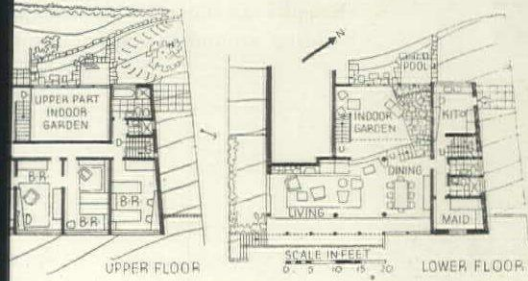
PRIZE-WINNING HOUSE

CARLOS FREDERICO FERREIRA, Architect

A competition prize winner, this compact house will be built to promote the sale of lots in the mountainous outskirts of Rio. It features a garage and main entry on the upper bedroom floor and a two-story indoor garden opened to the north sun through a wall of glass and a slatted roof. All living and sleeping rooms face the down-hill view and are oriented to escape the hot sun.



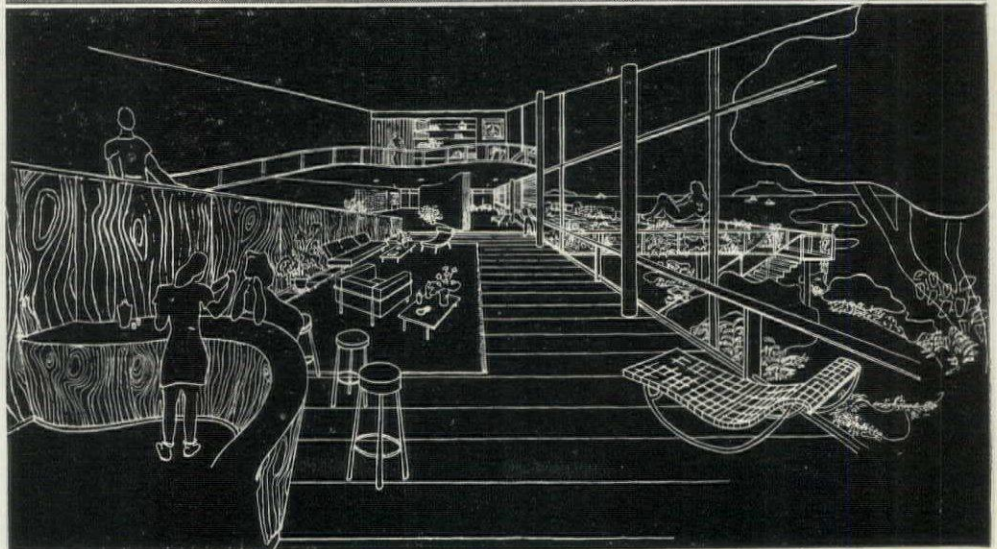
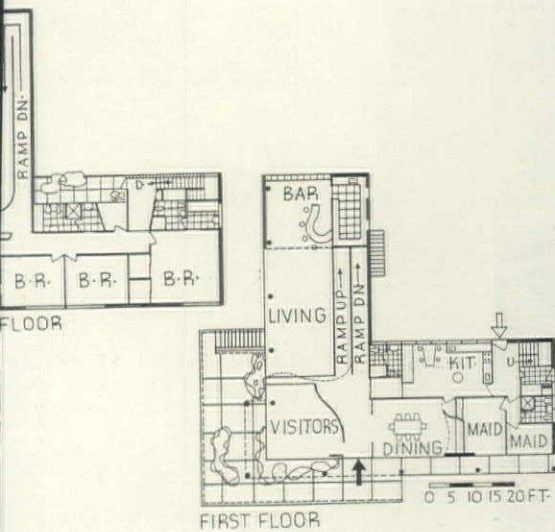
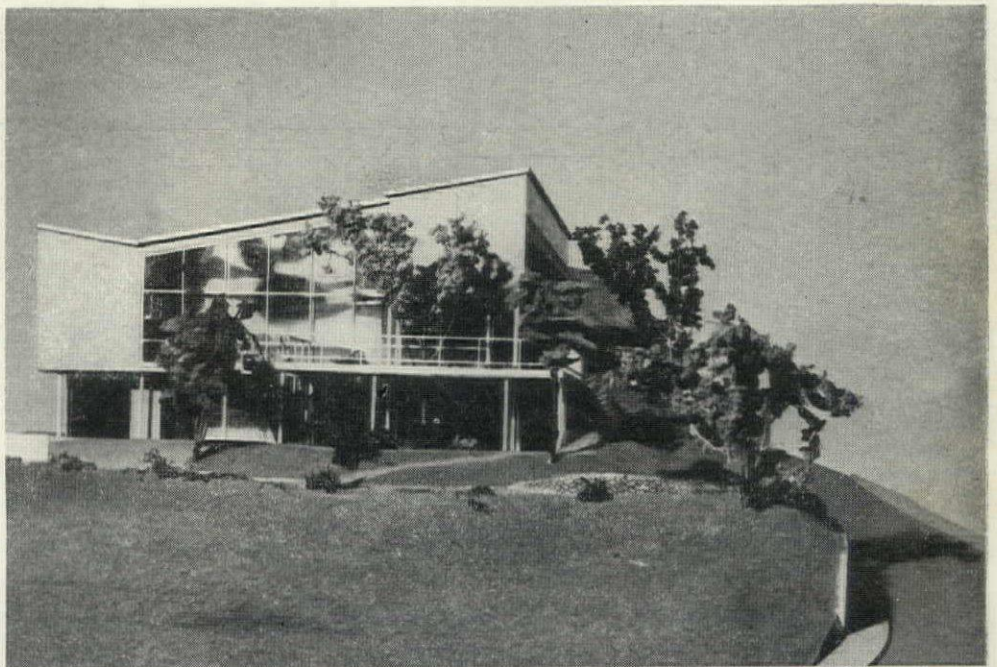
Carlos photos



THIRTEEN-ROOM HOUSE

RENATO SOEIRO, RENATO MESQUITA,
THOMAS ESTRELA and JORGE FERREIRA

This big house is raised on stilts to command the site's magnificent view of the Rio lagoon and to convert the "basement" into a large covered garden. Used as an open-air living area, this garden is accessible via a ramp from the two-story living room and via stairs from the projecting first floor veranda. Other ramps at the back of the living room lead to the mezzanine study and bedrooms.



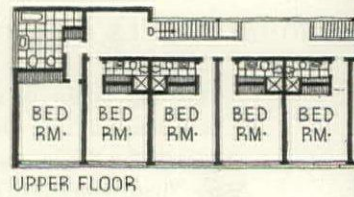
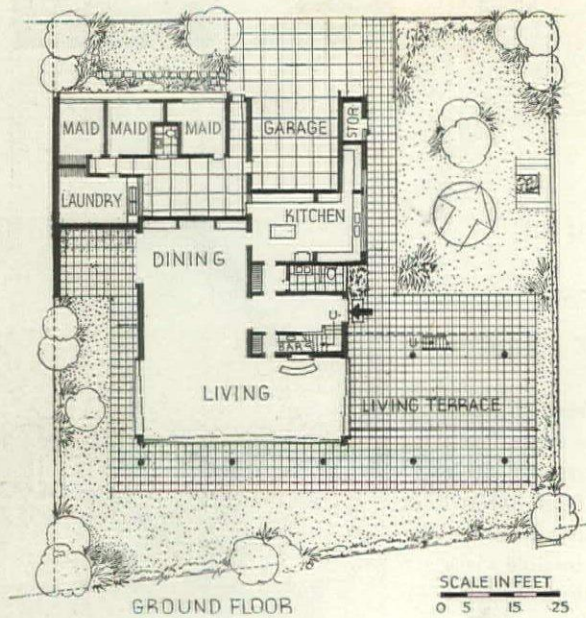
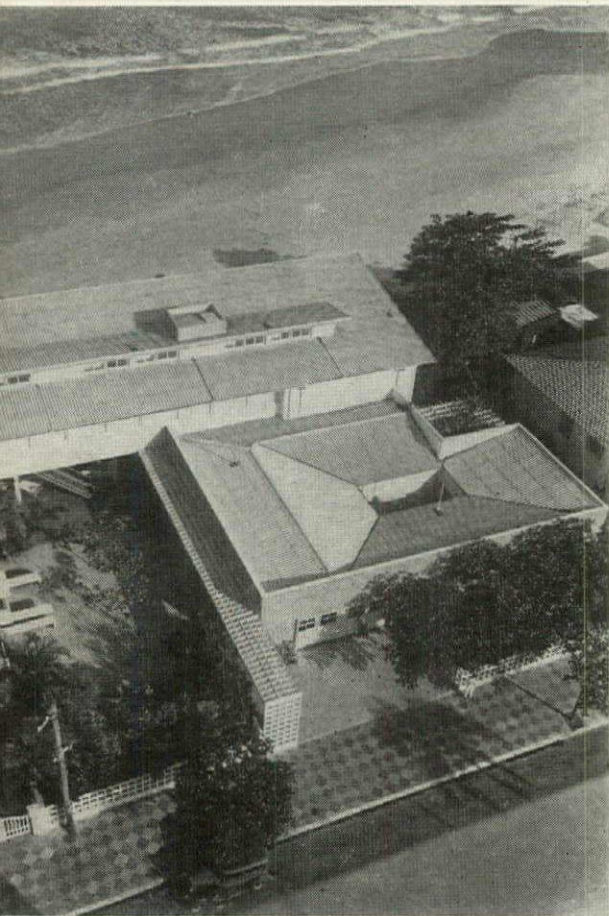
Kazys Vosylis photo



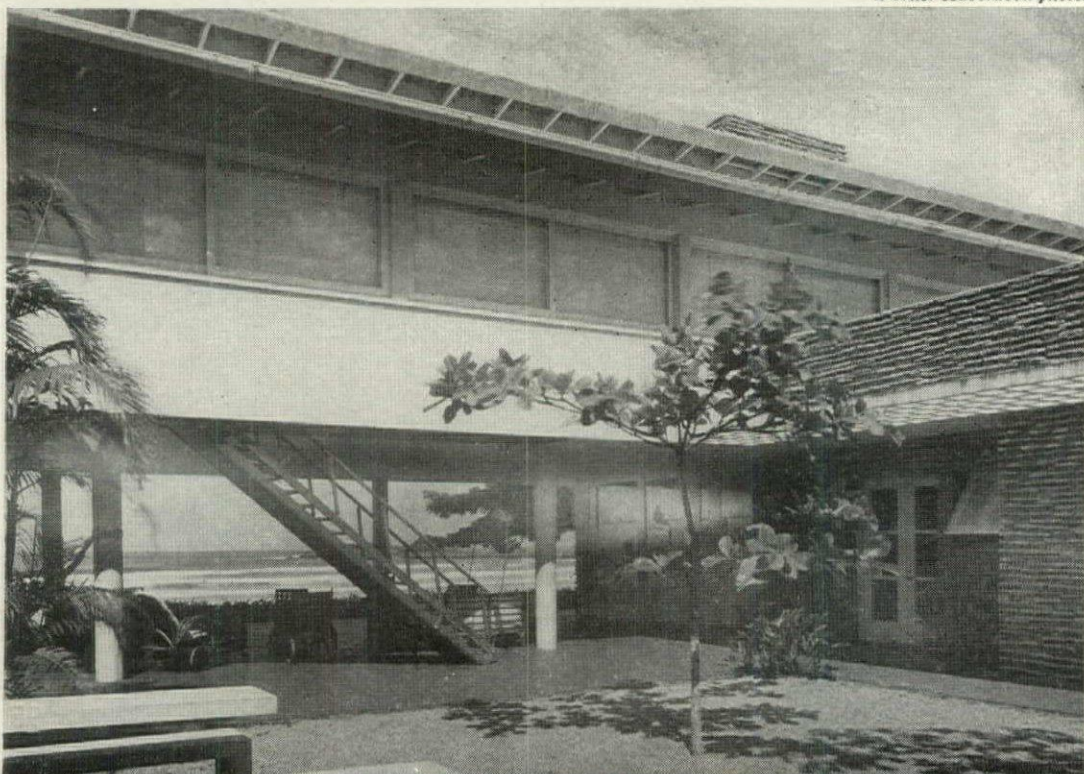
SEASHORE RESIDENCE

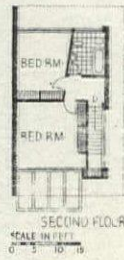
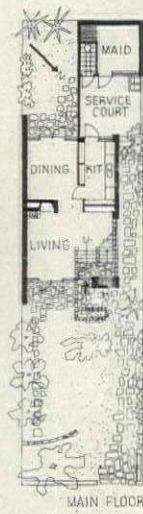
GREGORI I. WARCHAVCHIK, Architect

At Guaruja, on an island near Rio de Janeiro, this large resort house is built on a small lot between street and beach. It leaves much of the land open for outdoor fresco living. Indoor and outdoor areas of about equal size extend to the beach. Above them is a balcony with six bedrooms enjoying the same southern exposure and the natural light afforded by a northern sky. The sleeping wing is accessible via the usual interior stairs and a side staircase for bathers which can be retracted when not in use. All elements are concentrated in an arrangement around a small interior



Werner Haberhorn photos

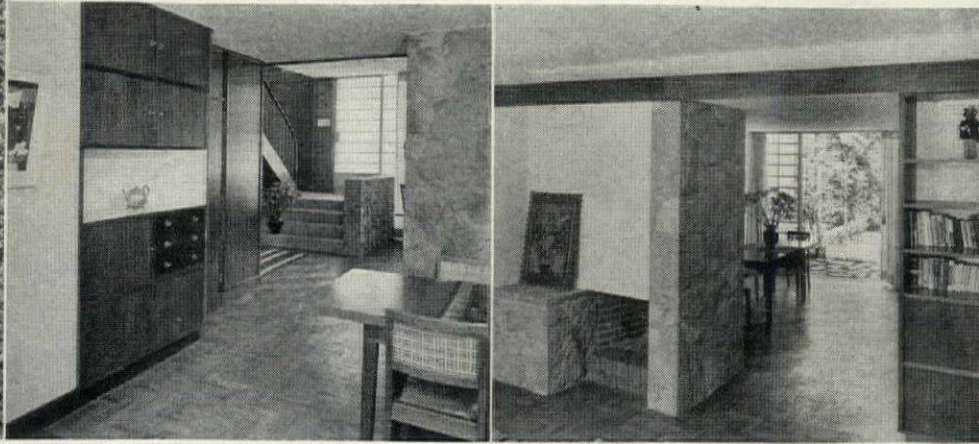




HOUSE FOR NARROW LOT

FORTE, RUCHTI, CIAMPAGLIA, Architects

On a long, narrow lot measuring about 26 x 94 ft., this small house in Sao Paulo employs storage partitions and built-in cabinets to conserve space. Unlike most Brazilian buildings, it uses horizontal and vertical projections, instead of louvers, to screen the northern exposures (front and right side) from the sun. The brick walls also contribute to its somewhat North American appearance.

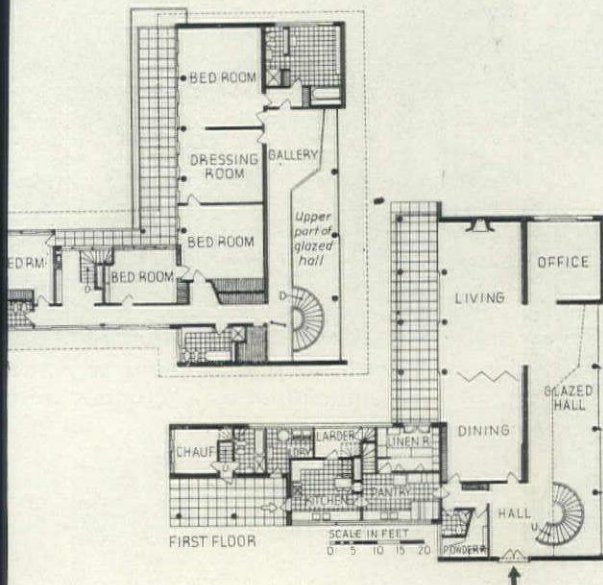
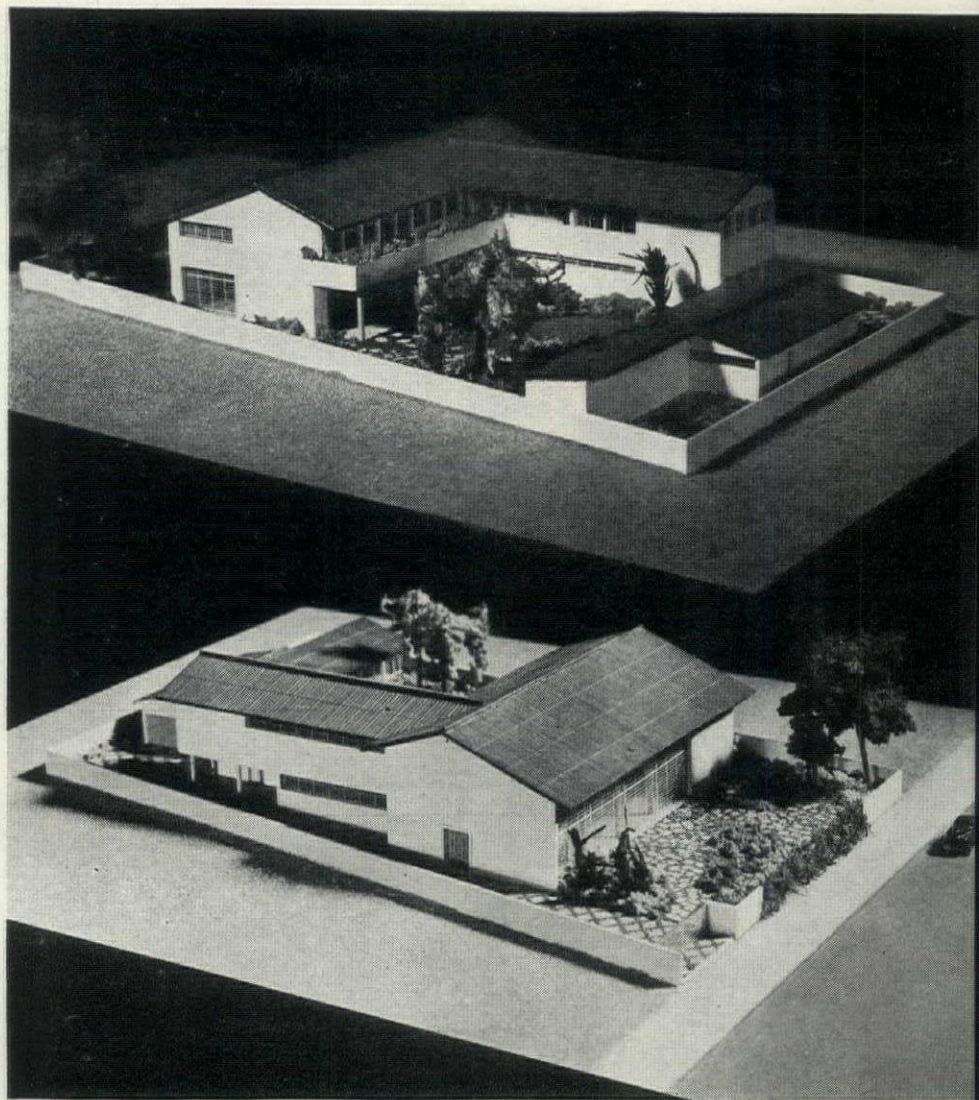


Curt photos

TOWN HOUSE

HENRIQUE E. MINDLIN, Architect

Featuring a huge two-story glazed hall on its street front, this Sao Paulo residence is for a client with an obviously unlimited building budget. The 18 x 55 ft. living-dining room opens to a covered terrace and the enclosed courtyard. Similarly, the four second-floor bedrooms and dressing room are connected by a courtyard balcony. The architect describes the design as "an attempt to do a luxurious house as unobtrusively as possible."



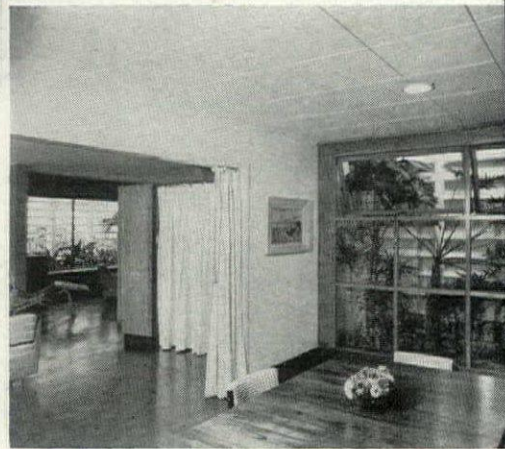
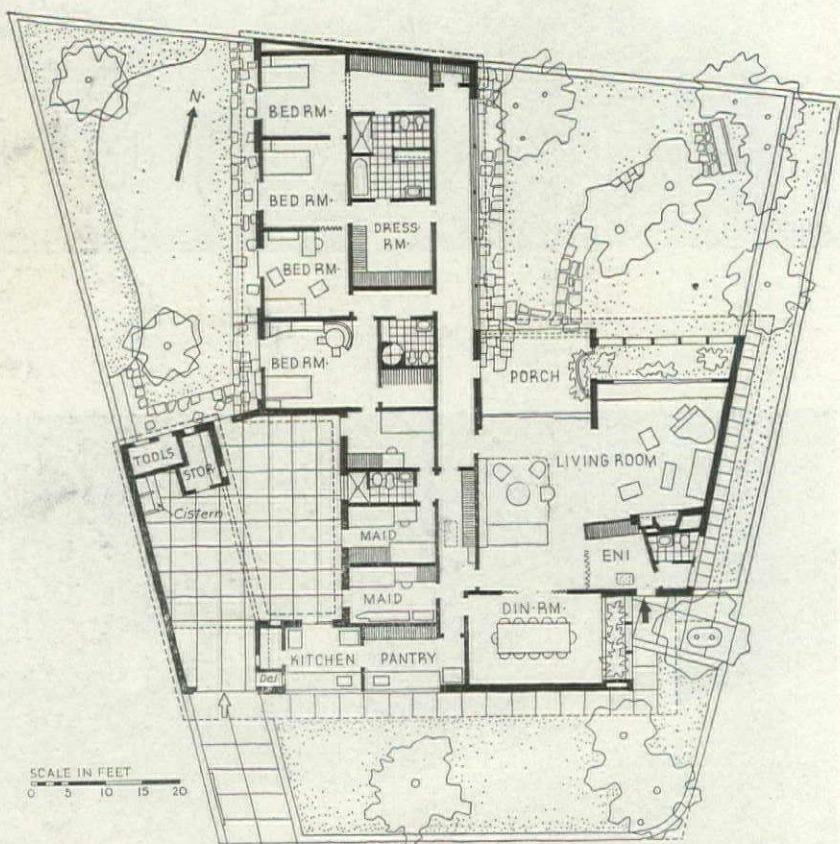


SMALL SUBURBAN HOUSE

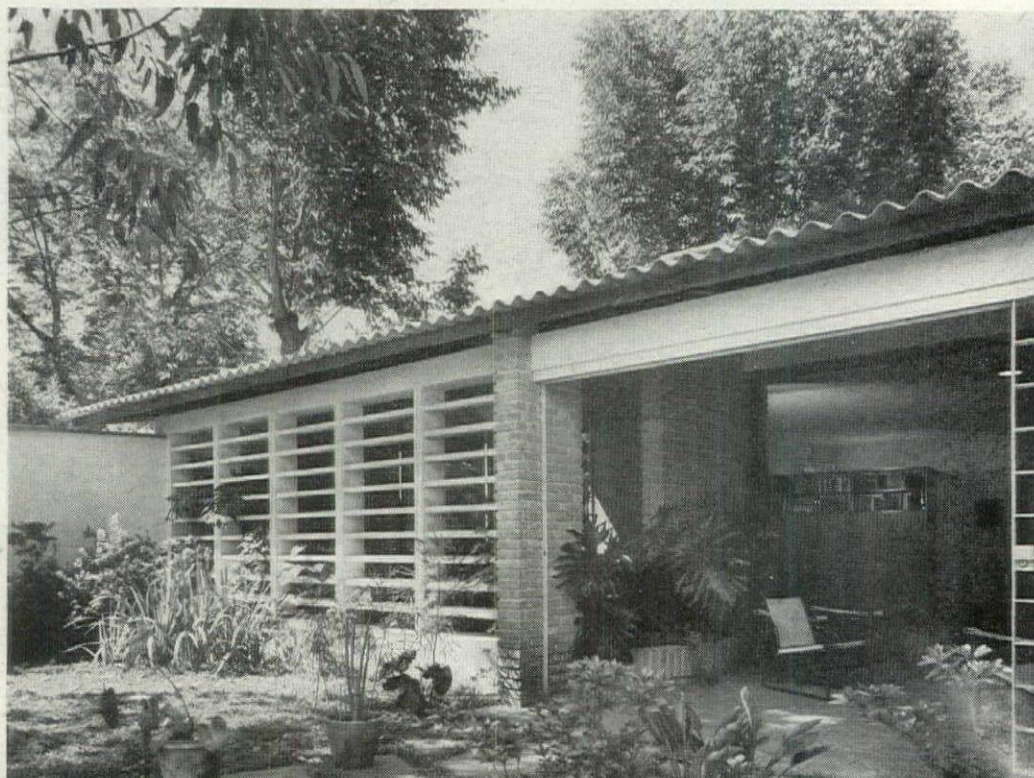
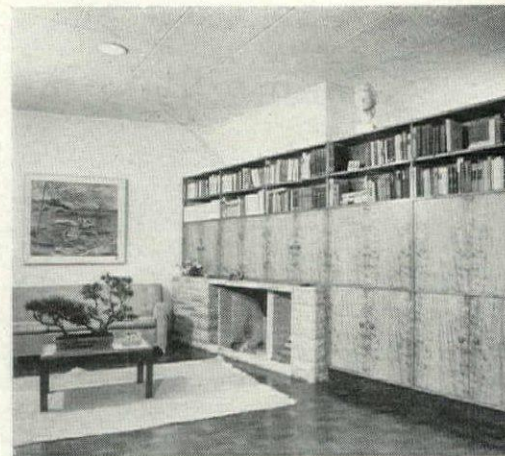
RINO LEVI, Architect

Two factors strongly influenced the design of this small house for the irregular shape and small corner lot and the need for protection from marauders. House and garden were set back from the lot lines or set back the minimum allowed by the building code and reflect the shape of the lot. Windows are protected from sun and rain by heavy louvers or grilles. Generally, the windows and their protective screens are screened by large planting boxes.

DINING ROOM IS SCREENED FROM ENTRY BY HEAVY LOUVERS



Saopaulo photos

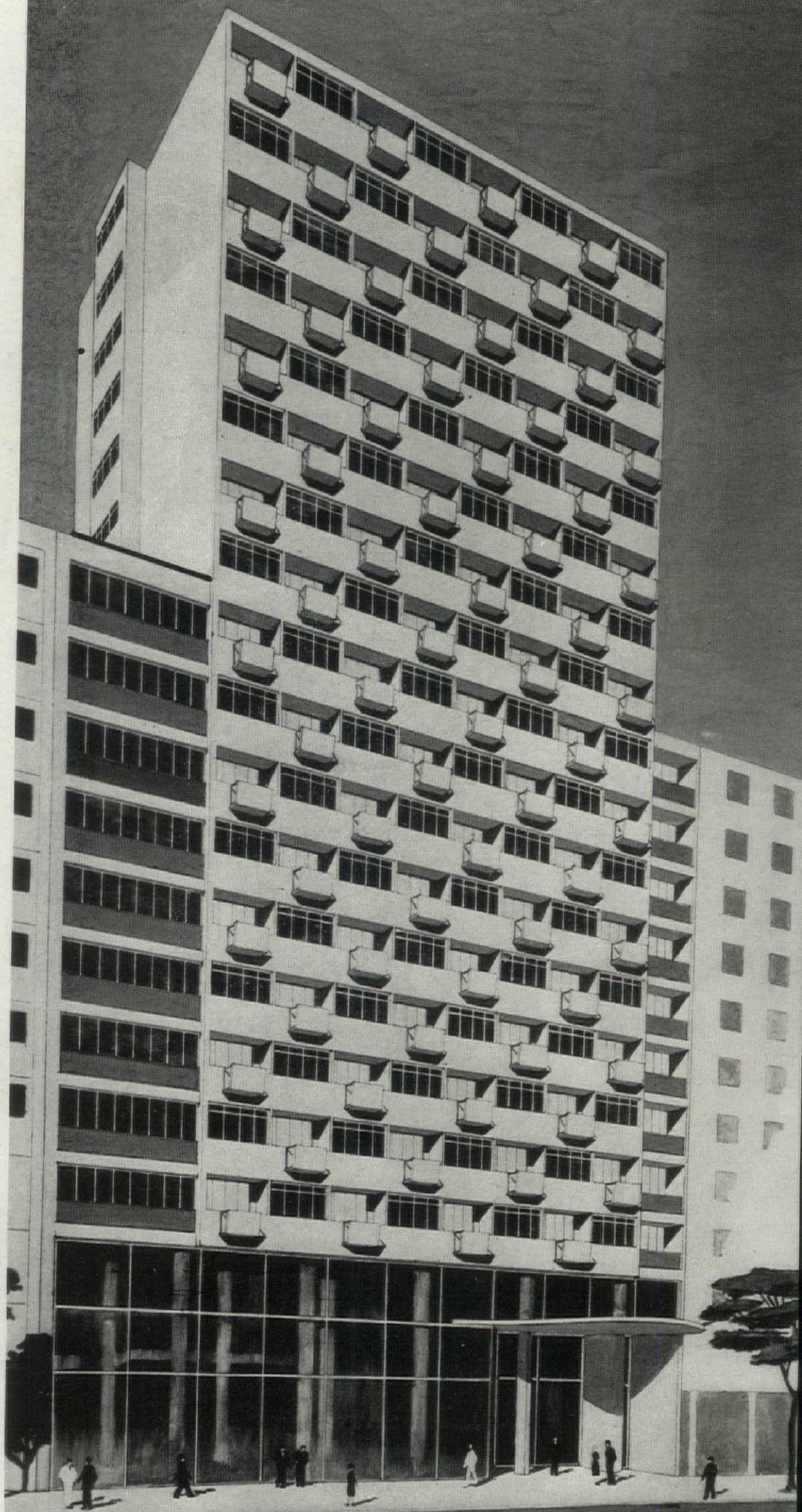
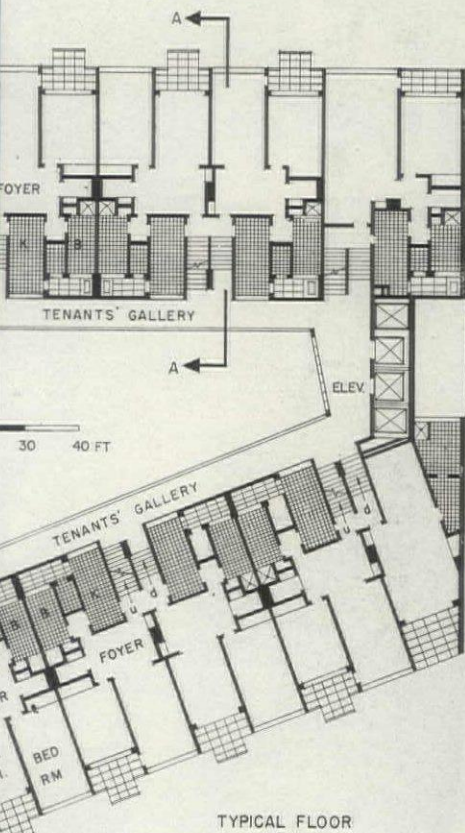
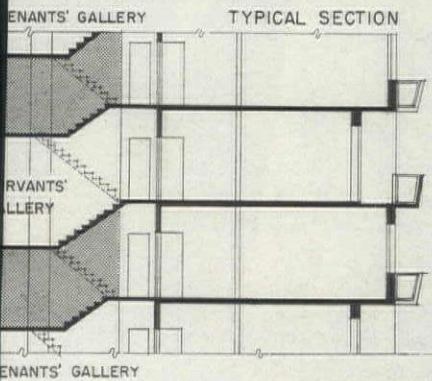


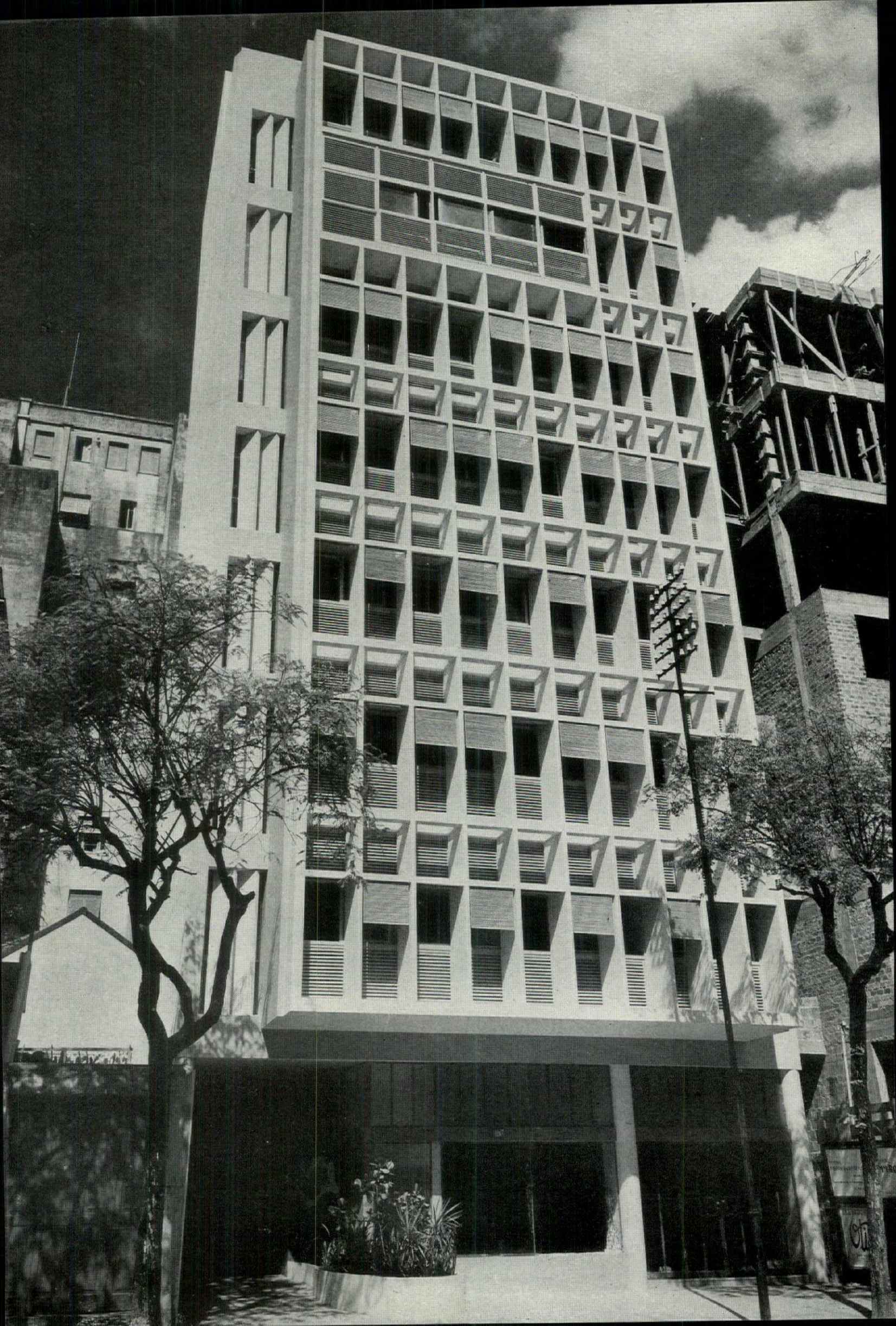
LIVING ROOM AND TERRACE FURNITURE WAS DESIGNED BY ARCHITECT RINO LEVI

APARTMENT BUILDING

HENRIQUE E. MINDLIN, Architect

To make the most of a very expensive site on two streets, this Sao Paulo building has 131 small apartments and an office floor in its 10- and 18-story wings. Bowing to the country's old slave tradition, the design provides separate circulation for tenants and servants. This is accomplished by courtyard access galleries half way between the apartment floors. Delivered to alternate galleries by two private elevators, tenants walk up or down a half flight of stairs to their apartments. Servants use two other elevators, stopping at their intermediate galleries, and similarly walk up or down a half flight to their employer's apartments. Unlike the enclosed high galleries for tenants, servants' galleries are 12 ft. high and entirely open to admit direct light to the kitchens and servants' storerooms. Interior tenant bathrooms borrow light from this light. Terraces with balconies are alternately attached in front of living rooms and bedrooms to meet the different space requirements of families with and without children—childless couples preferring the bedroom terrace and larger living room.

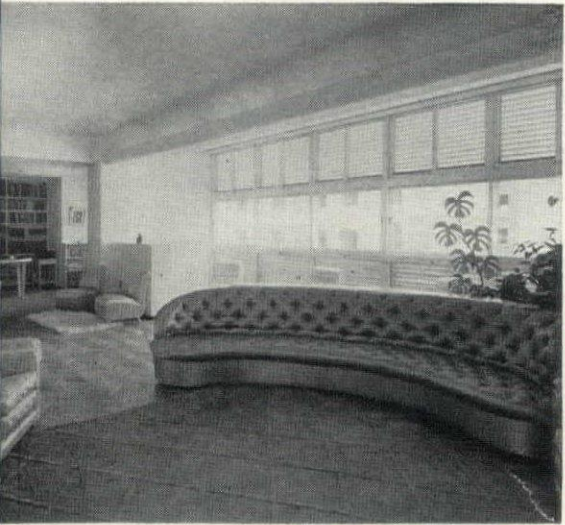
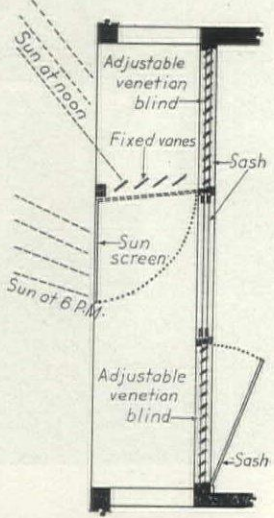
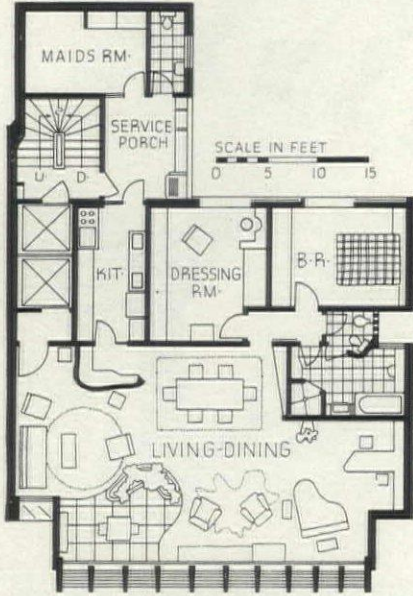




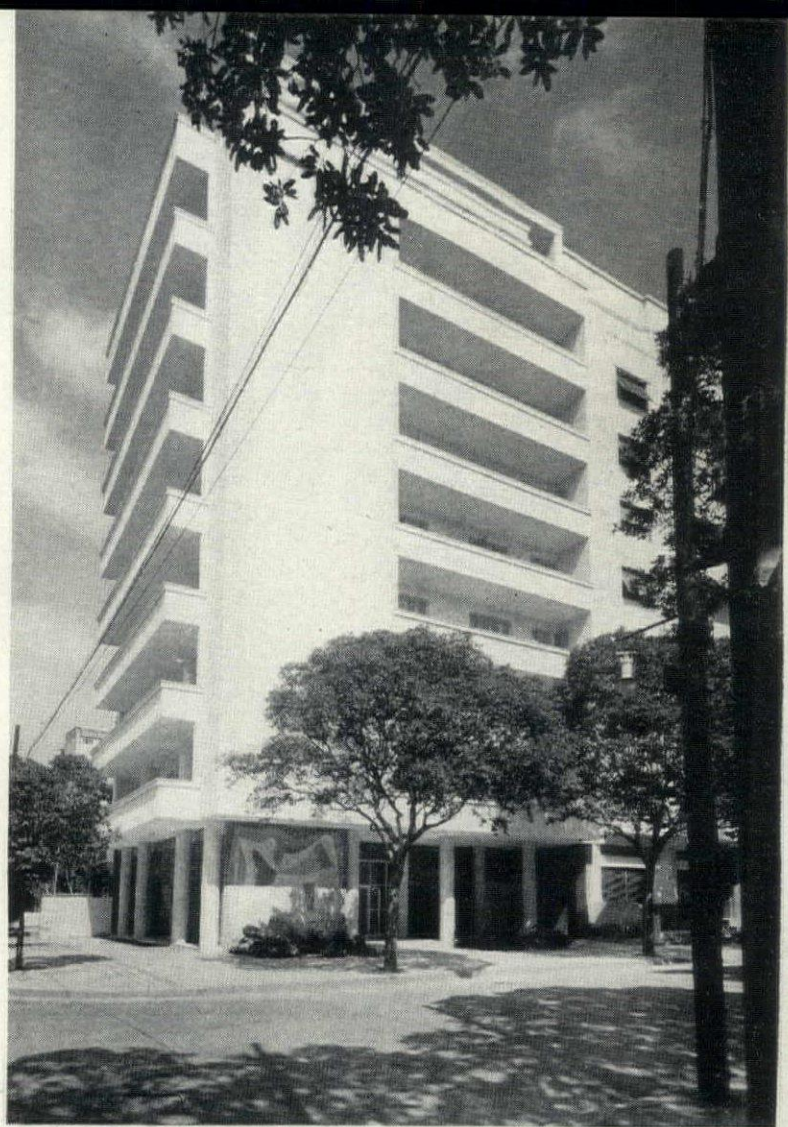
ARCHITECTS' APARTMENTS

CELO, MILTON and MAURICIO ROBERTO, Architects

this eight-story building in Rio is owned and par-occupied by the architects, it displays their unfettered pt of proper light control. Adjustable exterior blinds at the top and bottom thirds of the living-dining room ws—see photo below. At midday, the central third is ed from the direct sun by permanent slats set in the roced concrete framework which project from the face of the building—see photo left. Later in the gid shades may be dropped from the framework to le the sun's more horizontal rays, while the perma-slats continue to eliminate sky glare.



photos

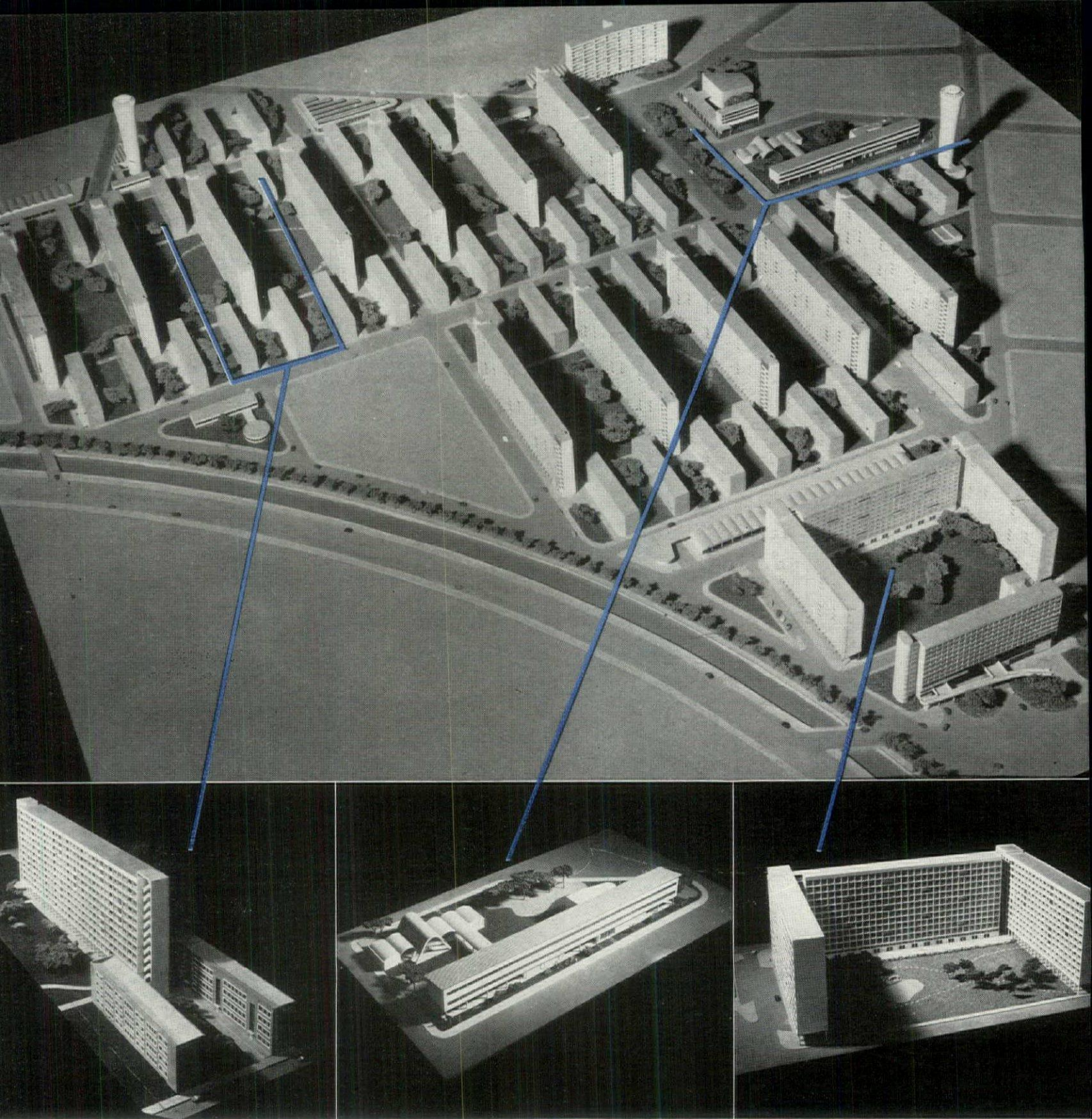


RIO APARTMENT F. F. SALDANHA, Architect

SAO PAULO APARTMENT LUCJAN KORNGOLD, Architect



Leon Liberman photo



VARZEA DO CARMO HOUSING PROJECT

ALBERTO DE MELLO FLORES, Engineer
 ATILIO CORREA LIMA (deceased), Architect
 HELIO UCHOA CAVALCANTI, Architect
 JOSE THEODULO DA SILVA, Architect

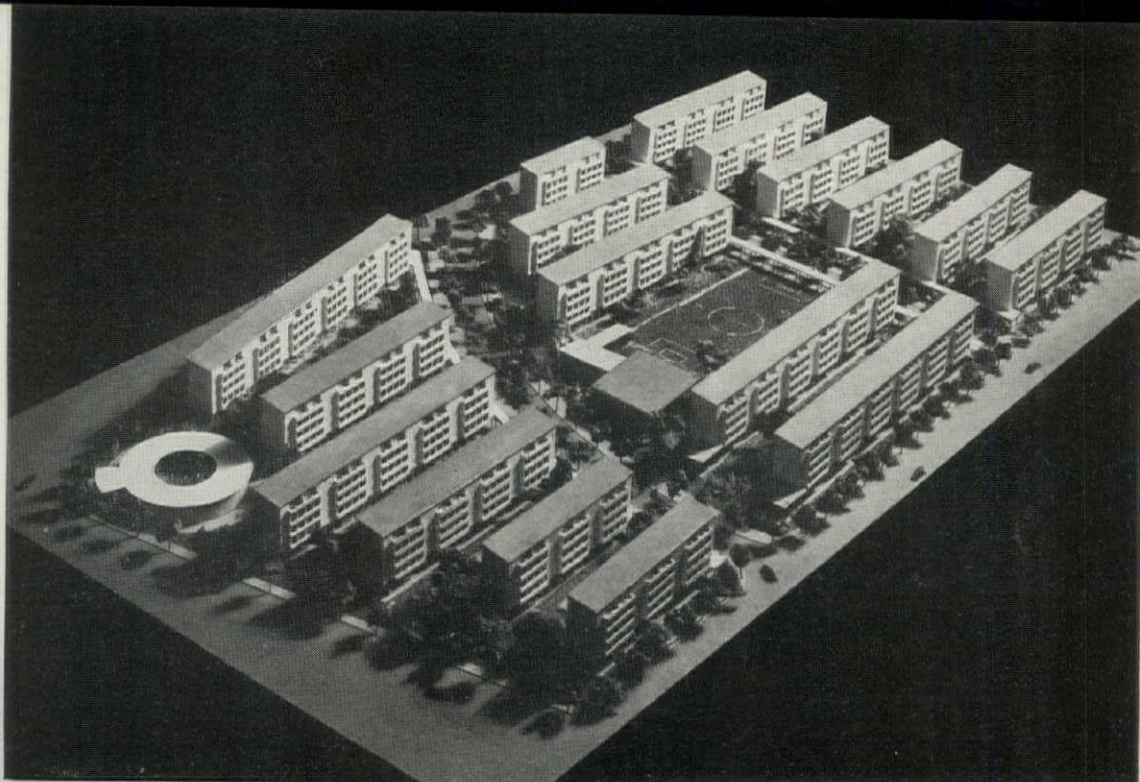
Located in a high outlying section of São Paulo, this housing project will be convenient to the tremendous park of Ibirapuera, near the park of Pedro II. It is to be built by the Social Security Institute for Industrial Workers. Since land in this section is expensive, special attention had to be given to orientation so that, despite a relatively high density, each unit would get its full share of sunlight. The site is exposed to strong winds and is often enveloped by fog necessitating more insulation than would have been required for building in the middle of town. All buildings will be of concrete; the taller ones will have elevators. The average industrial worker's family in São Paulo consists of five people, and the average unit will be a two bedroom apartment.

USING DEVELOPMENT

LO ANTUNES RIBEIRO, Architect

low-cost public housing project in Paulo is another example of what the Social Security Institute for Industrial Workers is doing. It is located in an industrial section of the city proper. In spite of the dense planning dictated by circumstances, an ample playground and community center have been provided. Sun protection, which is less important in Sao Paulo than in Rio, is taken care of by the balconies. The buildings consist of a reinforced concrete frame filled with brick. The circular structure at the left is the community center.

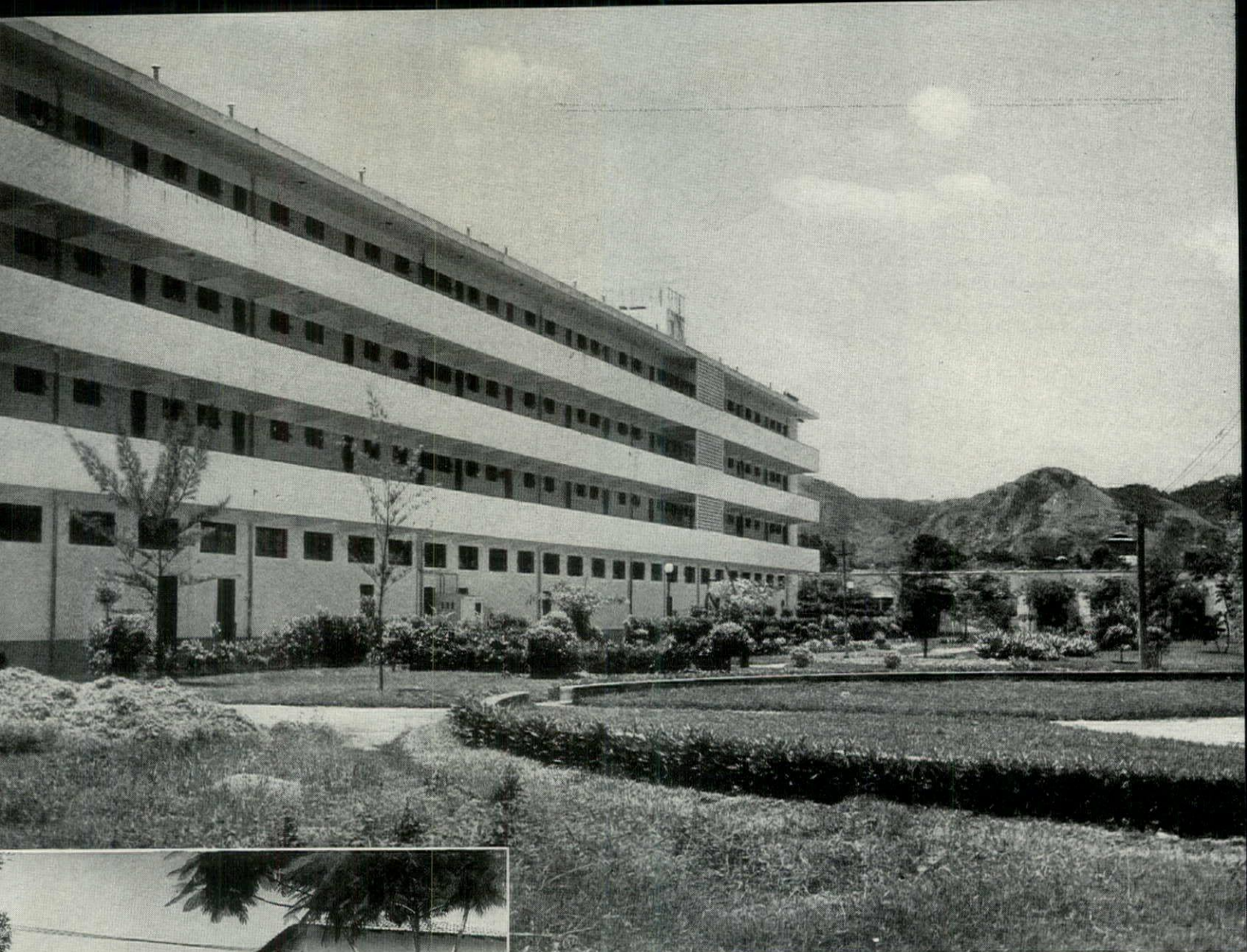
Designed for the middle-income bracket, the project shown below will be built under the auspices of Social Security Institute for Commercial Workers in Sao Paulo. The most popular apartments are the one- and two-bedroom units, with the smaller apartments in the taller buildings. The project includes a nursery and primary school, well, recreation center, maternity center, shopping center and garage, as well as plumbing, electrical and carpentry services. Care was given in the plot plan to avoid placing schools and residential buildings near heavy traffic. Since they are apparently the most expendable, bachelor's quarters are located near the highway.



Jerry photos

APARTMENT HOUSING PROJECT EDUARDO KNEESE DE MELLO and HELIO QUEIROZ DUARTE, Architects





Carlo



14,000-FAMILY PUBLIC HOUSING PROJECT

CARLOS FREDERICO FERREIRA, Architect

with WALDIR LEAL
and MARIO H. G. TORRES

Located on reclaimed swampland near Rio, this mammoth project was built by the government for the families of 14,000 industrial workers. Thanks to federal subsidies covering a share of the development costs, the average unit is "sold" for only \$525 down plus \$3 "rent" per month for 20 years.

Construction costs were minimized by the use of concrete block for the smaller structures and, in conjunction with reinforced concrete, for the multi-story buildings. Detached and two-family houses (small picture, above) cover a sizable part of the site and resemble U. S. solutions of the same problem. Larger pictures (top to bottom) illustrate a typical apartment building, the administration building, a nursery and a school.

PROPOSED 600-FAMILY PROJECT

AFFONSO EDUARDO REIDY, Architect

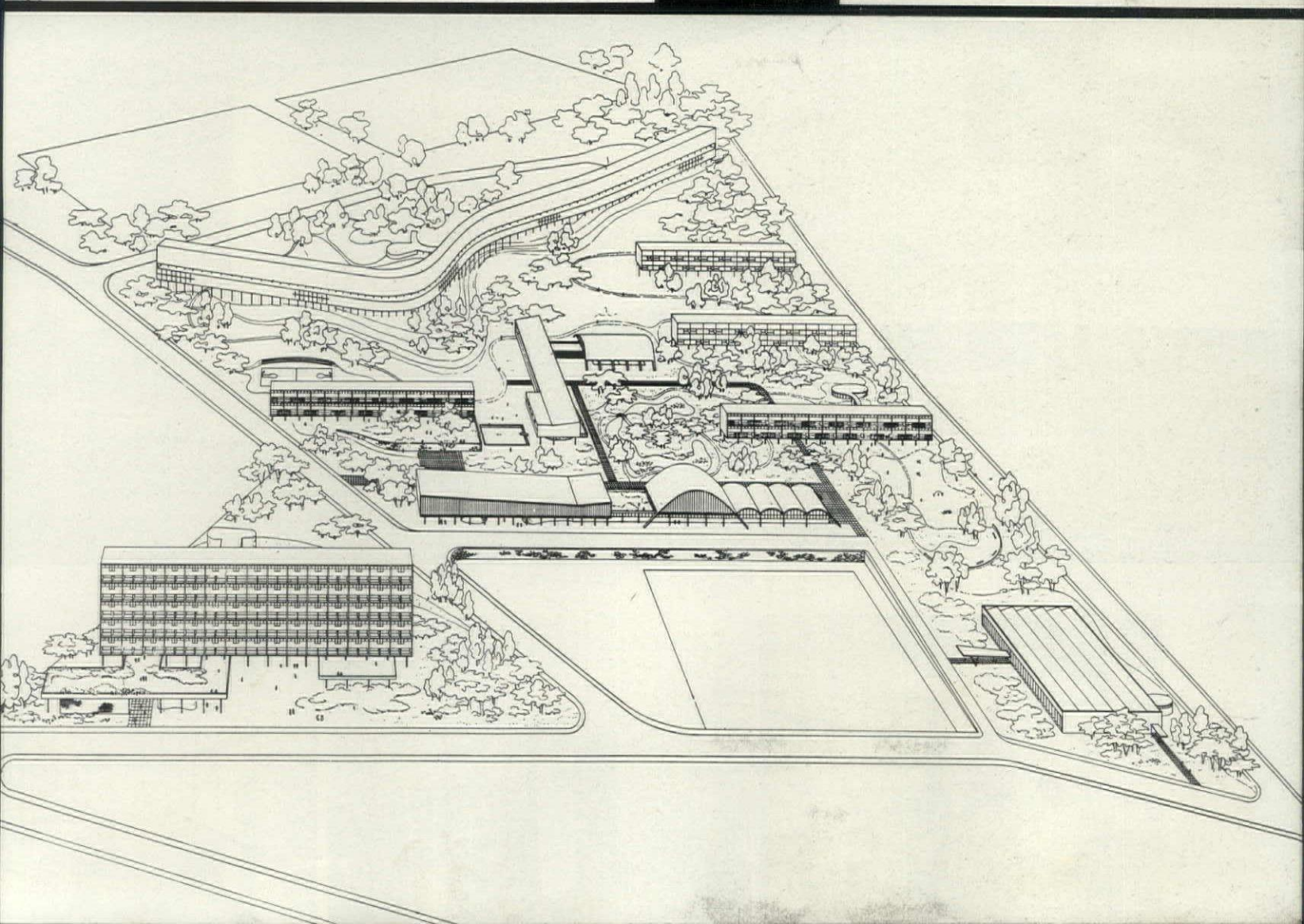
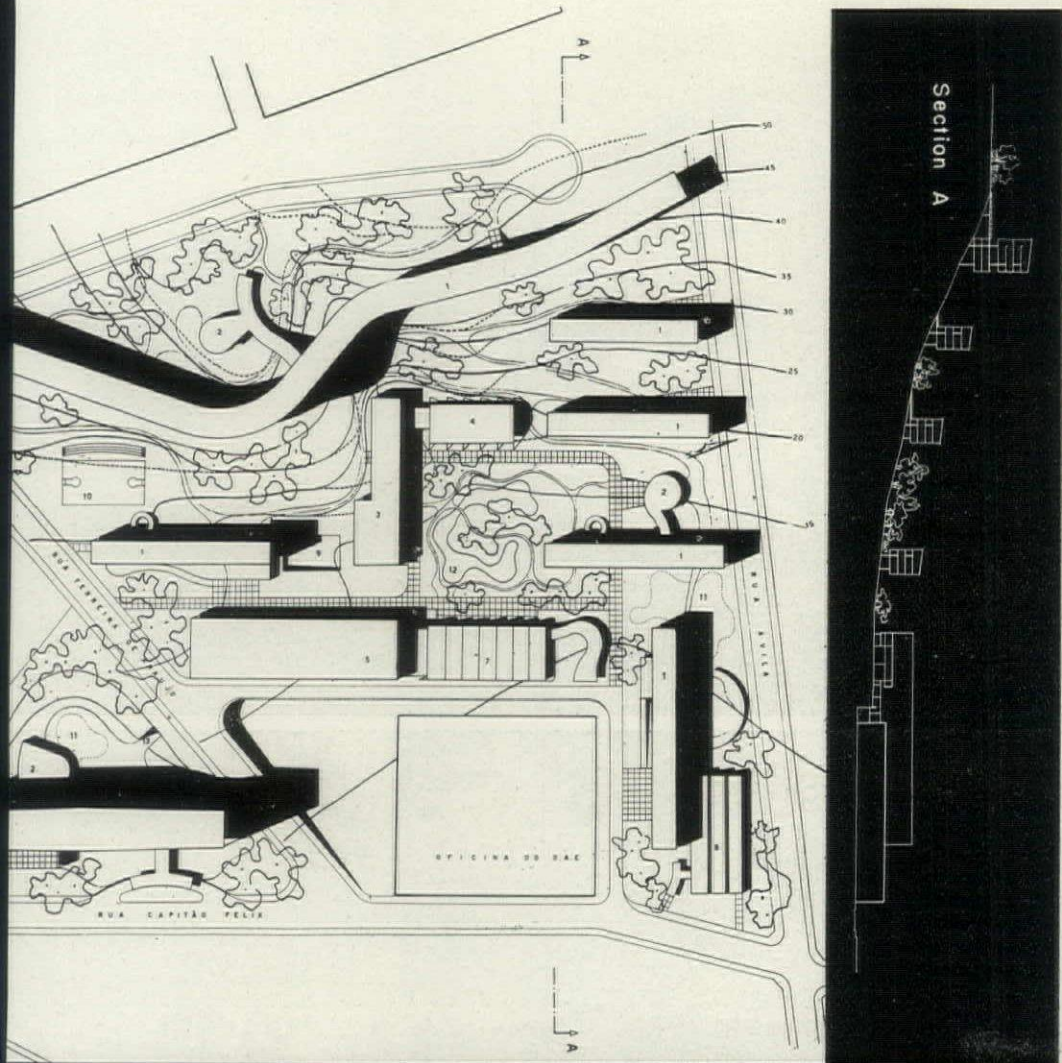
Like the project shown on the opposite page, this smaller development is a public housing project. It will be built by Rio's counterpart of the District of Columbia's local housing authority.

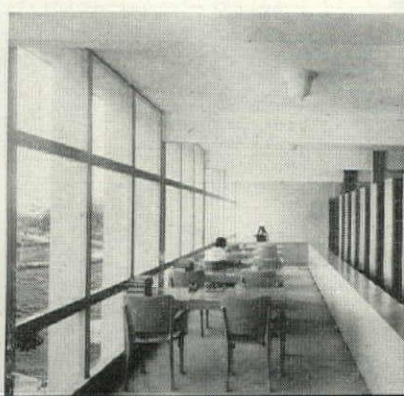
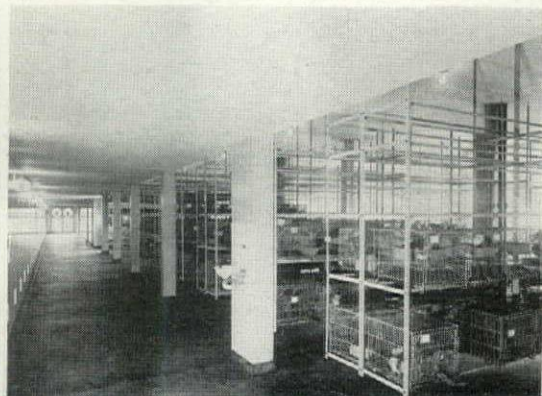
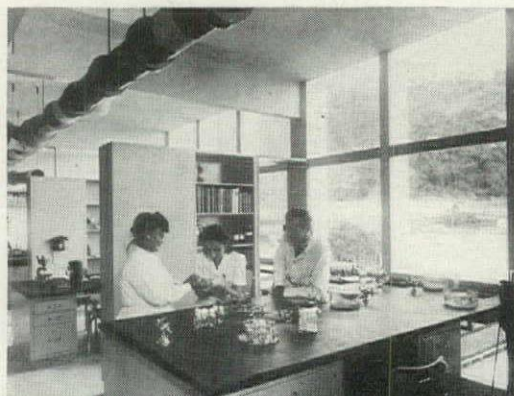
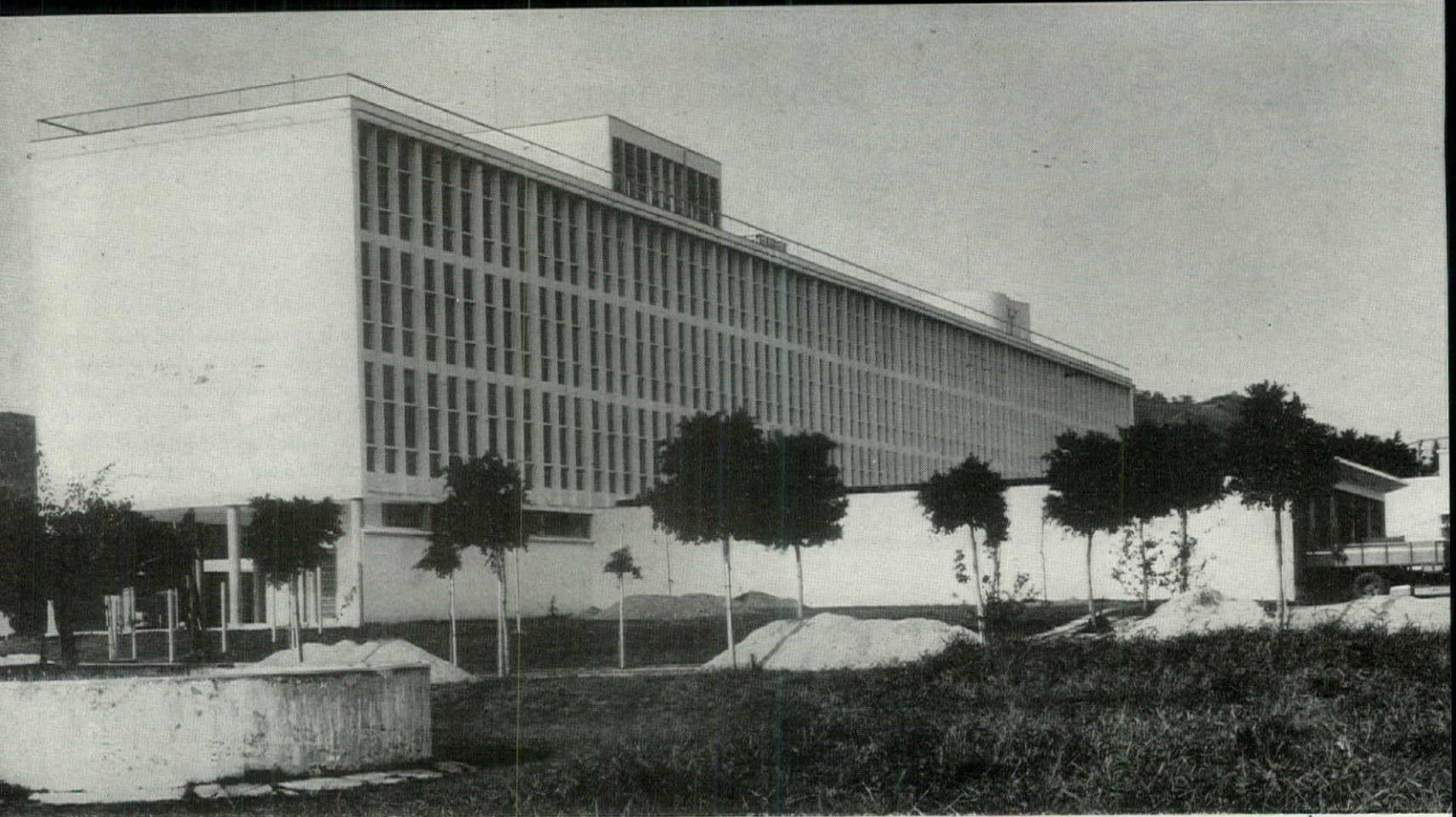
Although the accompanying plans illustrate two stages in the development of the site, they have several common features which will probably appear in the final scheme. The long thin apartment buildings are laid out along the contours of the steeply sloping site (which has a drop of some 165 ft.). This is particularly true of the snake-like building which closely follows the irregular conformation of the hill-top. Entered by a bridge to the third floor, this unit accommodates two layers of duplex apartments above and two floors of bachelor flats below. The other hillside apartment buildings have four floors each devoted to duplexes, while the larger building at the foot of the hill accommodates five layers of duplexes.

All apartment buildings are raised on stilts to eliminate excavation, simplify foundation construction and give the living units a better view of the valley. Non-dwelling facilities are clustered in the center of the site.

LEGEND (site plan, left)

- 1—Apartment building. 2—Nursery school.
- 3—Primary school. 4—Gymnasium. 5—Club.
- 6—Laundry. 7—Stores. 8—Clinic. 9—Pool.
- 10—Ball court. 11—Playground. 12—Park.
- 13—Pedestrian underpass.





WORK

Despite the glittering competence of the factories and office buildings shown here, Brazil is still preponderantly an agricultural nation. Like the other South American countries she is rich only in potentials. Industrial production has risen sharply in recent years (56% in the period 1938-1943 alone), but Brazil is still far too dependent on the outside world for many basic commodities. Out of a potential hydro-electric power of 24,000,000 h.p., only some 7% have been developed. And while the Itabira iron mines are probably the world's largest and richest deposits (assaying from 62 to 72% pure iron) she produced only 206,000 tons of steel in 1945. Industrialization is thus the pivot on which her future turns.

Many factors have retarded the development of Brazilian industry, not least of which is her lack of an adequate, integrated railway and highway system. Until this problem is solved, her natural resources will never be properly

exploited and her population will remain concentrated along the seaboard. It was to break this Gordian knot that the great Volta Redonda steel complex was begun during the war. Nearing completion now, this new city will have an annual capacity of 300,000 tons of steel and 50,000 tons of pig iron. Eventually, it is hoped to produce 1,000,000 tons of rolled steel a year.

Despite this fundamental weakness in her economic structure, Brazilian cities are full of new industrial and commercial buildings which, in competence if not in scale, might well cause the architects of more highly industrialized nations to look to their laurels. As in most countries of the southern continent, the lack of steel and iron has channelized modern construction into reinforced concrete. And since masonry was always the traditional material of the country, both architects and workmen have been able, for this reason, to maintain a rare sort of continuity between the old and the new.

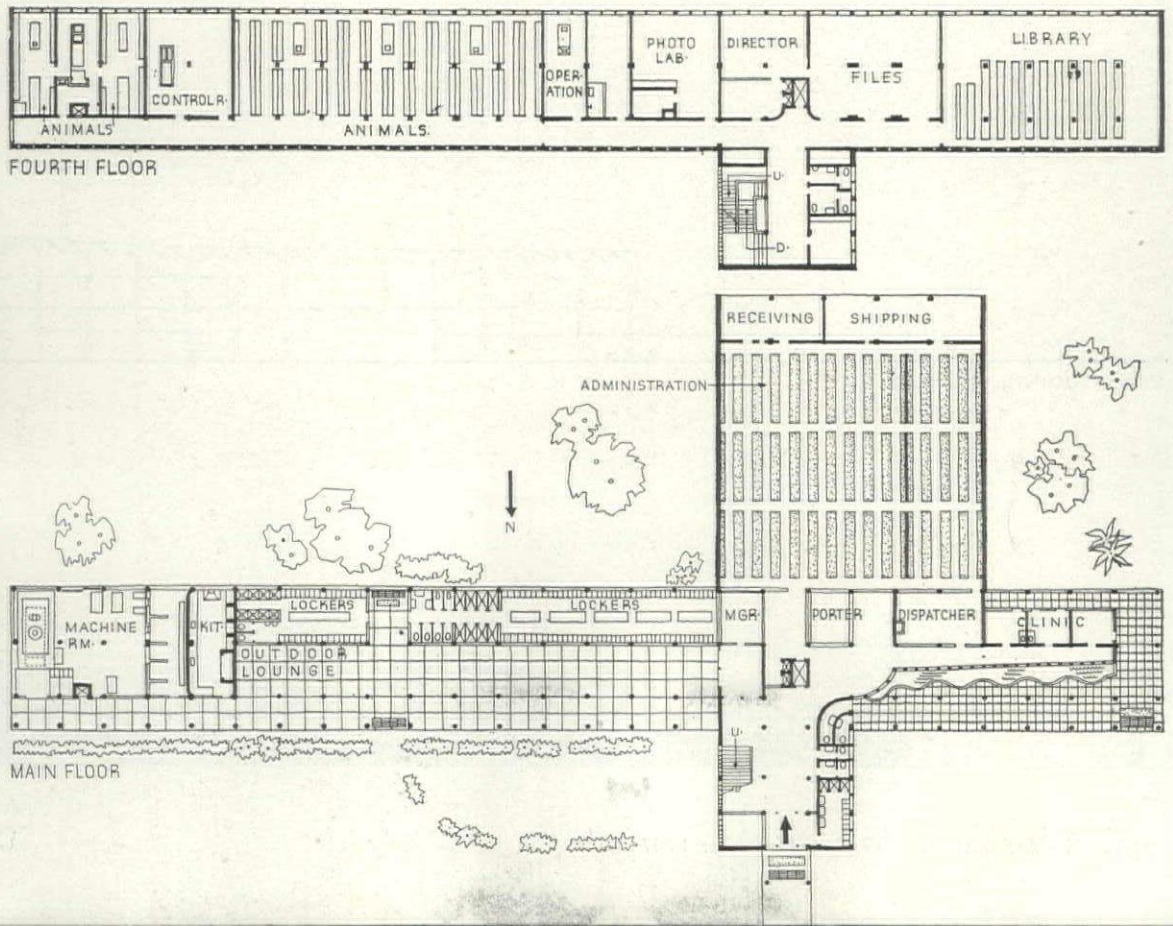
LABORATORY FOR SNAKE-BITE SERUM ALVARO VITAL BRAZIL, Architect

Brazil, with many types of poisonous snakes, has for many years taken the lead in research and production of snake bite serum. The laboratories of one of the most famous "snake farms," the Vital Brazil Institute, is now housed in this modern building across the bay from Rio. (The snakes themselves are kept on a separate farm, where they are periodically "milked" of their venom.) Main problem in its design was the need for absolute sterility in the laboratories where the serum is prepared, bottled and wrapped. Hence the building is completely sealed and air conditioned. To minimize the solar

heat load, corridors are placed along the north wall, behind a perforated concrete wall, and all work spaces are lighted from the south. The laboratories in which serums are prepared and bottled are protected by a second ventilation system, where purity, temperature and air movement are rigidly controlled. The ground floor of the project is given over to employees, warehousing and shipping; the second floor is devoted to manufacturing; the third floor to laboratories. The fourth floor has executive offices and library in the west wing, pens for 4,000 small animals in the east wing.



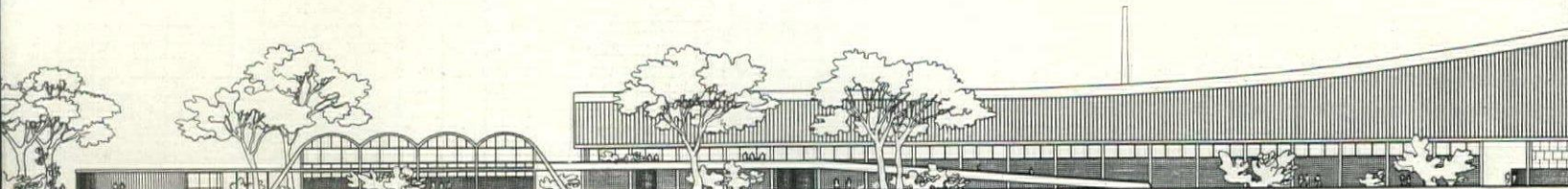
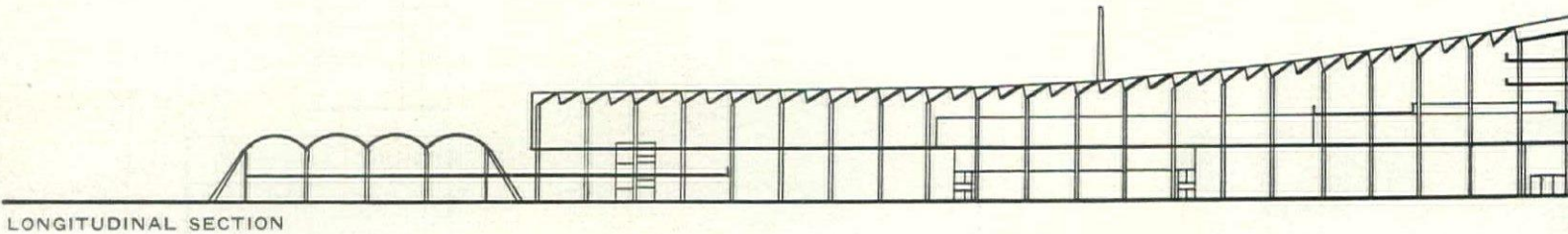
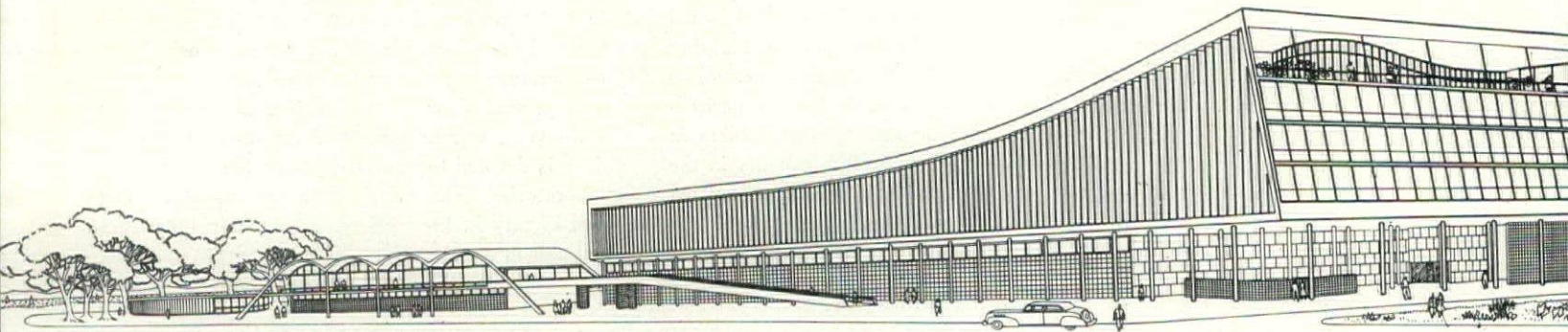
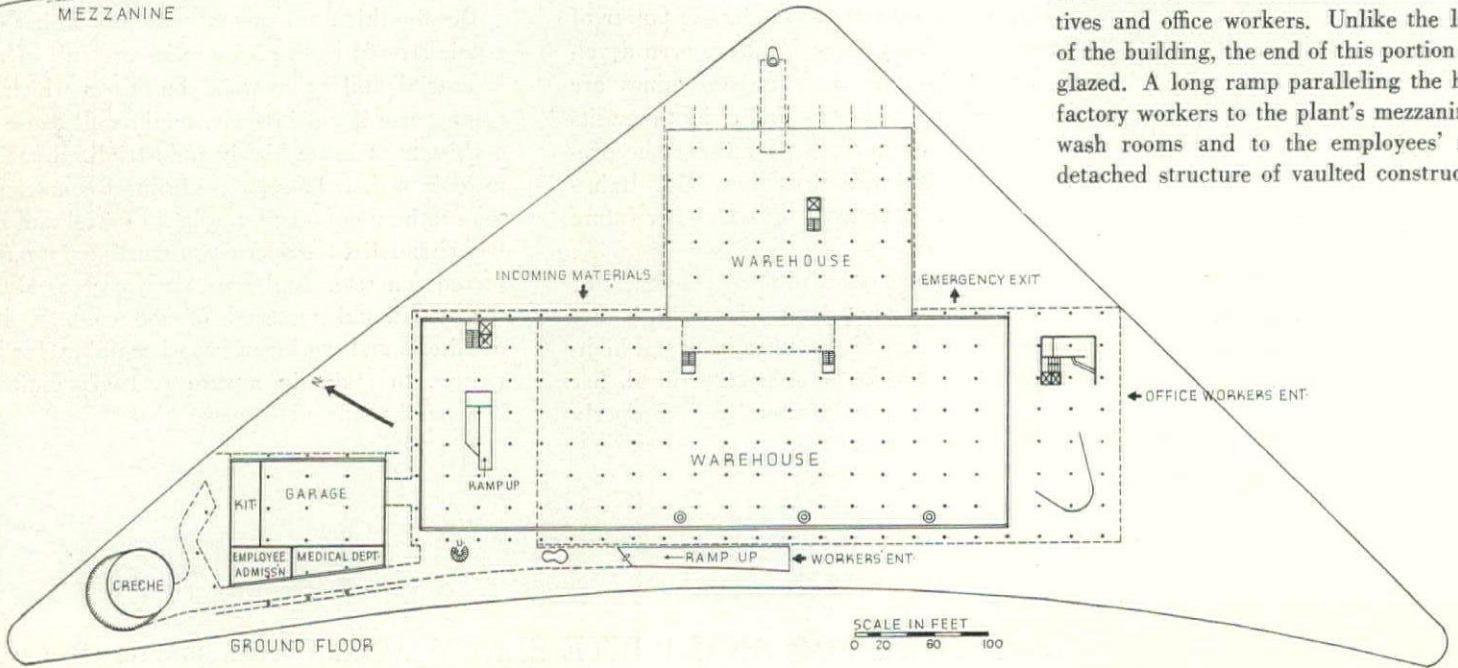
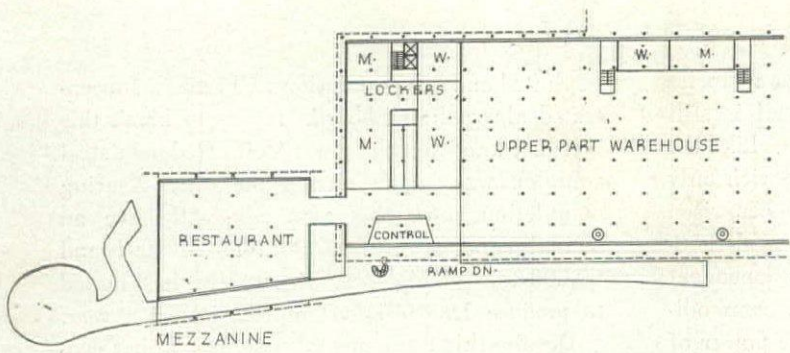
Carlos photos



PHARMACEUTICAL AND COSMETIC PLANT

AFFONSO EDUARDO REIDY, Architect

Fitted to a triangular plot facing the street between Rio and Petropolis to the north, the building was designed for the Sydney Ross Co. The two-story manufacturing building curves at the south end to make room for two mezzanine office floors and a mezzanine restaurant for executives and office workers. Unlike the lower portion of the building, the end of this portion is completely glazed. A long ramp paralleling the highway carries factory workers to the plant's mezzanine level, wash rooms and to the employees' restaurant, a detached structure of vaulted construction.

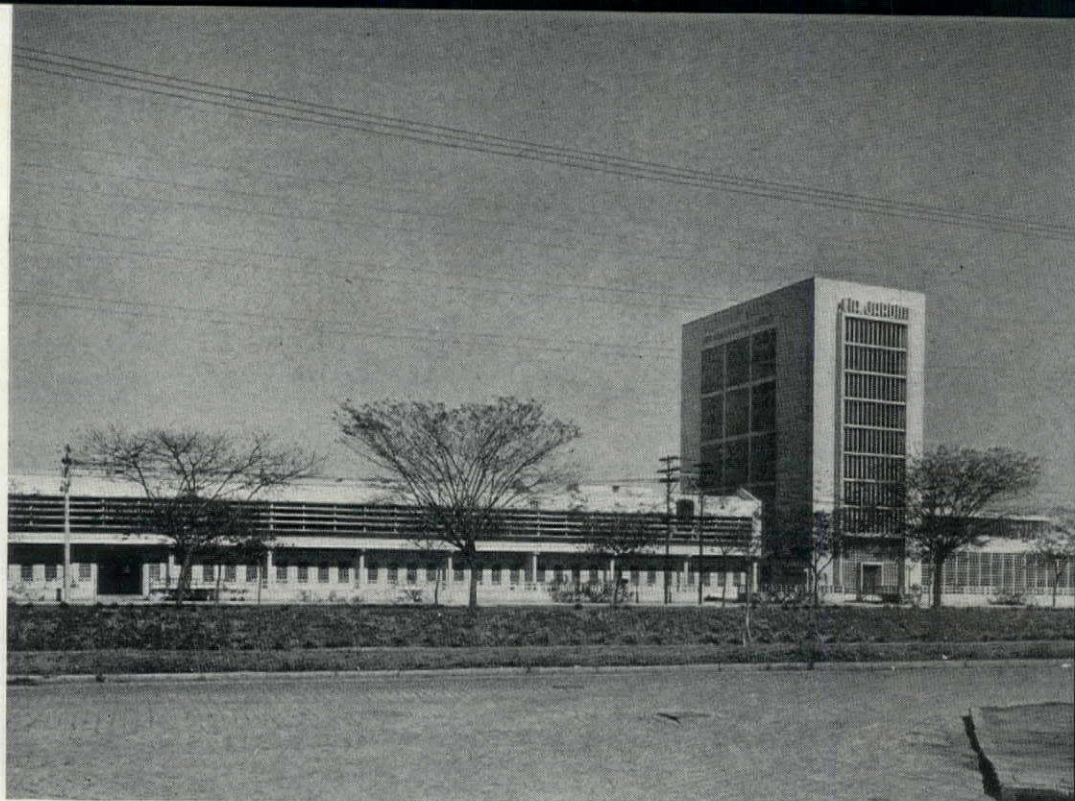


WAREHOUSES AND COFFEE PROCESSING PLANT

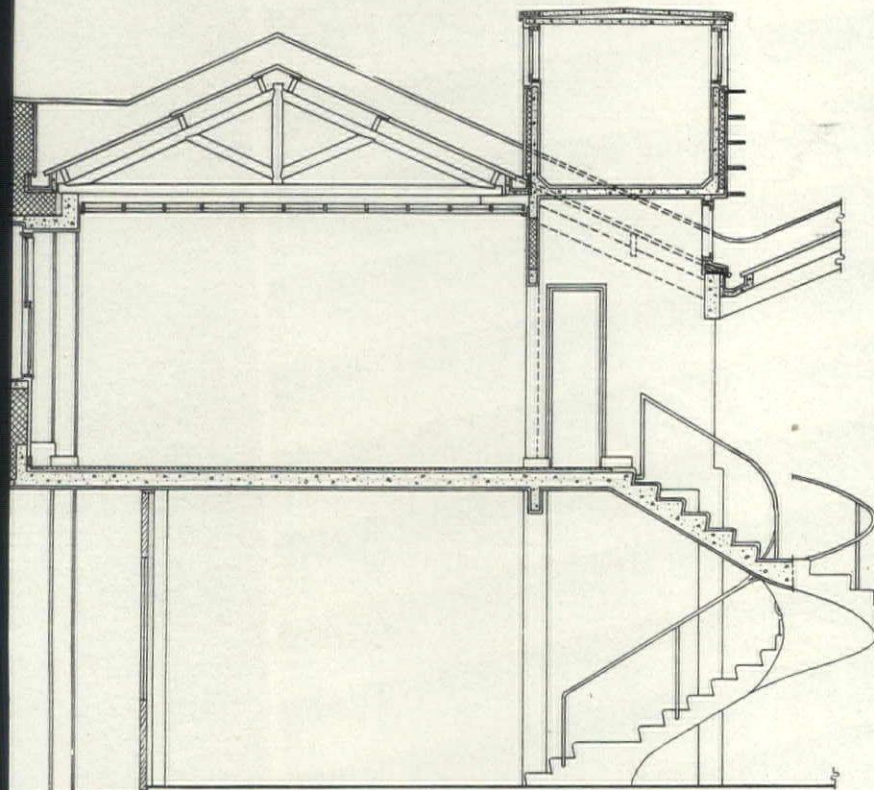
NO LEVI, Architect

ough it appears to be one large industrial plant, Sao Paulo project actually comprises a coffee processing tower with its attendant offices and, in a separate building, three warehouses which are attached. Constructed of reinforced concrete, both buildings employ precast concrete sun breakers on north (street) front for purposes of light diffusion and protection. Folding doors completely open in the front of the warehouses to facilitate shipping and receiving, and the saw-tooth roof opens up to the sunless south light. Neat in appearance, the roof framework is reinforced concrete, prefabricated in sections and joined on the job.

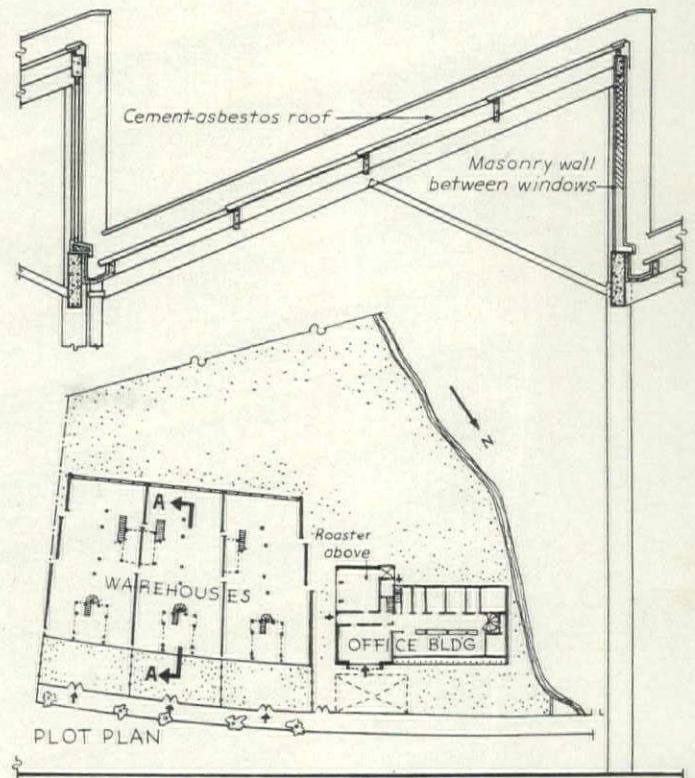
Processing of coffee involves raising the beans to the top of the tower by suction and feeding them by gravity into the roasting ovens, grinders and packing machines.



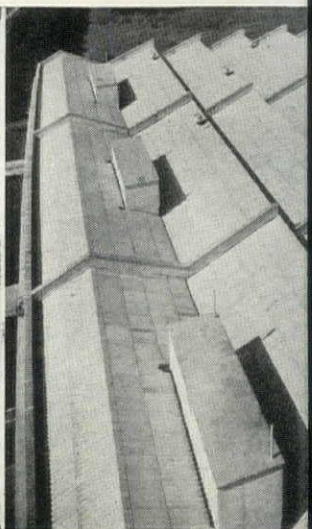
P. C. Scheier photos

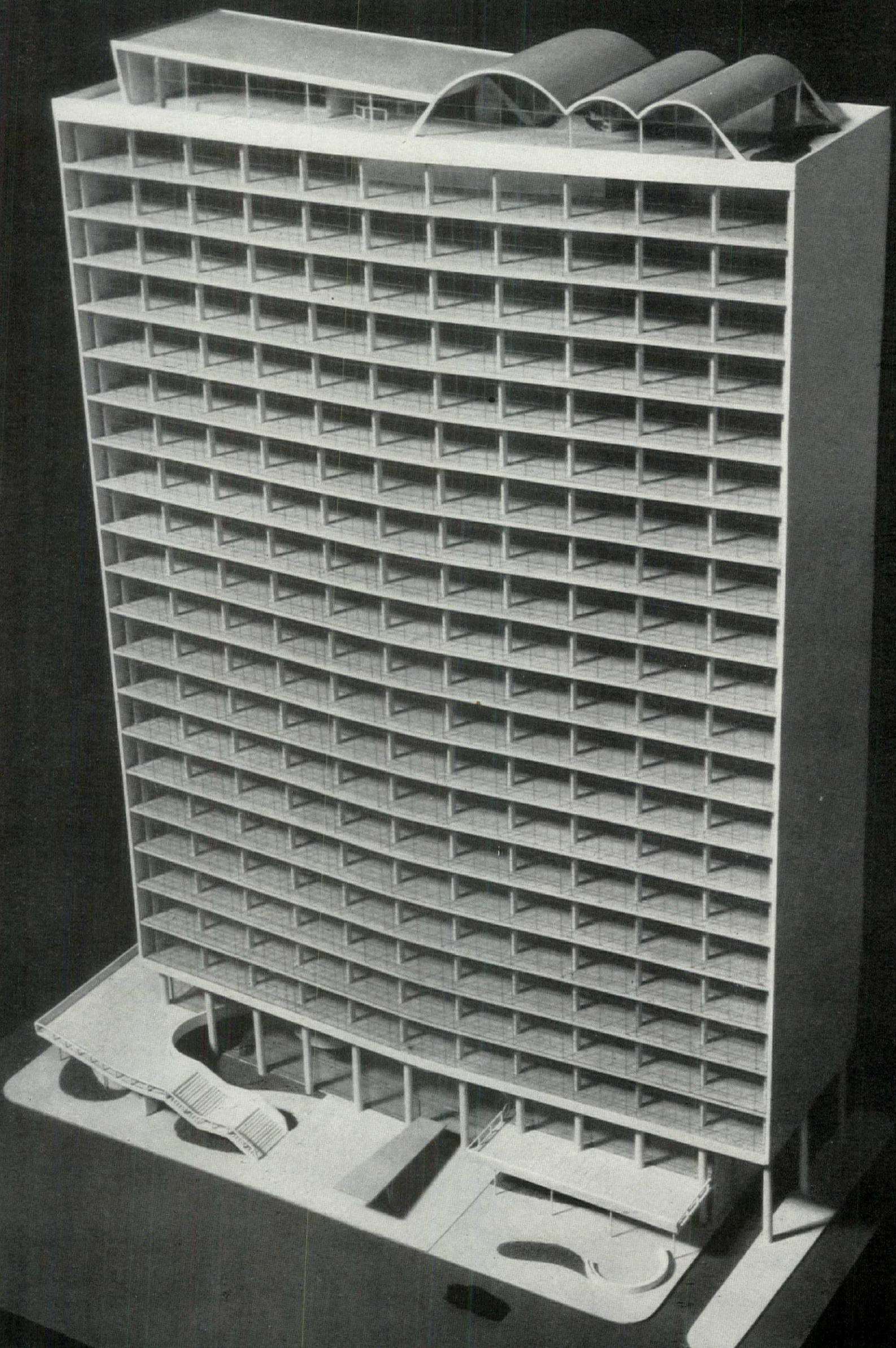


SECTION "A-A"



BUILT ON REINFORCED CONCRETE FRAME, WAREHOUSES ARE LIGHTED FROM NORTH THROUGH LOUVERS, SOUTH THROUGH SAW-TOOTH ROOF



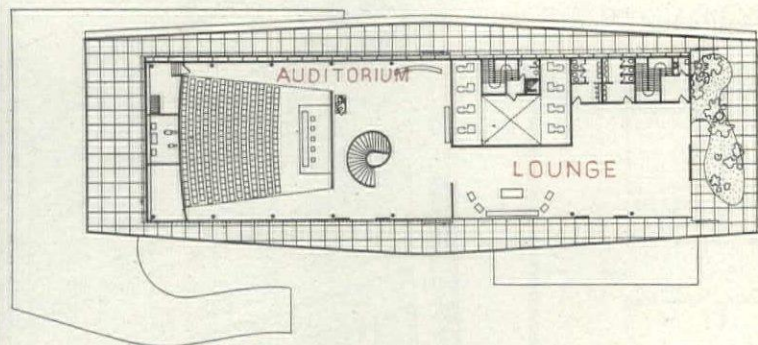


OFFICE BUILDING

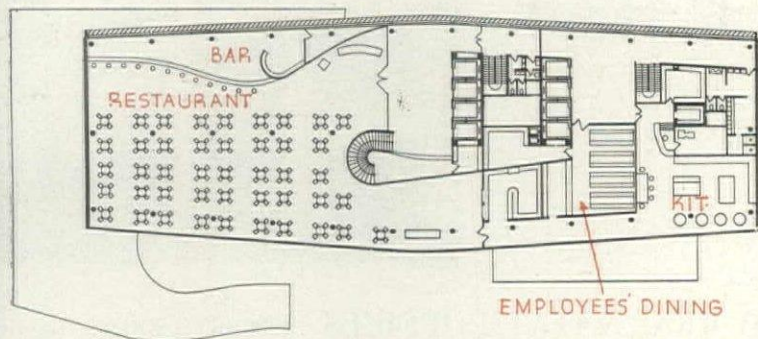
AFFONSO EDUARDO REIDY,
JORGE MACHADO MOREIRA, Architects

A competition prize winner, this design for the Rio Grande Do Sul Railway office building in Porto Alegre calls for a 22-story hexahedron of reinforced concrete and glass covering half the site. Set about 5 ft. outside the structural-columns, a wall of unprotected glass opens all floors to the sunless south light (left). On the opposite facade (below), vertical louvers set between the floor slabs, shield the north glass walls from the sun. There is only a single row of interior columns, and floor space is easily subdivided and highly flexible.

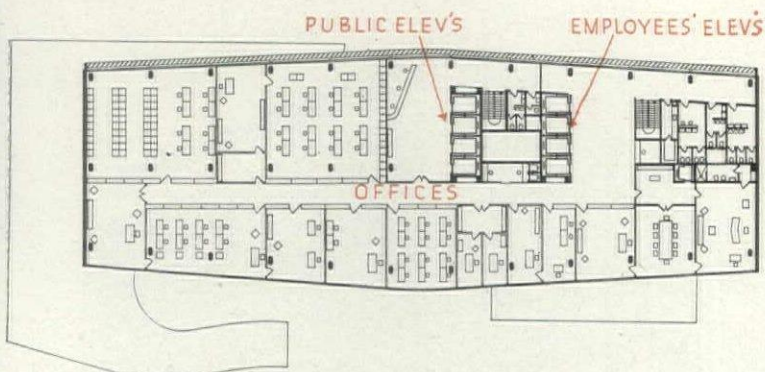
Offices directly serving the public flank the ground floor lobby and, like the mezzanine exhibition area, are accessible from the building's main entrance. Separate entrances leading to separate elevators are provided for employees and executives. This segregation of public and employees is maintained by the provision of separate elevator lobbies and stairs on all office floors—2 through 20. The 21st floor is occupied by a restaurant seating 176, a bar and a kitchen. On top is an auditorium, lounge and terrace open in all directions to views of city, sea and mountains.



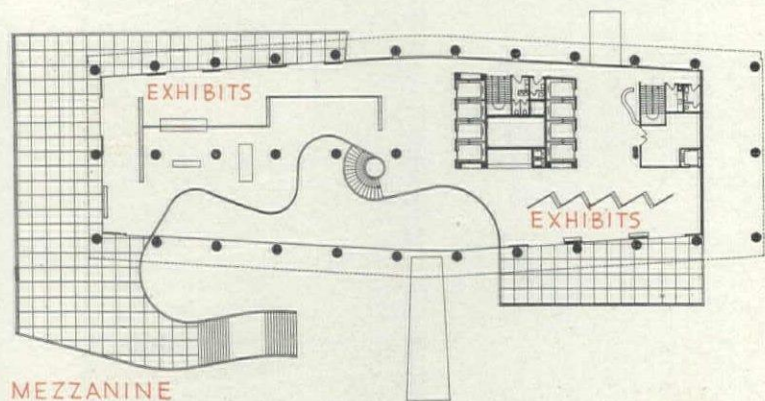
22ND FLOOR (PENTHOUSE)



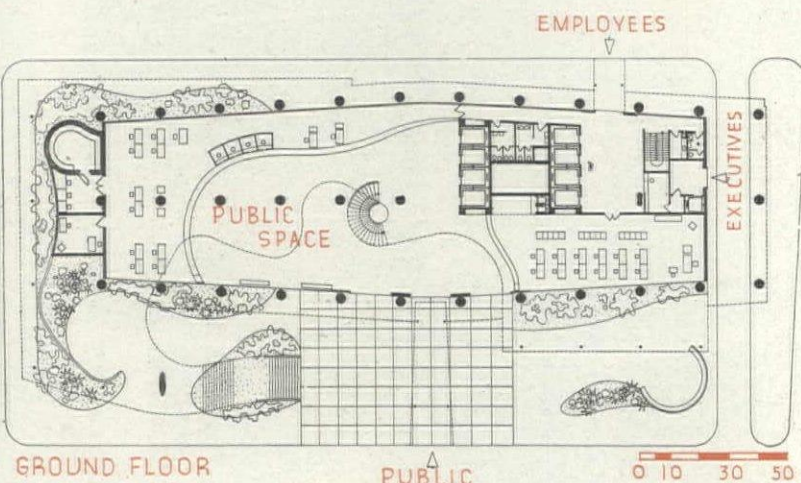
21ST FLOOR



TYPICAL FLOOR



MEZZANINE



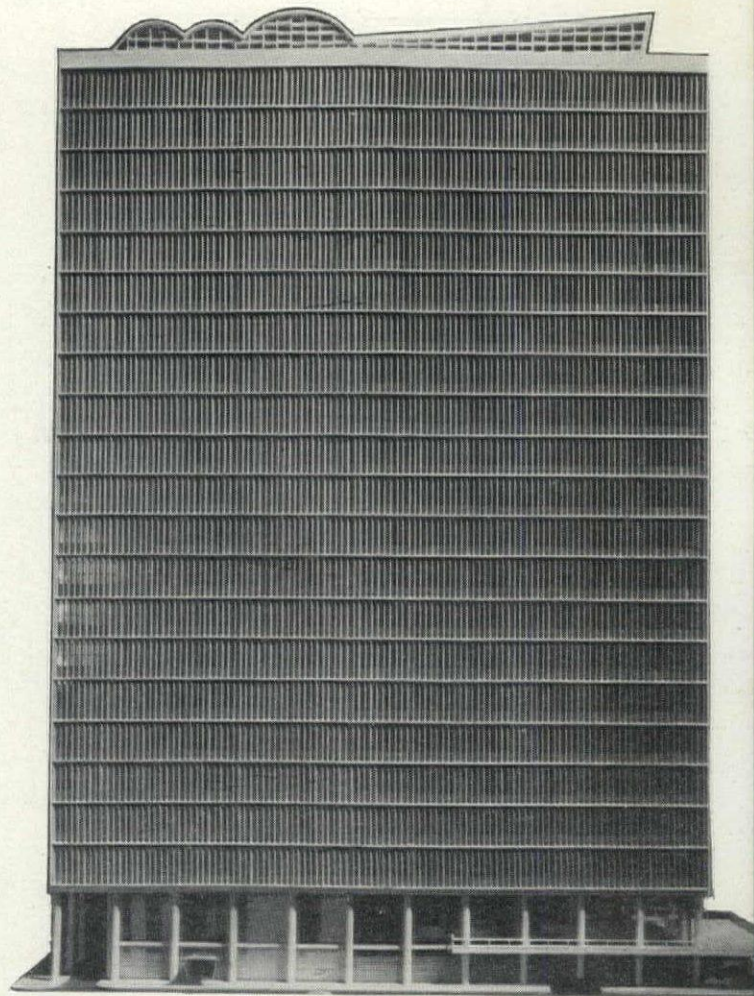
GROUND FLOOR

PUBLIC

EMPLOYEES

EXECUTIVES

0 10 30 50

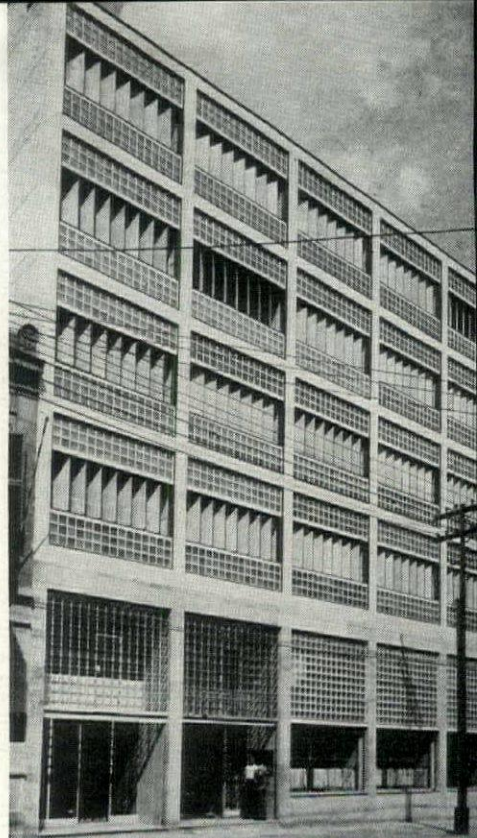
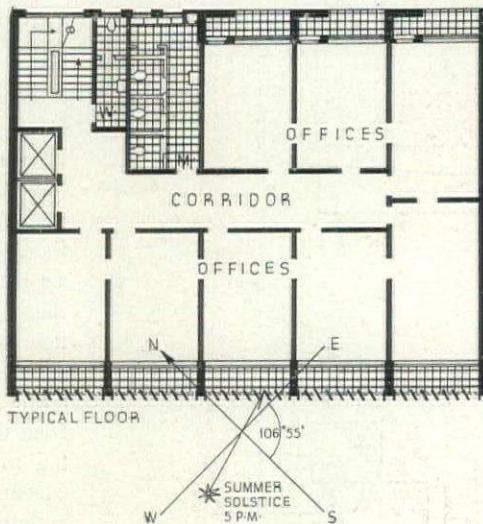


OFFICE BUILDING WITH DOUBLE FACADE

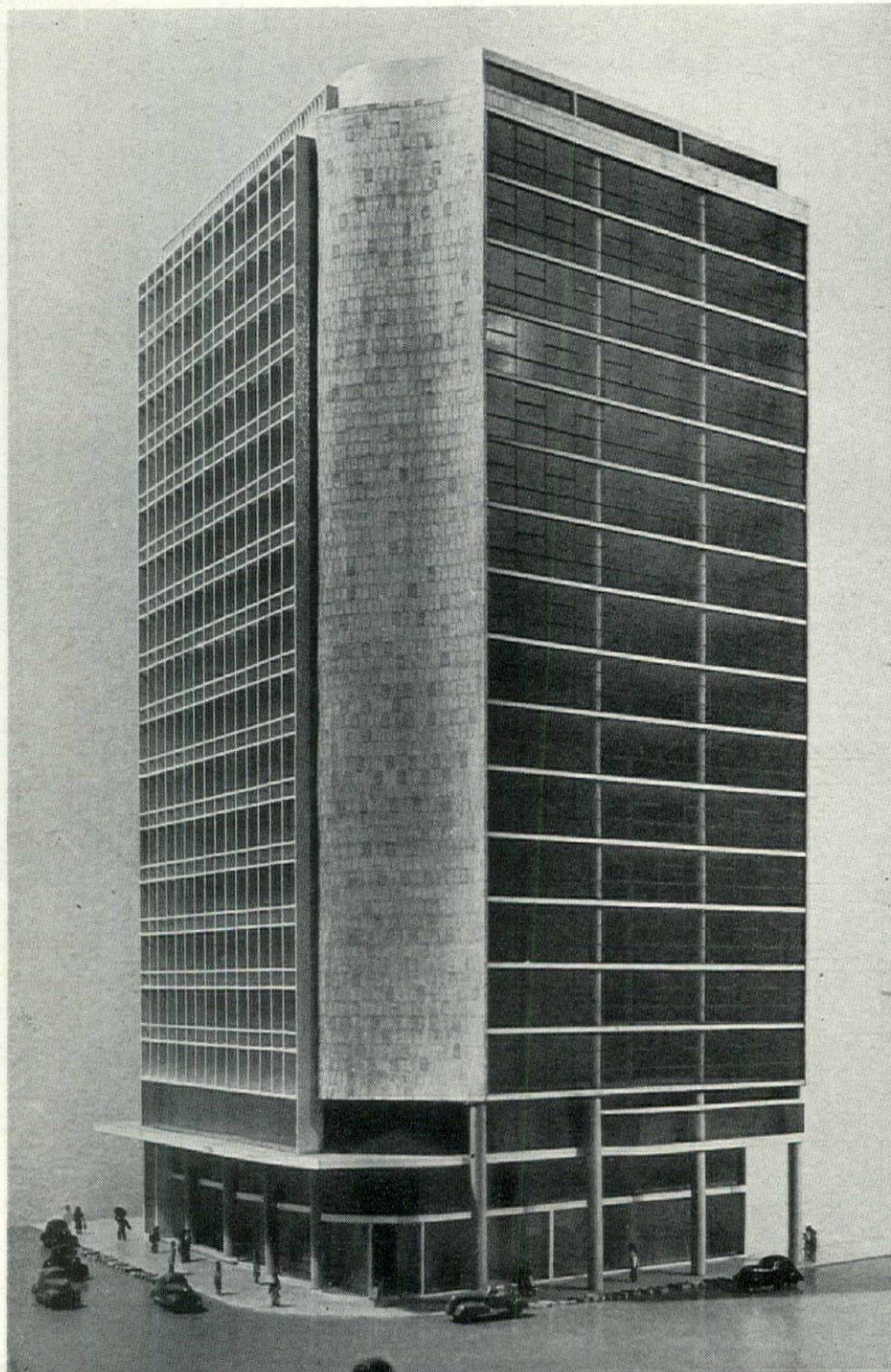
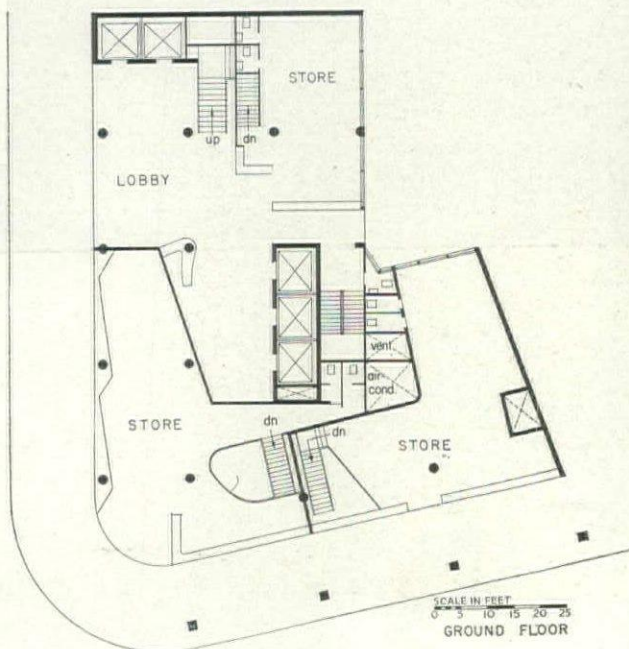
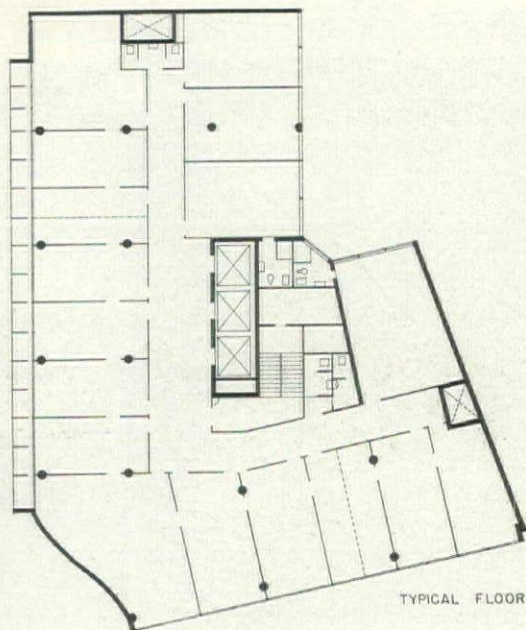
EDUARDO KNEESE DE MELLO, Architect

From the emphasis placed on its reinforced concrete frame this five-story building (right) has much in common with Belluschi's American counterpart in Portland, Ore. (FORUM, Apr. '47). Completely different, however, is its two-ply facade. The main elevation consists of glass brick with movable louvres backed by an interior wall of the same materials. Together, they provide adequate light and controlled ventilation for the individual rooms. Unfortunately, in the photograph the glass brick looks rather dark, belying the uniformity and lightness of the design.

The projected office building (below) revises conventional arrangement by allocating the upper floors to shops served by two express elevators. Also on the upper level are space for union activities and an employees' club. The gymnasium is on the roof. The Imobiliara Seguradoras, a real estate-insurance company, occupies the balance of building.



SHOPS AND REAL ESTATE OFFICES ROBERTO BROS., Architect



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They're manufactured *completely* in Ro-Way's own plant. Meantime, write for Ro-Way's four latest folders on Residential Doors, Industrial Doors, Commercial Doors and Ro-Way Door Accessories.

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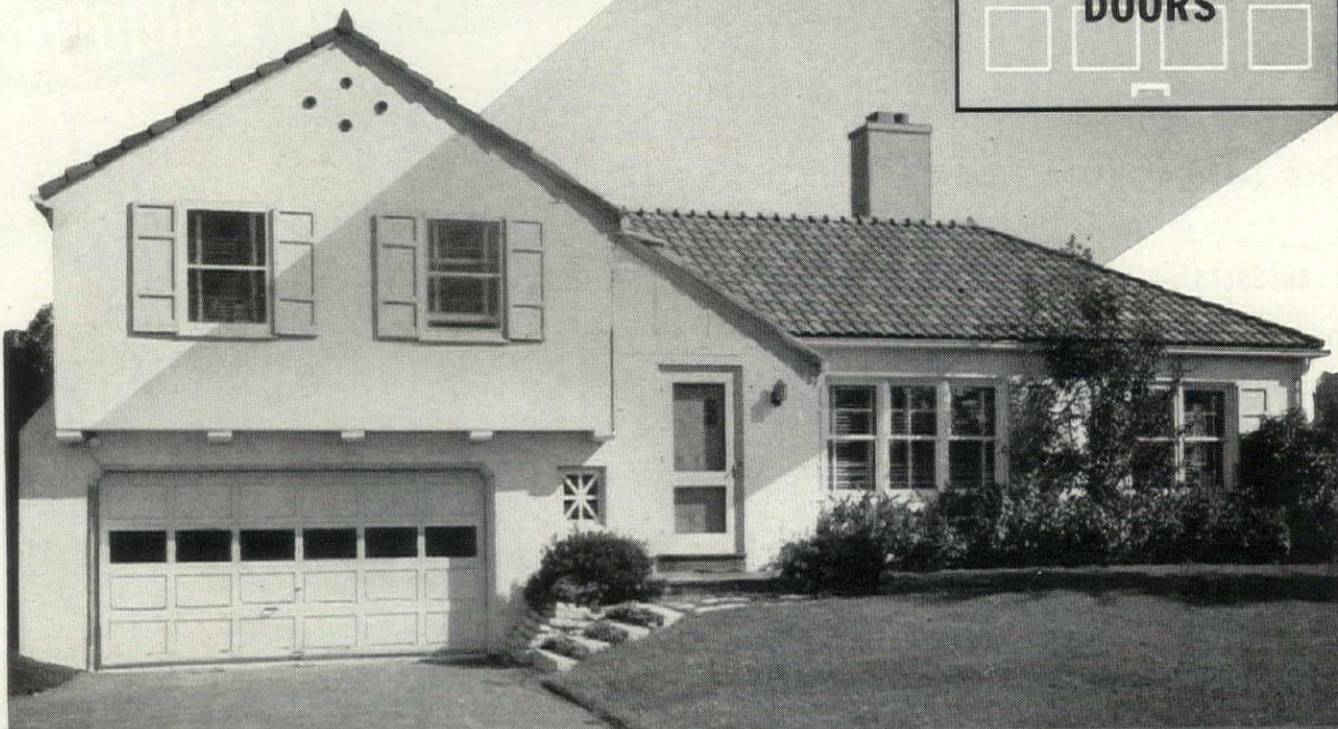
Ro-Way Distributors in all principal cities.
Consult your classified telephone directory, or write for distributor's name. See our catalog in Sweet's.

ROWE MANUFACTURING COMPANY

928 Holton Street, Galesburg, Illinois

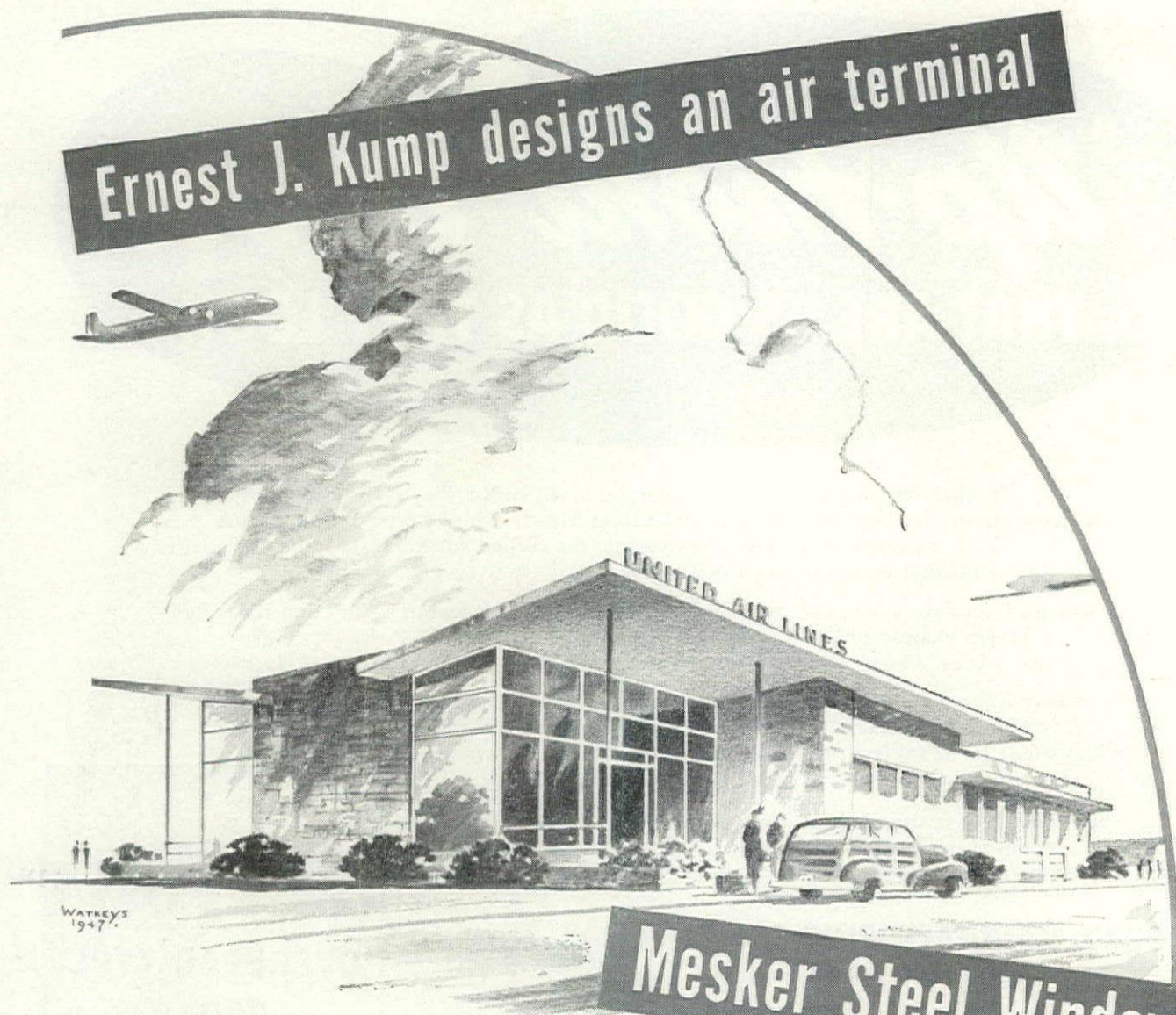
Ro-Way

**OVERHEAD TYPE
DOORS**



There's a RoWay for every Doorway!

Ernest J. Kump designs an air terminal



Mesker Steel Windows

**“When faced with the problem of bringing
the outdoors into a building, I am always grateful for
the slender, sturdy mullions of steel windows.”**

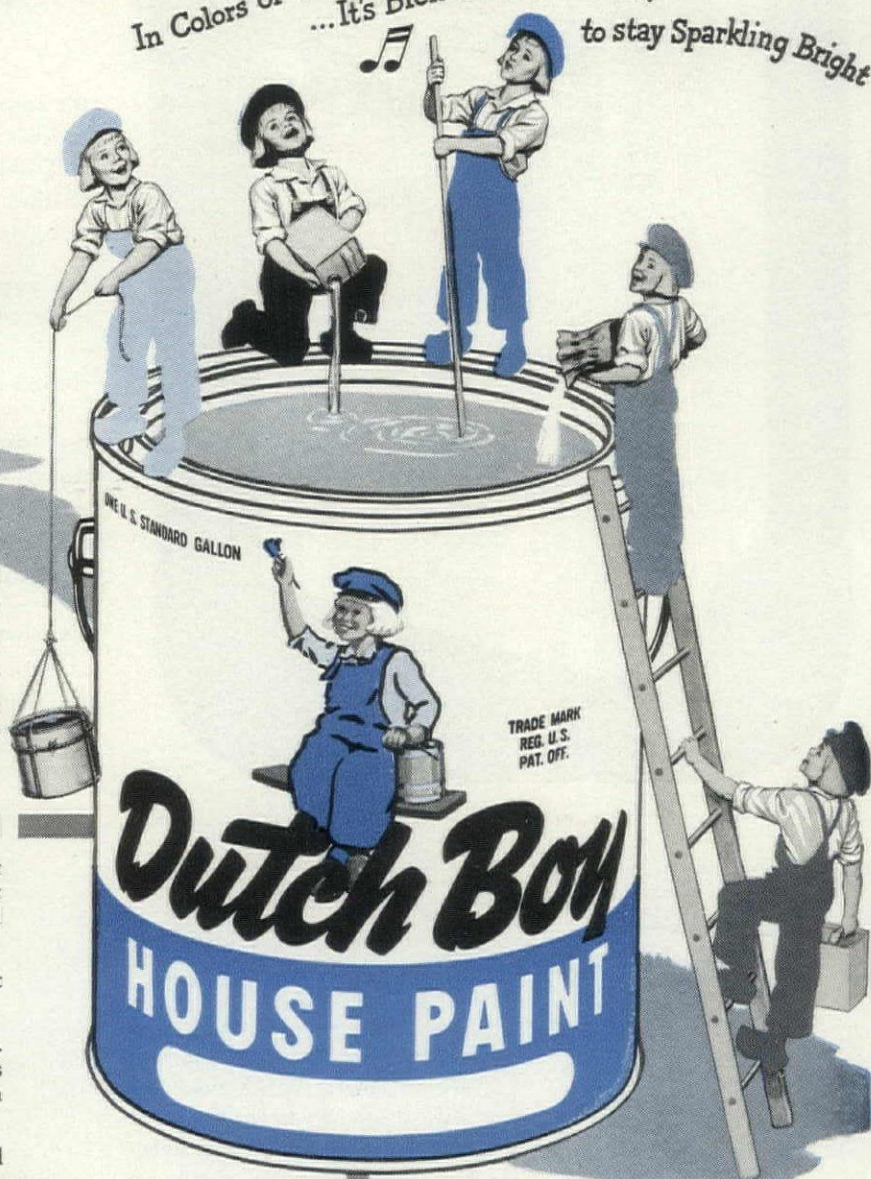


Architect
Ernest J. Kump
Franklin, Kump & Falk
San Francisco, Calif.

For your copy of the Mesker Book of Windows for Public Buildings,
write to Mesker Brothers, 4336 Geraldine, Saint Louis 15, Missouri

Sweet music for Home-Loving Ears
The New "Dutch Boy" Paint is
Blended

In Colors or White...
 ...It's Blended just right...
 to stay Sparkling Bright



It's something to sing about...
 the new "Dutch Boy" Blended Paint!

From the dazzling Bright White... to the fresh, crisp Tints... to the gay, glossy Trim Colors... it's an exciting new kind of "Dutch Boy" house paint.

In colors and white... it's blended just right to stay beauty-bright. Blended by the master hand of the "Dutch Boy" with all his years of experience in brushing away the years from American Homes.

3 Blends for 3-Way Beauty Protection

As you well know, house paint is required to do three different jobs. And blending gives three different kinds of paint — (1) Bright White; (2) Sparkling Tints; (3) Gay Trim Colors — each designed to do its job right.

No wonder the new "Dutch Boy" Blended paint stands *up* just as it stands *out*.

No higher quality paint has ever carried the "Dutch Boy" label. It's backed up by over 30 years of continuous outdoor paint tests — the longest research project of its kind. Now, as always, "Dutch Boy" is *Good Paint's Other Name*.

So remember... when it comes to paint... a home's best friend is the "Dutch Boy" blend.



1. White, Blended to Stay White:
 "Dutch Boy" Bright White is *self-cleaning*. The surface continually renews itself... permits dirt to wash away dirt. Covers exceptionally well; gives a dazzling white exterior finish.



2. Tints, Blended to Stay Bright:
 Crisp and lively are these "Dutch Boy" Tints... specially blended to assure lasting, uniform colors and thus keep their sparkling good looks.



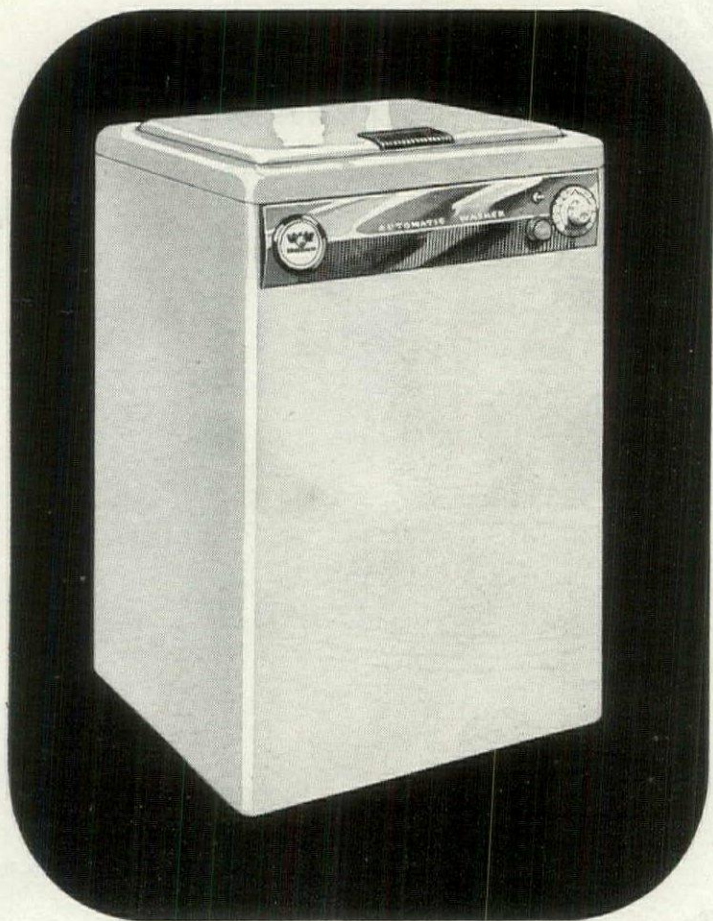
3. Trim Colors, Blended to Stay Bright:
 "Dutch Boy" Sash and Trim Colors add the finishing touch for beauty that lasts. They're blended to hold their gloss and stay bright. Ideal for shutters and doors, garden furniture, store fronts, railings, fences and decorative metal work.

Special "Dutch Boy" Blended Primer: An undercoat of great sealing and hiding power, that holds fast. When used under a topcoat of "Dutch Boy" Bright White or Tints, the result is a superior 2-coat paint job, even on unpainted wood.

**MADE BY THE MAKERS OF THE
 FAMOUS "DUTCH BOY" WHITE LEAD**

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.).

Here's important news for every new-home planner—from Frigidaire



Here's the new Frigidaire

AUTOMATIC WASHER

It's completely automatic — all the user does is put in clothes, add soap, set a single dial. Clothes are washed, rinsed, spun damp-dry in just 29½ minutes.

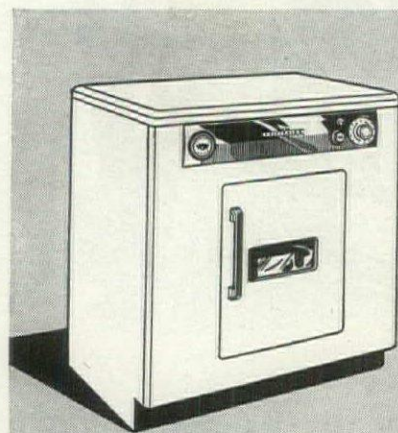
It's completely flexible—any cycle may be lengthened, shortened, omitted, or repeated; clothes added at any time.

It's completely proved. Home tested for more than 5 years, the Frigidaire Automatic Washer has been proved in hundreds of thousands of washings.

It's completely different. For example—"Live-Water," Frigidaire's revolutionary new washing action is created by the up-and-down motion of the pulsator at

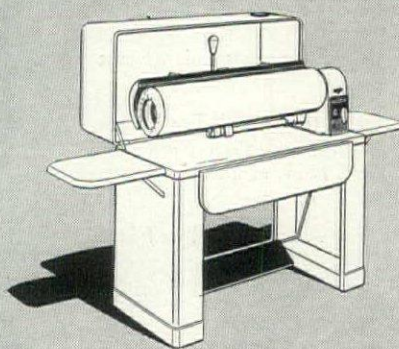
5½ times per second — this provides surging water currents that carry clothes to surface of water then over and deep under water again and again. Same "Live-Water" Action rinses clothes bright. Then Frigidaire "Rapid-Dry" Spin gets clothes really damp-dry.

Washer need not be bolted to floor! Unique "Harmonizer" automatically adjusts washer to load, checks vibration. Easy to install, on level or uneven floor; easy to move. Automatic stop; automatic grounding. Enameled, inside and out, self-cleaning. "Unimatic" Mechanism: direct drive; no belts, pulleys, or extra motors; lifetime lubricated.



Here's the new Frigidaire AUTOMATIC ELECTRIC DRYER

Dries clothes ready to iron in 15-25 minutes; ready to put away in a few minutes longer. Dry-O-Matic timer sets to desired drying time; heat automatically shuts off 5 minutes before drum stops revolving, so clothes may be removed comfortably. Easily installed: no pipes, no plumbing.



Here's the new Frigidaire ELECTRIC IRONER

Two ironing speeds, plus a special stop for pressing. Selective heat control. Exclusive "Prestoe-Matic" treadle control. 30-inch open end non-sag roll. Rust-proof, scratch-proof. "Pressure-Matic" Iron, with extra heavy pressure. Tilt-back cabinet to drop-leaf end shelves.

Ask your Frigidaire dealer for detailed information on these and other Frigidaire appliances. Or write Frigidaire Division, General Motors Corporation, Dayton 1, Ohio. Leaside 12, Ontario.

Note: Not all dealers have yet received Frigidaire Automatic Washers, Dryers, Ironers. Demand is heavy, many dealers must be supplied—but distribution is proceeding as rapidly as possible.

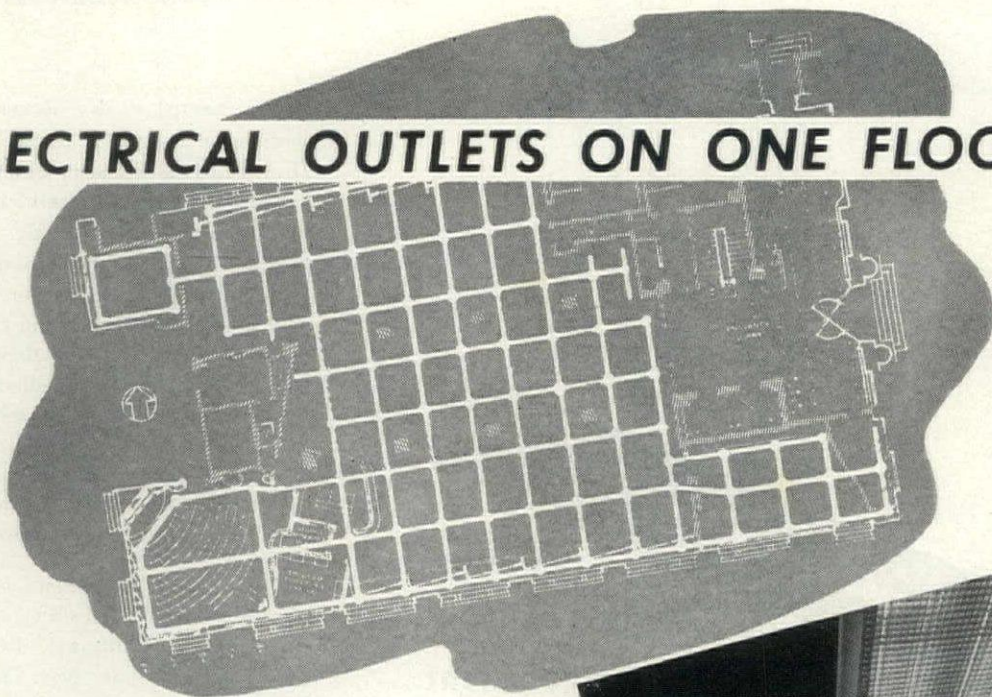
You're twice as sure with two great names



Frigidaire made only by **General Motors**

REFRIGERATORS • ELECTRIC RANGES • WATER HEATERS • HOME FREEZERS • KITCHEN CABINETS
AUTOMATIC HOME LAUNDRY EQUIPMENT • COMMERCIAL REFRIGERATION AND AIR CONDITIONING EQUIPMENT

1950 ELECTRICAL OUTLETS ON ONE FLOOR!



RCA Modern Studios for Sound and Television Equipped with WALKER UNDERFLOOR SYSTEM!

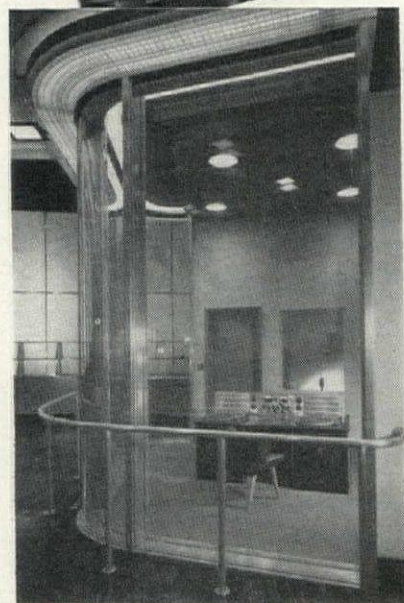
A network of concealed steel ducts provides raceways for all electrical circuits. Outlets for light, power, antennae, and telephone are quickly available from "Locked-In" inserts located on two-foot centers.

Architects will appreciate what this flexibility means in these days of modern functional design.

Investigate the "Preset" idea of Underfloor Distribution and you'll find that it can be used to advantage in any type of office building, school, factory, store or bank.

Write now for our Catalog No. 146 or consult Sweet's Architectural File for details.

WALKER BROTHERS
Conshocken, Pa.



Display Rooms for RCA Victor Division, Radio Corporation of America, Camden, N. J. Carroll, Grisdale and Van Alen, Architects. Consulting Engineer—A. Ernest D'Ambly.

walker
of Conshocken

UNDERFLOOR SYSTEMS

Source: "Leading National Advertisers," June 1947.

House Beautiful leads all magazines

...in building equipment advertising

BETTER YOUR HOME
BETTER YOUR LIVING

The advertisement features a large, stylized house shape filled with architectural floor plan details. A cover of *House Beautiful* magazine is placed on top of the house. The floor plan includes labels such as 'RECESSED LIGHT', 'LAUNDRY TRAY', 'CABINETS ABOVE', 'KITCHEN', 'HEATER RM.', 'WOOD BOX', and 'FLAGSTONE HEARTH'. Dimensions and other technical notes are scattered throughout the plan.

PHOTOGRAPHS, PLANS, REFERENCE BOOKS and DOCUMENTS have been assembled by the War Department Civil Affairs Division to show recent developments in American house construction methods and city planning to architects and builders in Germany. Mr. Frederick Gutheim of New York directed assembly of the material which includes examples of individual home construction, private housing developments, low-rent projects and rural housing with technical cost data on each. More than 20 city planning commissions have contributed to the collections. The section on construction techniques stresses advances made in labor saving devices and prefabrication. Great interest in this exhibition has been expressed by other countries planning to build, and shows have already been scheduled for Finland, India, and the International Architectural Congress in Lima, Peru.

MODERN PHYSICS FOR THE ENGINEER, a group of eight weekly lectures by leading specialists will be given at the University of California, Los Angeles, Calif. Fall term lectures will include: Nov. 17—Theory of Solids; Nov. 22—Nuclear Structure; Dec. 1—High Energy Particle Accelerators; Dec. 8—Physiological Dangers of Radioactive Contamination; and Dec. 15—Atomic Energy in Industry. Speakers will be Alfredo Banos, Jr., David Saxon, Staff Sergeant Warren F. A. Bryan and Leo Ohlinger.

YALE UNIVERSITY ART GALLERY is offering a series of lectures during October and November to promote better coordination among the arts. The architecture, furniture, literature and music of 18th Century France is being discussed to illustrate their close inter-relations. The final lecture on November 13th "Relations between Art and Music" will be given by Emanuel Winternitz.

BUILDING PREVIEWS



THE BURDINE DEPARTMENT STORE at Fort Lauderdale, Fla., illustrates careful planning for a semi-tropical locale. The main facade of granite and terra cotta opens on a central formal garden around which the first floor departments are grouped. Eliminating the basement because of prevailing high water levels, Architects Abbott, Merkt & Co. and Associate E. L. Robertson located necessary air-conditioning equipment on the roof with storage space above the first floor. A marquee above all show windows prevents sun glare while its under-surface of steel plate doubles as a hinged "hurricane" panel to be lowered and bolted to the sidewalk during storm periods. Structurally, the building has not only a steel frame but floors of steel deck. 130,000 sq. ft. of floor space are provided on the three stories of the building now completed; construction of three stories more is planned for the near future. Eleanor LeMaire supervised the interior design.

A HEALTH SUB-STATION, first building in New York City medical expansion program to get under way, will provide facilities for a dental and eye clinic. (Continued on page 12)

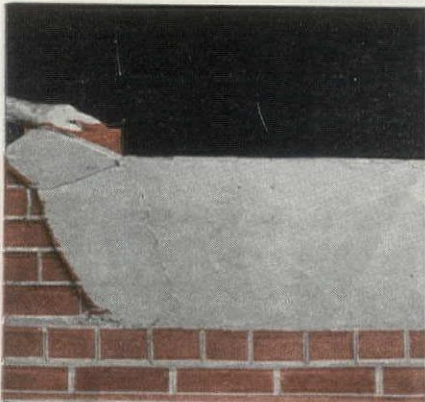
BRIXMENT Encourages BETTER WORKMANSHIP!

Really first-class brickwork calls for parging or tooling the inside surface of the face brick, as a final protection against the possibility of leakage. The photographs below give full details for both procedures.

No. 6 OF A SERIES—

PARGING OR TOOLING THE BACK OF FACE BRICK

PARGING



The face brick should be back-plastered with not less than $\frac{3}{8}$ " of mortar before the back-up units are laid.

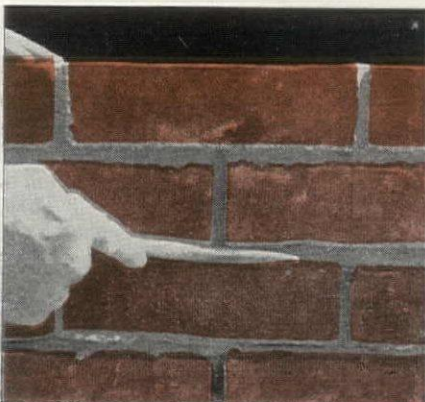


Or if the back-up units are laid first, the front of the back-up units should be plastered in the same way.



Before backplastering, however, all mortar joints should be cut flush. Parging should not be attempted over protruding mortar joints.

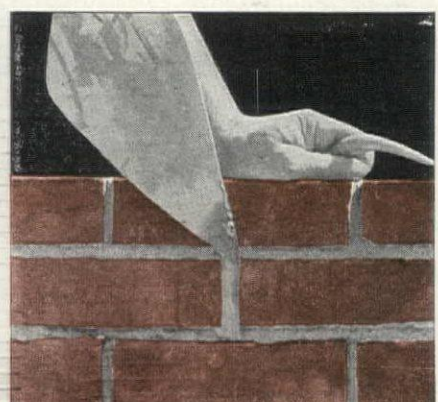
TOOLING



As an alternate for backplastering, the joints on the back of the face brick may be tooled to give a concave finish.



This encourages the bricklayer to fill the head joints, since proper tooling cannot be done if mortar is lacking.



Therefore before the tooling can be completed, it is necessary for the bricklayer to point up the open joints.

Because Brixment is more plastic and works easier, it actively encourages the bricklayer to do *better work*. The brick are bedded more quickly, with full joints, and without excessive tamping. Parging and tooling are done in minimum time, with minimum effort.

In addition to greater plasticity, Brixment also has 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, KENTUCKY



You provide many satisfactions when you specify KOHLER PLUMBING

AN arrangement of Kohler fixtures like the one in the bathroom above has lasting practical advantages that home owners want.

The Cosmopolitan Bench Bath is non-flexing because it is made of enameled cast iron. Cast iron is the time-tested base for the heavy coat of lustrous, pure white Kohler enamel which resists cracking and crazing. The Triton Shower Mixer is efficient and simple to operate. The Gramercy vitreous china lavatory has a roomy shelf. The Wellworth close-coupled closet works smoothly and quietly. All Kohler fixtures are attractive and matched in design, with surfaces that are easy to clean.

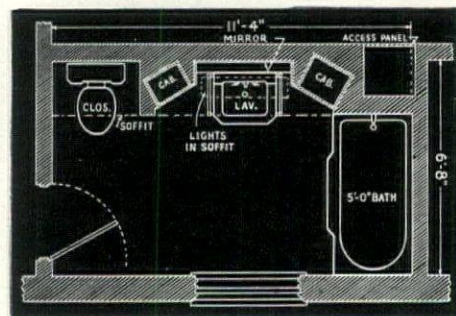
The fittings are of chromium plated brass—durable, and built especially for the fixtures they serve. Your

customers know the name "Kohler" means first quality in every detail.

Shipping crates have been carefully designed for each Kohler fixture, to assure delivery in perfect condition. Kohler products are made in one plant under one supervision. Write for further information.

Kohler Co., Dept. Q, Kohler, Wisconsin. Established 1873.

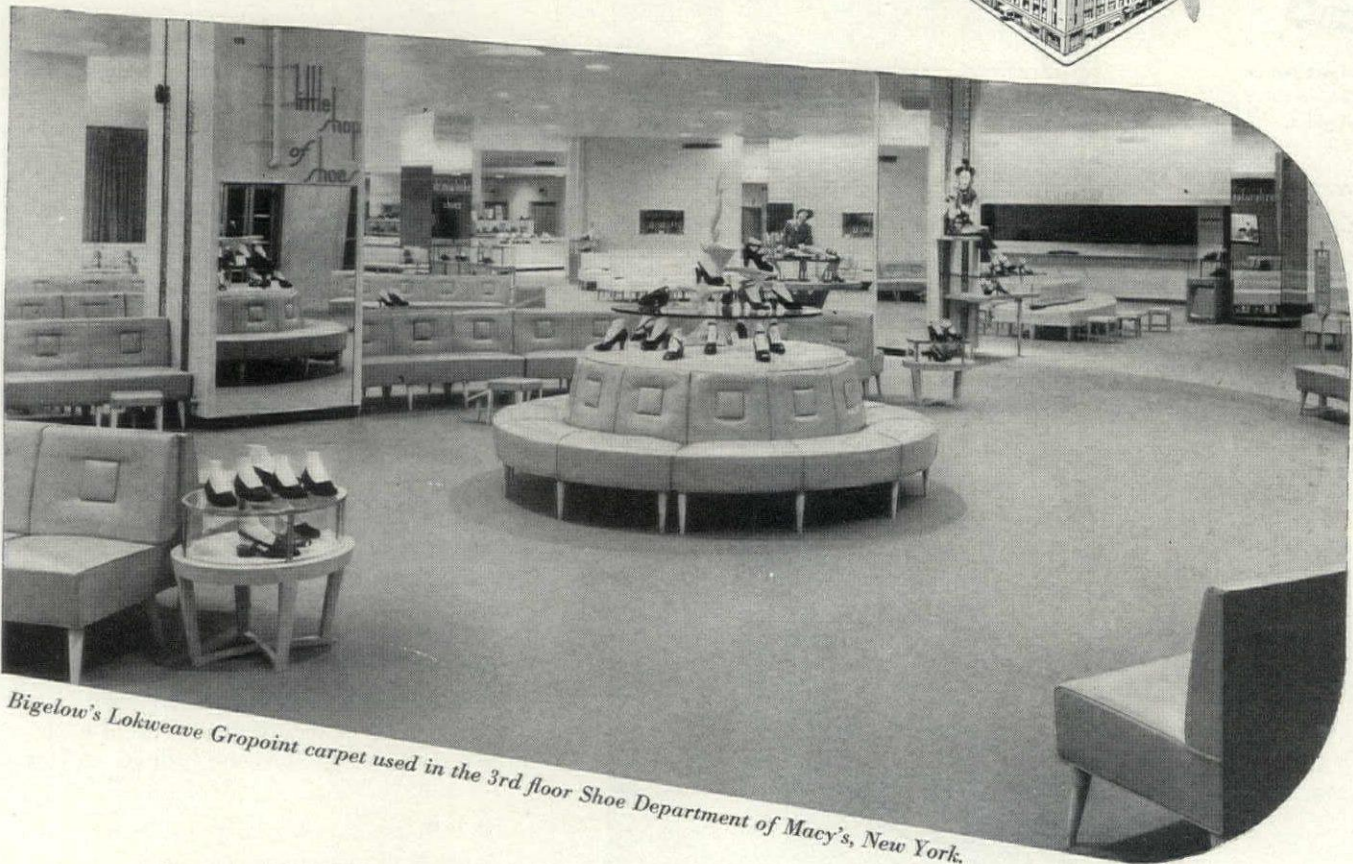
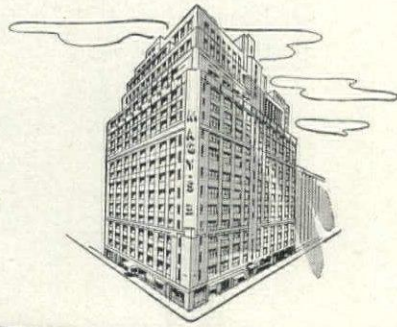
This compact, practical plan, with Kohler fixtures all on one wall, simplifies piping and allows convenient access to fixtures and storage facilities.



KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS

Take a leaf
from Macy's book...



Bigelow's Lokweave Gropoint carpet used in the 3rd floor Shoe Department of Macy's, New York.

...use Bigelow Lokweave Carpet for heavy traffic areas

Here are some of the reasons why Bigelow's amazing Lokweave carpet is ideal for Macy's much-walked-on floors:

Sturdy loop pile Gropoint construction stands up for years under heavy traffic... special close weave resists dirt... tufts are locked in and cannot pull out... installation costs are low—no waste yardage, no binding or stitching... and, best of all, Lokweave

comes with *spare parts*.

Because there are no sewn seams in a Lokweave carpet, worn or damaged areas can easily be replaced with pieces of carpet left over from the original installation. This is an economical carpet—ideal for large floor areas. Don't overlook Lokweave when you buy carpet.

BIGELOW-SANFORD CARPET CO., Inc.

140 MADISON AVENUE, NEW YORK 16, N. Y.

Fine rugs and carpets since 1825



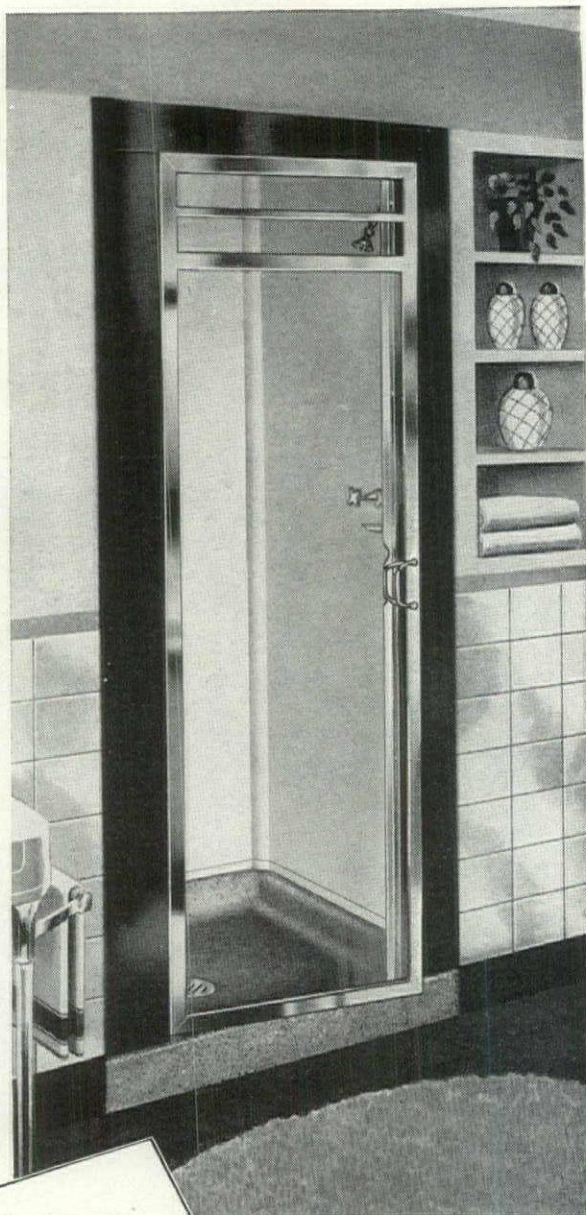


Dolphin Door installed on Fiat Admiral Cabinet faced with structural glass.

Construction Features

STANDARD SIZE
24 x 72 INCHES

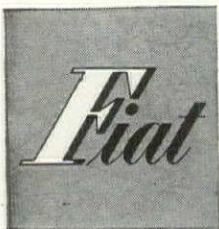
Solid brass one piece frame heavily chromium plated. One piece heavy extruded brass hinge jambs and specially constructed leak-proof continuous brass piano hinge make a smooth working, rigid door. Double friction catch, off-set handles, and water deflector to prevent dripping on floor are features that mark the finest in shower door construction.



Dolphin SHOWER DOOR

Essentially the same high grade shower door as the former Fiat Senior, but redesigned along modern lines with improved construction features. Made of solid brass, heavily chromium plated, the Dolphin represents the best in a shower door; can be furnished on Fiat Shower Cabinets and for built-up showers of tile, marble, or structural glass walls. This Dolphin Door is now in production for prompt delivery.

In Canada—Fiat showers are made in Canada by
The Porcelain and Metal Products, Ltd., Orillia, Ontario.



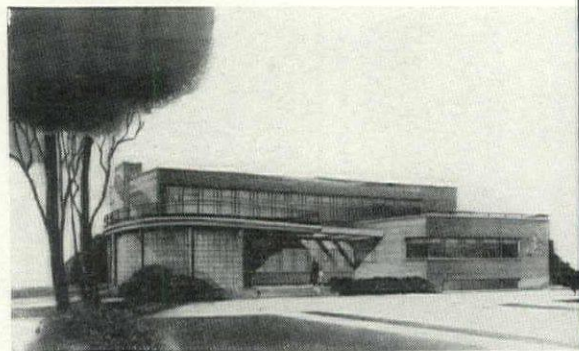
Metal Manufacturing Company

CHICAGO 13, ILL.

LONG ISLAND CITY 1, N. Y.

LOS ANGELES 33, CALIF.

Separate entrances and waiting rooms for adult and patients reduce hazards of contagion. The first floor information and business center, as well as dental office, north lights and children's waiting and play rooms south side. A special feature is provision of a protected area for baby carriages. Adult waiting and exam rooms are on the second floor, as are X-ray, sterilizing,scopy and laboratory areas. Salo and Magoon, New York architects, designed the clinic, sketch below, which is constructed of steel columns with outer walls of brick and cinder block and split tile furring. The windows and architectural parts are based on a 4-foot module.



COMPETITIONS

THE AMERICAN INSTITUTE OF DECORATORS announce second annual competition for designers of home furnishings, fabrics, floor coverings, wall coverings and lighting. Products have been put on the consumer market during current year. Designs selected for citation will be exhibited in New York before touring the country. Further information about rules of the competition, which closes December 15, may be obtained from the Institute at 41 E. 57th St., New York 22, N. Y.

THE BEAUX-ARTS INSTITUTE OF DESIGN, 304 E. 44th St., New York, N. Y. announces continuance of its 1947-8 schedule of problems for architectural students. A number of prizes offered in connection with individual designs and sketches submitted by enrolled students. Inquiries and request for registration may be addressed to the Department of Architecture of the Beaux-Arts Institute.

APPOINTMENTS

DR. JOHN CURTISS has been named chief of the newly established National Applied Mathematics Laboratory at the National Bureau of Standards, Washington 25, D. C.

E. MICHAEL SZAJA has assumed the post of associate professor of architectural engineering at Washington State College, Pullman, Wash.

VIRGINIA POLYTECHNIC INSTITUTE, Blacksburg, Va. announces the appointment of three Associate Professors of Design to its Department of Architecture: Heinrich Waechter, E. H. Wiss and Charles Worley.

JOHN HANS GRAHAM has become a member of Frank & Sons, architects and engineers, Newark, N. J.

HAROLD PAWLAN, architect, is now associated with the firm of Sidney Finck, architect, Chicago 2, Ill.

NEW OFFICES

FRANK MONTANA and SUREN PILAFIAN have consolidated their architectural practices at 112 Madison Ave., Detroit, Mich. (Continued on page 123)

It IS an Amazing New Discovery!

Hot Water "Packaged-in-Glass"

WE'RE TELLING EVERYONE who is planning, building, and buying a new home . . . it means cleaner, purer hot water free of tank rust and corrosion dirt.

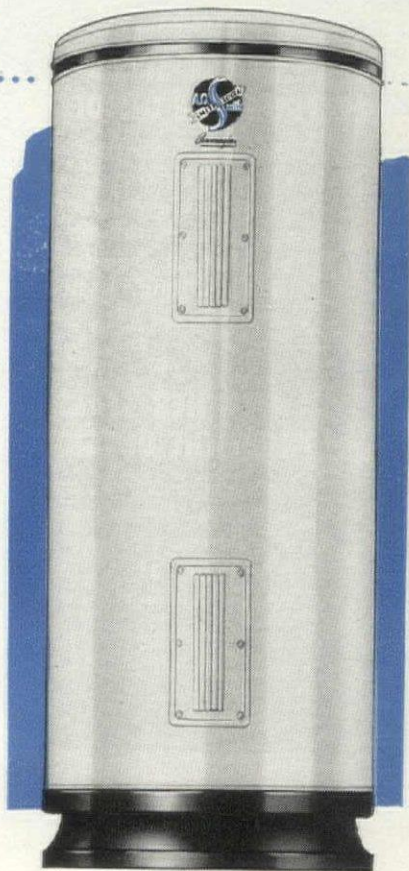


*No Rusting-
No Corroding*

Permaglas

WATER HEATERS

TRADE MARK REG U.S. PAT. OFF.



Gas, LP Gas, and Electric

WHEN YOU SPECIFY clean hot water...by specifying "Permaglas" . . . your clients know you are recommending the water heater for the completely satisfactory house.

They know—because the most sustained national advertising program in water-heater history is repeatedly telling them—in the popular national magazines

that all home-planners read and study.

They know—because leading public utilities, merchant plumbers, and better appliance dealers everywhere are showing them. Permaglas Water Heaters, with the tank of glass-fused-to-steel, CAN NOT rust or corrode under any water condition.

Send the coupon for complete specifications—today!



A. O. Smith Research and Engineering Building, Milwaukee



A. O. SMITH

Corporation

A. O. SMITH CORP.
Dept. AF-1147
Kankakee Works
Kankakee, Illinois

Without obligation, send specifications on the following SMITHway Water Heaters:

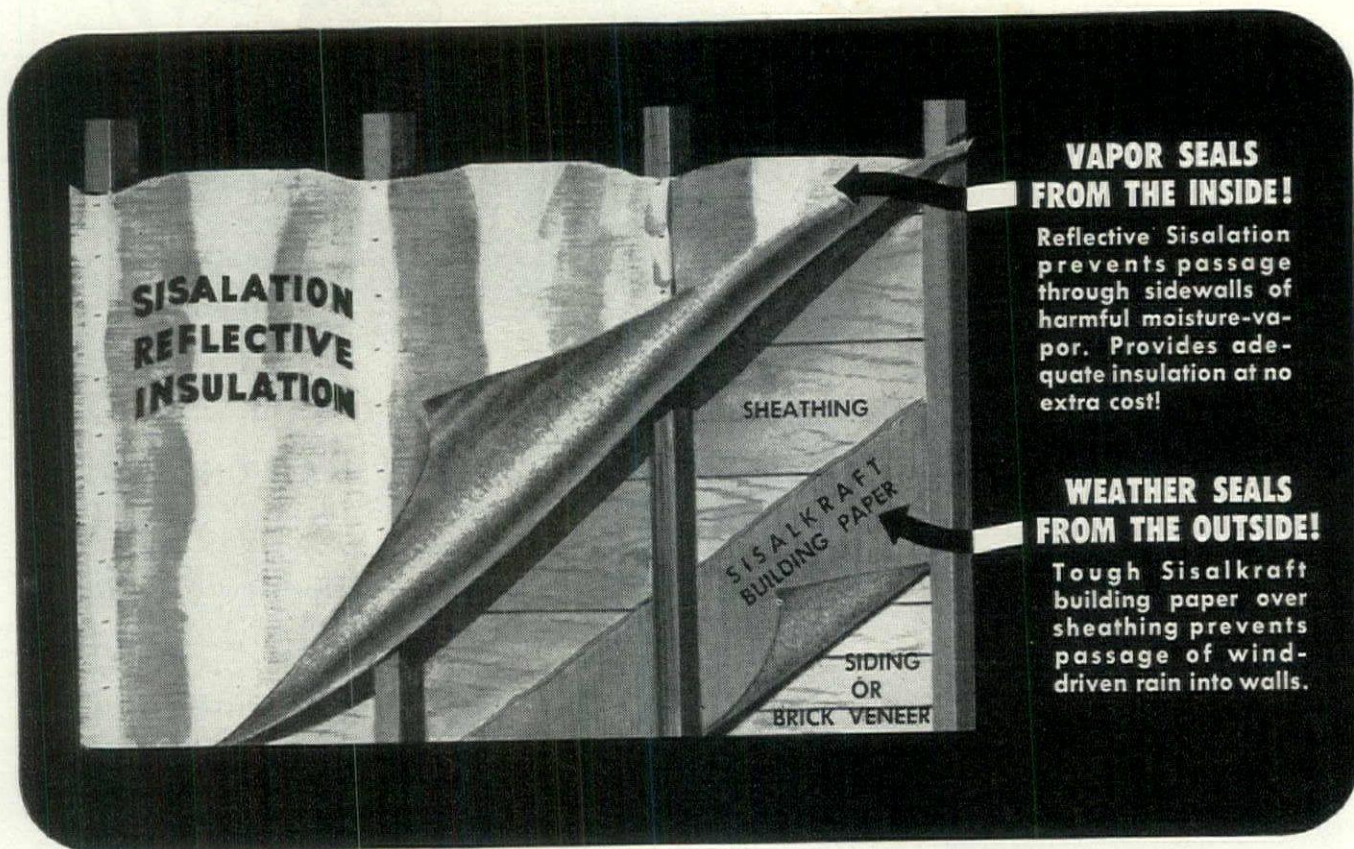
Gas Water Heaters
 Electric Water Heaters Both

Name _____
Firm _____
Street _____
City _____ State _____

New York 17 • Atlanta 3 • Chicago 4 • Houston 2 • Seattle 1 • Los Angeles 14 • International Division: Milwaukee 1 • Licensee in Canada: John Inglis Co., Ltd.

Manufacturers also of quality zinc-lined Duraclad and Milwaukee models

This Improved Construction Assures a Permanent
DRY WALL
 at Minimum Material and Labor Cost!



VAPOR SEALS FROM THE INSIDE!

Reflective Sisalation prevents passage through sidewalls of harmful moisture-vapor. Provides adequate insulation at no extra cost!

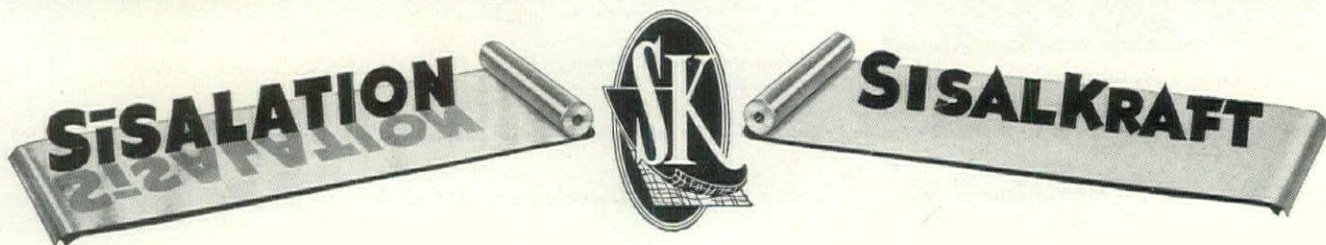
WEATHER SEALS FROM THE OUTSIDE!

Tough Sisalkraft building paper over sheathing prevents passage of wind-driven rain into walls.

See for Yourself: New wall construction, utilizing the prime features of Sisalkraft and Sisalation, now enables you to stop the passage of harmful moisture into walls easily and economically. This simple method provides a permanent DRYWALL in homes PLUS all the advantages of adequate INSULATION at no extra cost!

Write today for further information about these two products.

The SISALKRAFT Co., Dept. AF, 205 W. Wacker Drive, Chicago, Ill.





Here's the "MEADOWLARK" kitchen
 ... another reason why
 "Everybody's pointing to Hotpoint!"

HOTPOINT'S hard-hitting advertising of all-electric kitchens started a snowball that now pays big dividends to builders and architects. Public interest in, and desire for, the "Meadowlark" kitchen is proved by the thousands of inquiries received by the Hotpoint Kitchen Planning Service. This powerful trend for time and labor saving kitchens applies to every income bracket. And Hotpoint has a plan to fit every need, whether in building or remodeling.

Get on the Job NOW

To help you do this, Hotpoint offers the Portfolio of Personalized Kitchen Plans. It's full of helpful suggestions and short cuts for planning and installing America's favorite kitchens. Send for this handy Portfolio today. Satisfied home owners with Hotpoint kitchens will be a decisive factor in adding to your prestige and reputation.

No. 5 in the important "America Picks Its Favorite Kitchen" Series



The Hotpoint Institute
 5651 West Taylor Street, Chicago 44, Illinois
 Without obligation, please send me your Portfolio of Personalized Kitchen Plans. This offer available to architects, builders and contractors only — in the United States, Territories of Hawaii and Alaska.

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 Firm Name _____
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Hotpoint

HOTPOINT INC. A GENERAL ELECTRIC AFFILIATE

ANNOUNCEMENTS



*
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.

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

©TFCRC
 *T. M. REG. APP. FOR

ALFRED SHAW, FAIA, CARL METZ, ASCE and JOHN DOLIO, ASME, announce the formation of a partnership for architecture and engineering with offices at 208 S. LaSalle St. and 80 E. Jackson Blvd., Chicago, Ill.

ELIOT NOYES, industrial designer, will practice at 438 E. 88th St., New York, N. Y., where he and MARCEL BREUER, architect, will cooperate as consultants in each other's fields.

L. A. FERRIS and GRAHAM ERSKINE announce their association in the practice of architecture and engineering at 577 Larue Ave., Reno, Nev.

ROY SCHOENBROD has opened an architectural office at 8 S. Dearborn St., Chicago, Ill.

GEORGE ARMSTRONG & Co., Inc., New York, has extended its service to cover airport planning in both general and specialized aspects. This branch will be under the direction of Walter Prokosch AIA, now a Vice President.

ALBERT LARSON has reopened his office for the general practice of architecture at 704 Graham Ave., Eau Claire, Wisc.

CHANGES OF ADDRESS

CARL BRAUER AIA announces the removal of his office to 120 E. 65th St., New York 21, N. Y.

IGOR POLEVITZKY AIA is now located at 250 NE 18th St., Miami 36, Fla.

FRANCIS HEUSEL and EDWARD FICKETT, architects, have moved to their new office at 5678 Wilshire Blvd., Los Angeles, Calif., while maintaining their office at 730 E. 3rd St., Long Beach.

SANFORD GOIN AIA announces that his new address is 634 E. Church St., Gainesville, Fla.

FRANTZ & ADDKISON, architects, are now in offices at the State and City Office Bldg., Roanoke, Va.

IMPOSSIBLE TO INSTALL INCORRECTLY



Bronze Sweat Fitting

Cast Iron

FOOLPROOF!

(Pat. Applied For)
Master-Dual-Flow
 FOOLPROOF FITTING DESIGNED FOR ONE PIPE FORCED HOT WATER SYSTEMS

AVAILABLE FOR IMMEDIATE DELIVERY, the MASTER-DUAL-FLOW is manufactured in Bronze for Copper tube installations and Cast Iron for iron pipe. Sizes: 1" x 1/2", 1 1/4" x 1/2", 1 1/4" x 3/4".

INQUIRIES AND ORDERS GIVEN PROMPT ATTENTION

THE Mel Products

MANUFACTURERS & DISTRIBUTORS
 FOR THE
 WHOLESALE TRADE

COMPANY

554 CHAPEL STREET • NEW HAVEN, CONN.

YOU'LL BE
RIGHT
 ON
TOP



When you specify Decorative Micarta
FOR TABLES... COUNTERS
... BARS... WALLS

Whenever you want beauty plus convenience and durability, use this modern surfacing material. But be sure to specify Decorative Micarta*. That way you'll get all 10 of these important advantages.

- Won't scratch or mar under ordinary service conditions. Finished surface is hard and durable.
- Strong, dense material. Guaranteed not to warp, chip or crack under ordinary service conditions.
- Genuine wood veneers available. Truwood Micarta combines the beauty of such woods as primavera, mahogany and walnut with all the practical features of Decorative Micarta.
- Quickly and easily cleaned, because of its permanently smooth surface.
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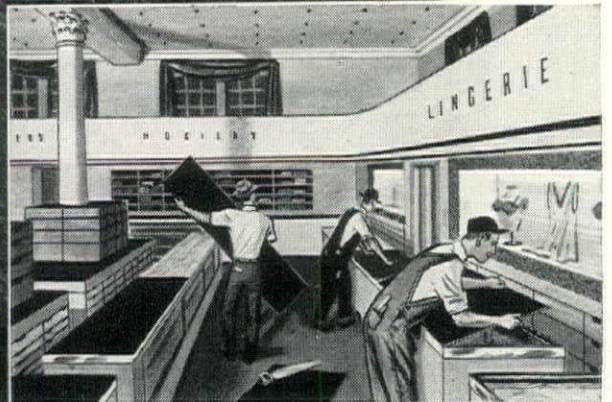
Resists moisture permanently—no tendency to warp

Great structural strength

Takes almost any applied finish

Can be sawed, planed, routed, beveled, laminated

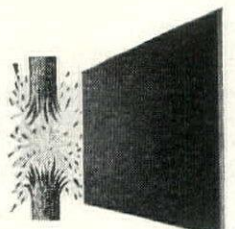
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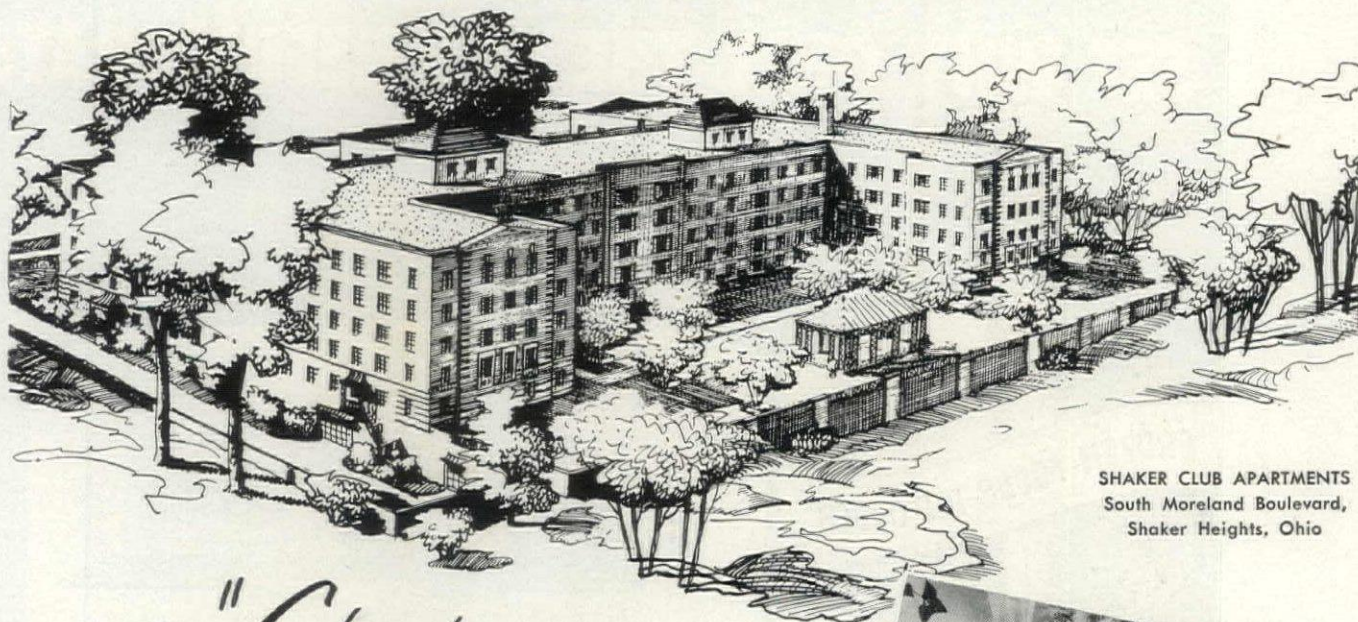
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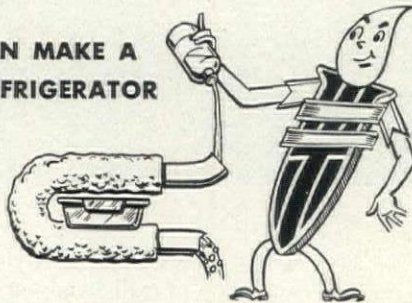
Stays Silent—Lasts Longer



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 the application. Study the following illustrations and you'll see why Gas Refrigeration's method is superior.

YOU CAN MAKE A SIMPLE REFRIGERATOR



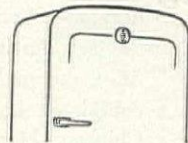
All you would have to do would be to pour continuous streams of ammonia or any other refrigerating liquid and air through a bent metal tube. As the ammonia evaporates on the inside, the outside of the tube cools . . . which causes refrigeration. The evaporated ammonia is then passed off in the form of vapor gas. However, in practical refrigeration, allowing this vapor gas to escape would be wasteful. It must be recovered and used again.

ONLY ONE HAS NO MACHINERY . . . A TINY FLAME DOES THE WORK

HERE'S HOW



All refrigerators but one use machinery or moving parts to change the vapor back to a liquid and circulate it for re-use. Only the Gas Refrigerator makes cold and ice with no motor, no pump, no valves, no piston or compressor.



A tiny gas flame takes the place of machinery in the Gas Refrigerator. Here the vapor is changed back to a liquid by first being passed through water. The water absorbs the ammonia. The mixture is then heated by a tiny gas flame. The ammonia is driven off in the form of vapor. Cooled by passing through pipes, it condenses again into a liquid. *Not a single moving part is needed.*

● **Shown above** are the basic principles on which all refrigerators freeze ice and produce cold. Perhaps you're ready to order refrigerators for new apartments or a housing development . . . or planning to buy replacements for your present apartments. Either way, it is important to know the difference between refrigerators.

As you'll note, there are two types of automatic refrigerators. One uses machinery. The other—a different, sim-

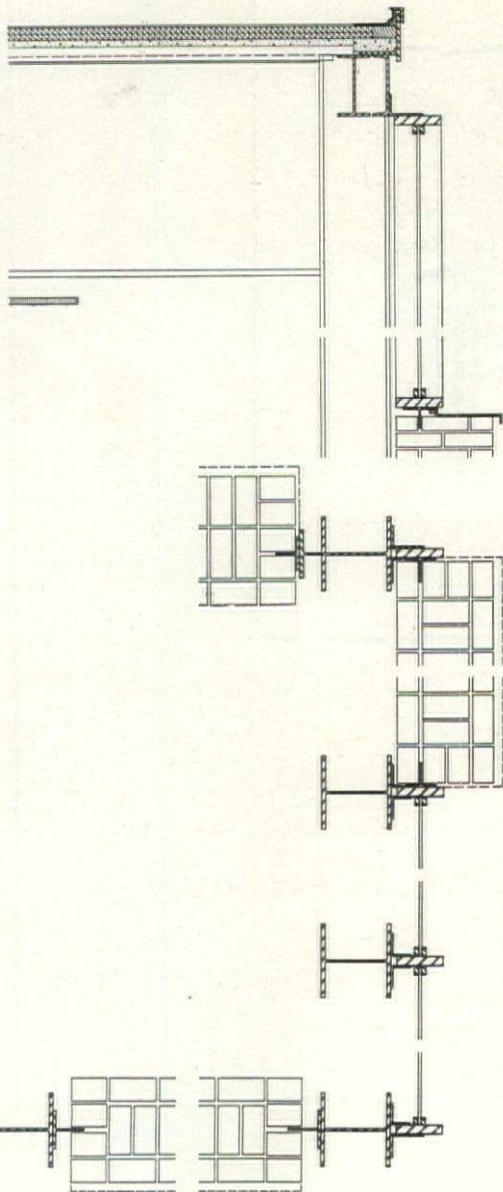
pler refrigerator—operates without moving parts. In their place a tiny gas flame does the work, silently, efficiently. This is the Servel Gas Refrigerator.

Because it freezes with no moving parts, you'll never hear a sound from Servel. No hum of stopping and starting. And it won't lose its efficiency or run up costly repair bills. More than two million families are enjoying this basically different refrigerator right now. Servel, Inc., Evansville 20, Ind.



Tugendhat house, 1930

LUDWIG MIES VAN DER ROHE*



Details: Library and Administration, I.I.T. Chicago, 1944

When the architectural history of the first half of this century is written, two names will stand out as those of the great builders of the Western World: The first, of course, will be that of Frank Lloyd Wright; the second will probably be that of Ludwig Mies van der Rohe.

Wright's position is so clearly assured that there is no need further to discuss it. Even his most relentless critics will acknowledge in his work that passionate, romantic flamboyance that is so characteristic of all that is best in America; the great volume of his work, moreover, with its consistency at least of grandeur, will speak for Wright in years to come.

Mies van der Rohe's work, currently on exhibition at the Museum of Modern Art in New York, has none of these factors to recommend it. Where Wright's work is emotional, the work of Mies appeals to an almost rarified type of intellect, in much the same manner as does a perfectly constructed, brilliantly luminous crystal developed by the soberest of research chemists. (Needless to say, such a crystal, in the end, has its own emotional appeal too.) Where Wright has innumerable houses built and many more designs on paper, Mies has to his credit only a handful of completed buildings: One in Czechoslovakia, a couple in Germany, a few in Chicago. Many of them were destroyed during the recent war, or before it. Where Wright's work is representative of a very definite cultural and historical era—the era, more or less, of Walt Whitman's America—the work of Mies is representative of no country—unless it be the timeless country known only to the minds of men, a country of perfection and infinite precision, of utmost simplicity and insurmountable logic. Yet such a country exists; it was known to the perfectionists of ancient Greece, to Michelangelo, and it is known in some way, to Mies van der Rohe.

Mies was born the son of a master mason. Today, at the age of 61, he is still essentially a master mason. Beginning with the simple dimensions of one brick, fitted to a simple piece of rolled steel, he will develop an entire structure, an entire campus, in much the same manner in which a mathematician will develop a multiplication table: 1 x 2 is his smallest unit, his brick; 100 x 100 is his largest—the complete design, as consequential as the elevations of the Parthenon, and designed with as delicate a hand and with as much sensitivity for detail.

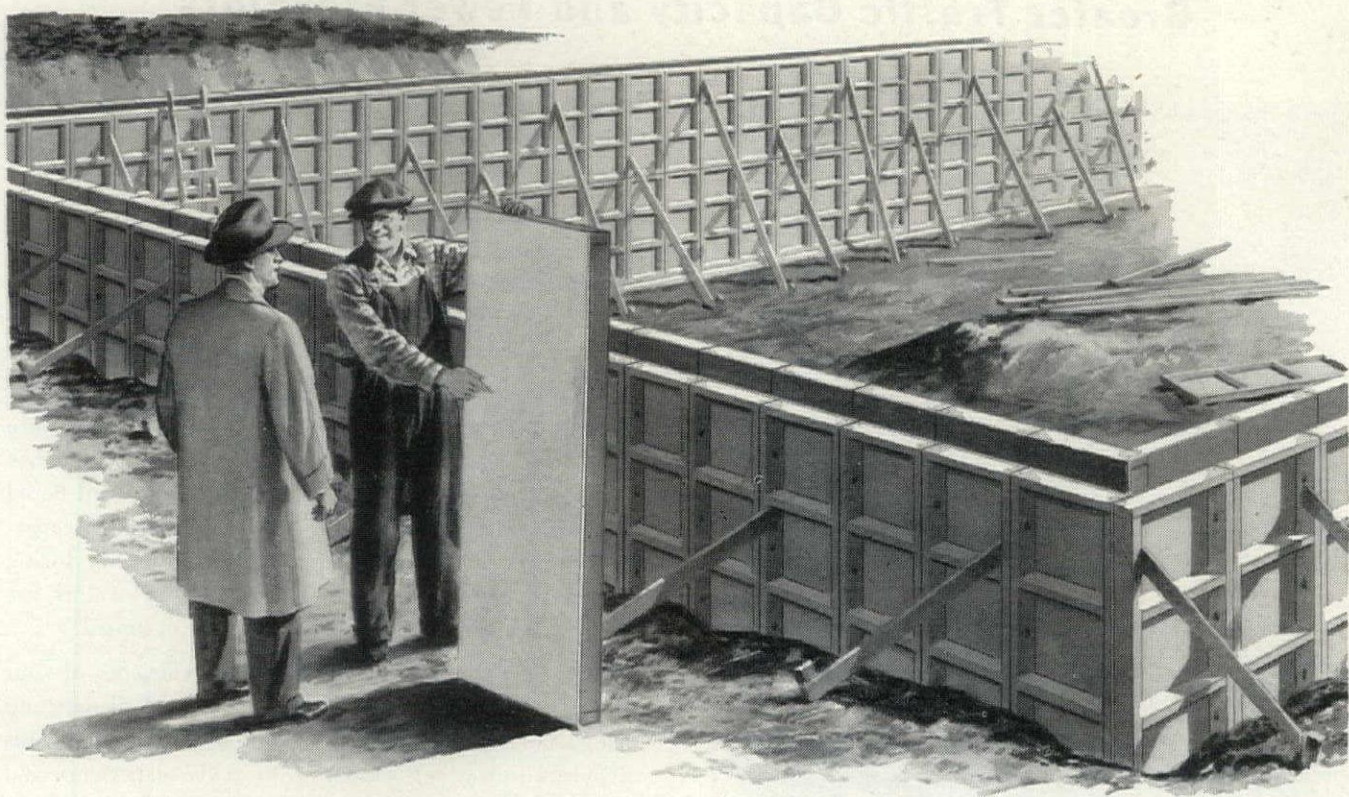
In 1947, with many of the "third generation functionalists" in hot pursuit of the kidney shape, the slanted wall, the fieldstone hearth and the angular roof trellis, his stern adherence to the fundamental maxim of building through the ages—i.e. that

(Continued on page 136)



* MIES VAN DER ROHE, by Philip C. Johnson. Museum of Modern Art, New York City. 207 pp. 7½ x 10 in. Illustrated. Paper \$2.75; Cloth \$7.50.

Plywood fortified with Kimpreg* . . . means smoother, longer- lasting concrete forms



New Plastic-Armored Plywood Cuts Ultimate Form Costs.

KIMPREG* plastic surfacing is fused to exterior grade plywood in manufacture to produce durable KIMPREG + Plywood. When wet, KIMPREG-surfaced plywood is 33 times more abrasion resistant than ordinary plywood...15 to 25 times more water-resistant. Handled with reasonable care, KIMPREG + Plywood concrete forms can be re-used over 100 times. And they're less costly than steel forms.

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Plywood panels protected with KIMPREG strip easier, clean faster, demand little oil and oiling labor. Because they are highly resistant to water, they won't swell . . . require no separation to dry. Light in weight, they're excellent for slab work. Greatly reduce overhead finishing time. Save labor—save money.

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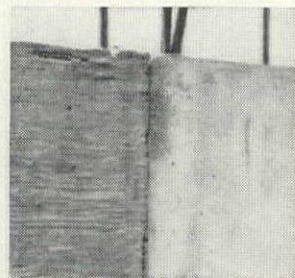
Get Full Information Today.

KIMPREG + Plywood panels are available through local plywood jobbers, and are also sold by plywood manufacturers under the trade names Laminex, Inderon and West-board Industrial Plastic. For further information write to:

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Compare →

A standard plywood form produced the rough-surfaced concrete on the left. Note how smooth the finish on the right looks—the work of a KIMPREG + Plywood form. Both panels have had many re-uses.



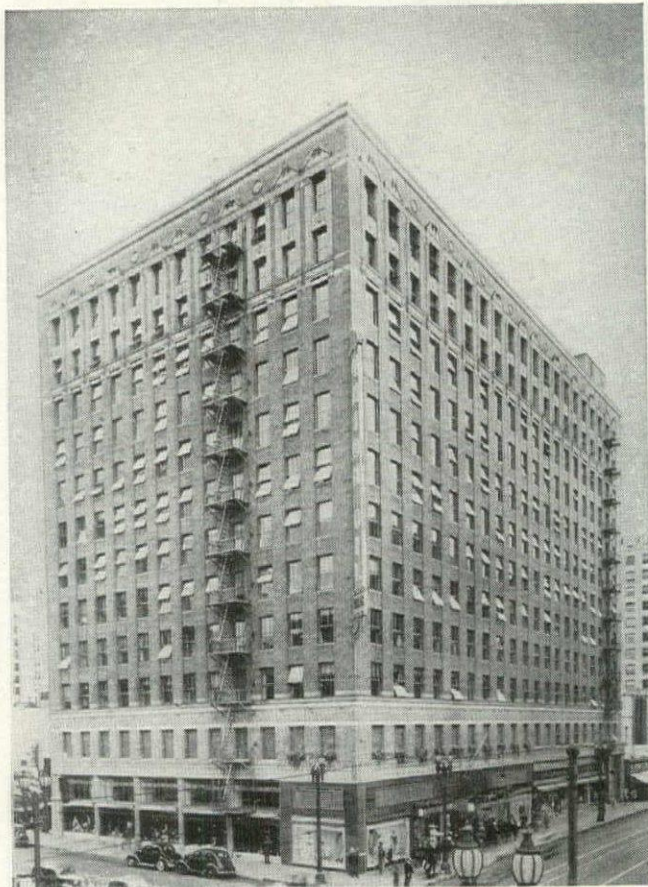
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PLASTIC SURFACING



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LOS ANGELES ELEVATORS GET THEIR PACE LIFTED

**Otis Modernization Results in Faster Service,
Greater Traffic Capacity and Fewer Elevators**



Union Oil Building, Los Angeles, erected in 1923 and originally equipped with six car-switch elevators.

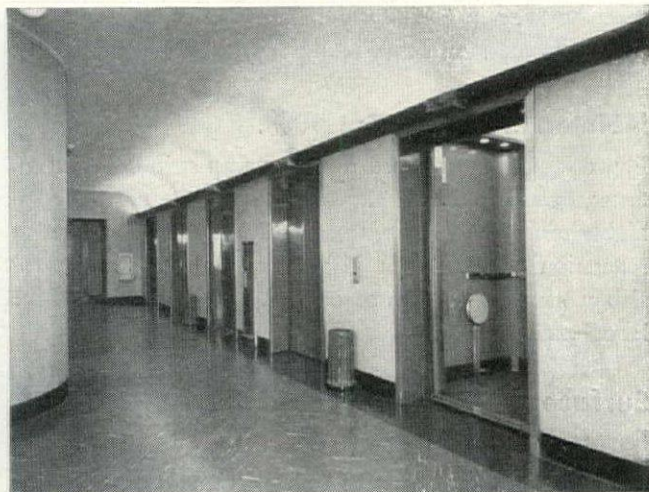
When management of the Union Oil Building realized their elevator service was lagging behind the occupants' needs, they wasted no time in doing something about it.

FROM 6 ELEVATORS TO 5. First step was a careful study by Otis of the building's traffic patterns. Next, Otis engineers recommended that five of the six elevators be modernized and equipped with Otis Signal Control and Otis Automatic Dispatching. The sixth elevator hoistway was put to good use for air conditioning ducts.

TRAFFIC CAPACITY UPPED 30%. Today, five elevators are doing the job of six — and doing it much better. Thanks to scientific scheduling of trips, waiting time at all floors has been greatly reduced, while passenger handling capacity has been increased 30 per cent. What's more, during normal two-way traffic periods, only four elevators are needed, even though the building is fully occupied.

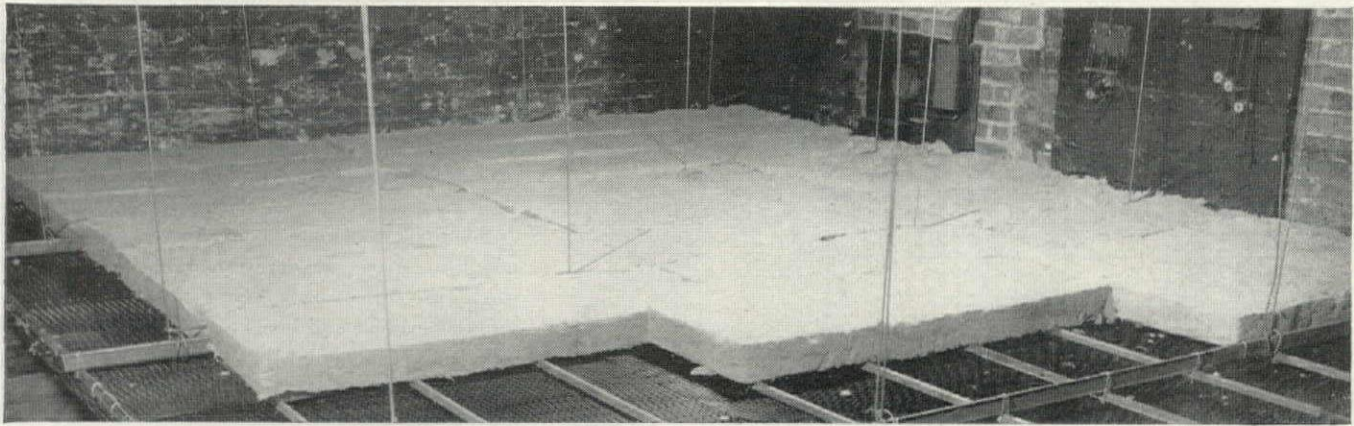
PROFIT BY EXPERIENCE. If the elevator efficiency of your client's building is hampered by inadequate dispatching methods or outdated equipment, why not let a trained Otis modernization expert help you, too? His experience and services are yours at no obligation . . . just call your nearby Otis office.

**OTIS ELEVATOR
COMPANY**



Lobby of the Union Oil Building combines simple dignity with modern utility. Note smart-looking cab interior of modernized elevator. (Right) Elevator entrances at typical office floor.

If you specify Gold Bond Rock Wool Batts...



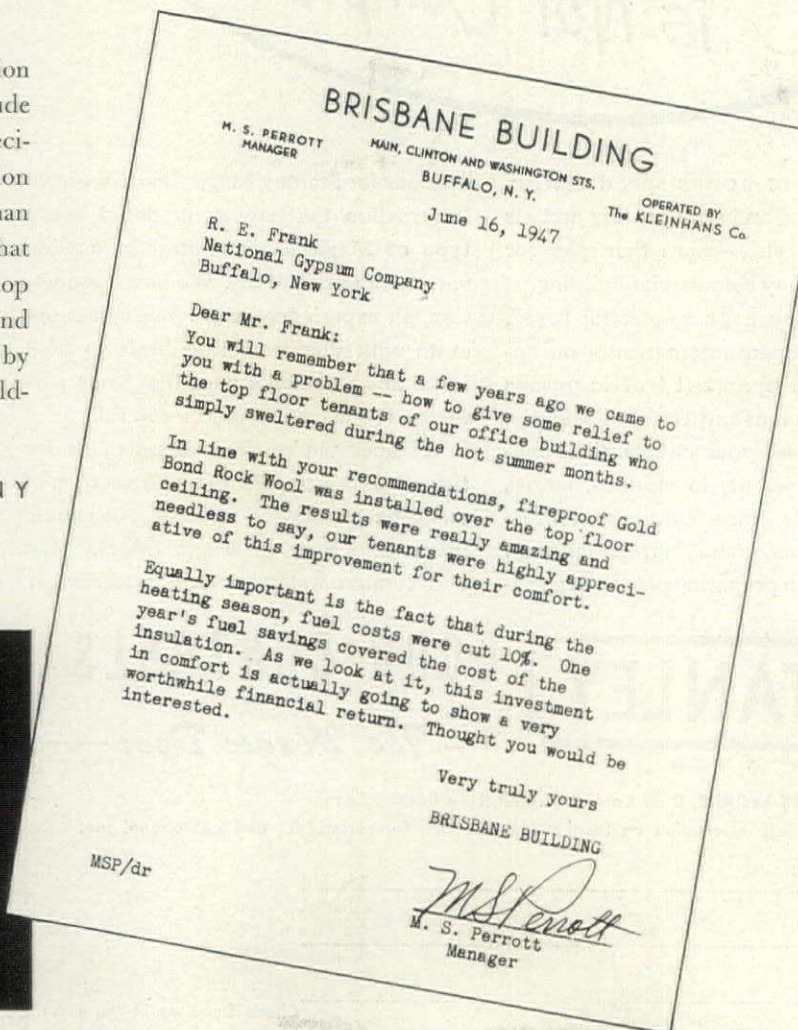
you can look forward to results like this...

NEXT time you plan commercial construction (office buildings, apartments, theatres) include Gold Bond Rock Wool batts in your ceiling specifications. Your client will be assured of insulation that is *permanently* fireproof—at no more cost than for merely “fire-retardant” materials. Insulation that will cut his heating costs in winter, and keep the top floor cool in summer. Insulation that both you and your client can depend on because it’s backed by one of the country’s largest manufacturer’s of building materials. Detailed specifications on request.

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BUFFALO, N. Y.

OPERATED BY
THE KLEINHANS CO.

June 16, 1947

R. E. Frank
National Gypsum Company
Buffalo, New York

Dear Mr. Frank:

You will remember that a few years ago we came to you with a problem -- how to give some relief to the top floor tenants of our office building who simply sweltered during the hot summer months.

In line with your recommendations, fireproof Gold Bond Rock Wool was installed over the top floor ceiling. The results were really amazing and needless to say, our tenants were highly appreciative of this improvement for their comfort.

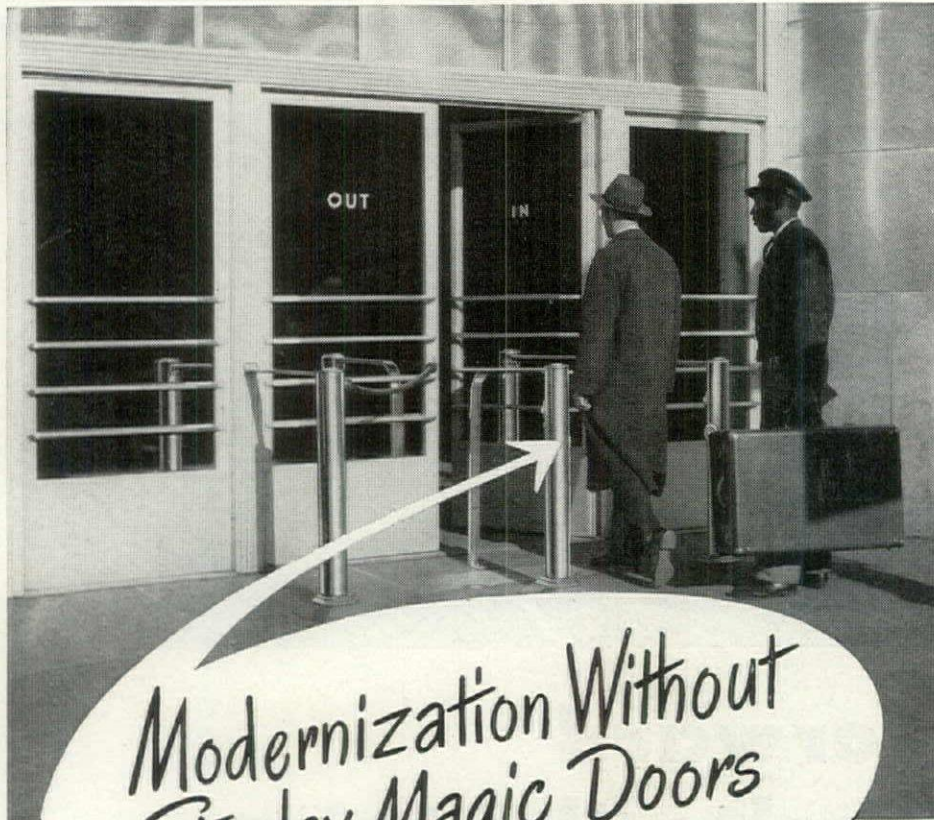
Equally important is the fact that during the heating season, fuel costs were cut 10%. One year's fuel savings covered the cost of the insulation. As we look at it, this investment in comfort is actually going to show a very worthwhile financial return. Thought you would be interested.

Very truly yours

BRISBANE BUILDING

M. S. Perrott
M. S. Perrott
Manager

MSP/dr



Modernization Without Stanley Magic Doors is Not Complete

STANLEY MAGIC DOORS speed traffic, improve service and save heating and air conditioning costs,—more than pay for themselves in any commercial building.

Controlled by a photo-electric "eye", Magic Doors open automatically on approach—stay open till traffic passes through—close promptly and silently. They will please your clients, their tenants and the public, in stations, stores, theaters, hotels, office buildings, and restaurants—in fact, wherever traffic is heavy.

To aid you in preparing plans and speci-

fications for Stanley Magic Doors, we have information that covers in detail every type of Magic Door control in a wide variety of applications. We have, in addition, an experienced staff who will cooperate with you from first draft to final installation to make sure that your particular requirements are met in full.

Whether you're drawing up plans for the modernization, or the construction, of any type commercial building, you should investigate Stanley Magic Doors. Mail this coupon today for full information.

STANLEY DOOR CONTROLS

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The Magic Door

THE STANLEY WORKS, Door Control Division, New Britain, Conn.

Please send full information on Stanley Magic Doors, for commercial and institutional use.

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structure and design are ONE—will, of course, be upon somewhat askance by our "fashion artists." There is something quite terrifying in Mies' work, a clarity and directness of vision that brushes aside everything that is brutally honest, and ends up with a monumental simplicity. The utterly monumental simplicity of a tremendous plank of steel; the equally monumental brilliance of a sheet of glass; the sweeping white plane of a roof suspended half way between heaven and earth. Each of these are works of art in themselves. Each of them is, in fact, a piece of genius, each a Taliesin or a Bear Run, and together they make a complete chronology of Mies' achievement.

This chronology has now been laid out on spacious panels at the Modern Museum. Concurrently with this exhibit Philip Johnson, who, in the words of one of his associates, "probably knows more about Mies than anyone else including, possibly, Mies," has published his book on the architect's work—the sort of book that can only be written through the utmost devotion and insight. Into his pages Mr. Johnson has somehow transplanted that sense of airiness, of lightness, of honesty that is so characteristic of Mies. To complete the excellent illustrations (many of them largely unknown to date), Mr. Johnson has quoted Mies:

"By our practical aims we are bound to the specific structure of our epoch. Our values, on the other hand, are rooted in the spiritual nature of men . . . Education must lead us from chance and arbitrariness to rational clarity and intellectual order . . . Therefore let us guide our students . . . in the healthy world of primitive building methods . . . Where can we find such unity of material, construction and form? (Our italics)"

And today, one might add, where else can one find this more clearly interpreted than in the work of Mies?

There are several lines of criticism of Mies van der Rohe's work, and no review would be complete unless they are mentioned:

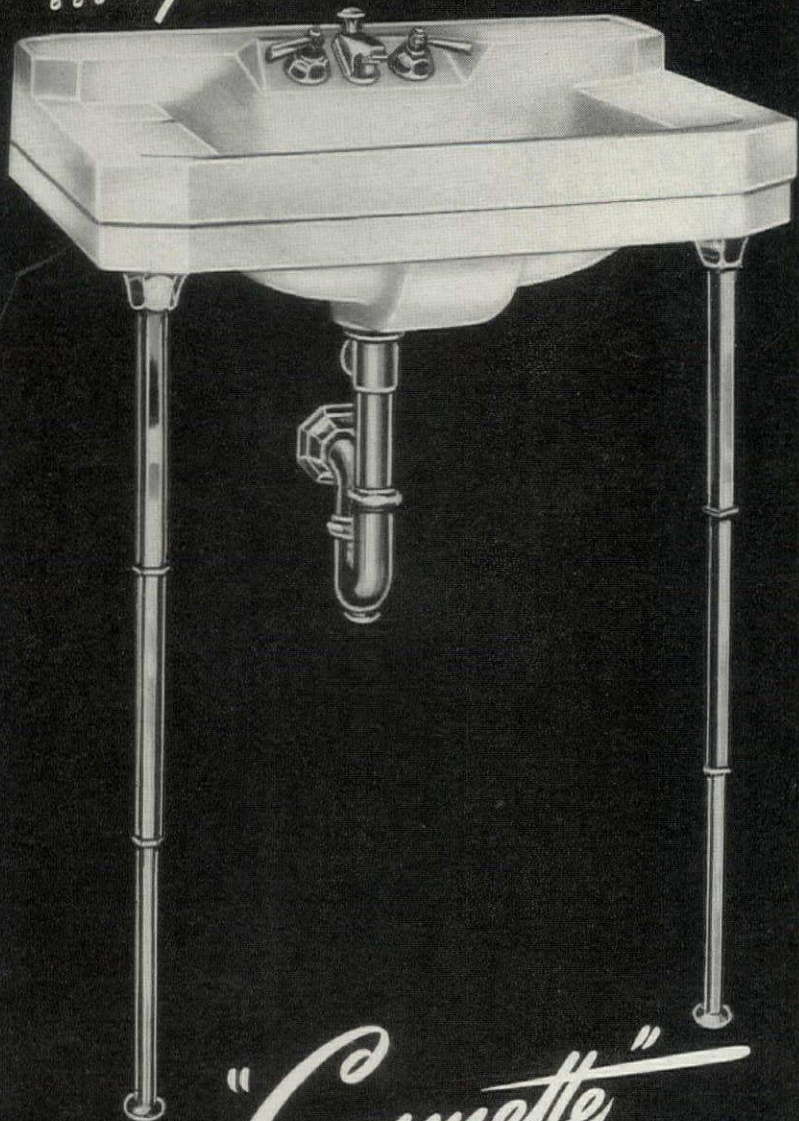
1. *Criticism:* Mies has concentrated on a rather precise design formalism, to the neglect of social and political implications. *Comment:* This is a little like blaming Dr. Bright for having invented only Bright's disease. If Mies should live another 60 years, he may get around to certain ideas in his mind. For the past 60 years he has been rather busy becoming a very hard working, exacting specialist in building. There is a very great need for such specialization; let's not concern ourselves with the issues.

2. *Criticism:* Mies imposes a rigid, abstract living code upon the individual, and disregards the latter's personality (alternative choices: soul, ego, psycho-pathological make-up, etc.). *Comment:* It is a fallacy to assume that designers embellish their houses with fuzzy-wuzzy nooks, free shape, woolly rugs and amorphous plants thereby prove their respect for the individual. Can an individual be freer in a stylized though "new" building, redolent with the latest room symbols, than in a large, unobstructed volume of fresh air and light—i.e. a Mies house?

3. *Criticism:* Mies' ideas of structure, lighting, heating, etc. are oversimplified, and won't stand up when measured by latest technical standards developed in the U. S. *Comment:* This is entirely possible, though it is not certain whether today's complex living requires complex architectural solutions. Perhaps Mies' solutions are oversimplified and are not from the technical specialist's viewpoint; but this may rest as much upon the technical specialist as upon Mies. In any case, when and if the Illinois Tech buildings are investigated by impartial, unemotional lighting and heating experts,

(Continued on page 140)

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... again in Production!*



the "Cosmette"
LAVATORY
PATENTED

- So attractive to the eye as well as the budget, so generous in usable area, so skillfully designed to fit limited bathroom space...this is the *Cosmette!* Produced by Case and distributed nationally—see your Classified Telephone Directory or write W. A. Case & Son Mfg. Co., Buffalo 3, N. Y. Founded 1853.

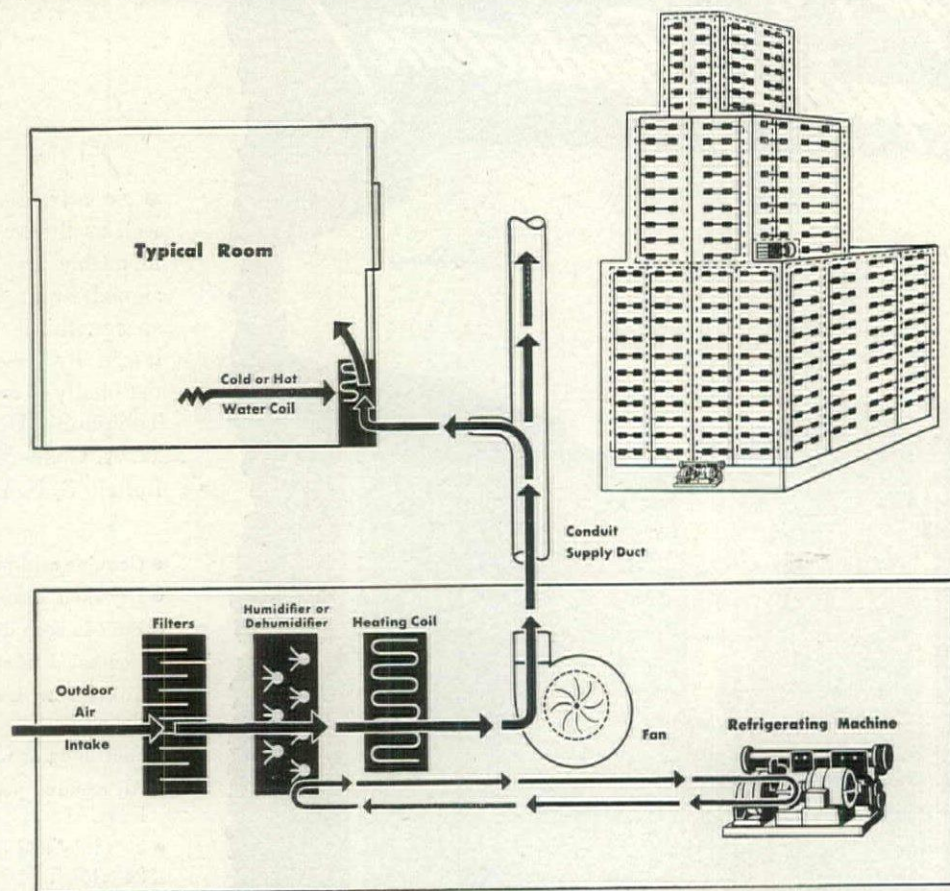
- Genuine acid-proof Vitreous China.
- Dry shelf space for toilet articles.
- Built-in soap dish.
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- Towel bars, if required, free from the wall.
- Wall hung or with legs.
- All exposed parts chromium-plated brass.
- 20" x 13½" and (for production later) 24" x 16½".

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plan a year-round air conditioning system

Today's office building tenants, hotel guests, hospital patients and others want year-round comfort—the kind of air conditioning they enjoy with a Carrier *Weathermaster* System.

The conduit type, as illustrated, is one of two *Weathermaster* Systems that provide comfortable, healthful air conditioning through the year in any multi-room building. In scores of leading office buildings, hotels and apart-

ments here and abroad they supply cool, dehumidified air in summer, and cleaned warm, humidified air in winter.

Unlike conventional types, the Carrier *Weathermaster* Systems permit *individual room control*. Every room can have comfortable indoor weather regardless of exposure, the time of day or season of year. The systems are adaptable to either new or old structures.

The development of dependable, efficient air conditioning takes ceaseless research and years of experience. Carrier engineers work closely with architects and their consulting engineers to bring the greatest efficiency—and lowest operating cost—to the individual installation. Write for the 40-page booklet—"Air Conditioning for Multi-Room Buildings." Carrier Corporation, Syracuse, New York.

Carrier

air conditioning

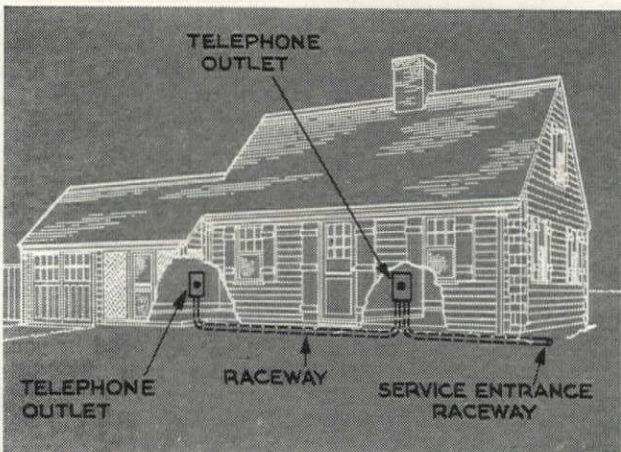
refrigeration

industrial heating



Architect, George R. Paul, Abington, Mass.

EVEN SPACE-SAVER PLANS CALL FOR TELEPHONE RACEWAYS



Little homes can be just as livable as big ones—if the same attention to detail goes into their plans. Among modern conveniences, a raceway for telephone wires gives a lot of value at little extra cost.

A few sections of pipe or electrical tubing, installed by the builder while the house is under construction, carry telephone wires into the house and within interior walls to pre-planned outlets.

In homes with finished basements, a telephone raceway avoids exposed wires in the basement as well as on the main floor. It also assures the convenience of built-in telephone outlets for the owner.

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BELL TELEPHONE SYSTEM



IN-SINK-ERATOR
AUTOMATIC GARBAGE DISPOSER

**ALWAYS
ONE JUMP
AHEAD!**

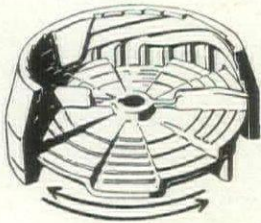
THIS IS IT, DOC!



With

THESE
OUTSTANDING
FEATURES

- REVERSIBLE ACTING ROTOR SHREDDER



- TWO-DIRECTIONAL SHREDDING ELEMENTS
- GLEAMING WHITE FINISH
- STREAMLINED, COMPACT DESIGN

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Specializing Exclusively in the Manufacture of Automatic Garbage Disposers Since 1938

IN-SINK-ERATOR
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FORUM will impartially and unemotionally publish the results.
4. *Criticism:* Mies is little more than any common, everyday American builder. *Comment:* Precisely—a little more. For those who were unable to see the beautiful exhibition of Mies' work at the Museum of Modern Art, Mr. Johnson's book will be a more than adequate substitute. For all those, in any case, who want to be assured that the traditions of great building—the Greek tradition, the Renaissance tradition, and so on—still continue in the Western World, this booklet on Mies van der Rohe will be invaluable.—P.B.

MONA LISA'S MOUSTACHE. By T. H. Robsjohn-Gibbings. Alfred A. Knopf, 501 Madison Ave., New York. 265 pp. III. 8½ x 6. \$3.

To those who read and were entertained by *Goodbye, Mr. Chippendale*, Robsjohn-Gibbings' current book will come as a considerable shock since it is neither light, slick nor caustic—the Mary Petty jacket notwithstanding. Here, we have a new Gibbings, sober and fervent, busily grinding the already keen edge of an all too lethal axe.



The author terms his latest opus, "a dissection of Modern Art" a description which proves somewhat inaccurate since the venom as well as the historical sleuthing is directed at only one faction of this remarkable and controversial esthetic phenomenon.

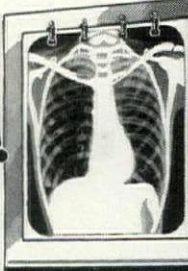
Quite understandably, Gibbings, along with countless fellowmen, has been frustrated and infuriated by the studied double-talk and mystic auras with which certain groups of recent and contemporary artists have chosen to veil themselves and their work. His resentment of the Museum of Modern Art's self-appointed role as seer and impressario in these matters is well known and not without justification. The mystery of the artist-superman which had long been fermenting in Gibbings' mind was forced into print by the everyday remark of an average woman who said of modern Art: "But you mean that I don't *have* to like it?" Storms Gibbings: "It is the modern art authorities who are responsible for the cult of esthetics and 'art appreciation.' To start with the premise that art is sublime and beyond the understanding of the average man, who must therefore be taught to 'appreciate' it, is absolute nonsense. Before the coming of modern art and its spokesmen no one needed a course of 'art appreciation' to understand just what he was looking at. You looked and you

(Continued on page 144)

CONTEMPORARY
LIGHTING

kurt versen
company
ENGLEWOOD, N. J.

Danger!



DO YOU KNOW . . . that there are approximately 250,000 "unknown cases" of tuberculosis?

. . . that TB still kills more Americans between 15 and 44 than any other disease?

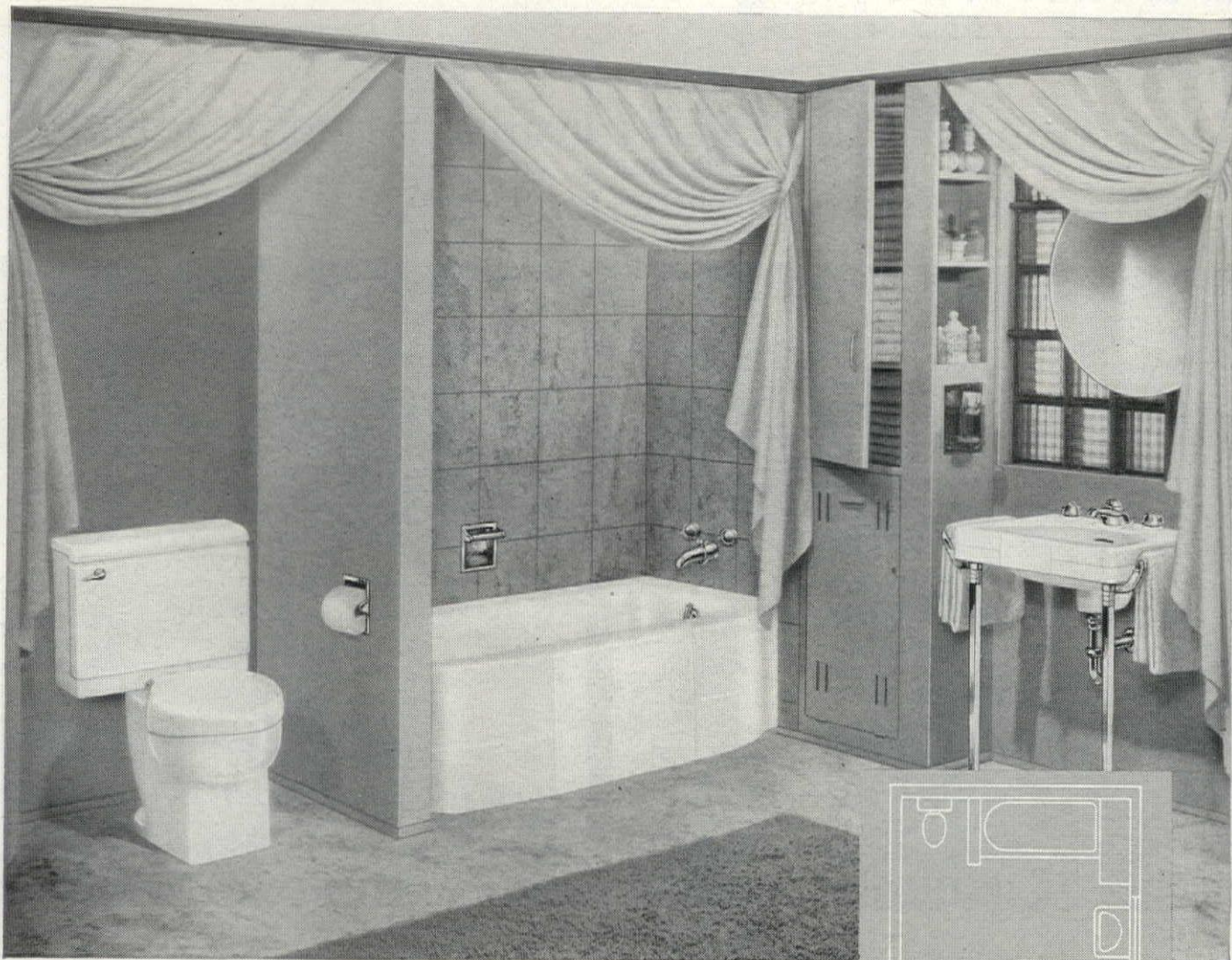
. . . that the surest way to discover TB and check its spread is the chest X-ray?

. . . that your Christmas Seal money buys X-ray units and makes possible mass examination?

PLEASE, send in your contribution today.

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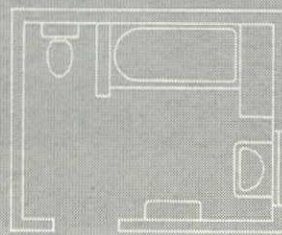
the *Criterion* bathroom

Here is the answer to the home buyer who wants a truly luxurious bathroom... here is Crane's finest.

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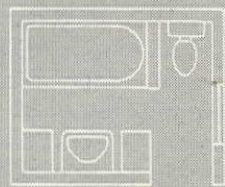
For home heating, your Crane Branch supplies complete systems of all types... for steam, hot water, or air... for coal, coke, oil, or gas. The new Crane line appears in condensed form in the 1947 Sweet's Builders' File. Call your Crane Branch or Wholesaler for further information.



Approx. Size: 9' 10" x 6' 9"

Above is the floor plan of the bathroom shown. Of course, the Crane Criterion Group lends itself to small arrangements, as suggested in the two layouts below.

Approx. Size: 8' 2" x 6' 3"



Approx. Size: 5' 6" x 5' 3"



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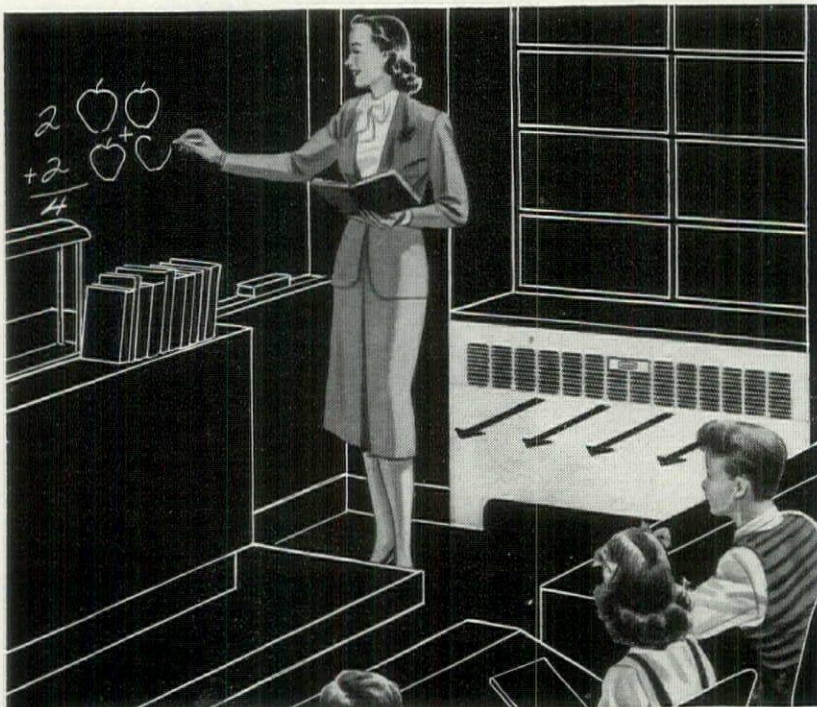
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makes sense to me**



**Convection heat
makes sense to me**



You get both of these great heating principles blended into one with Modine Convector Radiation!



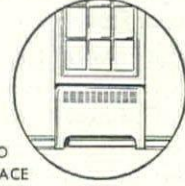
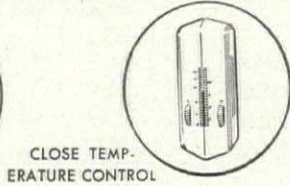
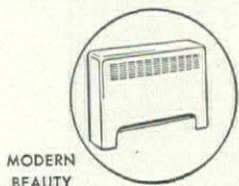
1 YOU GET RADIANT HEATING

See those arrows coming from the Modine Convector Panel below the window? That's *radiant heating* — mild, radiant heat in just enough quantity to offset heat loss from window areas. But that's not all ...

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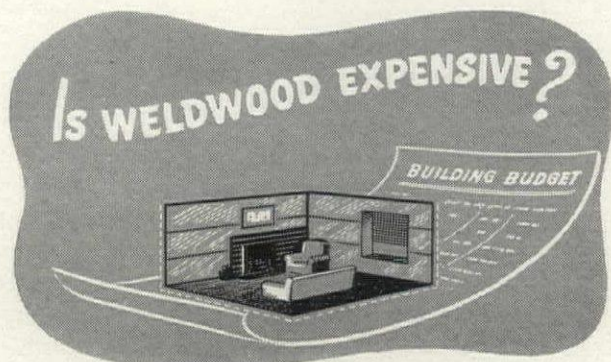


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The Modern "proved by use" heating method

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Fact is, you can do a 12 x 18 room in Birch Weldwood for less than \$300**... materials and installation. Stop and think how little that adds to monthly FHA payments, with a home improvement loan.

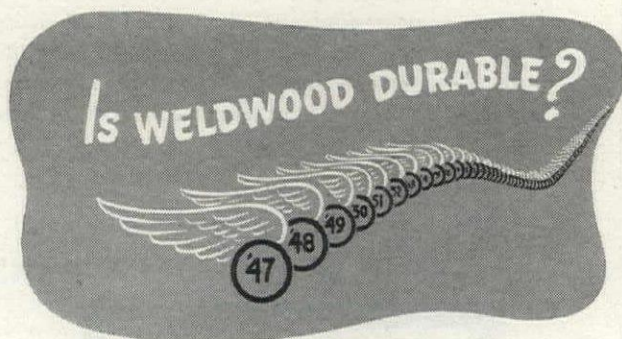
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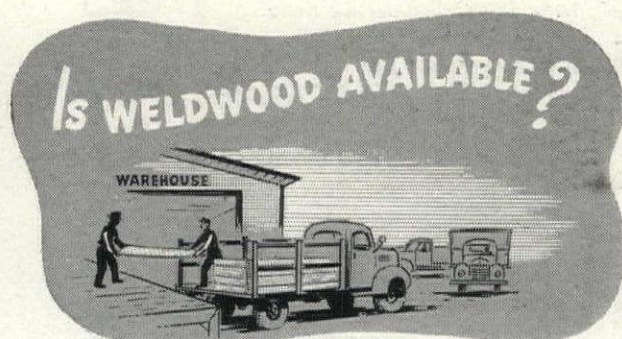


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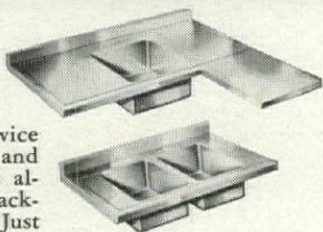


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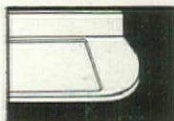
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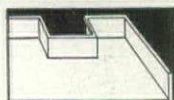


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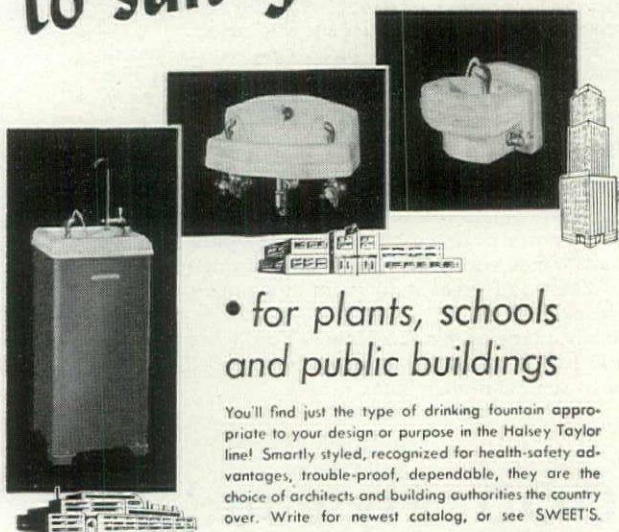
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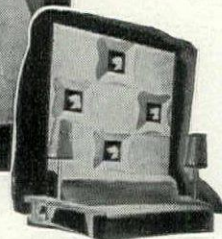
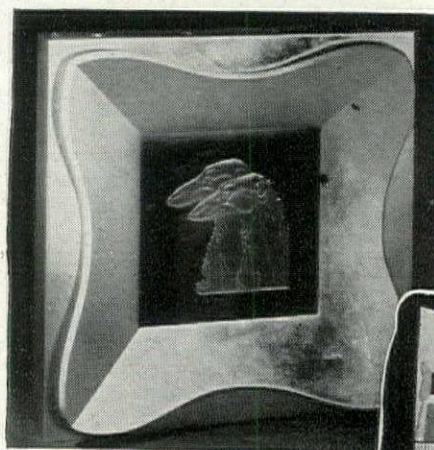
A-4

liked what you saw or you disliked it. But never did you look and then say 'Tell me what I am looking at.' Nor were you in any doubt about what the artist wanted you to feel when you looked at his picture" . . . "it is the German obscurantists who have maneuvered the artist out of his previous role of craftsman into the modern art role of quasi-religious mystic." As might be guessed, after this remark the leaders and exponents of the pre-Raphaelites, expressionists, futurists, cubists, dadaists, purists and surrealists are in turn led to the block and disposed of. Nor is the Bauhaus spared.

Looking back at the advent of the industrial revolution and the coming of age of the bourgeoisie, Gibbings, like many before him, finds the artist rebellious and disgruntled at no longer being an integral member of society. That the artist resorted to the ivory tower and assumed the guise of demi-god is equally well known. Gibbings is less preoccupied with their ultimate cannonization than he is with their means of achieving it. After years of reading and research, Gibbings presents a rather startling theory. He maintains that most modern art is not at all a product of the scientific and mechanical advancement of the times, but, instead, is a revival of the techniques of magic practiced by primitive and medieval leaders to gain and maintain power over their subjects. Astoundingly, he weaves a thread from 1850 to the present day which implies that all the more radical movements of the art world were directly and intentionally patterned after the attention arresting methods of ancient cultures, shared the common element of intentional distortion. Even more sinister is his charge that such practice was not only carried out with full awareness of its ultimate undermining of bourgeois logic and scientific advance but that in more instances than one was

(Continued on page 148)

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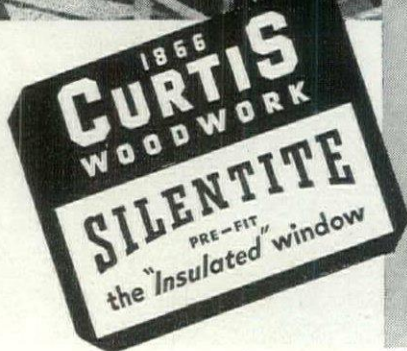
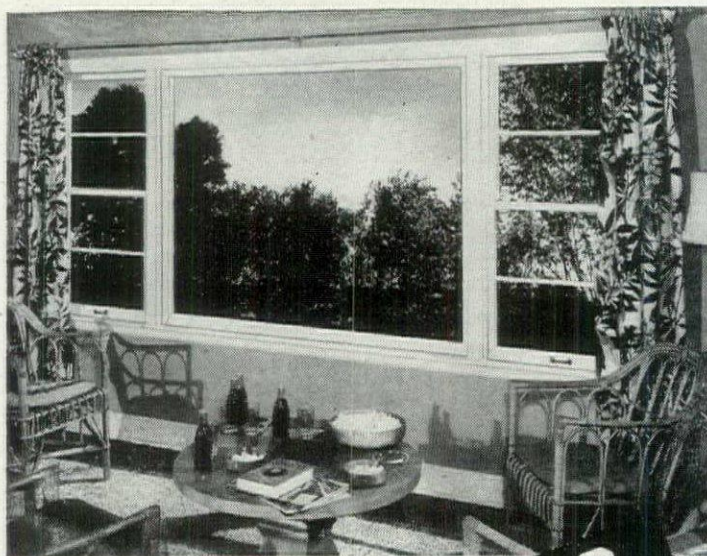
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NO QUESTION OF WEATHER-TIGHTNESS! The new self-fitting Silentite is 20% more weather-tight even than the famous original Silentite—America's first "insulated" window. In the new Silentite, full-length, double-Z type bronze weatherstrips in the jambs press sliding bars against the edges of the sash, providing a tight fit, yet permitting easy movement. In addition, the new Silentite has improved weatherstripping at head sill and meeting rail. Silentite is made of wood, a natural insulating material—toxic and water repellent treated.

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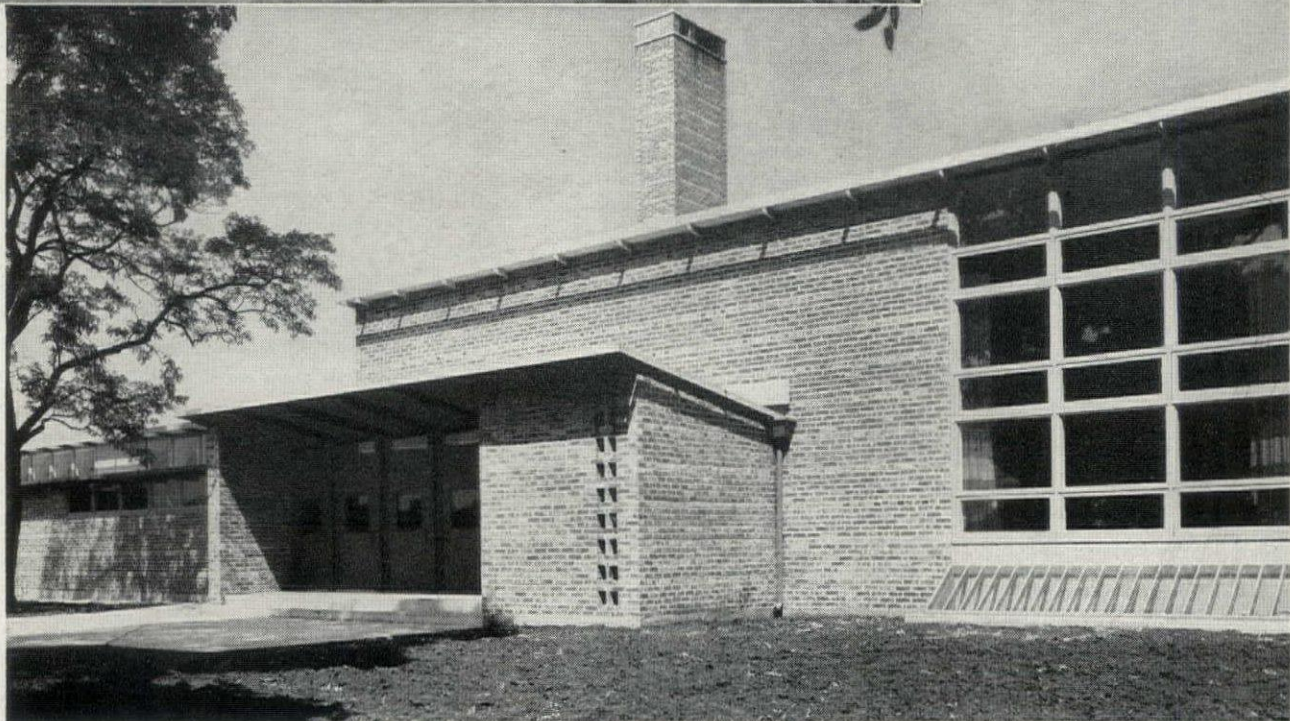
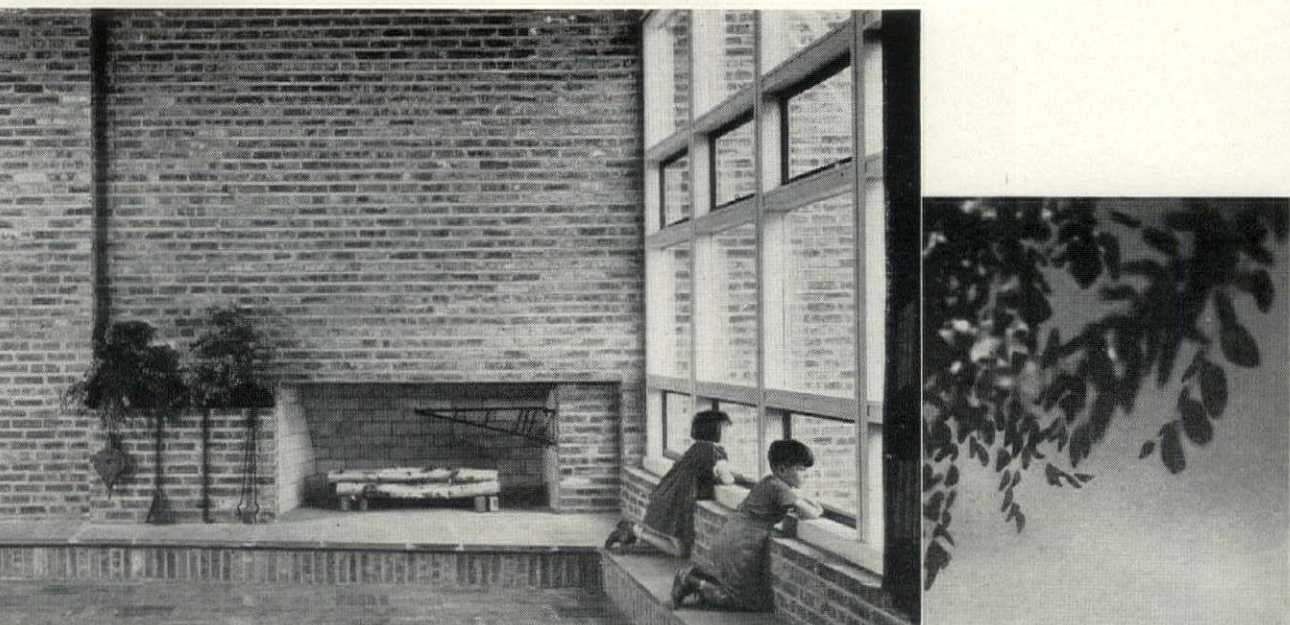
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unusual
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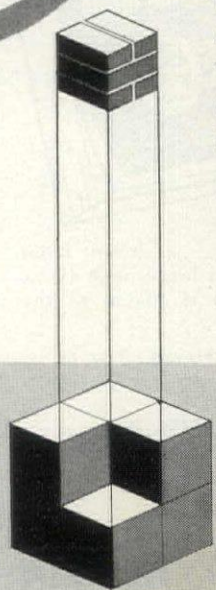
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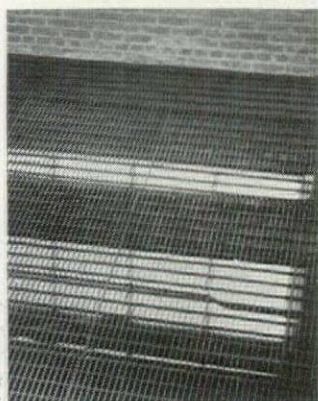
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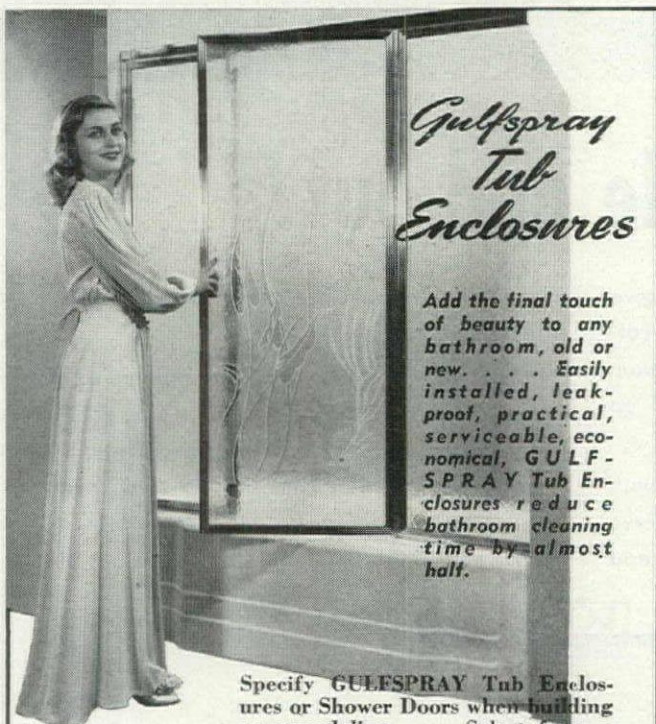


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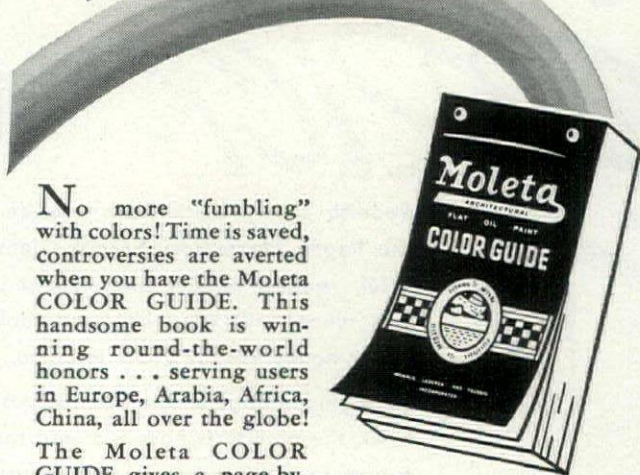


shrewdly geared to the more unpleasant types of government we have recently witnessed. Woven into this unpleasant tapestry are the elements of occultism, spiritualism, theosophy and mysticism starring Madame Blavatsky, culminating in the present day surrealist movement.

Gibbings' argument is, at best, a difficult one to accept. To state baldly that with the exception of the impressionists, the majority of consequential modern artists since the time of the pre-Raphaelites have deliberately attempted to reverse scientific progress and rational thought through a variety of voodooes takes a good deal of explanation and documentation. *Mona Lisa's Moustache* drips with authentic quotations but their fragmentary use leaves the reader with an uncomfortable feeling that he has only heard a tenth of the tale. And this is exactly the case. Mr. Gibbings' claim is, unfortunately, far too presumptive and libelous to be covered in a single short volume of this type intended for wide readership. The layman will be left in as much of a quandary about modern art as he was in the beginning. The initiate will squirm for lack of substantiation. This discomfort is further aggravated by the author's merciless hammering of a single point, page after page, chapter after chapter.

It is undoubtedly true that the prestige of unbiased reporting has suffered in the mind of the average reader. The more partisan the writing, the better. However, the art of convincing still requires considerably broader and more correlated documentation than Gibbings has seen fit to include. Nevertheless, he has an idea, and an intriguing one. *Mona Lisa's Moustache* may be but a fragmentary and biased analysis of the esoteric pervading our so-called "modern art" but if it does no more than to provoke further exposure of this painful mysticism, it will serve an excellent purpose.—M.S.

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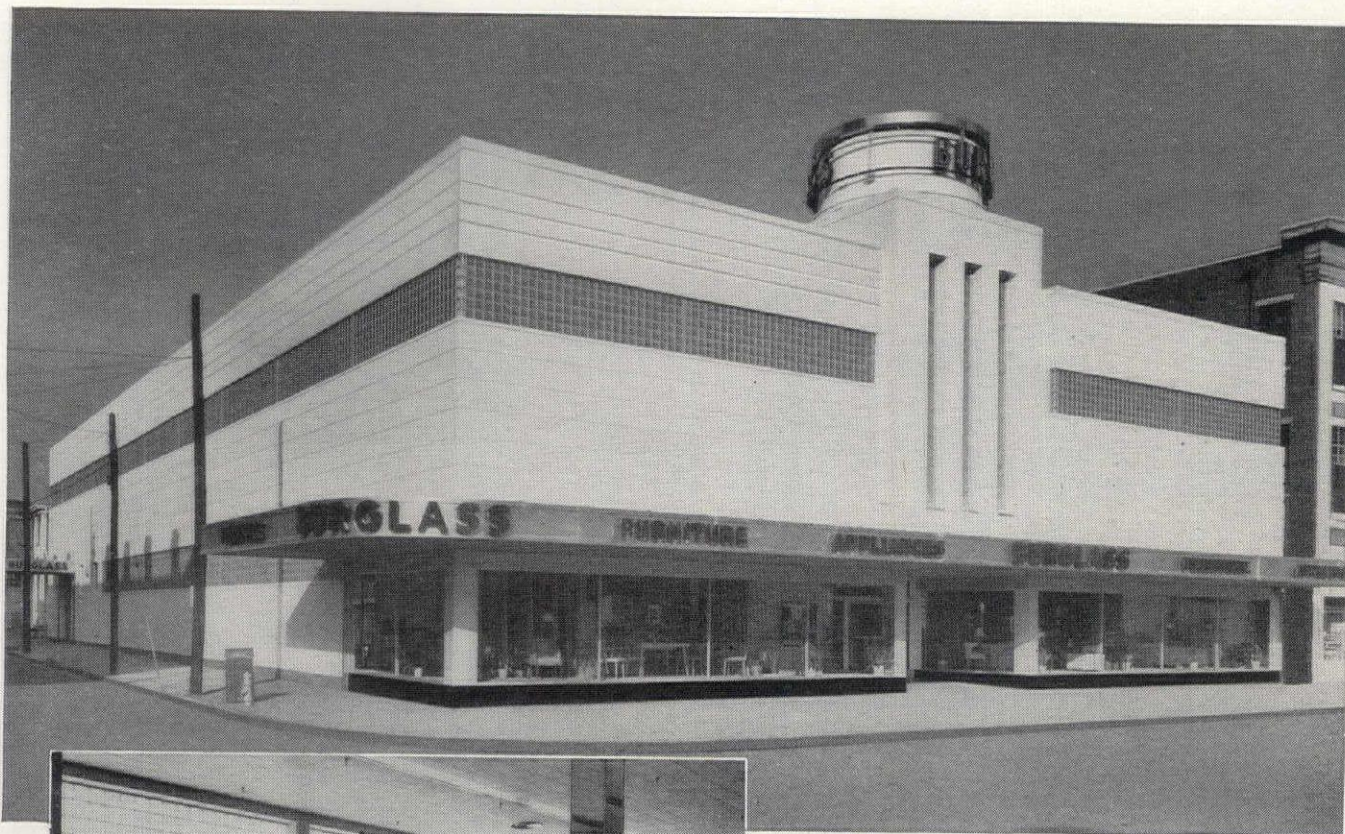
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FLAT OIL PAINT



Burglass Furniture Company's store in New Orleans uses Insulux Glass Block panels to help block out dirt. Architect: Rathbone de Buys, New Orleans, La.

←
Second floor of Burglass Furniture store uses Insulux to flood interior display area with daylight. The No. 351 Insulux pattern used was designed specially to direct light upwards to the ceiling. From there it is re-directed deeper into the room, thus giving better light with fewer shadows. Contractors: Perilliat-Rickey Construction Co., New Orleans, La.

Something new in lighting . . . for old New Orleans

Brand-spanking new! It's the Burglass Furniture Company's modern, cheerful store . . . new from top to bottom! Daylighted by Insulux Glass Block, of course.

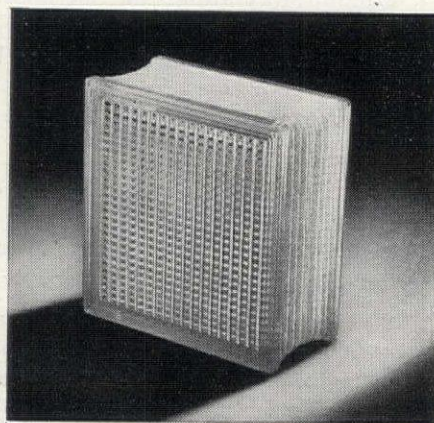
Continuous panels of light-transmitting Insulux on both floors add a note of gracefulness and style to the functionally designed building. They increase customer appeal, improve displays and lower the cost of maintenance.

In keeping with modern design trends, Insulux allows complete flexibility and originality in architectural planning and execution. It's ideal for adding light to dark corners, diffus-

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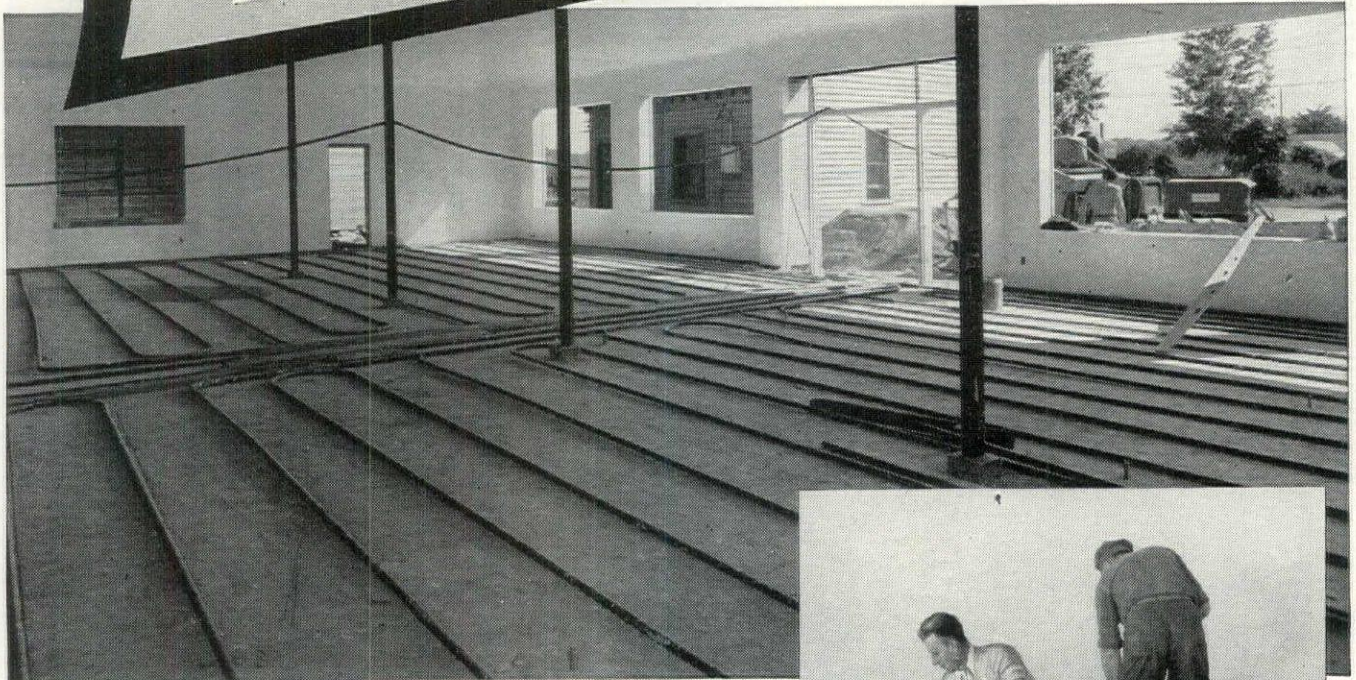
For complete technical data, specifications and installation details, see the "Glass" section of Sweet's Architectural Catalog, or write Dept. D-23, Owens-Illinois Glass Company, Insulux Products Division, Toledo 1, Ohio.



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GLASS BLOCK

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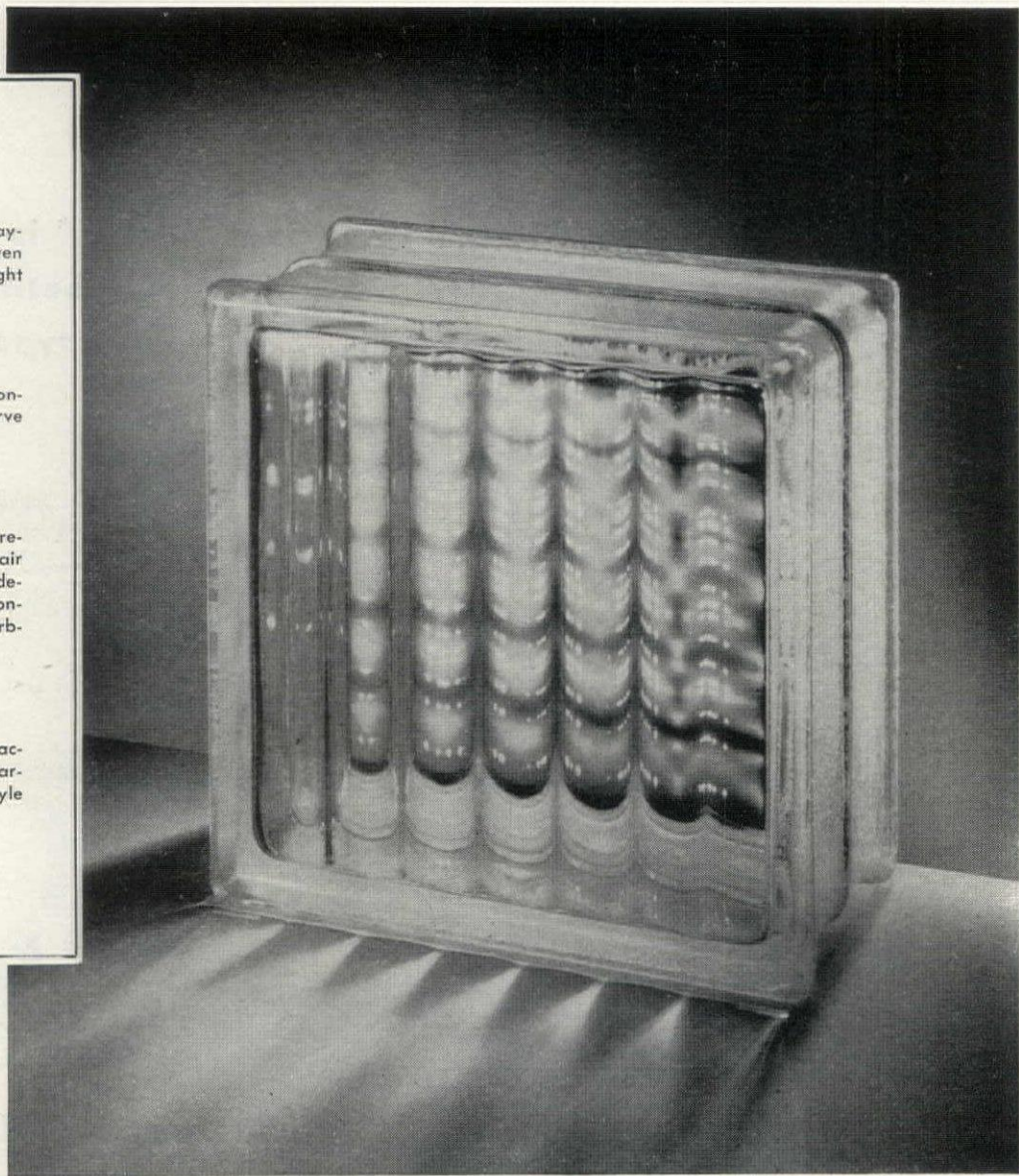
although translucent, are non-transparent and thus preserve privacy.

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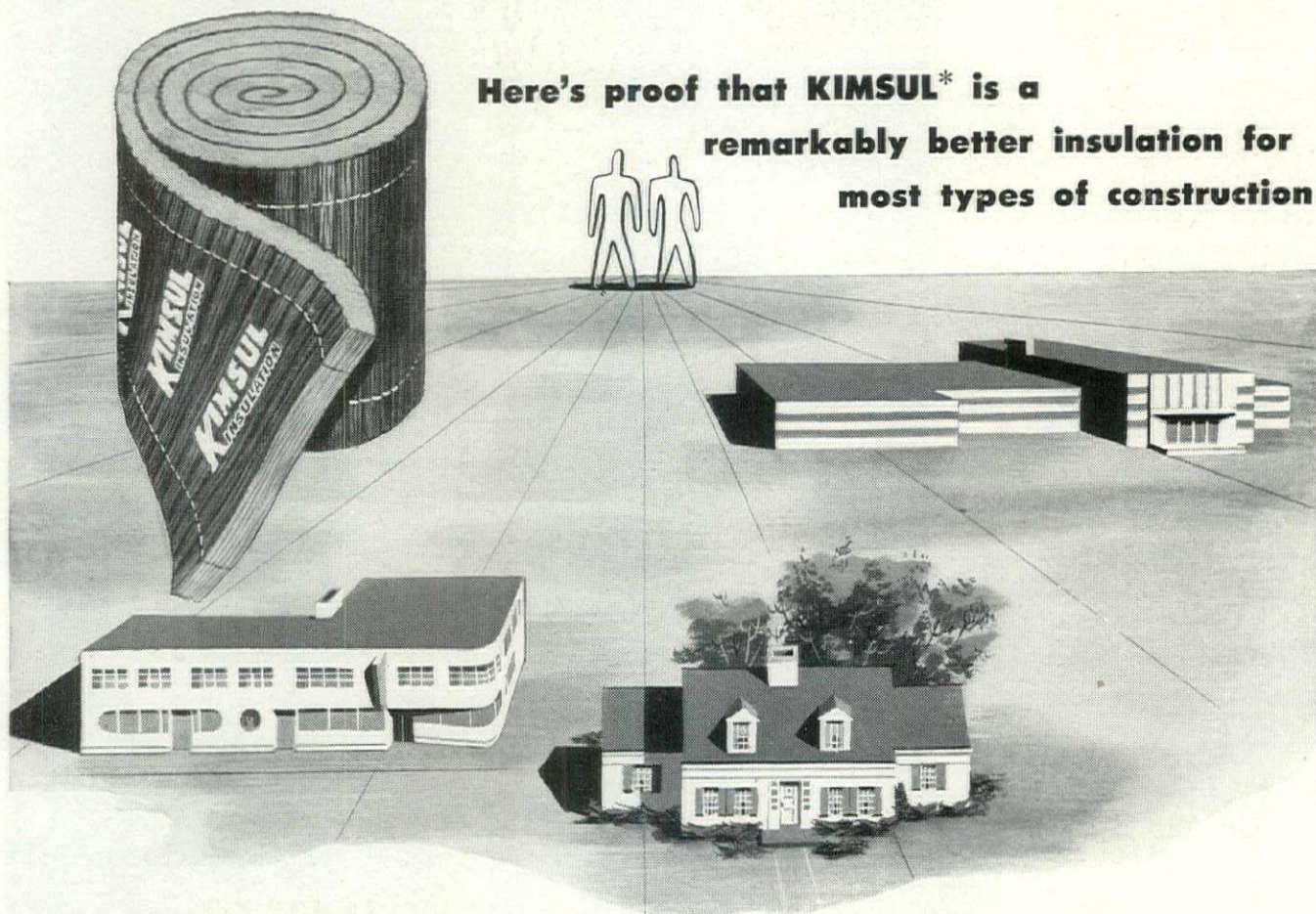
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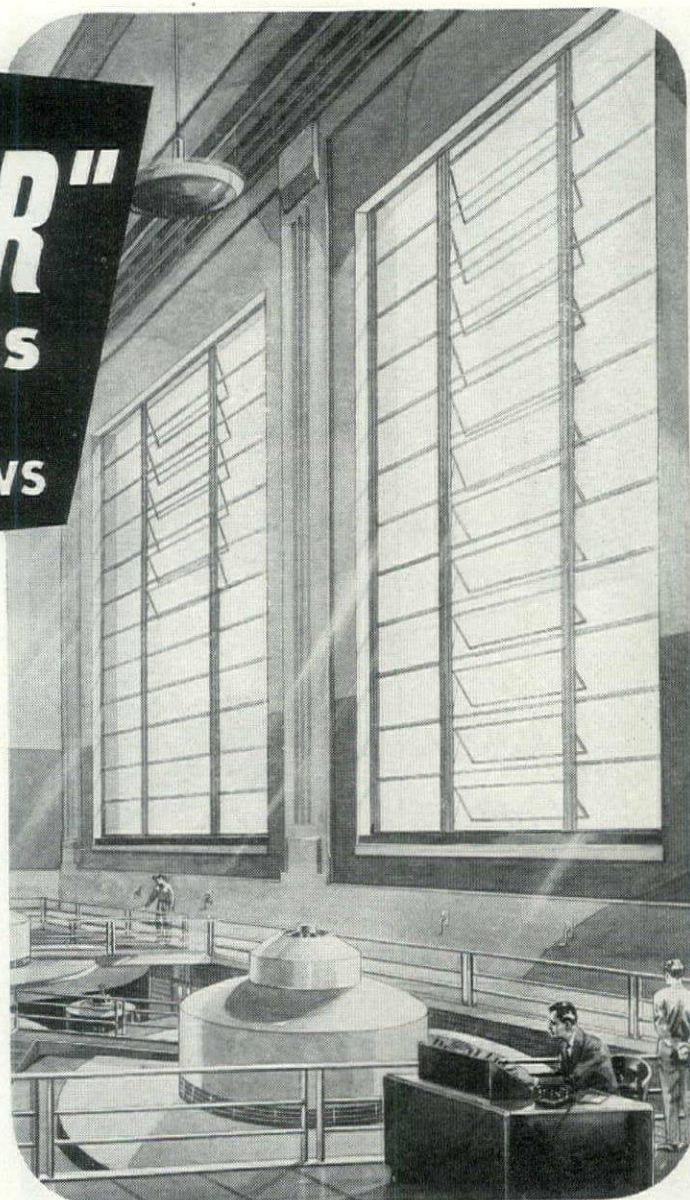
PORTLAND CEMENT ASSOCIATION

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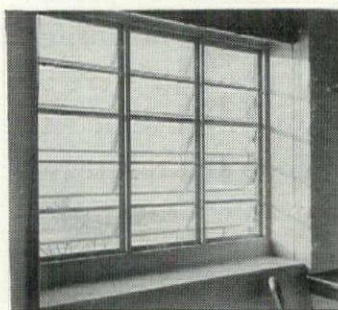
A national organization to improve and extend the uses of portland cement and concrete . . . through scientific research and engineering field work.

MORE
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FOR POWER HOUSES
WITH TRUSCON
DONOVAN STEEL WINDOWS

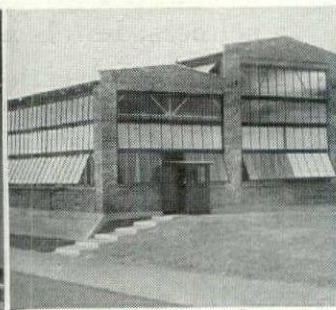
● Applications of mechanically controlled Donovan Windows for power house installations are steadily increasing. The manifest advantages of this exclusive Truscon product are becoming more generally appreciated by architects and engineers seeking a practical solution of the problem of adequate ventilation control for large window openings. With the entire operating mechanism integrally built into the unit, but completely concealed, the unsightly appearance of exposed shafting, gears and ventilator arms is avoided. No expensive field labor is required to install and adjust the operating mechanism. It is only by the use of the largest and heaviest steel window sections rolled for window manufacture, and available exclusively to Truscon, that single window units up to 18'-0" in height and 16'-0" in width may be completed in our shop and shipped as an integral unit ready for installation and use. Write for catalog describing Truscon Donovan Steel Windows.



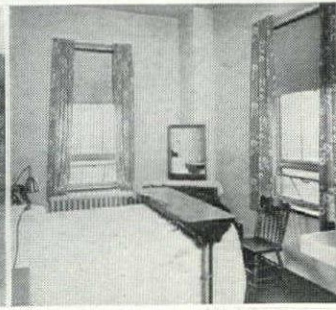
Truscon manufactures the most complete line of Steel Windows and collateral material obtainable from any one source. The illustrations indicate a few types.



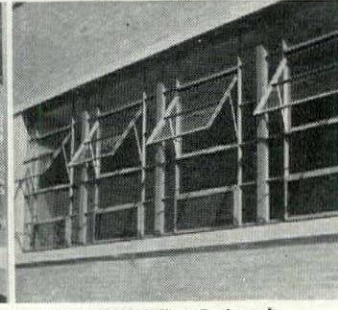
Maxim-Air Louver
Type Windows



Top Hung Continuous Windows
and Mechanical Operators



Double-Hung Windows
Medium and Heavy Types



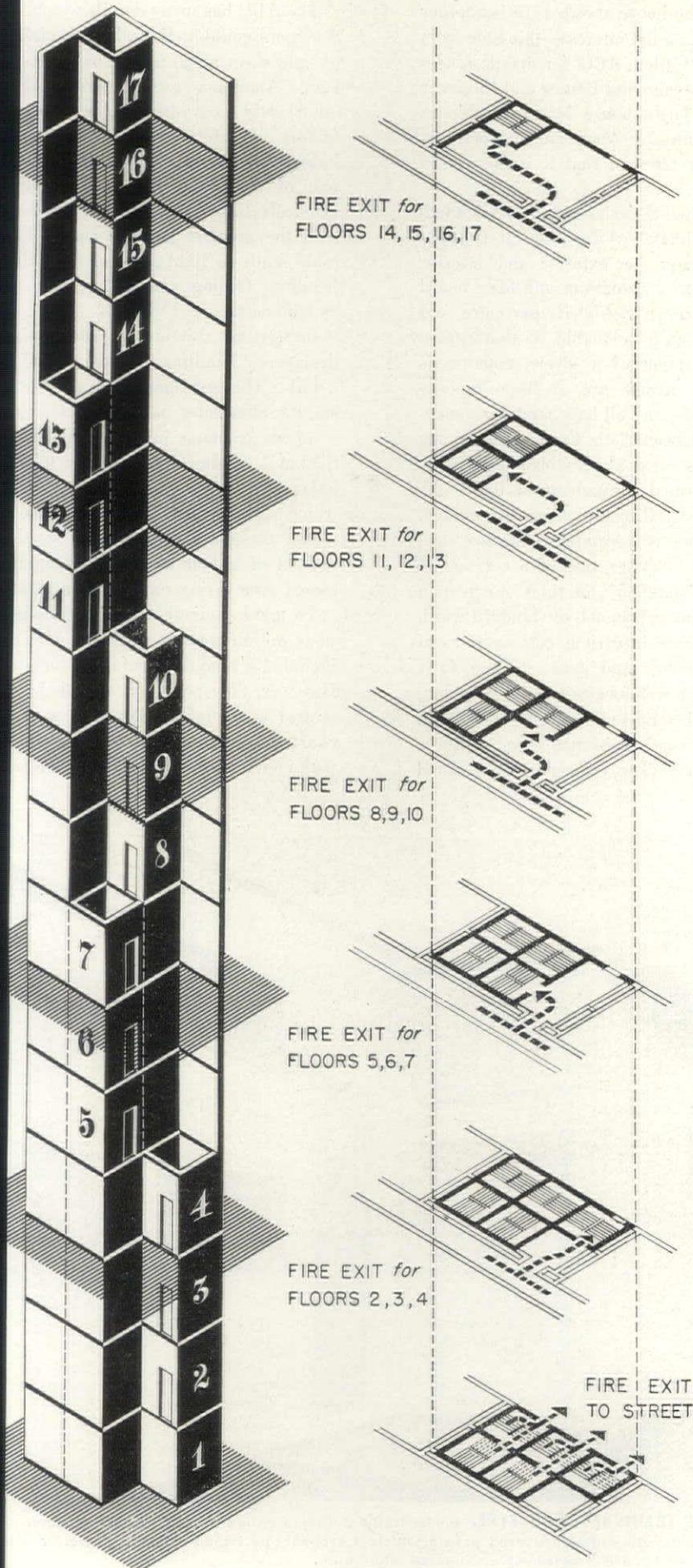
Intermediate Projected
Windows

TRUSCON STEEL COMPANY
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PRODUCTS AND PRACTICE

CELLULAR FIRE ESCAPES proposed to increase safety factor in multi-story hotel and apartment buildings.



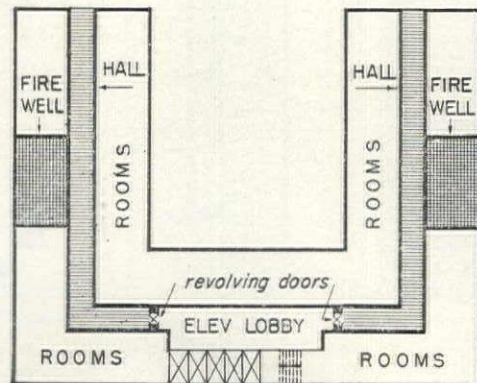
A system of multiple fire escapes for hotels and apartments has been proposed by O. A. Zimmerman, Dayton (O.) engineer, as a means of preventing reoccurrence of such disasters as the La Salle and Winecoff hotel fires (FORUM, July '46). Zimmerman's design calls for a double-walled vertical shaft extending from roof to sidewalk. This shaft differs in several important respects, however, from the conventional fire tower. Nested inside it, like strands in a cable, are a series of completely independent stairways. Each of these stairs serves only three floors, has no other entrances between that point and the ground, and each opens directly onto the sidewalk.

Thinking behind the Zimmerman design is based on analysis of recent disasters which shows that the hotel guest must be able to reach safety at his floor and not at some hypothetical level below. Conventional escape means, as Mr. Zimmerman points out, do not do this today. Service stairways with doors at each floor tend to act as draft tubes which spread smoke and flame. Elevator shafts are apt to act in much the same way, while outside steel fire escapes are hazardous and exposed to flame from top to bottom.

The plan below shows how Mr. Zimmerman's multiple-escape system could be adapted to a typical downtown hotel. Here space equivalent to two bedrooms in the center of each wing has been taken over for the shaft. (In existing structures, this could probably be done without disturbing the existing structural frame.) Double walls serve to insulate the interior of the shaft, while the plan at each floor is such that there is a lobby between the corridor and stair proper. No inflammable materials would be permitted in the shaft, not even painted walls. Construction would be waterproof and well drained, so that a damping fog could be used to settle any smoke which might show up. The entire system would of course have independent water and light lines.

As a further precaution, Zimmerman suggests that revolving doors be used to compartmentalize the main corridors, especially at the elevator lobby, and that each guest room be equipped with an alarm bell, served from a central switch.

Although installation of the proposed system might prove fairly expensive—especially in existing buildings—the designer believes it will greatly raise the safety factor of structures. Besides, as he points out, with greatly stiffened city and state fire safety codes now being drafted everywhere, all owners must greatly increase their safety facilities.



IN TYPICAL HOTEL FLOOR, new cellular fire escape would be placed at center of each wing; self-closing doors would create lobby off corridor while revolving doors would isolate main elevator lobby from the rest of the floor.

ALL-METAL ITALIAN PREFAB makes canny use of light gauges in structure

One of the fascinating things about prefabrication is its ability—despite the small scale of its accomplishments to date—to hold the interest of people everywhere. (It is this very interest, incidentally, which buoys the indefatigable prefab enthusiasts: they feel that where there's so much smoke there's bound to be fire.) The house shown here is another proof of international interest—this time from Turin, Italy. Called ABC for its designers (Architects Astengo and Bianco and Engineer Ceratto) the Turin house is comparable in every way with its American competitors, including even the fact that it is not yet in production.

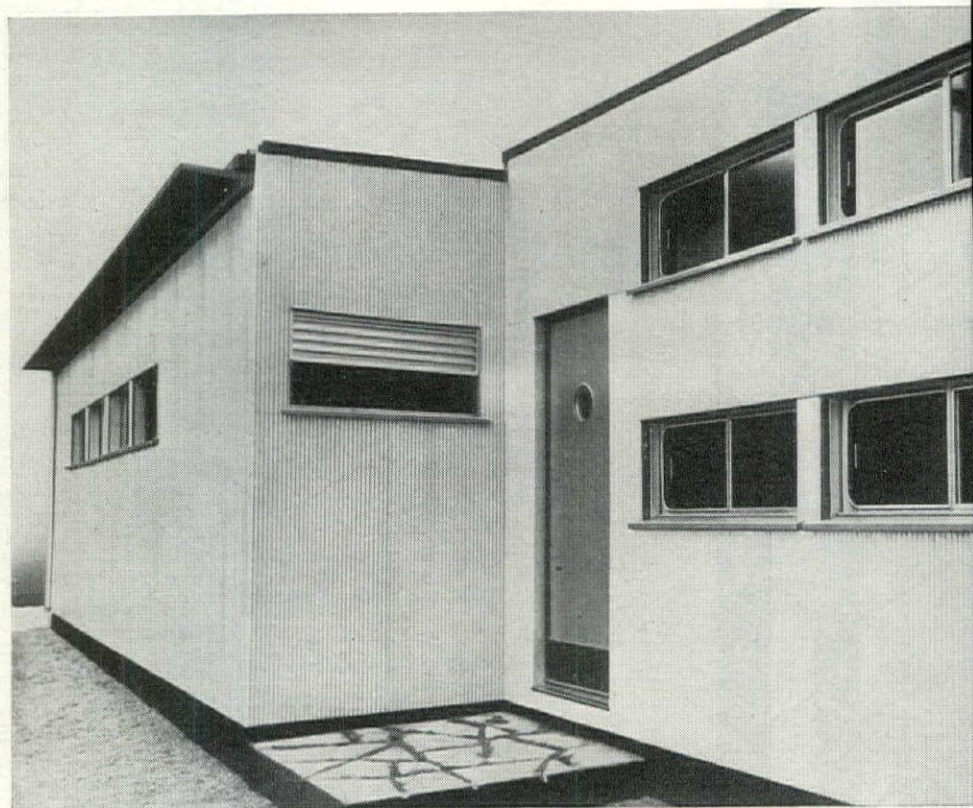
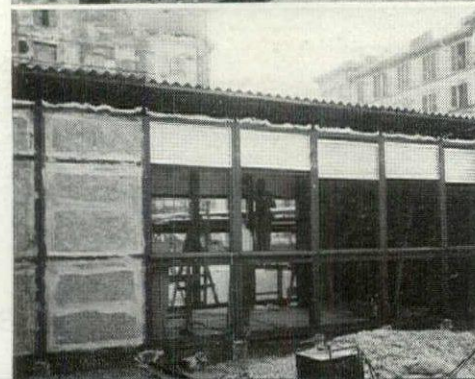
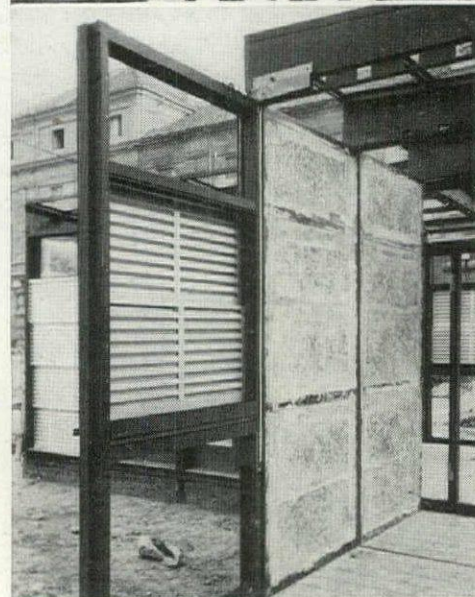
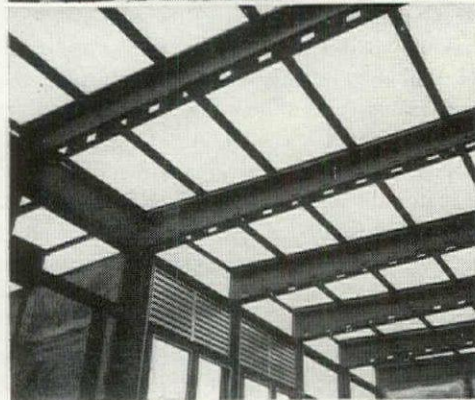
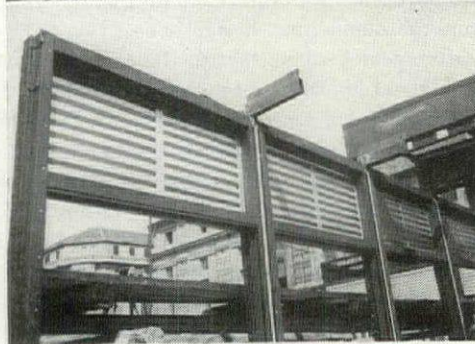
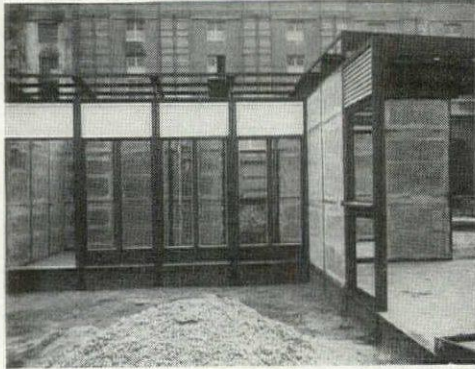
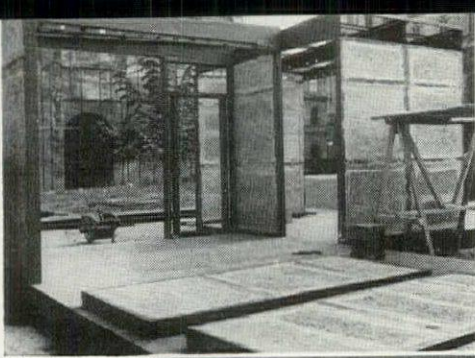
ABC uses a panel designed to a metric module of approximately 4 ft. 1 in. It is shop-fabricated except for exterior and interior finish (corrugated aluminum and fiber board in the house shown). And its parts are said to be readily interchangeable, so that expansion or contraction of a given structure is possible. The panels are of three types—floor, wall, roof—and all have modular dimensions. With characteristic European economy (where metals have always been dear) the panels are formed throughout of light (20-gauge) sheet metal, completely shop-welded. The floor panel is a sandwich of two steel plates welded to either side of a corrugated sheet: approximately 5½ in. thick, it can span 4 modules. The wall panel, of standard width and height, comes in various combinations of solid wall, window and door. (When fully insulated with a wood-waste-and-asbestos mat, this wall panel weighs under 51 lbs. per sq. ft. and has a thermal resistance equal to three ft. of masonry.) The ceiling-and-roof panel

is the same dimension as that for the surfacing is applied at the site after they are in place. Although in the Turin station house this consisted of corrugated aluminum (exterior) and fiber board (interior), any appropriate sheet material may be employed.

The ABC has many details which American designers could well study, especially the use of light sheet metal in all the structural members. American use of structural steel is notoriously heavy-handed, with extra factors of safety engineered into the lightest structures. With their chronic shortage of steel, the Italians, like the Japanese, generally, have had to see to it that they do the greatest possible work. This philosophy leads to light gauges, with all their bending, folding and corrugating done at the factory as stiffeners.

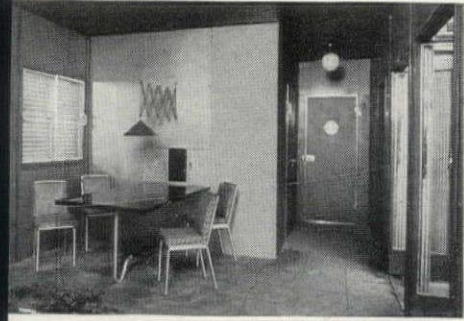
Interesting also in the ABC design is the designers' handling of door and window details. The sash themselves are horizontally-sliding aluminum, similar to bus windows common in this country. The thickness of the wall panel permits the use of vertically-sliding louvered panels which slide up into the head. Also, when the wall is made of sheet metal, these are divided into panels to fit the portion of a door or window opening.

To make their demonstration house completely prefabricated in every sense, the ABC design included a modular prefabricated kitchen-bath. However, they point out that their system is equally adaptable to modular construction, where it could be readily substituted with conventional steel or concrete frame.

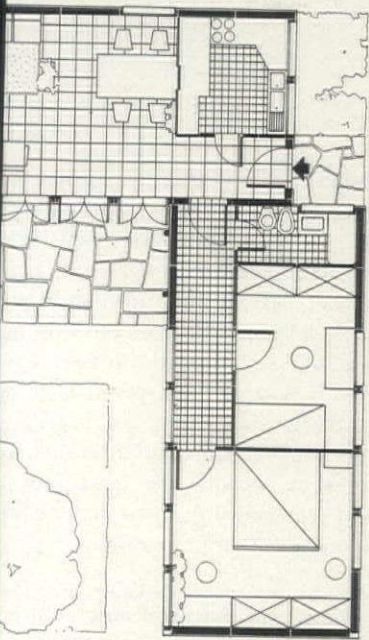


WINDOWS ARE TRANSPORTATION TYPE, horizontally-sliding aluminum sash. Each window, regardless of size, has vertically-sliding louvered panels which disappear in window head. Exterior surfacing applied after panels are erected—is corrugated aluminum.

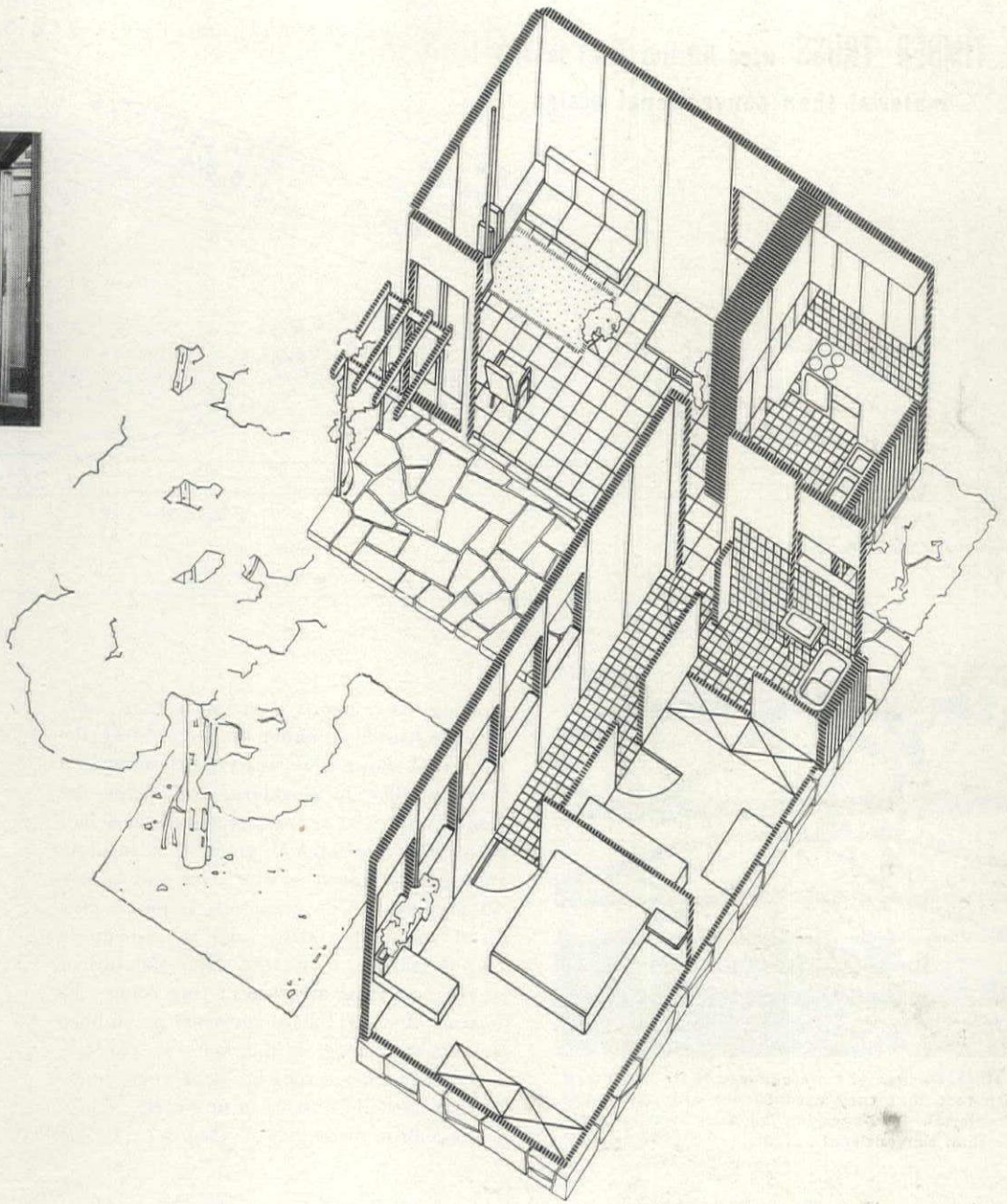
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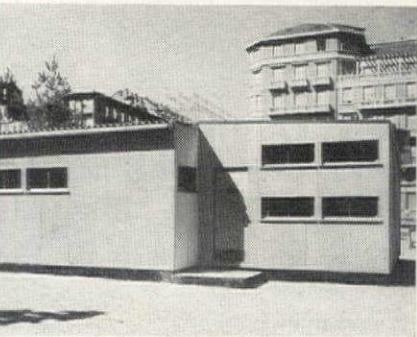
DINING ROOM looking toward entrance



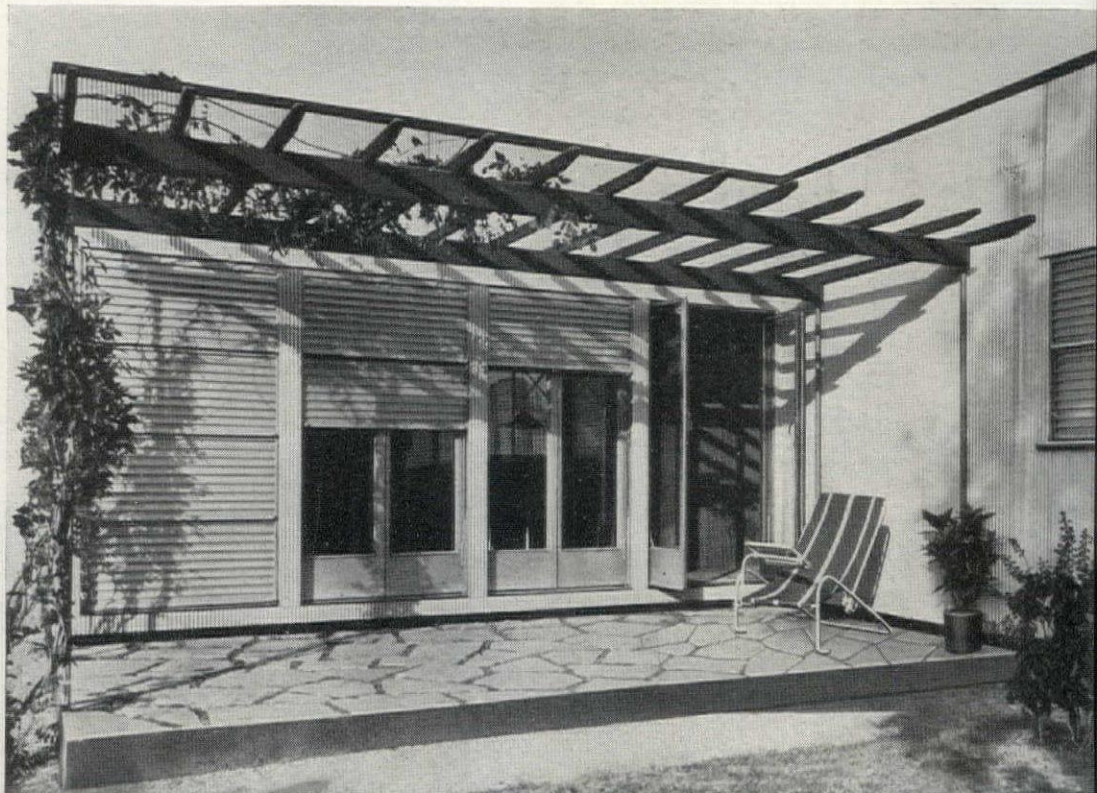
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Betrazzini photos

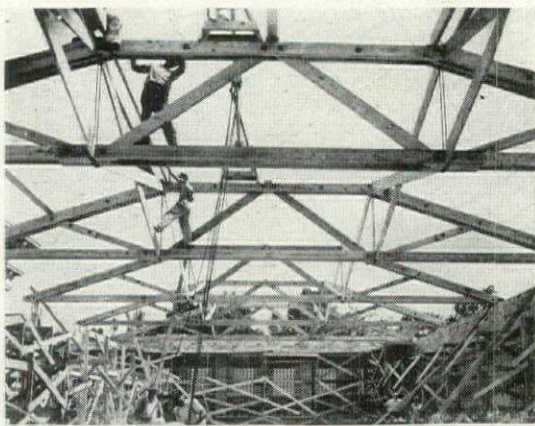
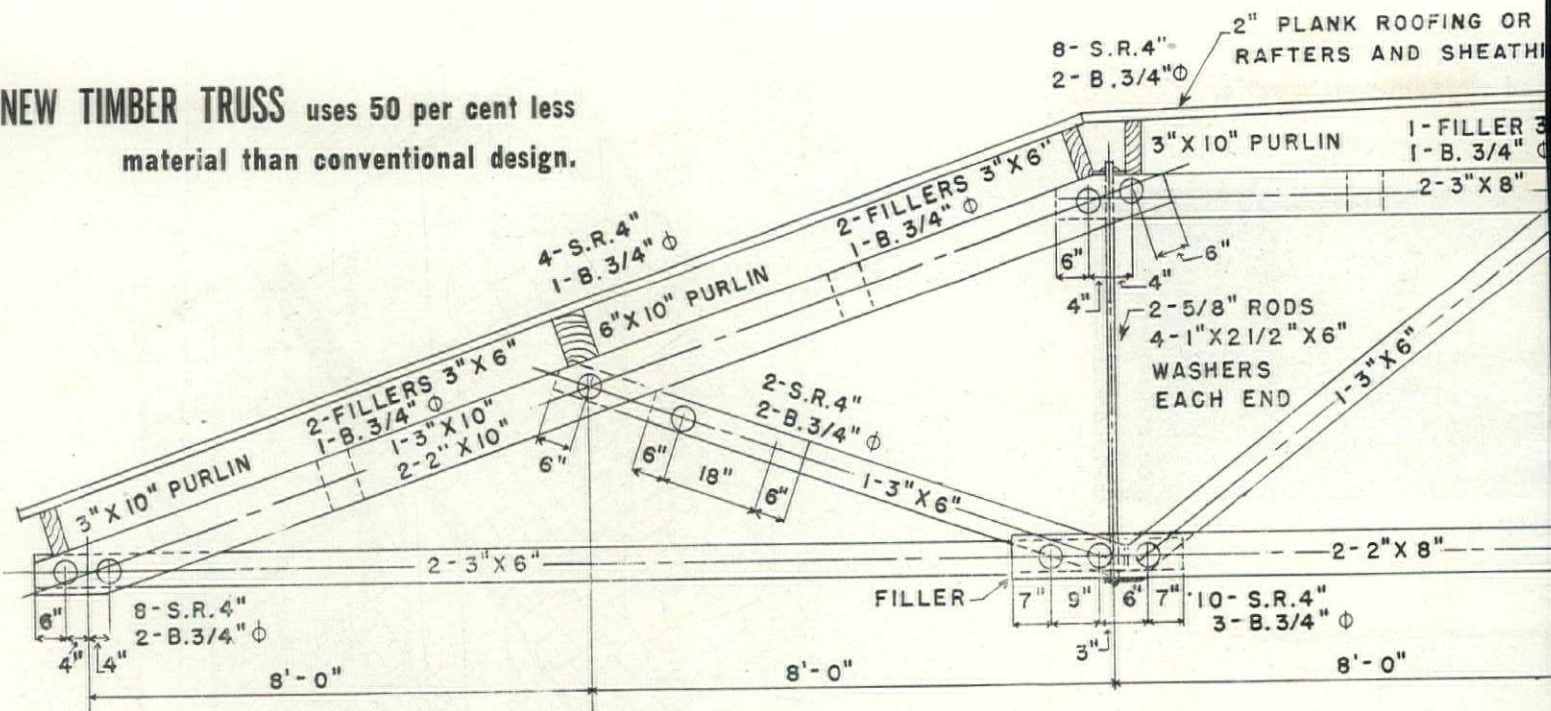


BUILT IN A TURIN PLAZA, ABC demonstration house is neatly landscaped, shows how Italians might be rehoused by industrial methods.



LIVING ROOM FENESTRATION is skillfully handled. Each wall section is complete with metal doors, louvered panels which cover any portion and slide up into head when not in use. Apparently missing is an element Americans consider essential: flyscreens.

NEW TIMBER TRUSS uses 50 per cent less material than conventional design.



NEW TRUSSES span 48 ft., are placed 16 ft. on centers. Despite fact that they used 50 per cent less labor and material, load-carrying capacity was slightly higher than conventional design.

Proving itself more economical than comparable trusses in either timber or steel, the new truss shown here was recently used in a bowling alley in Bogalusa, La. While the Lank-Teco truss* represents no radical departure from conventional practice, it incorporates several advances which are said to save 50 per cent of the materials required in a Pratt-type truss, and to cost up to 35 per cent less than steel. Main innovations of the new truss are: use of ring connectors instead of bolts; chord members are lapped at splices instead of butt-spliced; old-fashioned steel tension rods are kept where joints in timber would have been unwieldy.

To confirm the engineer's theoretical design

studies, the new truss was tested at alongside a flat Pratt-type truss under cal conditions. Both were satisfactory ever, the Lank-Teco (using only half timber) carried more load with only much deflection as the Pratt. As used Bogalusa structure, the trusses have of 48 ft. 4 in. and are spaced 17 ft. Obviously adaptable to a wide range story, medium-span buildings such as stores or schools, the Lank-Teco is most economical in spans of from 40 spaced about 16 ft. on centers.

* Named after the designer, Engineer S. Lank, and the developing company, Engineering Co., makers of timber c

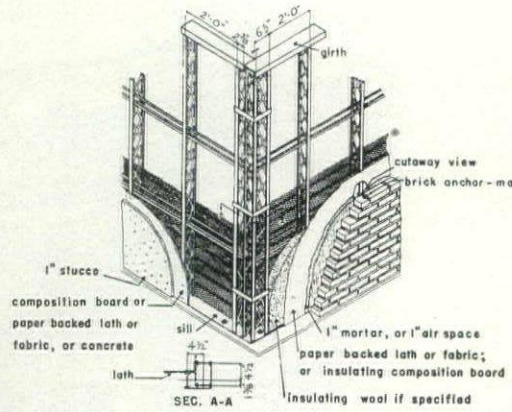
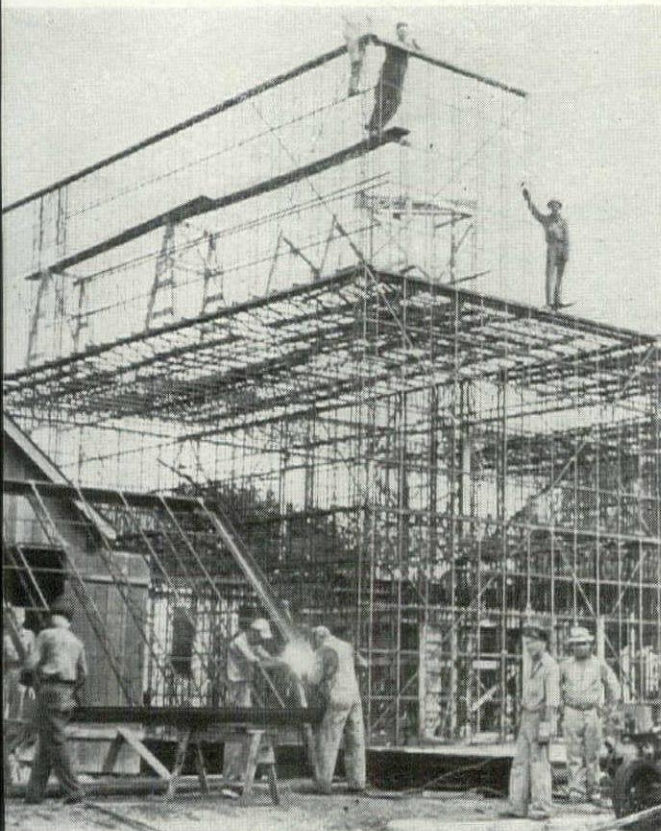


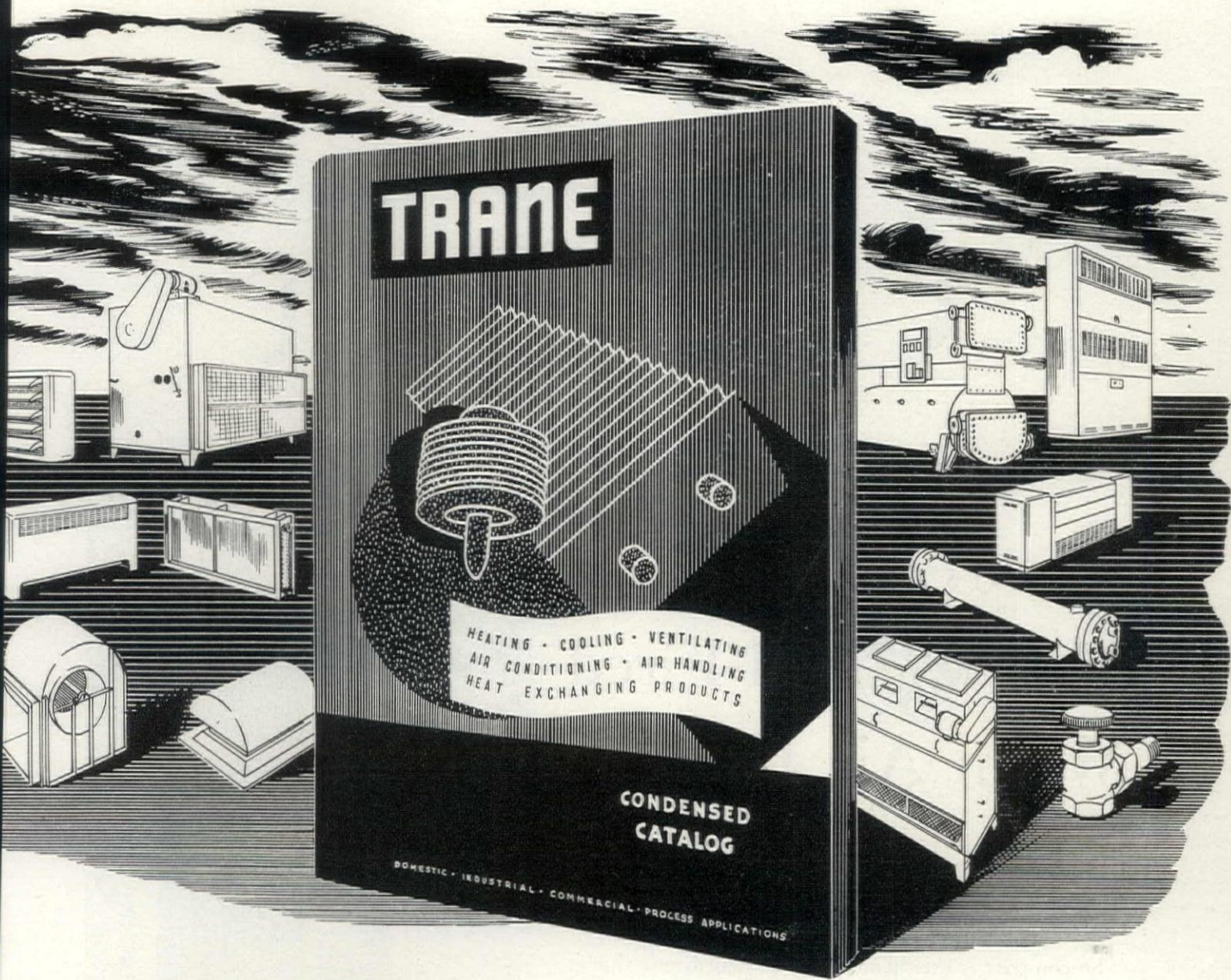
DIAGRAM SHOWS how open-web studs, used in site-fabricated panel system, may be surfaced with stucco or brick.

SITE-ASSEMBLED PANEL, 10 ft. wide and story-high, is being finished (extreme left) before being swung up and welded into place.

Open-web steel joists, site-welded wall panels, yield important savings.

An ingenious use of standard lattice-steel studs and joists brought important savings in time and material to this office in Houston, Texas. Instead of using members as a mere substitute for wall panels, Matthews Construction Co. welded the 10 ft. wall panels on the site. Light panels were then swung into place and into a continuous wall. Light open-web joists were then welded to a horizontal and the next story-high panels swung into place. The entire erection time for the story steel skeleton, including set-up and erection, was only 21 days.

In fabricating the virtually window panels, the horizontal stiffening and bracing was installed on a jig. Expanded metal lath on both sides will carry stucco and surfacing.



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New Oil-Fired Warm Air Furnace

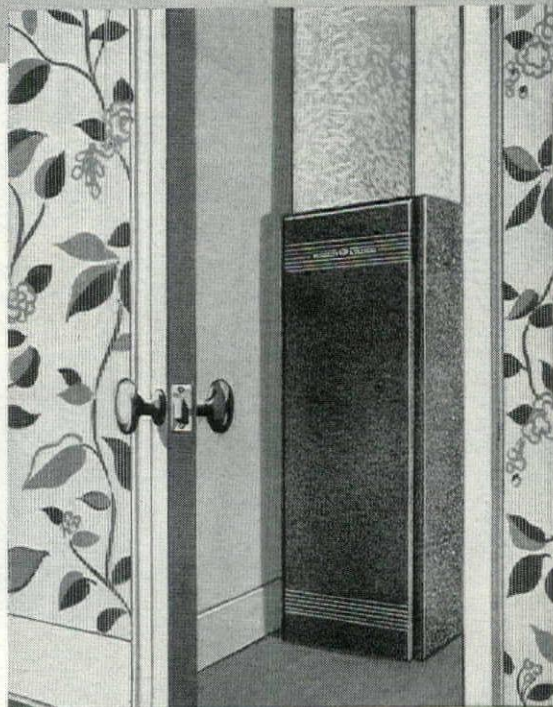
BASED ON YEARS OF EXPERIENCE in the heating field, General Electric engineers have produced a new G-E Oil-fired Warm Air Furnace.

So compact is this handsomely designed unit that it fits easily into closet, alcove or utility room . . . with only two inch wall clearance necessary. To obtain flexibility, the unit is arranged so that the filter frame may be installed in either side or back of fan housing cabinet—enabling quick installations and minimum duct-work expense.

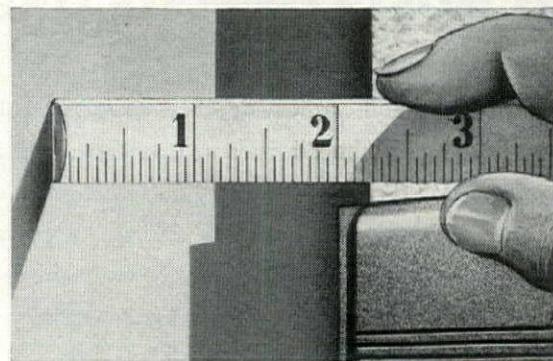
This new unit uses the time-tested G-E low-pressure oil impact method of atomization which has proved so economical of fuel. Like all General Electric heating units it is designed and built as a complete unit for efficient, trouble-free operation.

For installations where gas is preferred, the G-E Gas-fired Warm Air Furnace provides the same features of compactness and reliability for alcove or utility room installations.

For full information on gas or oil boiler or warm air units, call your General Electric dealer. He's listed in the Classified Telephone Directory. *General Electric Co., Air Conditioning Dept., Section 71311, Bloomfield, N. J.*



INSTALLED IN UTILITY ROOM. View of the new G-E unit installed in a neat compact utility room. Plenty of space is available to permit storage of vacuum cleaner, brooms, mops, etc. Closet-type installation saves time and expense for builders.



TWO-INCH WALL CLEARANCE. Underwriters' Laboratories have listed this unit for installation in small spaces with a clearance of two inches on both sides and back.

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Gas and Oil Heat

**The BENDIX WASHER and
the BENDIX DRYER, too!**
Featured in 100 Ridgcrest homes



BENDIX
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Home Laundry Equipment
is installed in this Home
CARROLL, HILLMAN & HEDLUND

le-barreled sales appeal will be built into the next 100
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s famous Seattle housing development.

These progressive builders have found that the Bendix
matic Washer packs tremendous selling pull.
their next offering of 100 homes will feature *both* the
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package deal, as basic parts of the house.

Prices on these completely equipped homes range from
0 to \$9300. With a down payment of only \$250,
hly installments run as low as \$54.53, including
ipal, taxes, interest and insurance.

No wonder these builders look for increased customer
est. For the Bendix Washer banishes the drudgery of
day. It washes super-clean, rinses three times, drains
, cleans itself and shuts itself off. And the Bendix Dryer
the clothes line ordeal: no more trudging,
ching, waiting for a drying day. No
fear of smoke and soot fouling the dry-
clothes.

When you can offer a woman all that—
package mortgage—you've got some-
! See your Bendix Dealer. Get the
of a smart builder" on your house.

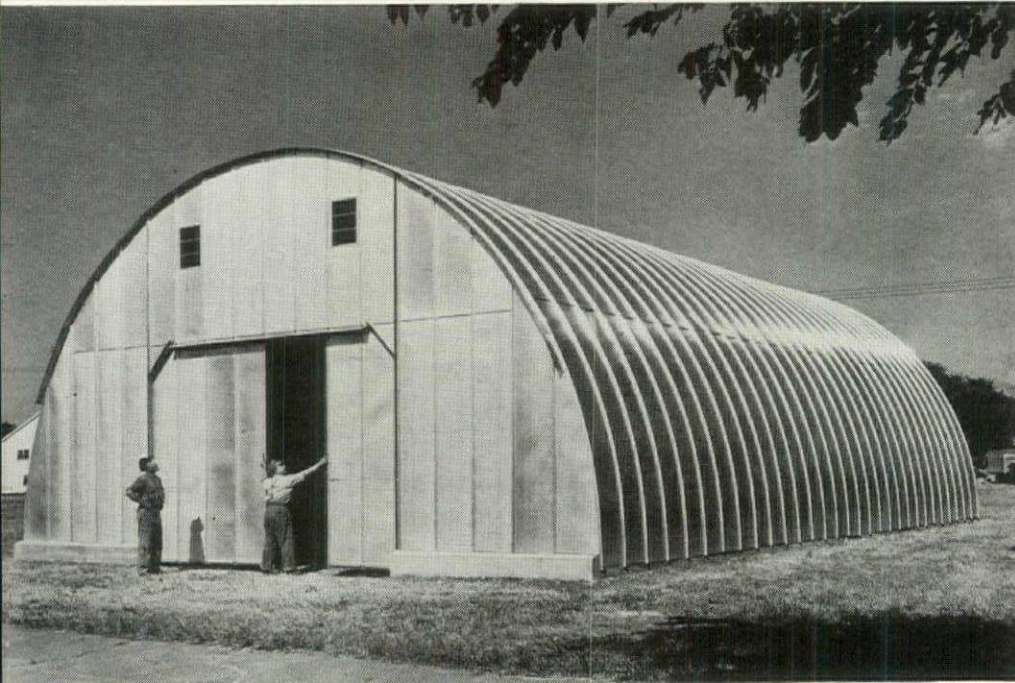
*Mrs. William Crayle gets
her Carroll, Hillman and
Hedlund "package mort-
gage" that includes the
Bendix with the house.*



BENDIX
automatic
Dryer

BENDIX
automatic
Washer

BENDIX HOME APPLIANCES, INC.
SOUTH BEND 24, INDIANA



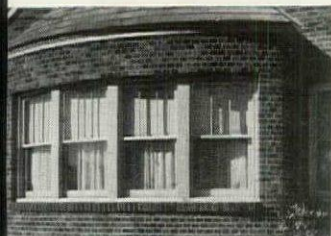
ALUMINUM PREFAB for commercial, industrial and farm purposes.

Alumi-Drome, Reynold's multi-purpose, all-aluminum prefab is a low cost, standard 36 x 60 ft., unit type, arch roof, self-supporting building. Of the familiar wartime hut design, it withstands high wind pressures and heavy snow loads, provides maximum accessibility and pleasing appearance. The entire floor area of 2,160 sq. ft. is available for use. Large double sliding doors, 11 ft. high by 16 ft. wide at each end afford easy accessibility to the interior and two windows at each end provide for light and air. When set on a 1 ft. concrete foundation, maximum interior height of the structure is 19 ft. Alumi-Drome employs standardized 6 ft. sections in its construction. Individual lightweight arch sections, assembled on the ground are easily raised into position and anchored to the concrete foundation. Main arches are spaced at 6 ft. intervals, intermediate framing at 2 ft. intervals to receive the 2 ft. wide sheathing. Longitudinal members are locked into the arches to form a strong, rigid framework, and aluminum sheathing sheets are attached. Because of the reflective qualities of the aluminum sheathing, the structure is said to provide cooler interior temperatures in summer and easier heating in winter. It is also reported to afford excellent protection against lightning when properly grounded, to be fire-proof, rustproof, ratproof and immune to attack by termites. Alumi-Dromes are tentatively priced at \$2,975 f.o.b. Louisville, can be erected by purchaser or dealer at an estimated cost of \$300. Approximate weight of the unit is 7,000 lbs.

Manufacturer: Reynolds Metals Co., 2500 So. Third St., Louisville, Ky.

COMPLETE LINE OF WOODWORK for large and small buildings features new designs and economies.

Carr, Adams & Collier's new line of woodwork, trademarked Bilt-Well, features a wide variety of new designs, ease of handling, storage and assembly, and economical installation. A complete line from basement windows to attic louvers, it is designed in keeping with the present trend to modular sizes and is suitable for use in large or small buildings. All of the products are fabricated of Ponderosa Pine and all come packaged in cartons or bundles for easy handling. Certain items



such as Superior Windows come as complete units. In both window and frame these units feature a patented, inserted weather-strip, which allows the sash to be or removed any time during construction without the weatherstrip. It automatically compensates for aging or shrinking of the sash. Superior Windows are in all positions with an overhead spring balance gear for the life of the building. Other items in the line Nu-Style Kitchen Cabinets, Entrances, etc. are pre-plant to aid installation and come knocked-down in units. Nu-Style Kitchen Cabinets are styled to nize with modern ranges and refrigerators. Each self-contained, but becomes an integral part of the assembly. Available in graduated stock sizes they space, need or taste. Entrance doorways are furnished several pediment designs which fit a standard base. are adjustable to various size door openings and to wall construction. Pilasters are reversible. The new B line includes many other products among which are ment windows; storm sash; garage doors; china cabinet
Manufacturer: Carr, Adams & Collier Co., Dubuque,

SAFETY FLOORING combines safety and durability in many indoor and outdoor applications.

Widely field tested since 1941 and used during the the U. S. Navy, Amcolun Safety Tile combines character of safety, durability, lightweight, economy and clean. It provides a safe footing under all conditions whether dry or oily, thus reduces slipping hazards to a minimum. In addition, it assures long wear, extreme resistance to impact and lower maintenance. Amcolun is a homogeneous compact structure, composed of abrasive material (aluminum oxide) and other inert fillers evenly distributed. This is bonded together with a heat resisting thermosetting resin forming an extremely durable tile. Amcolun is used in chemical and food plants, laboratories, showering rooms, store entrances and other areas where corrosion safe footing is required. It will adhere to existing concrete and steel floors, is applied by trowel to a thickness of 1/16 to 1/8 in. Light in weight, a sq. ft. averages about 10 lbs. installed. Amcolun Safety Tile comes in red or green, not affected by most acids or alkalis, is unaffected by water and has practically no water or oil absorption.

Manufacturer: American Abrasive Metals Co., Irvington, N. J.

SAFETY FLOORING is durable, eliminates slipping.

Duracite is a new abrasive cement especially designed to eliminate slipping and tripping hazards on worn or uneven floors. Providing a permanent, non-slip surface whether wet or dry, it sets up rapidly to a granite-like hardness, withstands years of traffic without showing appreciable wear. Duracite cement comes in powder form. Mixed with water it produces an easily workable mortar that bonds to such bases as slate, marble, concrete, wood, etc., even when trowelled to a depth of only 1/16 in. The surface is set rapidly and will support foot traffic six or eight hours after installation. Duracite is available in 6 colors, can be cleaned with a steam or water hose or scrubbed with cleaning compounds. Suggested applications for the material include: stairs, floors, entries, ramps, lobbies, kitchen floors, rooms, industrial plants, schools, garages, restaurants.
Manufacturer: Duane Specialties, Ltd., 388 South Street, Newark, N. J.

(Continued on page 163)

Your Sales Instincts will Tingle and Your Pockets will Jingle

if you take advantage of the hottest selling story in the heating industry today. It's the story of Superfex "Round the Clock" heating ... the only one of its kind.

✓ Check these features

1. Exclusive "Homogen-Air" system. Has three-stage, non-stop fire, automatic variable speed blower.
2. Two furnaces in one . . .
 - A. Peak (high fire) capacity for the coldest weather demand.
 - B. Automatic cut-back to economical low fire operation and low blower speed for that "in between" mild weather.
3. Healthful "live air" action.
4. Avoids layer cake separation of heat, which means . . .
 - A. Uniform temperature, floor to ceiling, all rooms.
 - B. Warm floors. No "Cold leg zone".
 - C. All-over comfort.
5. Gas or oil-fired models. (Designed for it . . . not conversion burners.)
6. Proved fuel economy.
7. Summer Fanning and Filtering facilities.
8. Heavy, long-life construction throughout.
9. Scratch and chip-proof finish. (Bonderized steel grips attractive baked enamel.)
10. A size and style for every type of home.
11. Companion line of "Thermaflow" non-blower models also with three-stage fire.
12. Special units for popular basementless type homes.
13. Wide consumer acceptance based on long successful performance.

Then Add...

A profit-protected exclusive franchise.*

Sound national advertising support.

Effective Dealer Help materials.

Quality and performance leadership insured by the finest development laboratory ever owned by a heating manufacturer.

Unreserved backing of the big name company with 60 years of history and a sure future.

* Yes, there may still be one of these franchises available in a spot where you'd like to do business. All YOU need is Determination, Dependability, a bit of DO. Then check with the home office without delay.

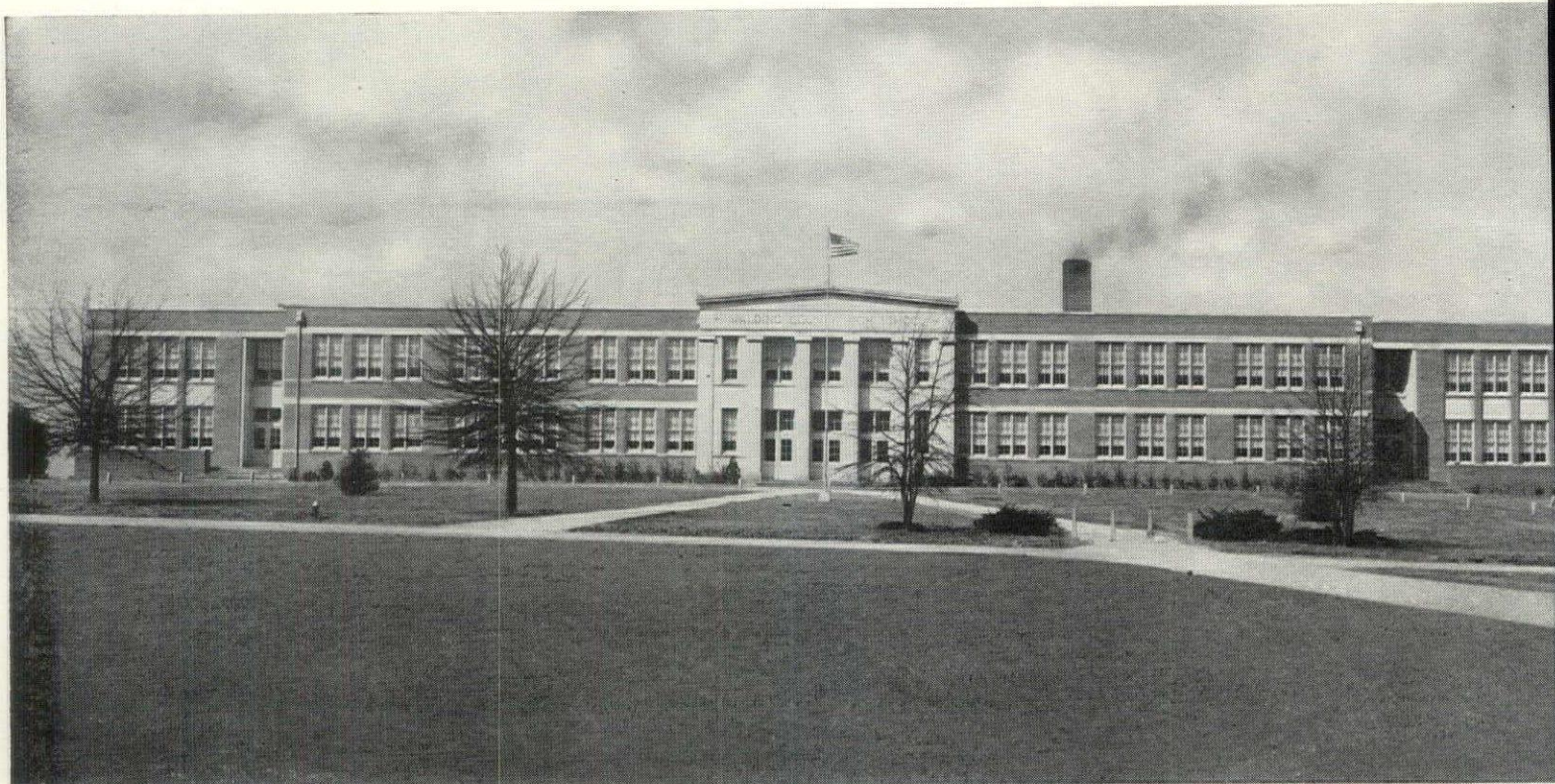
Superfex FURNACES

GAS OR OIL

PERFECTION STOVE COMPANY

7920-C Platt Avenue • • • • Cleveland 4, Ohio





SPALDING COUNTY HIGH SCHOOL, GRIFFIN, GEORGIA

WILLIAM J. J. CHASE, Architect, Atlanta, Ga.

STILWELL CONSTRUCTION COMPANY, General Contractor, Macon, Ga.

CHAS. C. HARKNESS, Painting Contractor, Macon, Ga.

ERECTED during the war emergency period, and because of War Production Board restrictions, considerable ingenuity had to be exercised in planning in order to secure proper and adequate results. The same conditions prevailed in the recently-erected R. E. Lee Grammar School, Thomaston, Ga., and LaGrange High School, LaGrange, Ga., representative of the many schools designed by William J. J. Chase, of Atlanta.

Plans called for load-bearing masonry walls, with open web steel joist and concrete slab floor and roof construction; exterior of brick with limestone trim. Each school has a cafeteria, modern kitchen, automatically-controlled heating and ventilating system, program clock, public address and fire-alarm systems. Adequate natural and artificial lighting as well as accoustical control, are also provided.

Included in the Pratt & Lambert Paint and Varnish products used were: P&L House Paint, Lyt-all Flowing Flat, Cellu-Tone, "61" Floor Varnish and Oil Color.

Specifications for appropriate decoration for any type of structure will be promptly furnished on request to the P&L Architectural Service Department nearest you.

PRATT & LAMBERT - INC., Paint & Varnish Makers
NEW YORK • BUFFALO • CHICAGO • FORT ERIE, ONT.

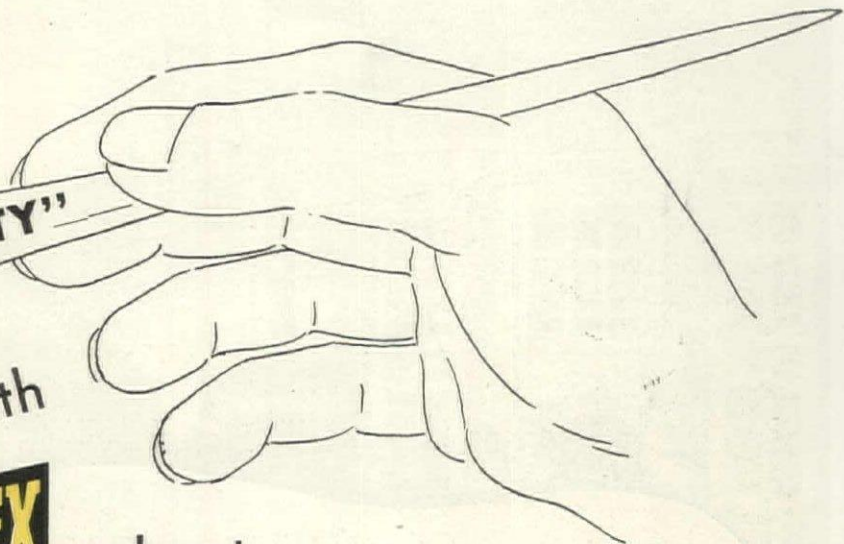
PRATT &

LAMBERT

PAINT AN

VARNISH

Put
"PERSONALITY"
into your
homes with



BONDEX colors!

How can you make one low-cost housing unit seem different from another? By taking advantage of the 12 colors available in Bondex Cement Paint.

"Exterior decoration" with Bondex colors gives a prospective home owner the chance to express a preference — to feel that his house suits him personally.

**BONDEX adds beauty...
checks wall dampness**

One Bondex treatment seals the wall surface against dampness — at the same time color and distinction are achieved.

For "mellowing" concrete and cinder block; for color-styling stucco, brick, masonry and asbestos siding, use Bondex Cement Paint — economical, easy to apply and known the world over for performance.

Basements, swimming pools and foundations also look their best when painted with Bondex.

THE REARDON COMPANY • St. Louis 6
Chicago 9 • New York 6 • Los Angeles 21 • Montreal 1

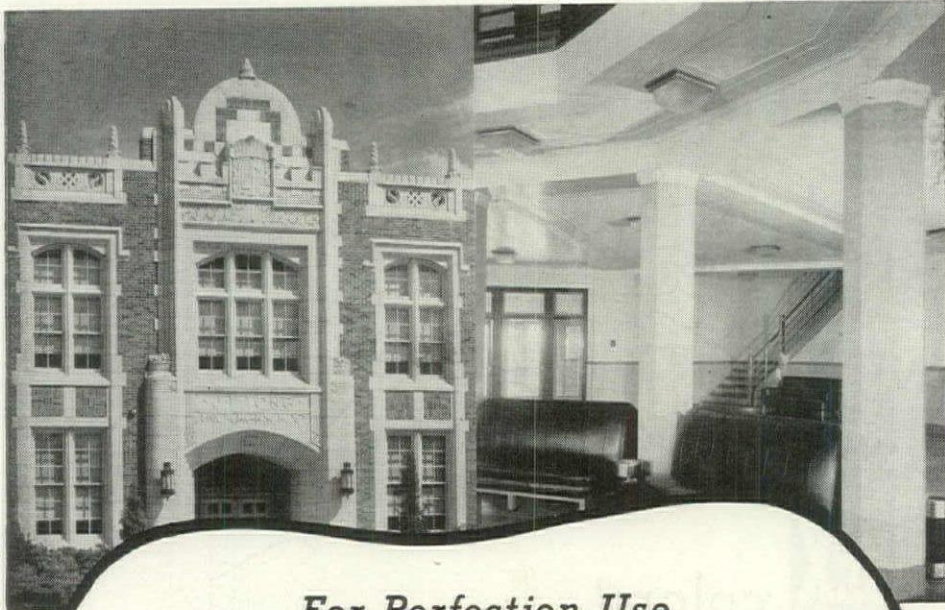
BONDEX
gives choice
of 12 colors
(and white)

Dutch White
Old Spanish White
Oyster Shell
Antique Ivory
Carthage Cream
Adobe
Tropical Coral
Spanish Buff
Monastery Gray
Grotto Blue
Ivy Green
Brick Red

BONDEX

THE *Patented*
CEMENT PAINT

*That outsells all other
cement paints combined*



For Perfection Use

MEDUSA WHITE

the original WHITE Portland Cement



Architects who seek the highest degree of perfection in terrazzo, stucco, cast slab, white concrete, will do well to specify Medusa White—the original white portland cement.

In designing construction calling for the use of white cement to produce pure white or colored work and desired textures, you cannot afford to take chances.

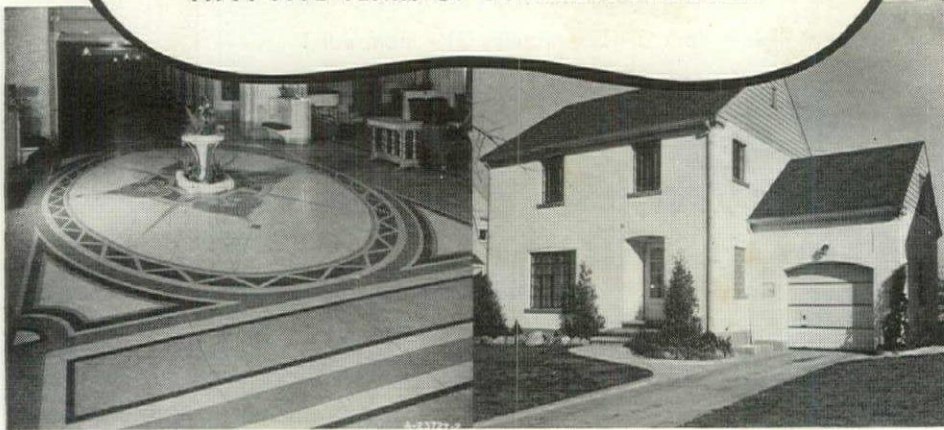
Consider this important fact: Medusa White has been used successfully for thirty-nine years. No other white cement has a use service record as long as this. Consequently when you specify Medusa White you know in advance that you are going to get a cement that is pure white in color, that can be tinted with pigments or colored aggregate to any color you desire and will lend itself to any surface textures. Time has proved it the most dependable of all white cements.

Medusa has literature available to you covering any use of Medusa White. Write today advising us of your requirements for white cement and let us send you complete information covering that construction.

MEDUSA PORTLAND CEMENT CO.

1004 Midland Building • Department "J" • Cleveland 15, Ohio
Also made by Medusa Products Co. of Canada, Ltd., Paris, Ont.

"FIFTY-FIVE YEARS OF CONCRETE PROGRESS"



LIQUID PLASTIC COATING applied like paint to practically any surface, provides a high-gloss, waterproof finish.

Phenoplast is a 100% phenolic resin coating material that can be brushed or sprayed on practically any surface to provide an infusible, high gloss, transparent, waterproof, solvent and chemical proof coating. Not a "plastic paint", but a 100% phenolic resin in liquid form, it sets within a few hours to produce the same ultra-high, hard gloss finish as is found on cast phenolic resin plastics. Many applications are envisioned for the new material. In the construction industry suggested uses include: impregnating soft wallboard to increase its strength, waterproofing and glazing hard-finished pressed wood, adhering fabrics to wood surfaces, coating floor furniture to eliminate waxing and cleaning, etc.

Manufacturer: Lockrey Plastic Products Co., 40-16 137th St., Flushing, N. Y.

MODERN LAMPS in metal and wood.

This new line of handsome modern lamps, designed and produced by David Wurster, include both table and stand models.



Most units are available in metal and wood. Many units have a flexible gooseneck arm which allows direct or indirect lighting. Many are available with either plastic or fabric shades. Typical of the line are the examples illustrated. The stand lamp shown with a 16 in. and 7 in. plastic shade, priced at \$37 and \$32 respectively, is available in oak or walnut. Table lamps come in brass and chrome. The upper model with 16 in. fabric or plastic shade retails for \$22.50 and \$25.50 respectively. Table lamp with 6 in. plastic shade sells for \$21.

Distributor: Mary Ryan, 225 Fifth Ave., New York, N. Y.

PORTABLE FLUORESCENT WALL LAMP provides both direct and indirect light, has numerous applications.

Providing both soft shadowless light directly downward and a generous amount of indirect light for general illumination, this supplementary lighting unit has a multitude of applications in the home. It is suitable for use over the kitchen sink, under pantry cabinets, in the sewing room or study, over the bed for reading or any place where light is required for a specific task. A simple, streamlined, portable fluorescent fixture, the Beverly contains two 20-w. fluorescent tubes shielded by a diffusing panel of frosted, ribbed glass. Mounting end caps are finished in white or chrome. (Continued on page 167)

Better Homes and Gardens

READ BY MORE THAN 3,000,000 FAMILIES
NOVEMBER 1947 • 25¢

WHY are all these ads in Better Homes & Gardens?

It's because all these companies in your field have found out that BH&G's 100% service content gets the readers who are really interested in what advertisers have to say, and who are at the buying — not the dreaming — stage in homemaking. BH&G gives you over 3,000,000 such families with high incomes. In the November issue, *Structural Glass* (description and uses in homes), and *If We Had It to Do Over Again* (remodeling), November, are part of our program of putting across the best ideas in home planning and building.

These brands are advertised in the NOVEMBER issue of Better Homes & Gardens

FLOOR COVERINGS

Armstrong Linoleum
Nairn Linoleum
Pabco Linoleum

HEATING

Airtemp
American-Standard
Bell & Gossett
Dearborn
Delco
Heatway
Heil
Janitrol
Kalamazoo
Master Kraft
Mueller
Norge
Palmaire
Pocahontas Pipeline
Petro
Rheem
Superflex Furnaces
Williams Oil-O-Matic

HEATING, MISCELLANEOUS

Arvin Portables
Bennett-Ireland Fireplace
Dust-Stop Air Filters
Electrosteam Portables
Electromode Portables
Emerson Portables

HEATING, MISCELLANEOUS (Cont'd)

Gardener Radiator
Enclosures
Heatilator
Minneapolis-Honeywell Controls
Research Filters
Surf Season-air Portables
Victor Portables
Vornadofan Portables
Wittie Portables

INSULATION

Baldwin-Hill
Balsam Wool
Carey
Chamberlin
Gold Bond
Homasote
Kimsul
Nu-Way Weather Stripping
Mortite Weather Stripping
Presstite Weather Stripping

KITCHENS

Kitchen-Kraft

LIGHTING & WIRING

Burgess Batteries
Cuttler-Hammer Controls
Onan Power Plants
Sylvania Lamps

LUMBER

U. S. Plywood
West Coast Woods

MAJOR APPLIANCES

Bendix Washer
Boss Range
CP Gas Ranges
Cadillac Vacuum
Caloric Range
Dexter Washer
Easy Washer
Estate Range
Filter Queen Vacuum
Frigidaire Range
GE Dishwasher
GE Range
Grand Range
Harderfreezer Freezer
Hoover Vacuum
Kaiser Dishwasher
Kalamazoo Stove
Kelvinator
Lindemann & Hoverson Range
Magic Chef Range
Majestic Incinerator
Monarch Range
Norge
Philco Refrigerator
Premier Vacuum
Royal Vacuum

MAJOR APPLIANCES (Cont'd)

Servel Refrigerator
Voss Washer

PAINTS

Cuprinol
DeVoe
Flatlux
Kyanize
Lapidolith
Luminol
Sapolin
Truscon

METALS

Alcoa
Anaconda Copper

PLUMBING

American-Standard
Briggs
Crane
Deming Water System
Ejler
Evans Water Heater
Frigidaire Water Heater
GE Water Heater
Mertland Water Heater
Norge Water Heater
Permutit Soft Water
Rudd Water Heater
Smithway Water Heater

PLUMBING (Cont'd)

Thermojet Portable Water Heater
White Water Heater

ROOFING & SIDING

Johns-Manville

STRUCTURAL MATERIALS

Portland Cement

WINDOWS

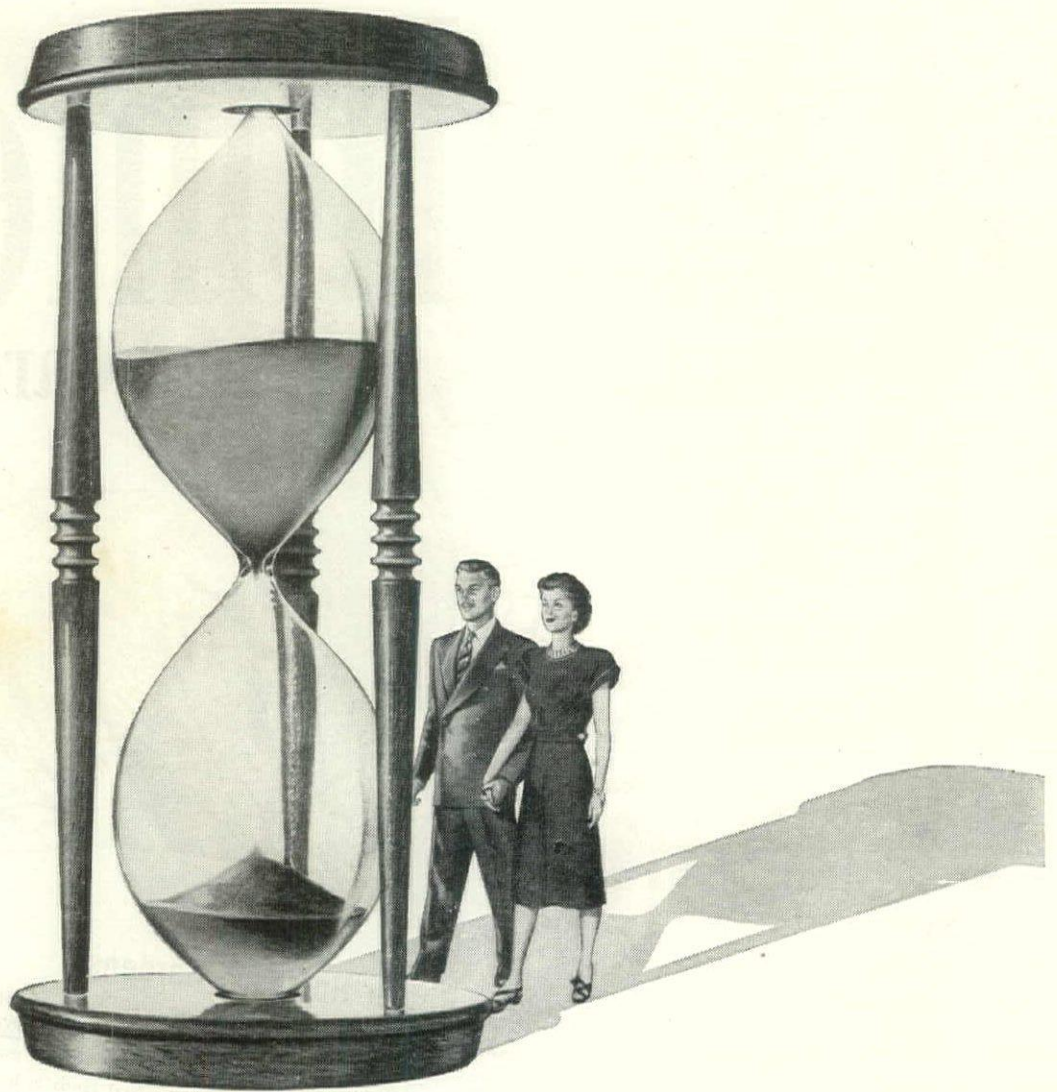
Alcoa
Eagle-Picher
Fenestra Steel Casements
Libbey-Owens-Ford
Pella

MISCELLANEOUS

Acme Venetian Blinds
Bell Telephone
Clopay Blinds
Columbia Blinds
Dutton Lanson Mailboxes
Edwards Chimes
Flexalum Venetian Blinds
Knappe & Vogt Closet
K-Veniences
Lorentzen Blind Levelor
National Homes Prefab
Onan Power Plants

CIRCULATION OVER 3,000,000

America's First Service Magazine



The years melt away

(as the years always do)

As your years dwindle down—as everybody's must—you'll need more than affection and companionship.

You'll need a place to live and food to eat. Which means you—not the family next door, but *you*—will need money.

There's only one way for most of us to get money—that's to save it. And for most of us, too, the best way to save money is through U. S. Savings Bonds.

Because U. S. Savings Bonds are the most widely and easily available investment to every citizen. Every bank sells them. Every post office sells them.

AND—most important—you can buy them *regularly* and *automatically* . . . which helps overcome human inertia and reluctance to save.

To do so, you just sign up for the Payroll Savings Plan

where you work, or for the Bond-A-Month Plan at the bank where you have a checking account. Then they really pile up.

Of course, there are other reasons for buying U. S. Savings Bonds.

They're SAFE. Backed by the credit of the United States, that's all.

They're PROFITABLE. You get 4 dollars out for 3 put in, after 10 years.

They're LIQUID. Like water. You can get your cash out of them at any time . . . in a few minutes . . . without penalty.

Remember those words "melt away." They say better than a volume of statistics that you have less time than you think, to save.

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

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

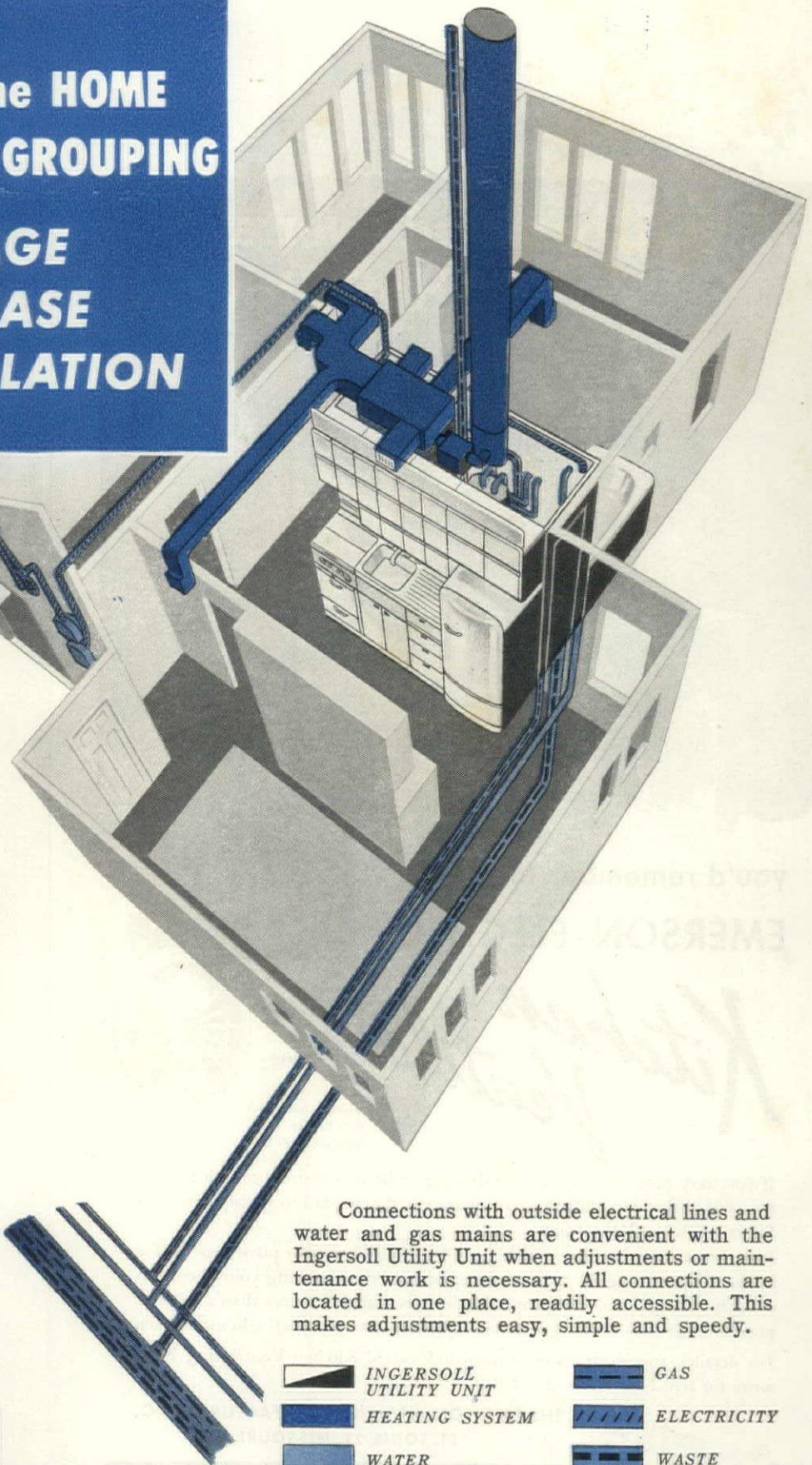


**ALL the UTILITIES of the HOME
ENTERED IN 1 COMPACT GROUPING
IN 1 PACKAGE
PURCHASE
INSTALLATION**

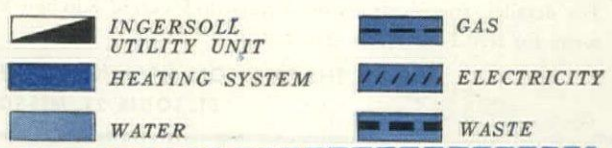
**The INGERSOLL
UTILITY UNIT...**

A single engineered assembly of fixtures, appliances, controls and fittings of Kitchen, Bathroom and Heating Plant, plus all interior plumbing and electrical connections.

- ★ Adaptable and flexible to a wide variety of individual plans and needs.
- ★ Compact—requires less than 80 cubic feet of floor space, providing extra cubage without restricting design.
- ★ Convenient—install before, during or after construction of building framework.
- ★ Available for immediate delivery.



Connections with outside electrical lines and water and gas mains are convenient with the Ingersoll Utility Unit when adjustments or maintenance work is necessary. All connections are located in one place, readily accessible. This makes adjustments easy, simple and speedy.



**Ingersoll Steel
Division**
Borg-Warner Corp.
Chicago 4, Illinois

Ingersoll
UTILITY UNIT
TRADE MARK

INGERSOLL STEEL DIVISION
Borg-Warner Corp., Dept. F11,
310 S. Michigan Ave., Chicago 4, Ill.

Please send me illustrated booklet showing details of the complete Ingersoll Utility Unit.

Name

Firm

Address

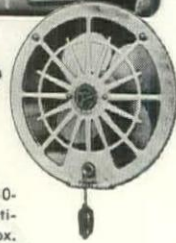
City..... State.....

**if YOU worked over a
Hot Stove...**



**you'd remember to specify
EMERSON-ELECTRIC**

*Kitchen
Ventilation*



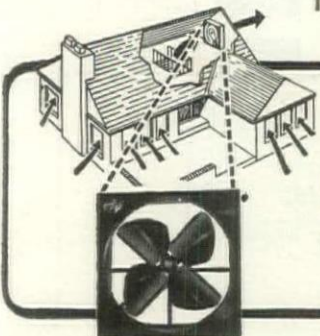
Emerson Junior 10-inch Kitchen Ventilator with wall box.

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. 214 today!

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



Breeze Condition

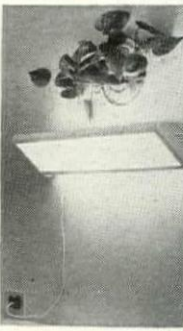
**The Entire Home with an
EMERSON-ELECTRIC HOME COOLER FAN**

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 EMERSON ELECTRIC APPLIANCES

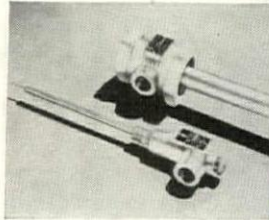
ivory enamel and the partially covered top is flat to permit the use of such decorative touches as plants or figurines placed on it or on the wall behind. Installation can be either direct to an outlet box or by means of an extension cord plugged into a convenient electrical outlet. Cord model is designated as Beverly RWC-220, outlet box model as Beverly RW-220.



Manufacturer: Sylvania Electric Products, Inc., 500 Ave., New York, N. Y.

AIR ELIMINATOR eliminates air in radiators of hot water heating systems.

Reported to eliminate the accumulation of air in radiators of hot water heating systems, the B & G Airtrol System consists of two basic parts, a boiler fitting and tank fitting. Together they function to trap air in the compression tank and prevent its return to the boiler, piping and heat distributing units. The Airtrol Boiler Fitting is actually a tube inserted in a T-shaped fitting. Extending

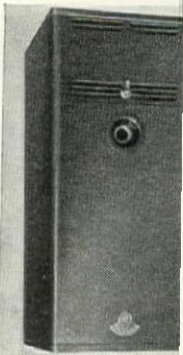


the supply main down into the boiler water, it prevents accumulated air at the top of the boiler from rising into the piping and heating units. Air flows around the tube up into the compression tank leading to the tank fitting. The B & G Airtrol Tank Fitting provides separate passages for air to flow to the top of the compression tank and the water it displaces to flow into the pipe connections to the system.

Manufacturer: Bell & Gossett Co., 8200 No. Austin Ave., Morton Grove, Ill.

OIL BURNING, GRAVITY TYPE FURNACE employs three-stage heating operation for efficiency and economy

The new Superfex Model 74 "Thermaflow", an efficient oil burning, gravity-type furnace for small home heating, features a three-stage heating operation; pilot, coasting and booster fires. The pilot and booster fires constitute the equivalent of an ordinary "on and off" furnace. The coasting or intermediate fire maintains a steady flow of heat in the degree needed when temperature demands are too great for a pilot fire and too mild for a booster fire. The pilot fire burns only a minute quantity of oil, alternates with the coasting fire when relatively little heat is needed. The booster fire takes over when the heat demand is greater than the coasting fire can continue to supply. With the new Thermaflow model, the flow of water is delivered uninterrupted in the quantity needed to meet temperature demands. No heat is wasted in reheating furnace and ductwork, hence fuel economy is claimed. Other special features of the new unit include: a large radiating surface; long flue travel; mechanical draft with its individual thermostatic control and constant level valve with its built-in three-stage oil delivery control. Superfex Model 74 "Thermaflow" has a heating capacity of (Continued on page



LARGEST POST-WAR STORE IN DIXIE HAS

Q-FLOORS

Because they reduce to a small fraction the unpredictable conditions prevalent in today's construction.

Because they speed up building time 20 to 30%.

Because they save a tremendous amount of drafting room time.

Because they provide dry, clean, quiet incombustible, weight-saving construction.

And this is why the largest post-war office buildings in the South, in New England and in Canada are also using Q-Floors.

The over-all electrical availability of Q-Floor enables you to locate partitions and electrical outlets after the building is occupied. Think of this in terms of drafting room expense saved! The steel cells of Q-Floor are crossed over by headers which carry the wiring for telephone, power, signals and every other electrical device. An electrician merely drills a small hole—on any six-inch area of the exposed floor—to establish an electrical outlet. The whole job takes only minutes, leaves no trenches or muss.

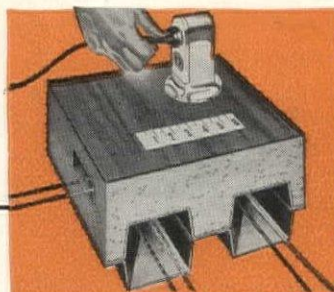
You can see Q-Floor fittings at any General Electric construction materials distributor's. Write for detailed information for your file.

H. H. ROBERTSON COMPANY

2403 Farmers Bank Building
Pittsburgh 22, Pennsylvania



Offices in 50 Principal Cities
World-Wide Building Service



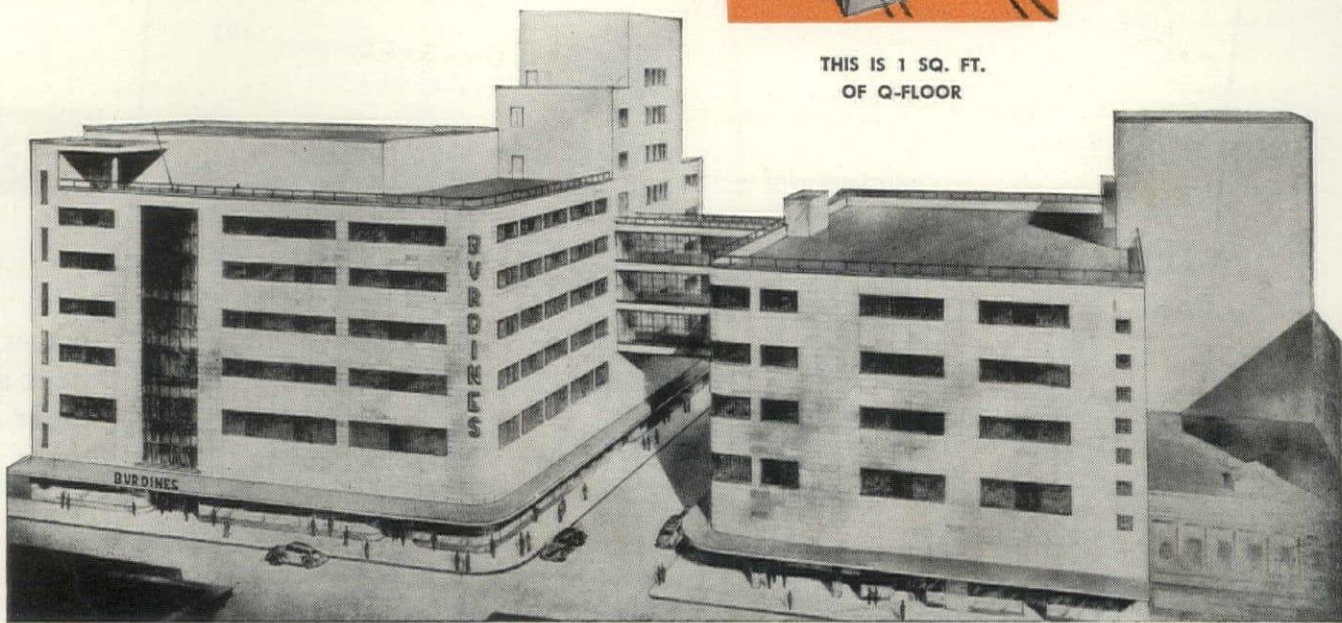
THIS IS 1 SQ. FT.
OF Q-FLOOR

Burdine's, Miami

Architects—E. L. Robertson,
Miami

J. R. Weber,
New York City

Contractor—Rodney Miller,
Miami



SITE FOR MANAGEMENT EYES

Fortune

OCTOBER, 1947

27 Miles Of New Freight Cars	Pennsylvania Railroad	27
For Sale: Freight Service	Al Paul Lefton Co., Inc.	
What Makes A Specialist?	Diamond Chain Company, Inc.	29
For Sale: Roller Chains	Kirkgasser-Drew	
Fuel For The Torch of Liberty	Sun Chemical Corporation	47
For Sale: Ink	J. M. Mathes, Inc.	
Springtime For Sale	The Mead Corp.	50
For Sale: Paper	Gray & Rogers	
This Little Mechanism May Puzzle A Housewife	P. R. Mallory & Company, Inc.	147
For Sale: Electrical Equipment	The Aitkin-Kynett Co.	
... Butter Your Bread On The Right Side	Texas and Pacific Railway Company	171
For Sale: Plant Sites	Rogers & Smith	
Why The Lady Is All Lit Up	Diebold, Inc.	173
For Sale: Office Systems	McCann-Erickson, Inc.	
For Feeding A Family	Witco Chemical Co.	189
For Sale: Industrial Chemicals	Hazard Advertising Co.	
Cure For A Tractor's Toothache	American Brake Shoe Company	191
For Sale: Forged Industrial Tools	Fuller & Smith & Ross, Inc.	
What's Unusual About A Clothespin?	South Carolina Research	198
For Sale: Plant Sites	(Planning & Development Board)	
While She Powders Her Nose	Liller, Neal & Battle Advertising	
For Sale: Automatic Typewriters	American Automatic Typewriter Co.	202
A Pioneer In Pensions	Paul Grant Advertising	
For Sale: Telephone Service	American Telephone & Telegraph Co.	208
	N. W. Ayer & Son, Inc.	

Above are a random dozen of the 200 headlines in October considered "fine enough for FORTUNE" by advertising's best professionals.

There's no simpler test of whether a man is "management" than to know whether he would help choose his company's new plant site. And there's no surer test of a management magazine than its results for plant site advertising.

Typically, in one campaign which drew 2,407 inquiries, FORTUNE produced 26.3% of the total response from 12 magazines.

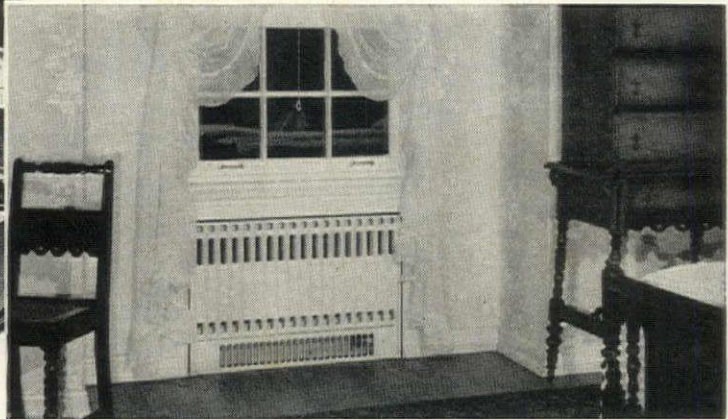
And because of their unequalled interest in plant sites, FORTUNE readers are your best prospects for all the things that go into plant sites—for all the products offered under these headlines from the October FORTUNE—as well as for roofing, piping, concrete and steel; power plants, drill presses, ball bearings, and cable; typewriters, stationery, files, and furniture . . . and a long, long list of etcetera.

Fortune

**WHERE INDUSTRY'S
BEST BUYERS
MEET ADVERTISING'S
BEST SELLERS**



Best

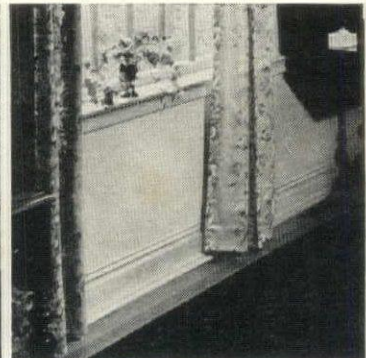


RADIATORS

*for any kind of
Radiation*



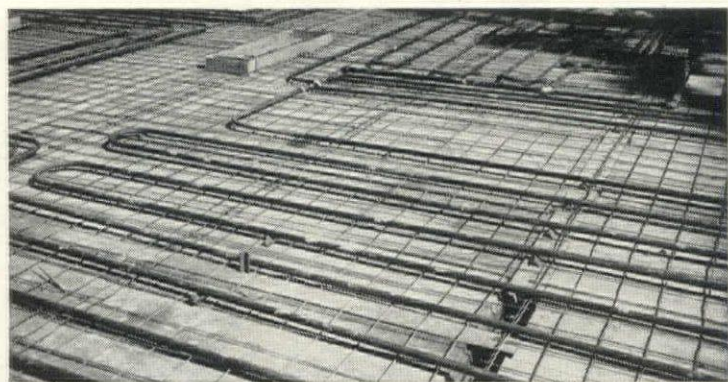
CONVECTORS



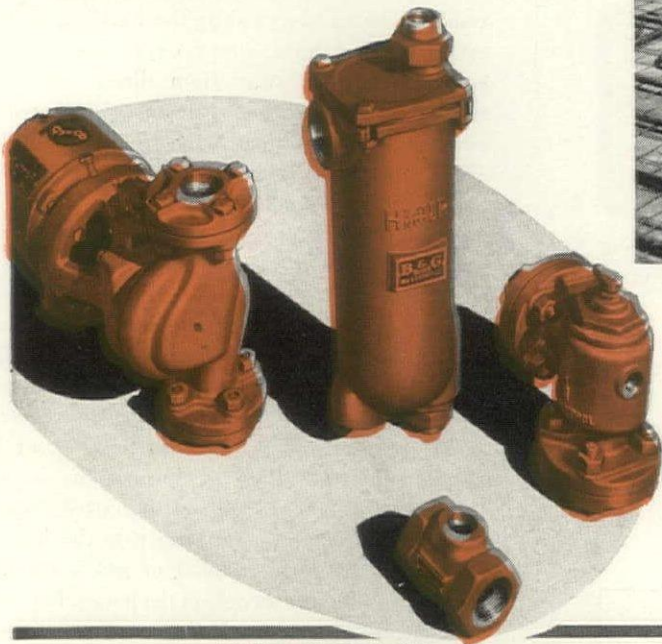
BASEBOARDS

For luxurious winter comfort, there's nothing like the sunny warmth of radiant heat! And whether it is distributed by radiators, baseboards, convectors or radiant panels, a B & G *Hydro-Flo* Heating System assures you of its maximum benefits.

B & G *Hydro-Flo* Heating takes full advantage of the basic superiority of *forced hot water* as a heating medium. It establishes ideal comfort conditions because it measures out heat in the exact amounts required by the weather. As the outdoor temperature varies, the average temperature of the water in the system is *varied also*,



RADIANT PANELS



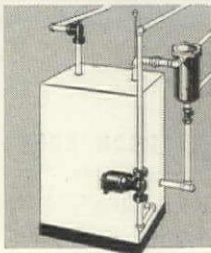
providing exact compensation for changes in heat loss.

The result of this *variable* water temperature is a *constant* room temperature, regardless of weather changes. Operating economy is obvious since fuel is burned only in amounts sufficient to satisfy the heat demand.

Don't forget year 'round hot water

With a B & G *Hydro-Flo* Heating System installed, the same boiler that heats the house also heats water for kitchen, laundry and bath. The supply is virtually limitless . . . low in cost . . . furnished 24 hours a day, all year 'round.

B & G *Hydro-Flo* Heating Equipment can be installed on any hot water heating boiler. It is known everywhere for dependable operation.

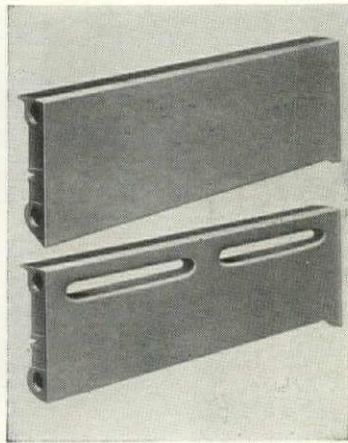


***Hydro-Flo* HEATING**

BELL & GOSSETT COMPANY

Dept. AG10, Morton Grove, Ill.

REG. U. S. PAT. OFF.



60,000 B.T.U.'s at the bonnet, installs in the basement, requires only the connection of room thermostat, fuel oil tank, chimney outlet and heat distributing system.

Manufacturer: Perfection Stove Co., 7609 Platt Ave., Cleveland, Ohio.

BASEBOARD HEATING PANELS for use with forced hot water systems, provide comfortable radiant heat.

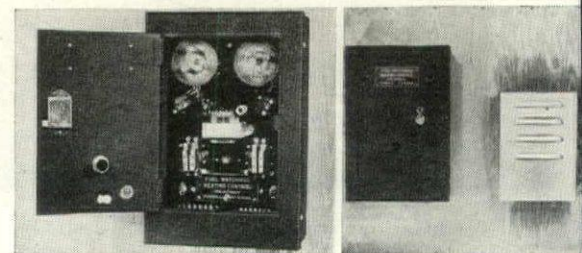
American-Standard's new Baseboard Radiant Panels install along one or more walls of a room to provide clean, efficient, comfortable radiant heat. Cast-iron units, 8 in. high by 2 in. thick, they replace the conventional wooden baseboard, fit snugly against or recess into the wall. The new panels come in two models. Type R is a hollow unit that circulates hot water from the regular boiler and provides radiant heat only. Type RC, for use where heating requirements are above

average, supplies both radiant and convected heat. This incorporates a series of vertical fins on the back, an inlet at the bottom and outlet near the top to achieve its efficiency. Both of the new units come in 12 in. and 18 in. lengths with cast-in supporting lugs on either right and in center sections without end supports. Special enclosures and matching corner covers are furnished. Piping, valves and connections are readily accessible. Panel is finished with a regular wood molding at the top only, Type RC with a regular wood molding at the top only.

Manufacturer: American Radiator & Standard Sanitary P.O. Box 1226, Pittsburgh, Pa.

AUTOMATIC HEAT CONTROL for apartments and buildings maintains desired temperatures within

A completely flexible, automatic heat control for apartments and office buildings with centrally located boiler systems, the Fuel Watchman can be installed on any boiler to provide efficient, year round control of the



supply. Properly installed and regulated, it is said to maintain temperatures throughout the building within two degrees of the desired setting and at the same time to eliminate waste and servicing. The control consists of three parts: a roof control, outside thermostat and main control panel. The roof control, preset at the factory, is located where it receives direct sunshine. It determines the amount of radiation being absorbed by the building in order to prevent overheating on mild, sunny days. The outside thermostat control, mounted away from direct sunshine, operates a selector in the main panel at any of six predetermined temperature settings, which range from 60° F to below freezing. The main control is mounted in the boiler room. Inside the main panel are two synchronous clocks on each of which are mounted 3 plastic schedule discs or dials. Each of these discs is notched to a corresponding outside control setting. When the outside control is 60° F or below there will be one schedule in operation and that schedule will depend on the outside temperature. Each disc has a different schedule depending on the temperature and heating requirements of the building. At 60° F outside, one disc controls the boiler at 55° another and so on down to 30° F or below. Regulated by the discs to furnish the actual power, the operating boilers, are well oversized. The control, operating a steam system only puts the burner on and off. From there the burner stoker or gas is automatically controlled over by the pressure switch on the boiler. For morning peak load the control operates the boiler continuously on pressure. In a hot water system, the control operates the circulating pump. *Manufacturer:* Fuel Watchman Co. 77-29 138th St., Flushing, N. Y.

KEYLESS DOOR LOCK combines security, convenient installation.

Preslok is a simply designed, push-button combination lock that is said to offer greater security (Continued on page 175)

It will be Spring before you know it!



Install USAIRCO Comfort cooling NOW for 1948 profits!

USAIRCO
ALL THE AIR YOUR TRAFFIC WILL BEAR
+
3 GREAT comfort Cooling Systems at 3 Budget levels

You can have air conditioning installed this fall and winter... have your system all set to function the first warm day... and make your first payment April 1st.

It's the new way to get more in Air Conditioning. New, 1948 usAIRCO systems designed now... ordered now, receive all those extra values that come from well-planned unhurried execution. It's a new way to avoid the disappointments of hectic, last-minute ordering and planning... and to get the newest and best in 1948 designs.

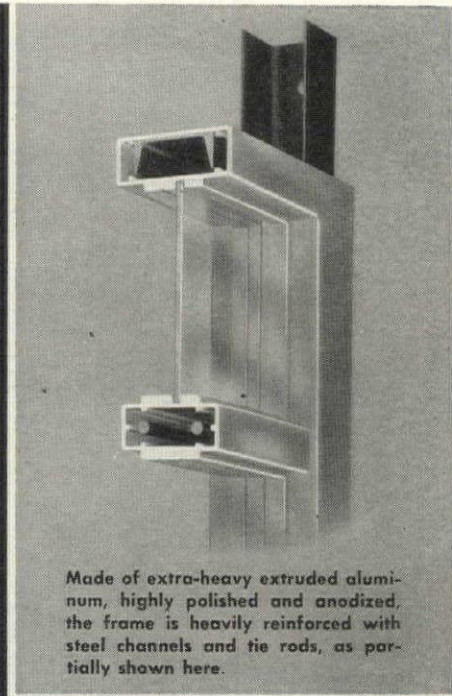
It's the function of good management to plan for tomorrow... to have things ready when they're needed. Good management will use the coupon to obtain complete details.

UNITED STATES AIR CONDITIONING CORPORATION
MINNEAPOLIS 14, MINNESOTA

United States Air Conditioning Corporation
3315 Como Ave. S. E., Minneapolis 14, Minn.
Please send me more details on your deferred payment plan.

NAME _____
ADDRESS _____
CITY _____
STATE _____

New-Unique
HERCULITE
DOOR-FRAME ASSEMBLY
by "Pittsburgh"



Made of extra-heavy extruded aluminum, highly polished and anodized, the frame is heavily reinforced with steel channels and tie rods, as partially shown here.

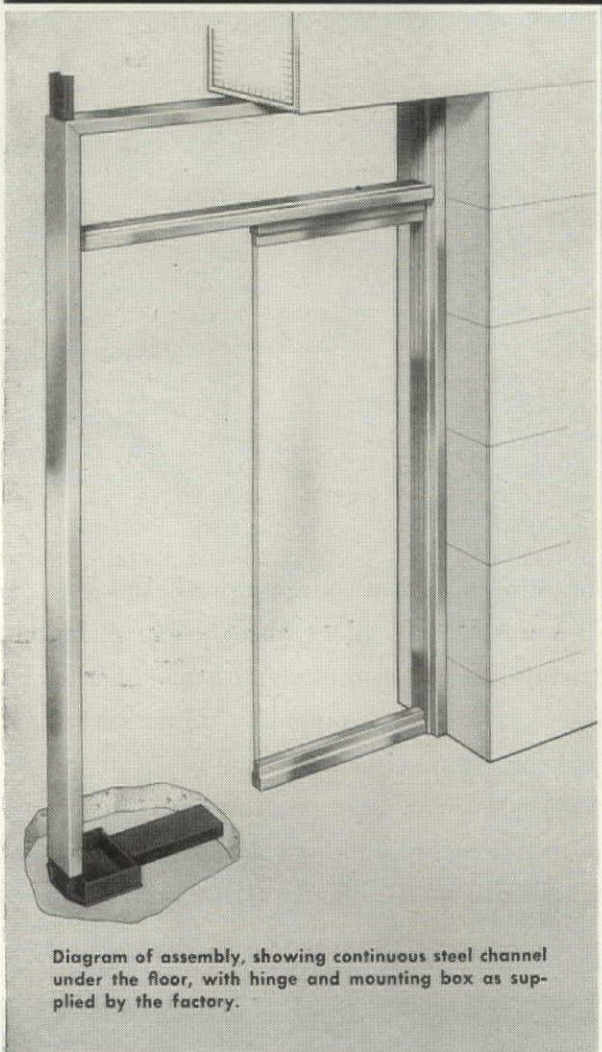


Diagram of assembly, showing continuous steel channel under the floor, with hinge and mounting box as supplied by the factory.

... affords great simplicity of installation

A "PACKAGED" construction, in one unit, this handsome, rugged and easily installed Herculite Door-Frame Assembly by "Pittsburgh" entirely eliminates all problems of setting and fitting; does away with bothersome details of clearances and many other time- and labor-consuming matters. It replaces the complicated custom-made frames which required scores of different materials and the services of various trades to install.

"Pittsburgh's" Herculite Door-Frame Assembly is available in twelve standard styles to satisfy almost any requirement. It is built to accommodate standard Herculite Tempered Plate Glass doors. It is supplied complete with checking floor hinges and top pivots—ready to bolt into the rough building opening. All clearances on the frame and doors are controlled by accurate factory gauges. These features combine to make possible the greatest simplicity of installation. When the building is ready to receive the doors, they are simply set on the hinge pivot, the top pivot is dropped into the top channel, and the entire structure is complete. Nothing else is necessary.

Further detailed information will be supplied you without charge or obligation upon receipt of the coupon below. Why not send it today?

Pittsburgh Plate Glass Company
 2888-7 Grant Building, Pittsburgh 19, Pa.
 Without obligation on my part, please send me your descriptive literature on "Pittsburgh's new Herculite Door-Frame Assembly."
 Name _____
 Address _____ State _____
 City _____



PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS

PITTSBURGH PLATE GLASS COMPANY

Alcoa Aluminum INDUSTRIAL

Get bids! They'll be LOW.. and the roof, BETTER

LONGER LASTING

NO PAINTING

FASTER CONSTRUCTION

LIGHTER DEAD LOAD

Aluminum, a topflight roofing material that has been used on monumental buildings for many years, is now economical for industrial applications. Alcoa Industrial Roofing and Siding is made of a tough Alcoa Alloy that is unexcelled in resistance to atmospheric corrosion by any aluminum alloy now made. It is easy and inexpensive to put on . . . attractive in appearance.

Alcoa Industrial Roofing and Siding gives you, and

your clients, that almost unbelievable combination . . . a *better* material at *lower* price. A material that withstand common industrial atmospheres . . . smoke fume . . . for years on end. A material that won't streak or stain.

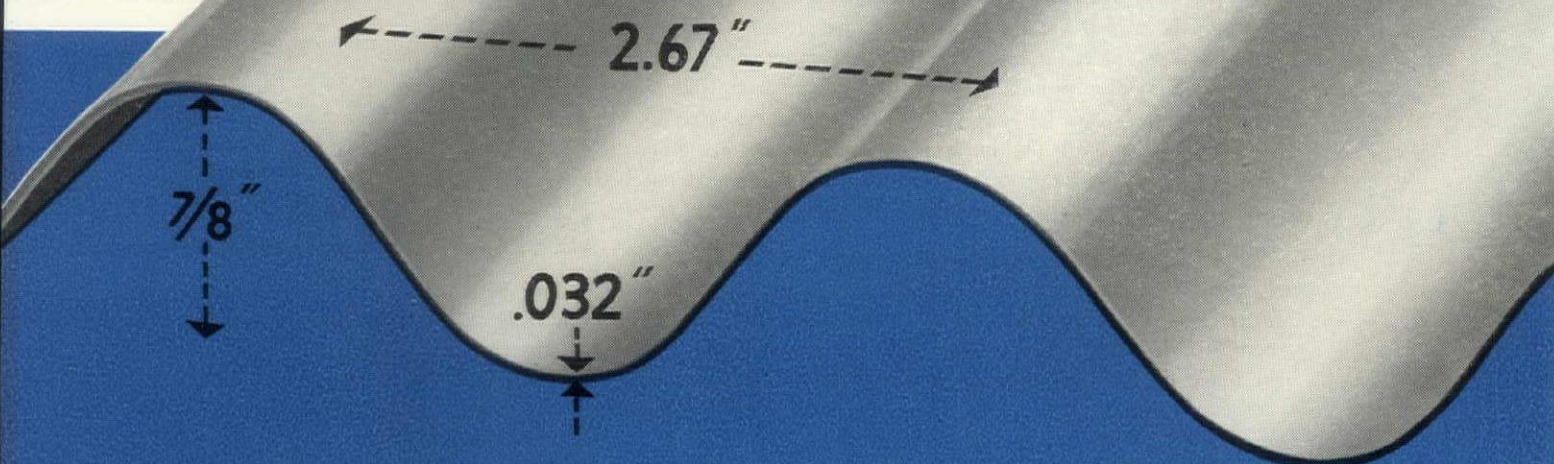
Figure it in aluminum, any job on your boards can use sheet roofing or siding. Calculate not only savings but also the client satisfaction, which will be pl

WRITE FOR PRICES



ALCOA

ROOFING and SIDING



HERE ARE THE DETAILS

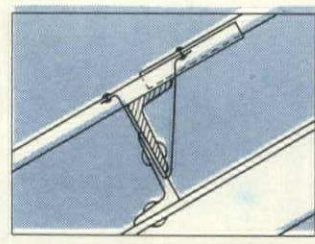
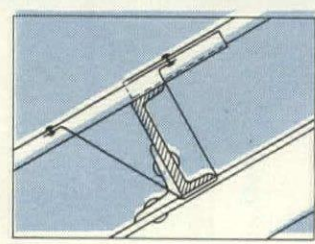
- Thickness: .032 inches.
- Lengths: 5, 6, 7, 8, 9, 10, 11 and 12 feet.
- Widths: Roofing sheet, 35 inches; Siding sheet, 33 3/4 inches; Coverage: 32 inches.
- Corrugation: 3/8 inch deep, 2.67 inches crown to crown.
- Weight: 56 lbs. per 100 sq. ft.

LOAD CARRYING CAPACITY

PURLIN SPACING	CLEAR SPAN	UNIFORM LOAD p. s. f. (Safety factor: 2)
6' 6"	76"	29
6' 0"	70"	35
5' 6"	64"	41
5' 0"	58"	50
4' 6"	52"	63
4' 0"	46"	80

QUICK APPLICATION

Illustrated here are two of the many ways of installing Alcoa Industrial Roofing Sheet.



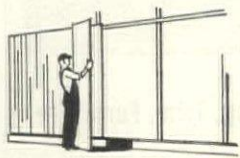
STRAP FASTENERS CAN BE ADAPTED TO PRACTICALLY ANY TYPE OR ARRANGEMENT OF PURLINS.

WITHSTANDS INDUSTRIAL SMOKE AND FUME



Alcoa Aluminum has been used for many years on coal mines, railroad terminals, warehouses, factory buildings, and locomotive roundhouses. The protective qualities of Alcoa Roofing and Siding have been virtually unaffected by these severe conditions.

FOR SIDING THAT GOES UP FAST



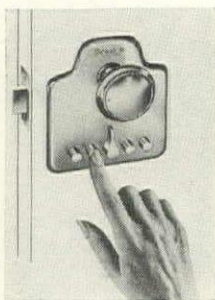
Alcoa Industrial Siding has the same corrugation dimensions and lengths as Industrial Roofing. Overall width is 33 3/4 inches covering 32 inches and providing extra economy for siding applications. Properly applied and with girt spacings up to 7'9" it will withstand 20 p.s.f. wind load.

ASK FOR COMPLETE INFORMATION



Pick up your telephone now and call your local Alcoa sales office. Ask for a sample and complete information on Alcoa Industrial Roofing and Siding Sheet. Or write to ALUMINUM COMPANY OF AMERICA, 1450 Gulf Bldg., Pittsburgh 19, Pennsylvania.

INDUSTRIAL ROOFING AND SIDING

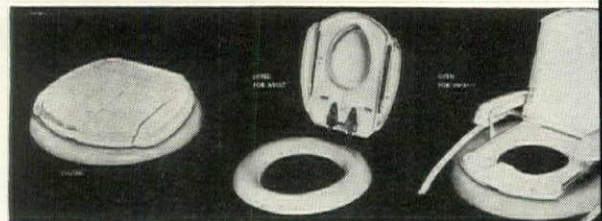


than ordinary door locks. Operating without a key, it locks with the flick of a lever and opens only when the proper combination is tapped out on 4 small buttons placed under the knob. According to the manufacturer the number of combinations is virtually unlimited and the change from one to another can be easily and quickly accomplished. Preslok installs on standard 1 $\frac{3}{4}$ in. wooden doors and most other doors. Installation requires only a single, straight-through cut. *Manufacturer: Security Lock Corp., Walden, N. Y.*

TOILET SEAT COVER incorporates child's trainer seat.

Resembling a modern toilet seat cover, the King Cole Infant Trainer is a compact folding unit that opens into a safe, comfortable training seat for the baby. It permanently installs in place of the regular seat cover, eliminates the fuss and bother of attaching and removing the training seat. When

closed the unit functions as a cover to protect the adult. When opened for infant use it automatically locks in



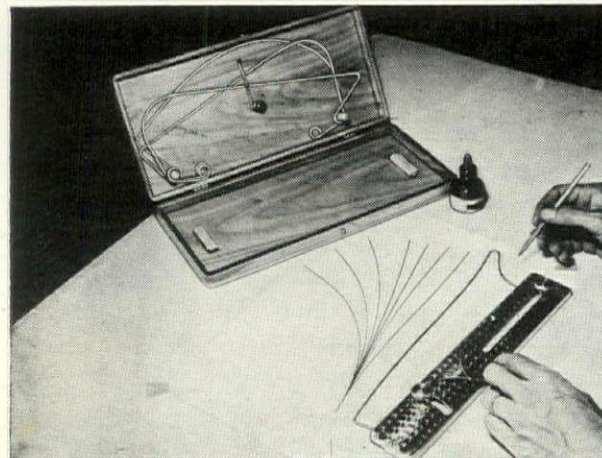
trainer with strong, wide arms and back. Raised in the conventional manner it does not interfere with adult use. The plastic unit is strong and durable, incorporates a built-in deflector and vinyl straps for protection. Price is \$6.95. *Manufacturer: Cambridge Industries, Inc., 315 East St., New York, N. Y.*

CONVERTIBLE SOFA-BEDS styled to blend with modern interiors.

Converta-Sofa Inc. has announced its entry into the popular priced market with the introduction of two new convertible sofa-beds designed to harmonize with modern interiors. Retaining the patented space-saving and quick convertible features of the original unit, they are attractive by day and comfortable beds at night. One model, of modern conventional design, has its three back cushions securely attached to the back panel to its save time, effort and space when converting. Bedding is housed in a compartment behind this pivoting hinged back panel which raises to provide use of the full mattress width for sleeping. The other model, of English Lawson design, has two over-size cushions supported by the back panel. Seat is a comfortable divided inner-spring mattress. Both models have removable inner-spring mattresses of full length and approximate twin bed width mounted on a No-Sag base. Both come in a wide selection of coverings. *Manufacturer: Converta-Sofa Inc., 14850 Linwood Ave., Detroit, Mich.*

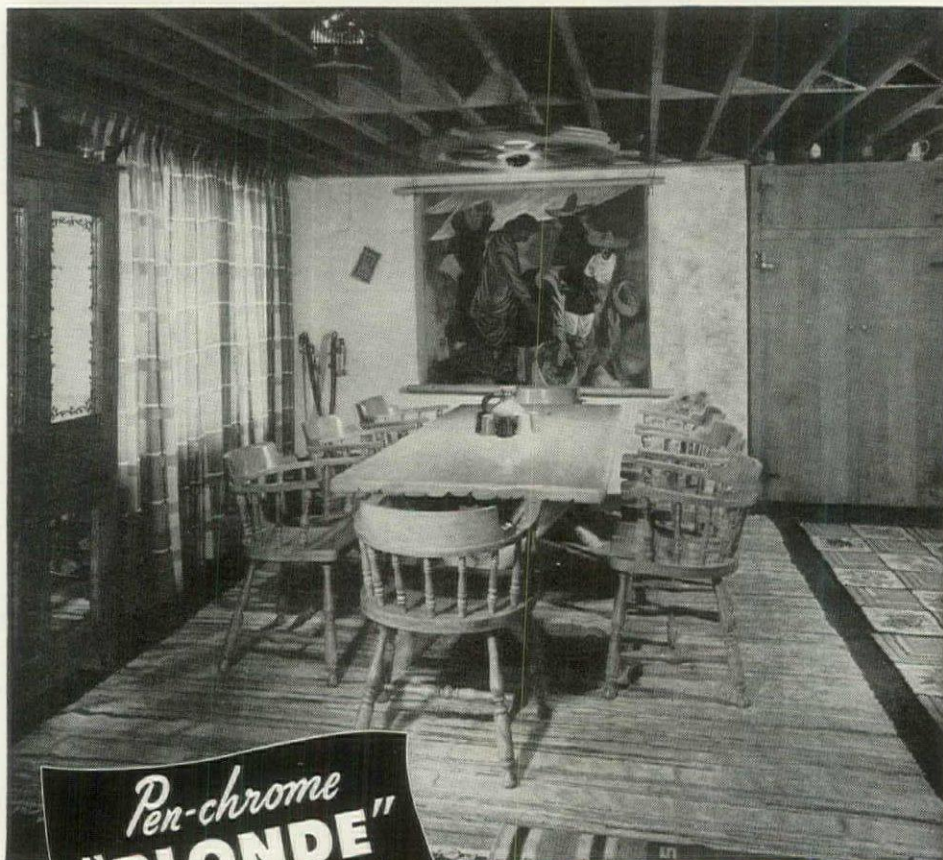
INSTRUMENT for drawing curves.

Infinarc is a new, inexpensive curve drawing instrument which, according to the manufacturer, it is possible to produce almost any desired shape including reverse curves. It



is based on a new principle and is composed of a 12 in. base and 4 interchangeable, preformed wire curves. The desired curve is obtained with these especially tempered wire forms and the shape is altered by moving either or both of two adjustable screws along slots in the base. Infinarc is made entirely of stainless steel, comes in a lacquered wood instrument case. *Manufacturer: Cook Speciality Co., Green Lane, Pa.*

(Technical Literature, page 1)



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
- BLEACHED MAHOGANY
- MAHOGANY
- DRIFTWOOD
- PLATINUM
- BLONDE
- LIGHT OAK
- DARK OAK
- AMERICAN WALNUT
- MAHOGANY

Request free sample and color card today on your business letterhead.

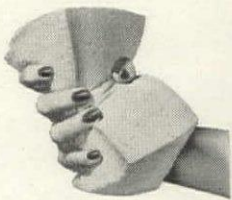


THE O'BRIEN CORPORATION, 101 N. JOHNSON ST., SOUTH BEND 21, IND.

UNITED STATES RUBBER COMPANY

SERVING THROUGH SCIENCE

No Place for Vermin



KOYLON—the world's most comfortable material—makes life uncomfortable for vermin. For the very characteristics of Koylon Foam make it *verminproof!* Vermin just won't go near Koylon Foam—even if they could build a home in it.

Koylon Foam starts clean—*stays*

clean! That's one of the many reasons why this amazing cushioning and mattress material is ideal wherever people sit or sleep. In *every* way it's best for the people you serve and best in the way it serves you. For the *matchless comfort* of Koylon can be provided easily, economically and permanently.

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!

Mattresses, chairs, sofas—Koylon provides all with comfort that sells itself!



U. S. Koylon Foam Division, Mishawaka, Indiana

← BREWERY WAREHOUSE, 9480 Quincy Ave. (Addition)

← PERFECTION STOVE PLANT, 1135 Ivanhoe Rd. (Addition)

← CLINIC FOUNDATION, 2020 E. 93 St. (Addition)

● SOUTHERLY SEWAGE TREATMENT PLANT

← EASTERLY SEWAGE TREATMENT PLANT, 4709 Maximer Ave.

● SERV. BLDG., 3207 Grant Ave.

● GARAGE, E. 49 St.

← APTS., 2540 N. Moreland Blvd.

← OFF. BLDG., S. Moreland Blvd.

← OHIO BELL TEL. CO., 12223 St. Clair Ave. (Addition)

← LAUNDRY BLDG., McBridge Ave. (Addition)

← ELEC. PLANT, E. 179 St.

← PHYSICIANS & SURGEONS HOSP., 2700 Euclid Blvd.

← SCHOOL, 2500 E. 46 St. (Addition)

← HOSP., 2103 Adelbert Rd. (Addition)

← SERVICE BLDG., Chester Ave. & E. 40 St.

← RESEARCH CENTER, Mayfield Rd.

← SHOPPING CENTER, E. 222 St.

← OFF. BLDGS., Glenridge & Green Rds.

← SCHOOL, So. Euclid

← HEALTH CENTER, 1500 E. 55 St.

← APTS., Cedar Rd.
PLANT, 3600 Lakeside Ave

← HOSP., E. 185 St.

← PUMPING STATION

HOUSING, 13000 Brookpark Rd

● APTS., 3000 Brookpark Rd.

● APTS., Broadview Rd.

● FIRE STATION, Pearl Rd.

● FANNER PLANT, 3702 Brookside

● CITY HOSP. (Addition)

● STEEL MILL, Jennings Rd. & Clark Ave.

● BAKING PLANT

MOTOR VEHICLE MAINT. BLDG. W. 3 St. & Clark Ave.

● CREAMERY, 2310 W. 17 St. (Addition)

POWER STATION, 2274 Canal Rd

Cleveland Trees

STORAGE BLDG.,

← HOSP., 2103 Adelbert Rd. (Addition)

← SERVICE BLDG., Chester Ave. & E. 40 St.

← RESEARCH CENTER, Mayfield Rd.

← SHOPPING CENTER, E. 222 St.

← OFF. BLDGS., Glenridge & Green Rds.

← SCHOOL, So. Euclid

← HEALTH CENTER, 1500 E. 55 St.

← APTS., Cedar Rd.
PLANT, 3600 Lakeside Ave

← HOSP., E. 185 St.

← PUMPING STATION

● COAL PLANT, 2831 Carnegie Ave

● PLANT, 2507 E. 22 St. (Addition)

● STORE, 2010 Euclid Ave. (Addition)

● GARAGE, 3001 Superior Ave.

● GREYHOUND BUS STATION, 1465 Chester Ave.

● HALL BROS. STORE, 1041 Huron Rd.

● SERV. BLDG., 1199 Prokett Ave.

● WAREHOUSE, 2215 St. Clair Ave.

● GARAGE, 1418 Superior Ave.

● ATHLETIC CLUB, 1118 Euclid Ave. (Addition)

● BOND STORE, 815 Euclid Ave.

● CATHEDRAL SQ., Superior Ave.

● BANK, Euclid Ave.

● RENN. R.R. STATION (Proposed)

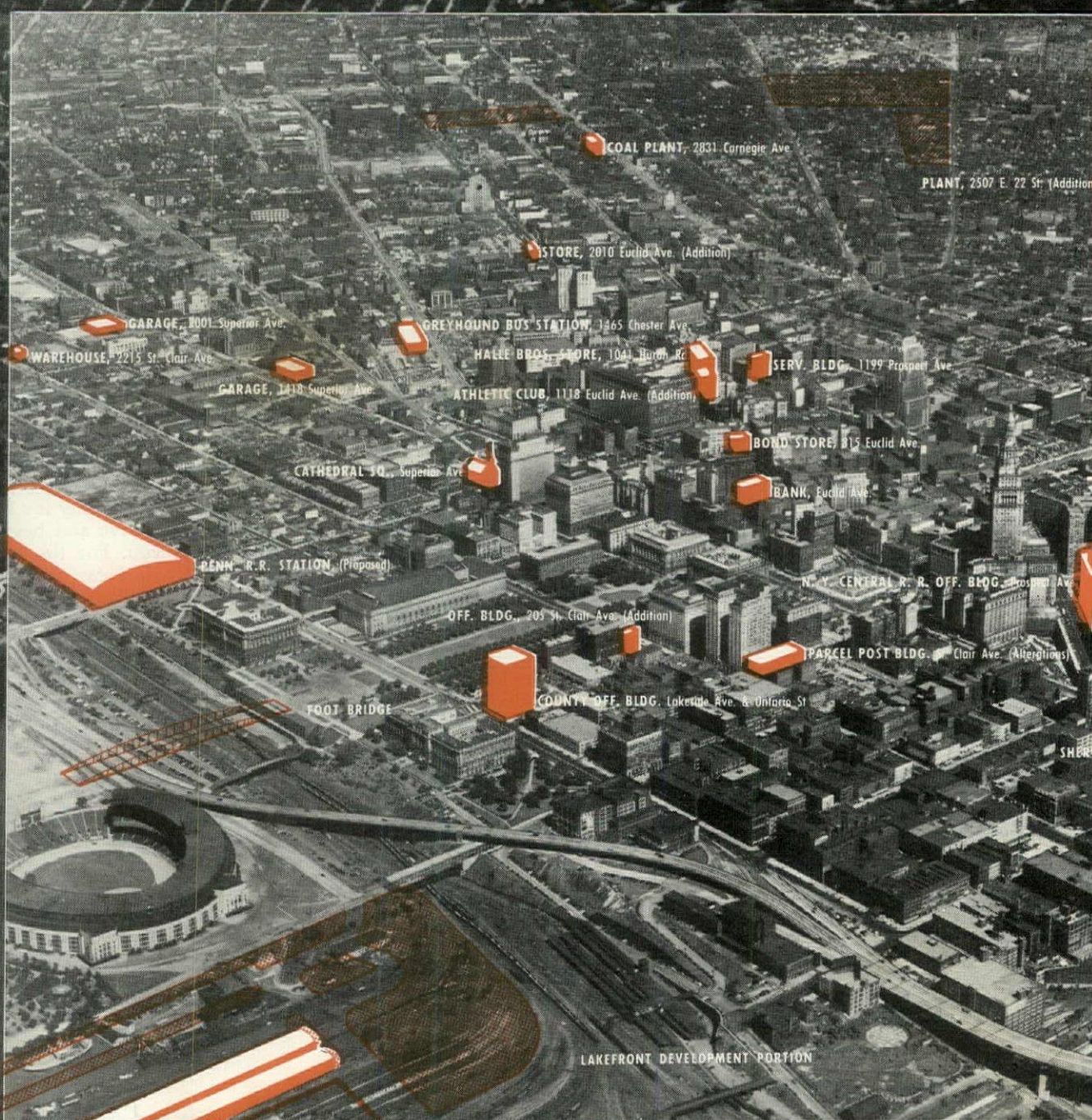
● OFF. BLDG., 205 St. Clair Ave. (Addition)

● N.Y. CENTRAL R.R. OFF. BLDG., Prospect Ave.

● PARCEL POST BLDG., Clair Ave. (Alterations)

● FOOT BRIDGE

● COUNTY OFF. BLDG., Lakeside Ave. & Ontario St.



LAKEFRONT DEVELOPMENT PORTION

The new look for CLEVELAND

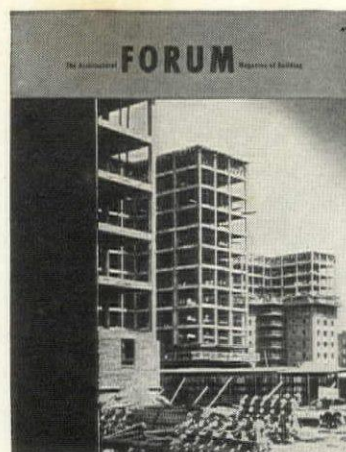
Shown on the air map are some of the great new structures which will change the skyline of Cleveland over the next decade.

From hillside suburbs to industrial bottom lands, new buildings are springing up—stores, apartments, schools, factories, homes, office buildings—every kind and size of structure.

And while Cuyahoga Valley rings with the sound of building, in cities and towns across the country architects, engineers, builders, contractors, bankers, suppliers and investors are forming building teams to plan and carry out a construction program without precedent.

The men who dominate this great nationwide program—some 60,000 of them—through long experience have come to rely on the FORUM for a comprehensive picture of the building industry as it is today, as it plans for tomorrow.

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THE ARCHITECTURAL
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Building product manufacturers and their advertising agencies are invited to send for a new booklet "SOMETHING HAPPENS."

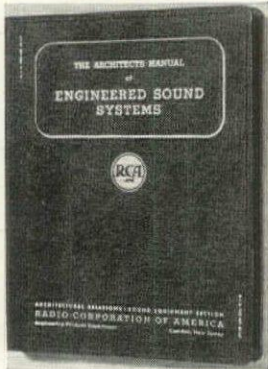
Address: THE ARCHITECTURAL FORUM, 350 Fifth Avenue, New York 1, New York.

To those regularly engaged in any branch of building—design, construction, financing, distribution, ownership or management—the FORUM (published monthly) is available at the professional rate of \$5.50 (U.S. and Canada). Letterhead or other proof of occupation must accompany orders. Subscription to nonprofessionals, \$8.50 (U.S. and Canada). Foreign rates on application.

Address: THE ARCHITECTURAL FORUM, 540 North Michigan Avenue, Chicago, Ill.



TECHNICAL LITERATURE



SOUND SYSTEMS. The Architects Manual of Engineered Sound Systems. Architectural Relations, Sound Equipment Section, Radio Corporation of America, Camden, N.J. 288 pp. 9¼ in. x 11½ in. Price \$5.00

The Architects Manual of Engineered Sound Systems is a valuable guide for those engaged in designing and installing sound systems in modern structures. Consisting largely of typical layouts and specifications for sound systems in schools, hospitals, churches, auditoriums, stores, industrial buildings and hotels, the work also includes data, complete with architectural and engineering details, on such specialized installations as studios and control rooms, projection rooms, etc. Special sections give technical descriptions of the components of a modern sound system, the microphone, amplifier, loud-speaker and controls. An informative chapter on acoustics discusses sound intensities and sound levels, the decibel, conversion of electrical energy to sound energy, noise and

noise levels, sound frequencies, reverberation, methods of correcting unsatisfactory reverberation time, echo and other subjects. This section also contains complete absorption coefficients for various materials used for local purposes. Informative chapters on the sound film and antenna systems are also included.

PLASTER. Technical Information Gypsum Plaster Base Coats and Finishes. United States Gypsum Co., 300 West Adams St., Chicago, Ill. 14 pp. 8½ in. x 11 in.

This pamphlet is designed to give the architect full and fire test data on U. S. Gypsum's complete line of Base Coat and Finishing Plasters. Containing precise specifications for the various Red Top Plasters, complete fire test data on a variety of partition and ceiling construction utilizing the different gypsum products. Complete performance data on use of USG materials in different types of coats are also included.

METAL BUILDING PRODUCTS. Leigh Catalog 47-L. Control Products Inc., Coopersville, Michigan. 10 pp. 8½ in. x 11 in.

Leigh all-metal building products are fully illustrated and described in this catalog. Advantages, uses, availability and installation data are included for each of the following products: ornamental shutters, dust chutes, clothes doors, brick and foundation ventilators, attic and roof ventilators, built-in mail-boxes, milk and package receiver

FLOORS. Beautiful Floors For Homes Without Basements. Armstrong Cork Co., Lancaster, Pa. 6 pp. 8½ in. x 11 in.

This booklet explains why Armstrong's Asphalt Tiles are especially suitable for use in basementless homes. It details how the material withstands the harmful effects of moisture and alkali present in concrete slab construction—the major cause of basementless homes; its suitability for use with radiant heating and other advantages such as durability, ease of maintenance, wide color range, etc. Several installations of this material in basementless homes are illustrated in color.

RADIANT HEATING. Radiant Panel Heating. A Non-Technical Discussion. Revere Copper and Brass Inc., 230 Park Ave., New York, N.Y. 36 pp. 8½ in. x 11 in.

Presenting authoritative information on the pros and cons of radiant panel heating, this non-technical introduction to the subject gives facts on the following: claimed and actual advantages of radiant panel heating; claimed and actual disadvantages of radiant panel heating; relative advantages of ceiling, wall and floor panels and the best methods of distributing the panel surface. Written primarily for architects, engineers and heating contractors sufficient background to enable them to compare radiant panel heating with other types of heating systems, the material presents conclusions, offers no recommendations, but is a good go-to-earth approach to the subject.

RADIANT HEATING. Brass and Copper In Your Home, Radiant Heating. Chase Brass & Copper Co., Waterbury, Conn. 8½ in. x 11 in.

This non-technical publication briefly summarizes the principles of radiant heating, lists its advantages and elaborates upon the use of copper tubing in its installation. Closing sections of the brochure explain the fundamentals of radiant heating, discuss its history and compare it with conventional heating. Following sections illustrate and describe the use of Chase Copper Tubing in ceiling, floor and wall panel installations. Closing sections cover other Chase products such as bronze screening, copper water tubing and roofing products.

(Continued on page 183)

ADD MORE *Visible Value*



Kintrim
REG. U. S. PAT. OFF.

decorative and protective metal mouldings

In kitchens, Stainless KINTRIM imparts a distinctive beauty that owners and tenants can see . . . and appreciate . . . and value more highly. That's visible value! Installed in corners and along edges of sink and counter-tops, walls and floors—graceful, lustrous KINTRIM gives lasting protection to linoleum and other coverings . . . guards them against costly wear and tear.

Indeed, you can plan a liberal use of beautiful, serviceable coverings—with KINTRIM. It's precision-made to accent the beauty of your modern design—to give it more *Visible Value!*

A LITTLE KINTRIM ADDS A LOT MORE *Visible Value*



IN HOMES



HOSPITALS



STORES



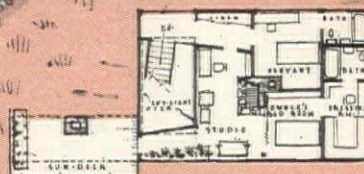
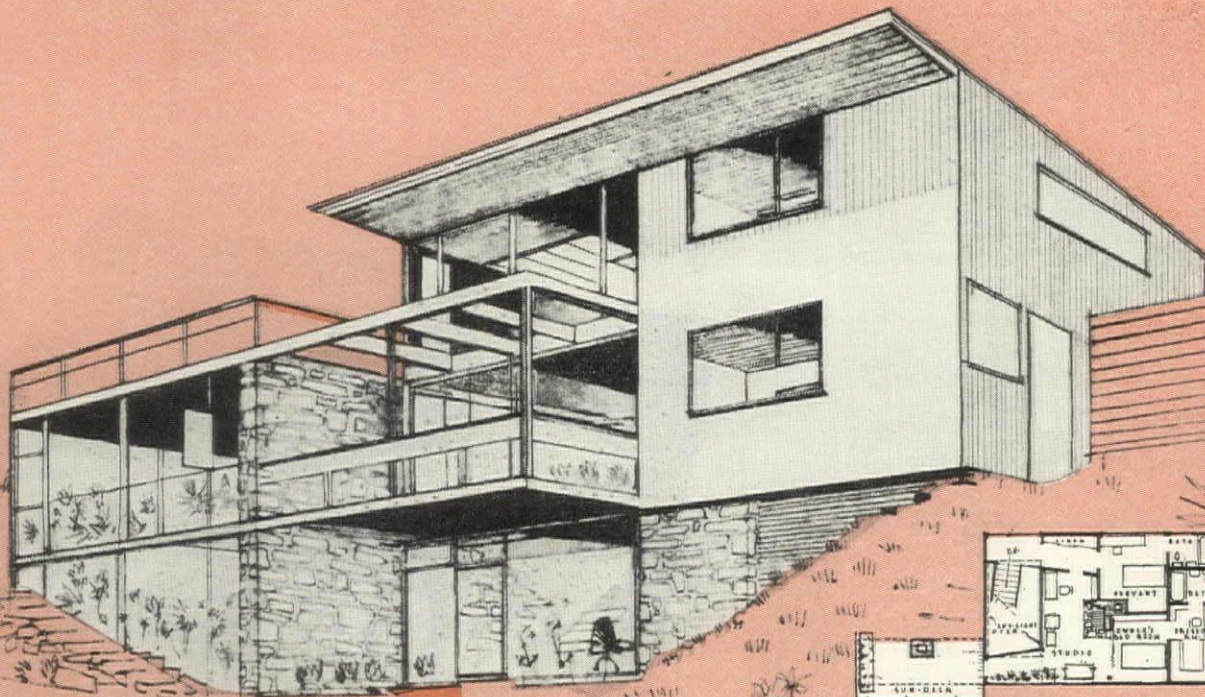
HOTELS



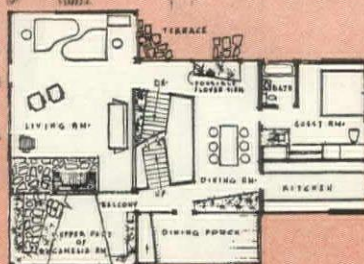
THEATRES

See KINTRIM in Section 13J-2 of Sweet's 1947 Architects' File — or write us, Dept. 117, for reprint.

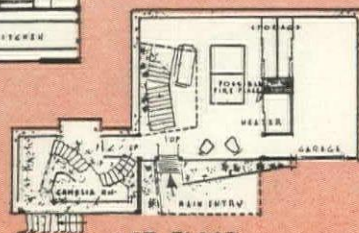
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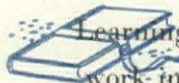
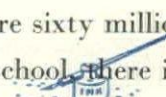
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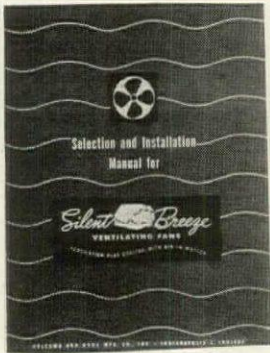


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VENTILATING FANS. Selection and Installation Manual For Silent Breeze Ventilating Fans. Holcomb and Hoke Mfg. Co., Inc., 1545 Van Buren St., Indianapolis, Ind. 40 pp. 8½ in. x 11 in.

This manual offers complete information on the selection and installation of Silent Breeze Ventilating Fans in homes, industrial and commercial buildings. Beginning with a full description of the ventilating fan and available accessories (automatic shutters, an automatic control, etc.) following sections cover residential and non-residential installations. These outline in detail the procedure for selecting the correct size fan and the best method of installation. Both sidewall and suction plenum installation methods are covered for residential installations. In "non-residential installations", suction ventilation and pressure ventilation systems are discussed. Concluding pages present installation diagrams, details, etc. Manual should be requested on business letterhead.



RACEWAYS. Raceway Fittings, Wiremold Catalog and Guide No. 17. The Wiremold Co., Hartford 10, Conn. 4½ in. x 6½ in.

In addition to general catalog information on all Wiremold Surface Metal Raceways and Fittings and Fluorescent Lighting Equipment, Guide No. 17 includes up-to-date wire capacities of the raceways and a complete list of Wiremold interconnecting fittings. Wire capacities include data on the small diameter types T and R. Fittings for each type of raceway are listed in separate sections to facilitate finding a needed fitting for a connection. All products are fully illustrated and new easy-to-understand installation drawings minimize guesswork. An alphabetical index affords easy reference.

EQUIPMENT. Dresser Industries, Inc., "All Along The Line" Dresser Industries, Inc., Terminal Tower, Cleveland 111 pp. 8½ in. x 11¼ in.

This book is an elaborate presentation of typical equipment manufactured by each of the members of Dresser Industries, Inc., a group of companies engaged in the production of a wide variety of equipment. Each product is well illustrated and briefly described. Many of them are of interest to the engineering and construction field. Such products include: air conditioners, airport equipment, blowers, boilers, heating buildings, compressors, dehumidifiers, derricks, electric radio masts and towers, water heaters, pumps, etc.

PARKING FACILITIES. An Economic Study of Interior Parking Facilities by Charles S. LeCraw. Bureau of Traffic, Yale University, Strathcona Hall, New Haven 29 pp. 6½ in. x 9 in.

Taken from a thesis prepared by Charles S. LeCraw at Yale University, this study deals with some of the economic aspects of providing off-street parking space in the interior of business blocks. The contents cover: the parking problem, a study of separate interior-block land parcels, study of the value of various portions of street-front land parcels, study of entrances and exits for interior-block parking facilities and conclusions. Work is illustrated with figures and maps.

UNDERPASSES & TUNNELS. Manual of Underpass and Service Tunnels. Armco Drainage & Metal Products Inc., Middletown, Ohio. 24 pp. 8½ in. x 10 13/16 in.

How to provide underground passageways and tunnels for people, livestock, merchandise or utility lines is the subject of this manual. Well illustrated with photographs, tables and details, it gives data on sizes and shapes of openings and three methods of obtaining openings and the types of structures available. Other sections discuss floors, drainage, lighting, brackets, end treatment and aggregate conveyors.

REQUESTS FOR INFORMATION

HARRY L. ALPER, architect, 565 Fifth Ave., New York 17, requests literature and samples of new building products particularly adaptable to store design.

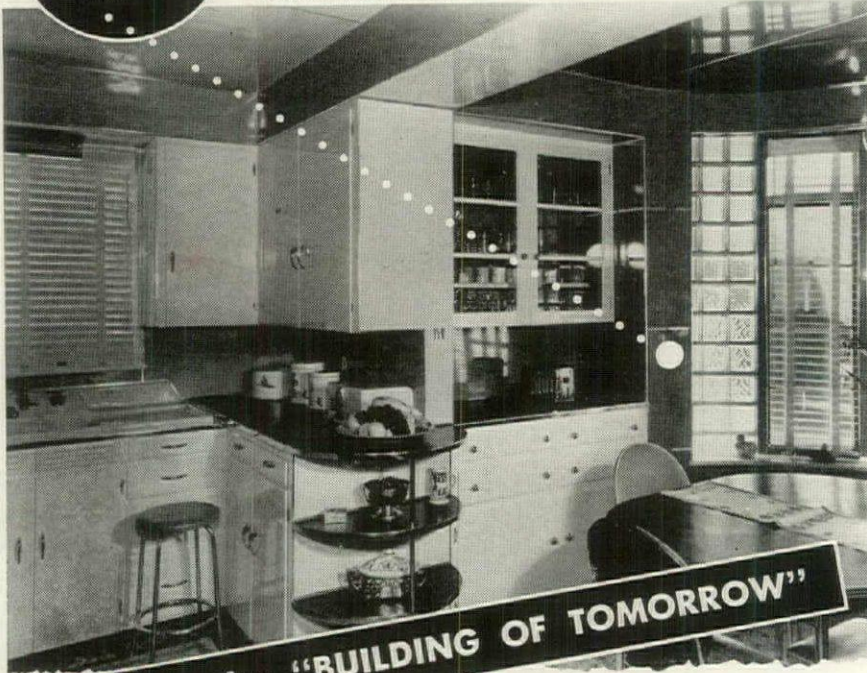
WAYNE E. CHAMPION, designer for Aviation Facilities, Box 1171, Arcata, Calif., requests information on air conditioning design, including hangar and aircraft maintenance service buildings, ticket and passenger facilities, etc.

DON E. KNOBLAUCH, engineer, 8022 West Dixon St., Milwaukee 19, Wis. requests information on products applicable to small and medium size houses.

RAPHAEL TING, consulting structural engineer, 1684 Siping Road, Shanghai, China, requests information on reinforced concrete design, electric arc welding and general building materials.



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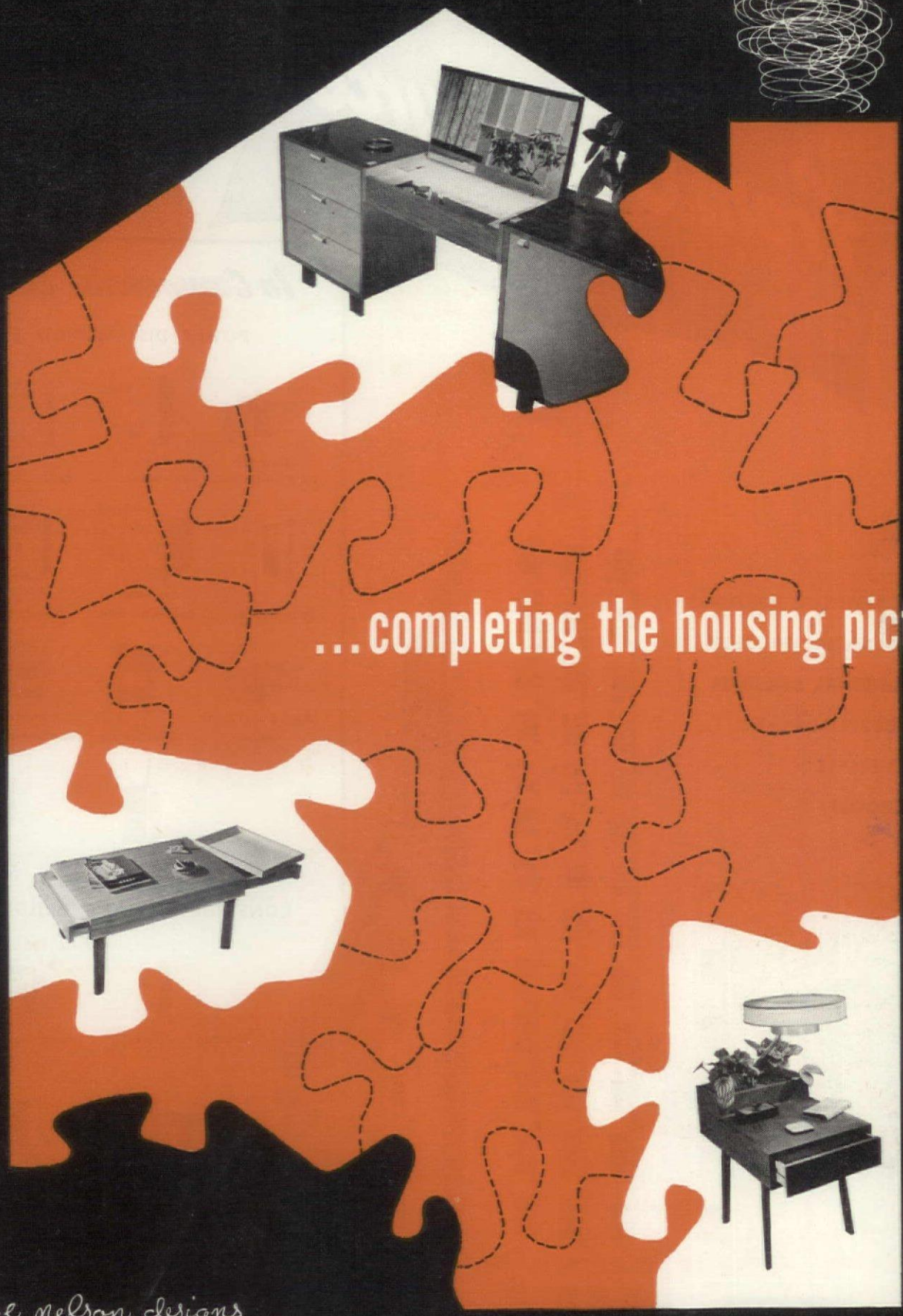
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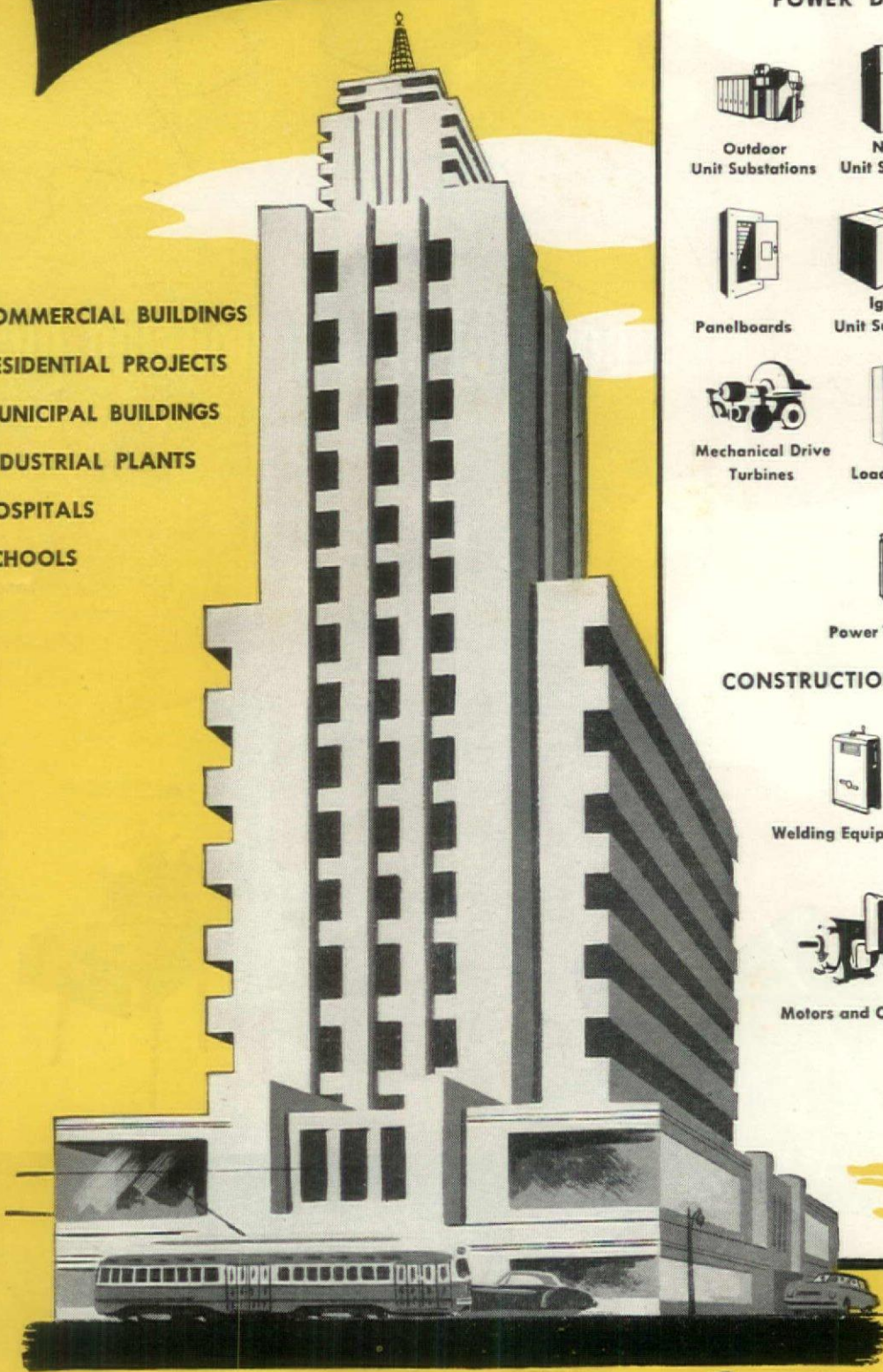
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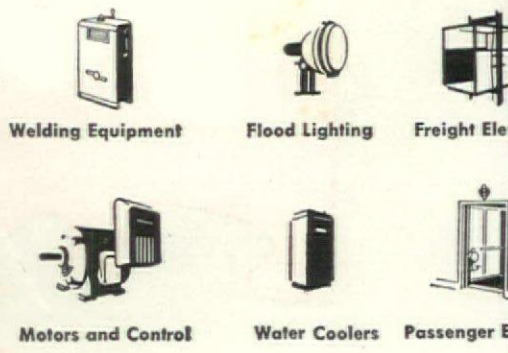


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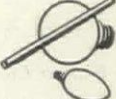
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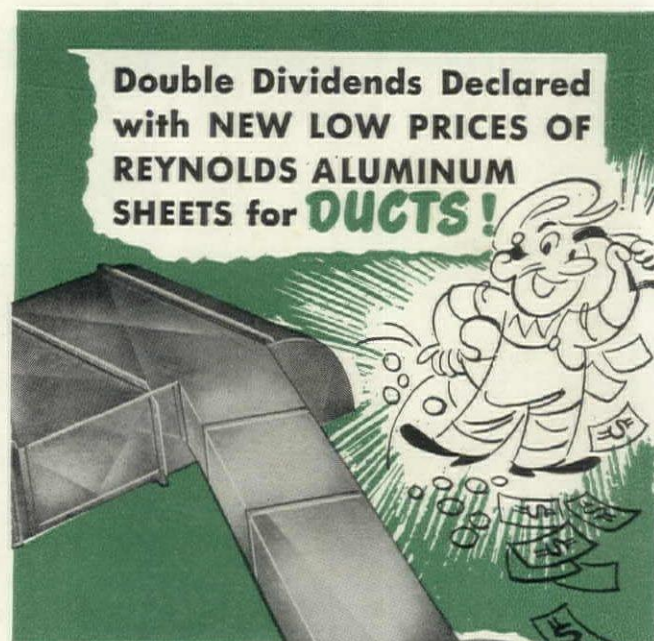
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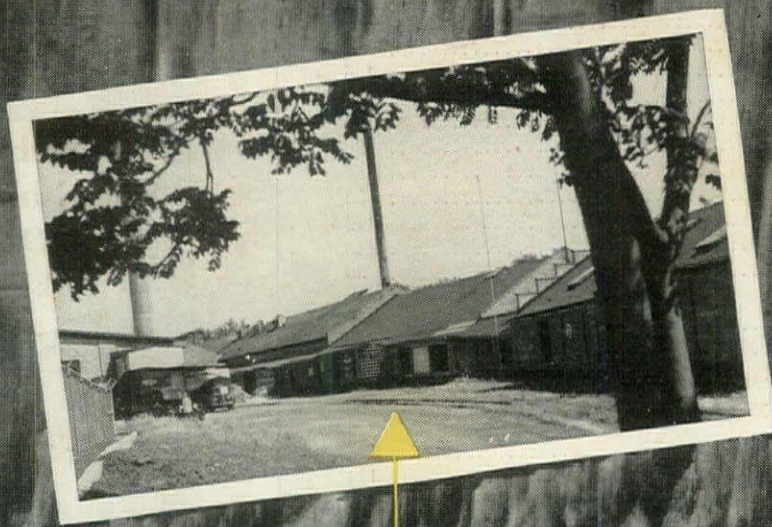
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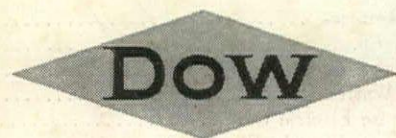
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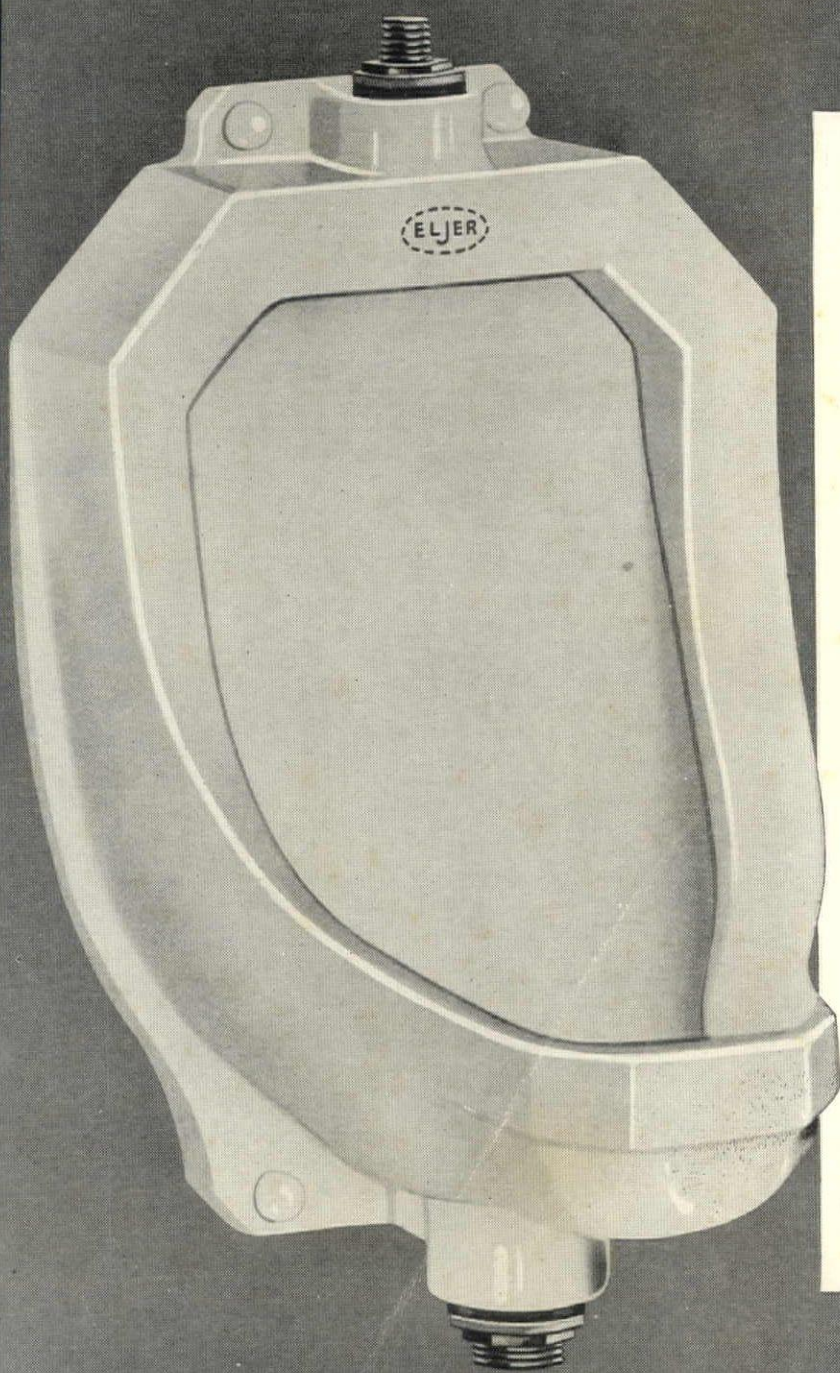
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