

CIRCULATE

The Architectural

FORUM

Magazine of Building

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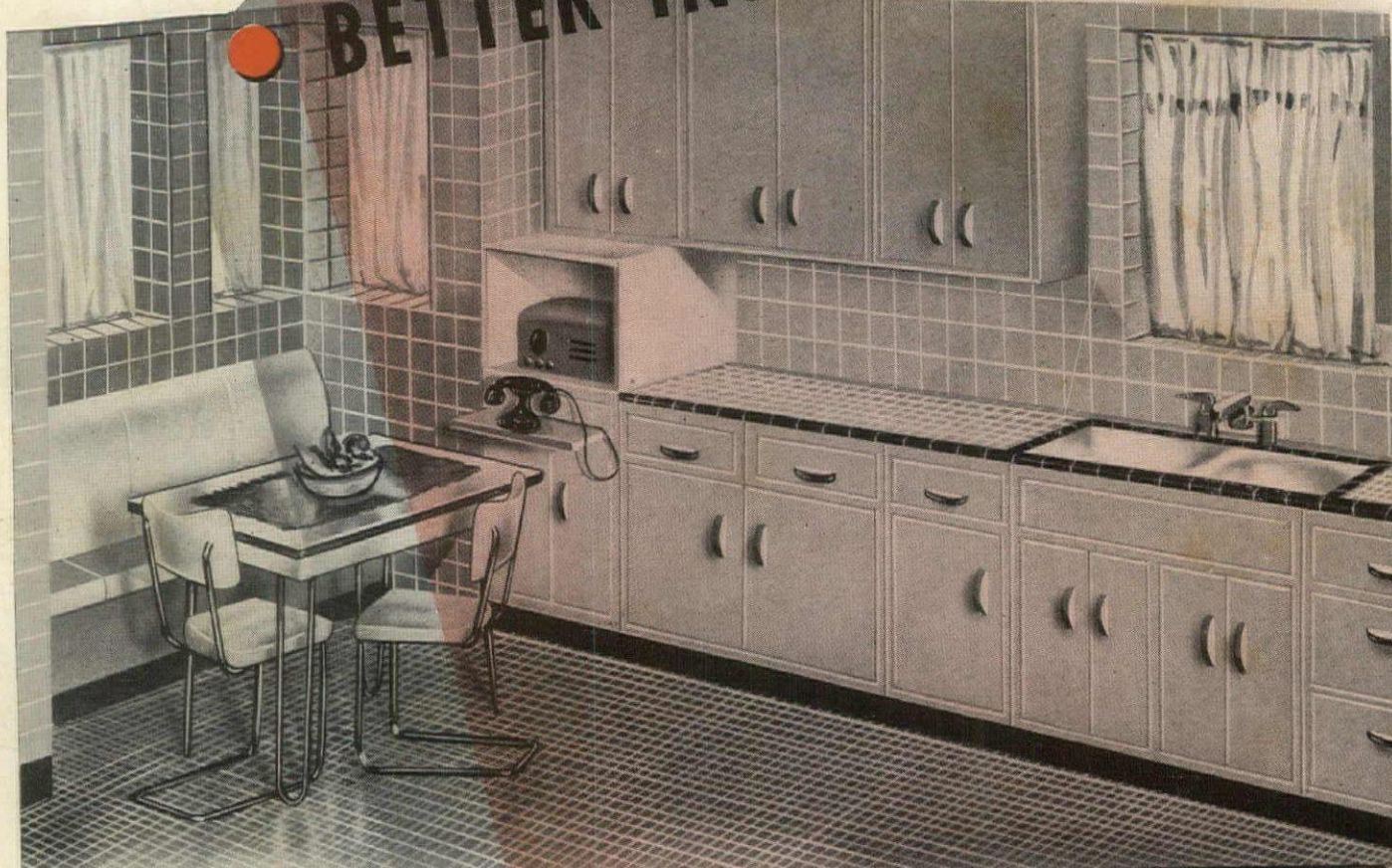


August 1948

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A recent survey disclosed many interesting opinions and preferences in relation to Stucco exteriors. Before reading further why not check the design at right... which do YOU think is most appropriate for Stucco? See whether you agree with the architects who furnished the answers for the survey.

To simplify the question, five styles were listed. Because many of the architects think that more than one style is appropriate for Stucco, the percentages equal more than 100. On this basis, the "voting" gave Ranch Type sixty-three per cent of the votes, Modern fifty-six per cent, Colonial twelve per cent, Georgian seven per cent, and Cape Cod six per cent... the architects gave as the principal reasons why more Stucco will be used in the future—Low Cost, Appearance and Improved Construction Methods.

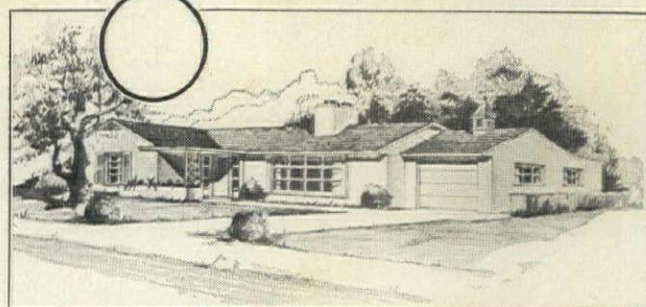
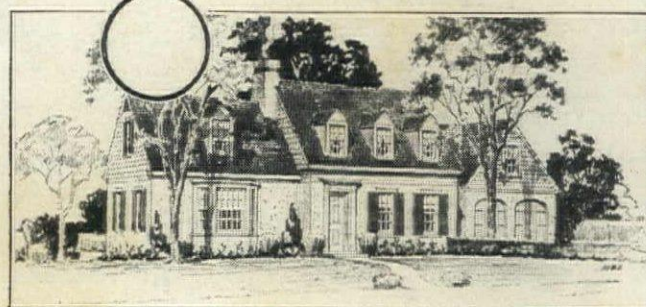
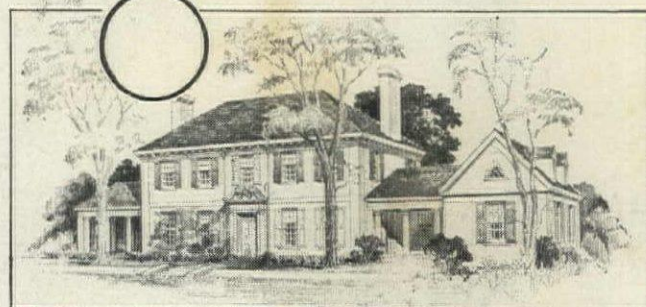
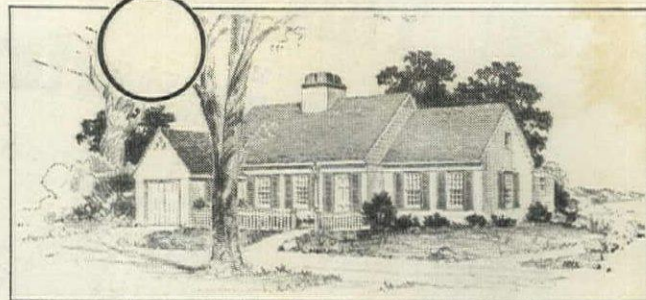
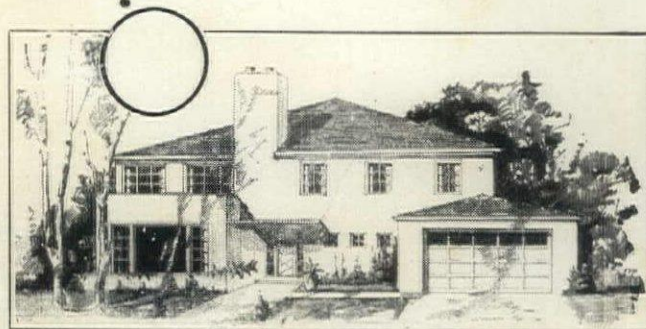
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The Architectural **FORUM**

MAGAZINE OF BUILDING

AUGUST 1948

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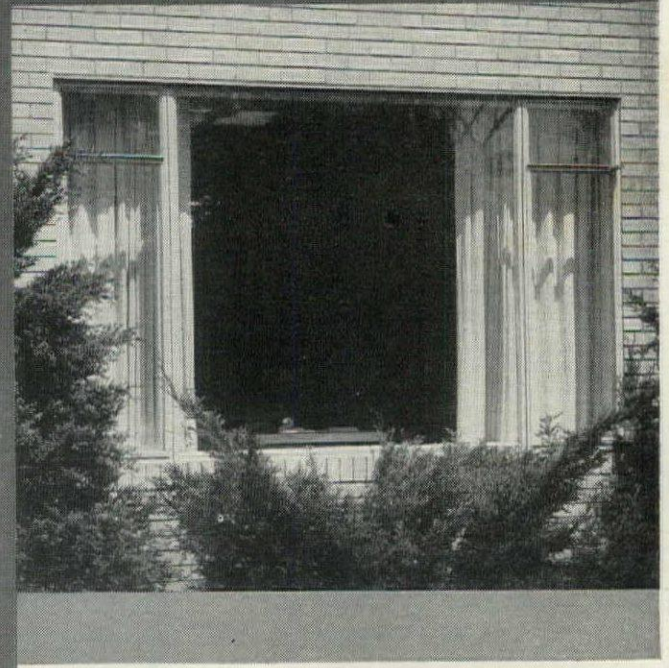
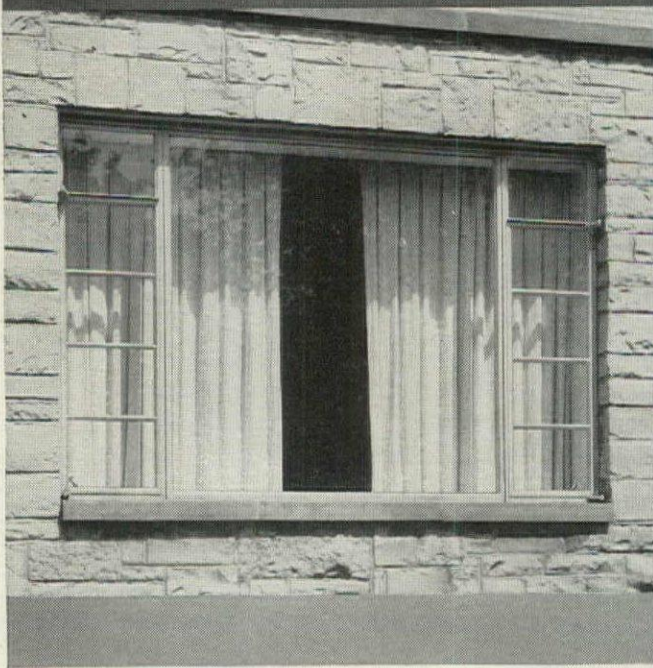
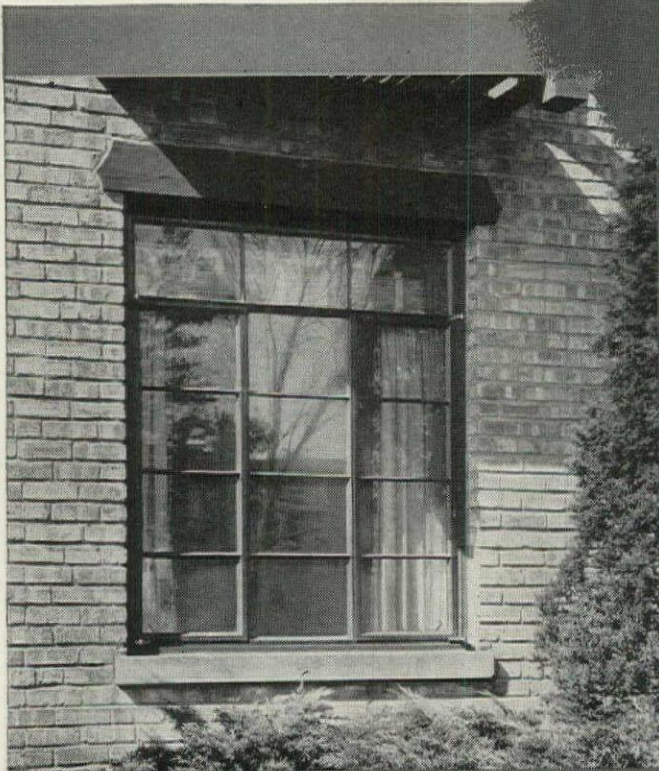
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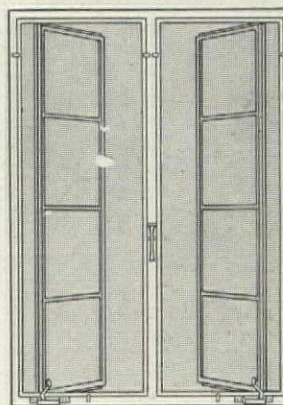
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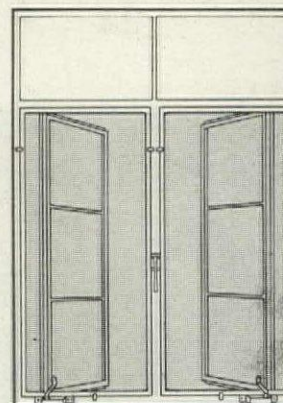
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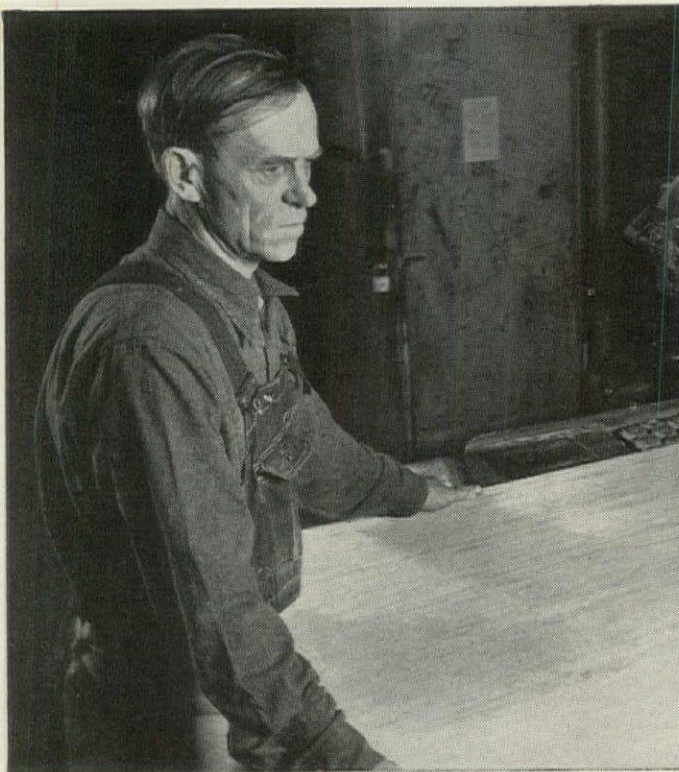
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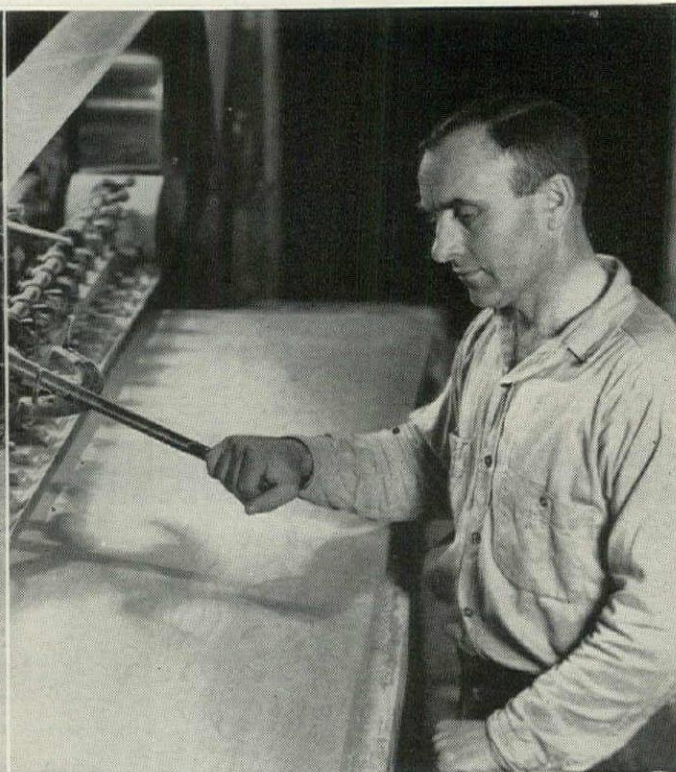
Here is another popular type, 2423. Notice the fixed transom above the ventilators to help with drapery problems. Window dimension is 3'1" wide x 4'2 1/2" high. Illustrated with screens. In addition, many other types and sizes are available.

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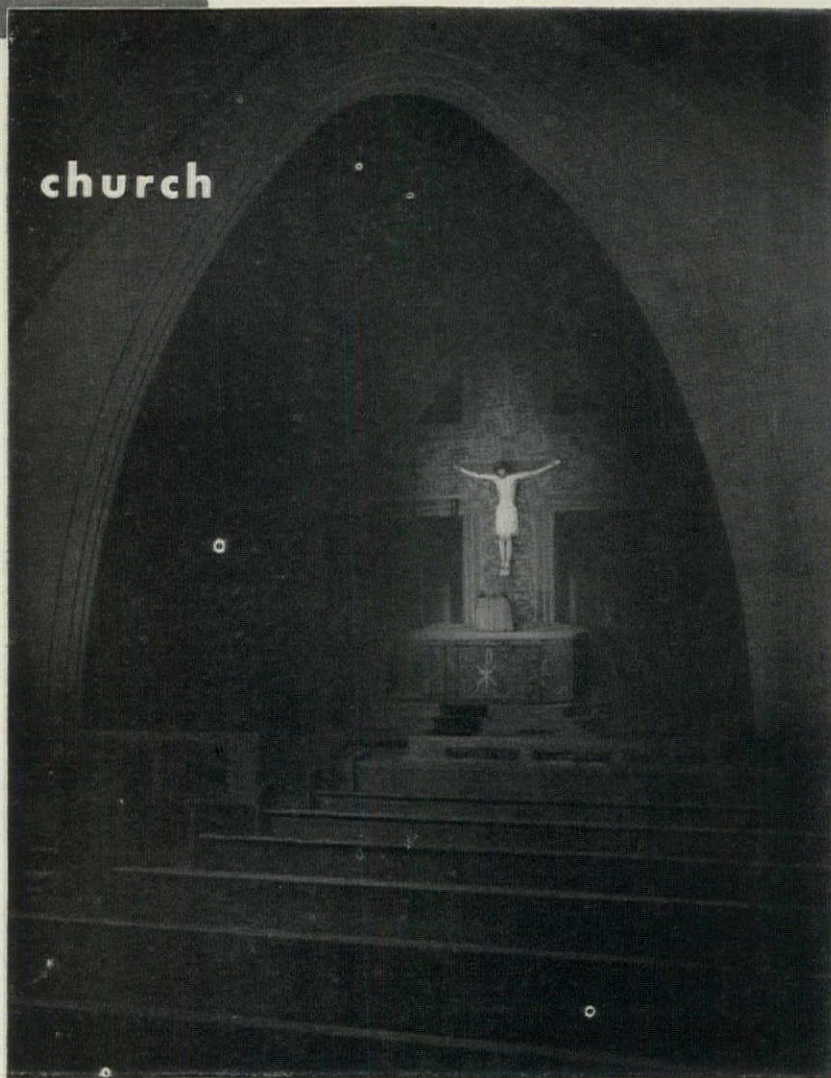
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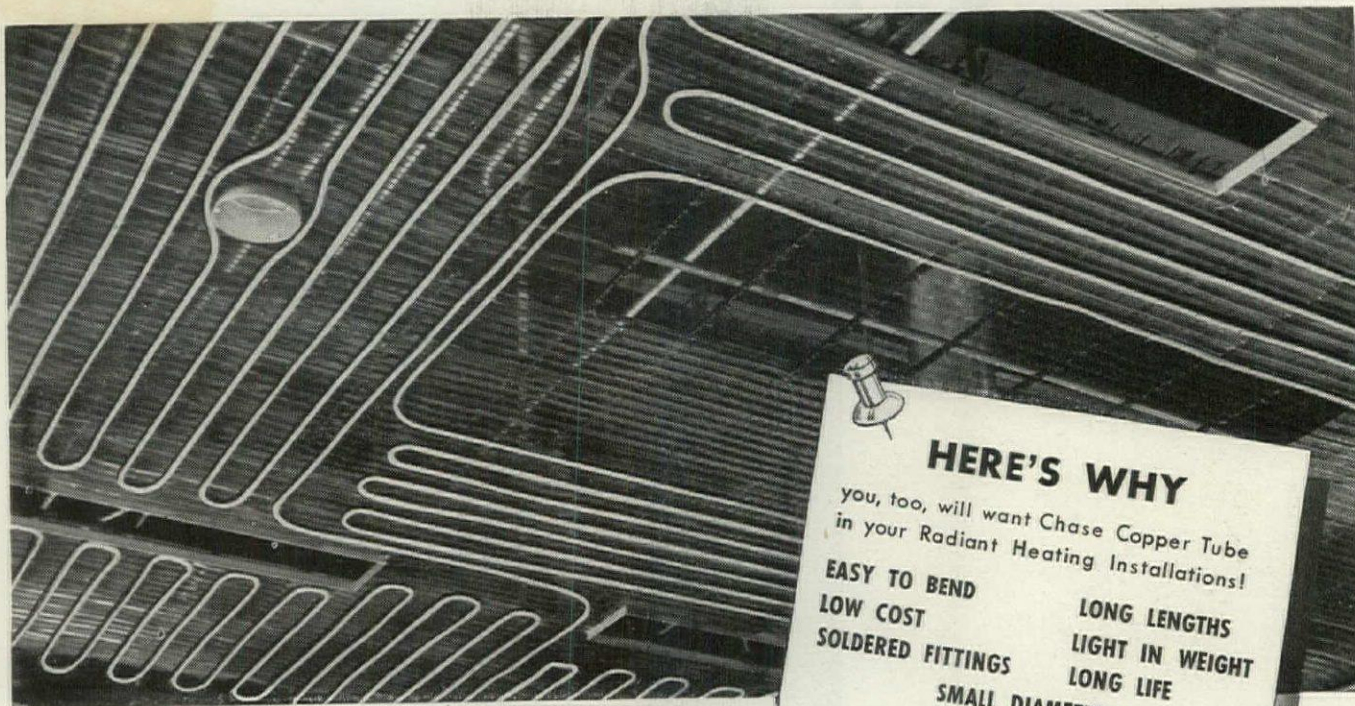
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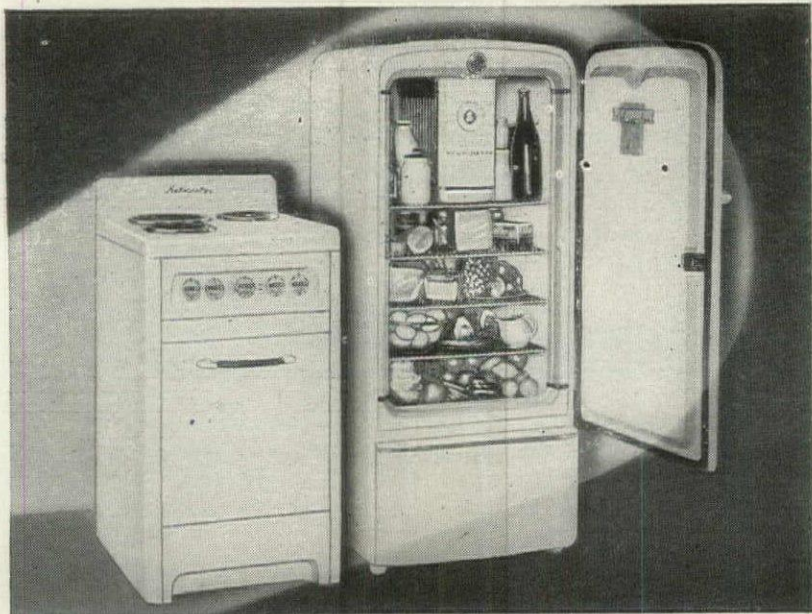
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NEWS

WASHINGTON

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Chicago and San Francisco
start rebuilding p. 15

BUILDING MONTH. Some 500,000 houses had been started in the first half of the year; July starts (over 90,000) promised that housebuilding's record rate of production would hold through the year. House permits were up again, too, after their brief dip in May. Industrial construction was still dropping slightly, but commercial building—stores and small office structures—had reached in June the highest volume on record and showed no sign of dropping off. Total expenditure for construction during the first half of the year had amounted to \$7,500,000,000—25 per cent higher than the same period last year in dollar volume and about 12 per cent higher in physical volume. Building had plenty of reason to congratulate itself on its rapid recovery from war and the aftermath of war controls. Housebuilding, backbone of the industry, had confounded its critics to expand its rate of production beyond the postwar step-up of any other major industry.

But if housebuilding had reason for pride in its accomplishments so far this year, it also had reason to assess soberly its own part in skidding the nation into dangerous inflation. The housebuilding boom had been built on a foundation of easy credit. Residential real estate loans had reached the all-time peak of close to \$33 billion, and one out of every four of them was backed by government credit. The Federal Deposit Insurance Corp. said that its member commercial banks had doubled their real estate portfolios over the last two years—years of peak real estate prices. Over-expanded housing credit was clearly the softest spot in the nation's economic front.

Plenty of customers still wanted to buy houses, and the federal government had not yet faced up to the full meaning of its 14-year-old policy of making it progressively easier for them to do so. President Truman had asked the special session of Congress to liberalize credit aids still further—and some key Republicans shared his point of view.

Because millions of Americans were still underhoused, it was not easy to face the fact: more credit would not build more houses. But it was time for the industry to ask itself some questions. Had a low monthly down payment been substituted for construction economies that could reduce the total cost of a house? Had the easy bonanza of government credit side-tracked the search for improved methods, the drive for large-scale production which alone can put the housebuilding industry on a sound economic footing?

FHA mortgage insurance had undeniably assisted in the birth of the large-scale housebuilder, who delivered a better product than the volume U. S. market had ever seen before. But easy FHA credit had also, and all too often, been used to help sell a house that the customer could not afford.

The month had brought a number of signs that not even easy credit could support any further rise in the price of houses. A National Association of Real Estate Boards survey found housing shortage somewhat eased in all but the biggest cities. A Gallup poll found that most people think the housing situation is much better than last year. The time required to sell both new and old houses was increasing, and the rise in the price of old houses had been checked. As price rises in steel and glass raised new uncertainties for Building, as

easy government credit stiffened a little, it was more important than ever before for the housebuilder to seek every possible road to reduction of the basic cost of his product.

WASHINGTON

WHAT TO DO?

**More credit won't saw wood, lay bricks,
build more houses**

Both the Administration and its operating agencies seemed unable to steer a straight course through the rising tide of housebuilding inflation. In one breath, the President had asked the special session of Congress to act against inflation. In another, the President had urged Congress to pass the T-E-W housing bill, whose bevy of credit aids and direct government building dollars threatened to push high house prices higher still.

The Federal Reserve Board warned that home mortgages had reached a dangerous peak of \$32,800,000,000 and urged that mortgage credit be stiffened. On the same day, the Reconstruction Finance Corp. announced the rules under which its subsidiary, the Federal National Mortgage Association, will buy up FHA-insured mortgages—and so increase lenders enthusiasm for making them.

Senator Taft was still sticking by his bill. The promise of some newly influential support in the stubborn House came when Rep. Hugh D. Scott, Jr. (Pa.), an active supporter of the T-E-W bill, was made chairman of the Republican National Committee. But other Congressional leaders argued that there was simply not time in the special session to pass on the many provisions of this complicated legislative proposal.

It was hard for even the staunchest advocates of the W-E-T bill to see how increased credit could enlarge the output of the private housebuilding industry—which was building all the houses its resources permitted. Nor could more credit—and new federal building dollars—make more workers available for construction employment, which last month was close to the war building peak of 1942. Since 1939 general employment has increased by 47 per cent. But construction employment has increased almost twice as much—or 79.5 per cent.

(Continued on page 12)

The nation was experiencing full peacetime employment—there were no idle building workers to be called to work. Nor would federal credit aids boost output in the materials industry, already operating at capacity.

These were the cold facts-of-life of the industry. But the dilemma of the market remained—millions of Americans were underhoused, doubled-up, paying more than they could afford. What, if anything, could Congress do?

Rental housing seemed the point at which the federal credit machinery most needed retinkering. Rental starts were running only about 13 per cent of housing volume. In the booming Twenties, rental house-building accounted for nearly half of total value. This might mean that smart money has been shying away from current building prices. But it also reflected the fact that builders could no longer meet the room cost limitation of \$1,350 on rental housing under FHA mortgage insurance.

There was a good chance that the special Congressional session would do something about rental housing, maybe about FHA-insurance for production loans to prefabricators (see p. 10) and large-scale house-builders. Any further liberalization of credit would be directed at the under-\$7,000 house. Passage of the \$65 million loan to build U.N.'s headquarters seemed a certainty.

INTEREST STIFFENS

Veteran will pay 11 per cent more for his house as lenders move to FHA

At least one thing was clear in the confusion about whether more or less government-backed credit should be handed to the housebuilding industry: from now on, the cost of credit alone will make the veteran pay about 11 per cent more for his house. This is because Building money is rapidly forsaking the straight VA-loan program at 4 per cent interest, in favor of the combined VA-FHA loan plan, which offers 4½ per cent interest on the larger FHA-insured part of the loan. To the increase in interest rate, the veteran buyer must add another ½ of one per cent to cover the FHA insurance premium (see itemization, below).

It was hardly fair to blame lenders for

turning to the loan plan that offered better earnings. The fault seemed rather with the complex government credit machinery itself. Why should the government be doing business with veterans under two programs at two different rates of interest? Why—as many had asked when the VA-loan program was set up—had FHA, which has accumulated a decade of mortgage underwriting experience, not been delegated responsibility for operating the guarantees with which the government wanted to assist veteran home buyers?

While these and other questions remained, one government economist offered a cheerful hypothesis—the stiffer interest rate would reduce the other costs of a house. Their theory went like this: The initial and monthly cost of buying a house is as high now as the market will stand. If higher interest rates increase monthly cost, builders—to maintain present volume—will be forced to offset this by cutting asking prices. But if interest rates were to stay at their wartime 4 per cent rate, builders would have less incentive for squeezing any water out of their own prices.

PRICES

HOW MUCH MORE?

Steel, cement, glass rises boost building's price tags

In mid-July the wholesale price index for building materials stood at 197.9—nearly twice its 1926 base. Then Building, like the rest of the U. S., got the bad news of the 11 per cent rise in steel prices. Close on the heels of Big Steel's decision came word from Pittsburgh Plate Glass: window glass prices were also going up 10 per cent.

How much more could Building stand? Customers, big and little, were already showing resistance to the price of building's product: applications for veterans' home loans were running one-third less than last year; some of the big life insurance companies had halted their plans for rental housing; spring expenditure for industrial plant was down one-third from its 1946 peak.

About four tons of steel and iron go into a small house. Housebuilders figured that

the steel price rise alone would add \$50 to \$100 to the price of a minimum house. But this was only the beginning. The steel and glass price boosts had been based on wage increases. Other supplying industries faced the same demands. Would price increases in other materials follow?

Over and above the outright boost in steel prices, a recent Supreme Court decision (see FORUM, June '48) had forced the steel and cement industries to abandon the basing point system of pricing, under which producers had absorbed some freight charges. End of basing point prices would have the immediate effect of higher prices for most builders. Builders only a few rail miles away from their cement and steel suppliers would stand to gain a little by paying their own freight instead of the flat zone price. But builders far away from their suppliers would find mill price plus freight charge higher than the old basing point price. To get the advantage of the freight differential would, in many cases, mean switching orders to new suppliers. Few builders would willingly sacrifice long-established dealer and supplier relationships in the present tight materials market. Nor would such switches, in the case of steel, be generally possible: 40 per cent of the nation's steel capacity is in the Pittsburgh-Youngstown area.

In New York, for example, U. S. Steel's Pittsburgh mills have been absorbing \$3.64 a ton of rail freight to compete with Bethlehem's integrated Maryland mill. Now structural shapes shipped from Pittsburgh will cost \$76.87 per ton in New York; structural shapes shipped from Maryland will cost \$70.52. But if all New York steel users were to switch immediately to Bethlehem, their demand, plus that of all present customers, would be beyond the mill's current ability to meet.

On cement, end of the basing point system brought considerable price confusion. Delivered cement prices now might differ in different blocks of the same city. In the busy housebuilding sector of Long Island, the price of cement rose gradually as it was shipped East—amounting at the tip of the island to an 80-cent increase per barrel.

Housebuilders were doing what they could to turn back the tide. The National Association of Home Builders set up a new technical services department to develop cost-saving construction methods and help builders over the country in using them. To head the new department, NAHB tapped Carl Lans, an architect, engineer and former assistant technical director in FHA's underwriting division. NAHB expects to develop prototype economy houses, suitable for every region in the country, which will pare prices as thin as they can be pared.



LANS: economy

COMPARISON OF HOME-FINANCE COSTS TO THE VETERAN

Assume a house with a purchase price of \$6,000 (mortgage maturity 25 years)

	Payment to principal	Payment for interest	Payment for ½% premium	Total cost to veteran
Combined FHA and VA Loan				
FHA primary 203 loan for \$5,400 at 4½%	\$5,400	\$3,607.20	\$399.98	\$9,407.18
VA secondary 505a loan for \$600 at 4%	576*	336.38	.00	912.38
				\$10,319.56
Straight VA loan at 4%	\$5,880*	\$3,433.92	.00	\$9,313.92
Excess cost to veteran of combined 203-505a loan over a 501 loan				10.8% \$1,005.64

* \$6,000 principal reduced to \$5,880 by gratuity payment of \$120 to veteran (4% of the guaranteed portion of the loan which is \$3,000 in this case or 50% of the loan amount).

Old Massachusetts Small-Arms Plant Moves Half-Way Underground at No Extra Cost

Last month an aircraft factory started moving 60 million pounds of machinery and 1,500 workers from a Connecticut town to a new location near Dallas, Texas—at a cost of \$6 million. The Chance-Vought Division of United Aircraft said it was anxious to get out of the Eastern seaboard's concentrated industrial zone—most vulnerable strip in the nation to bomb attack.

A hundred miles away, in Springfield, Mass., the Smith & Wesson Co., manufacturer of small arms, was completing a new \$2 million plant. But this 100-year-old firm was building to a plan which may provide industry with another kind of insurance against the incalculable risks of another war: a dual-purpose underground area.

Plant owners not aware of the recent history of the Smith & Wesson Co. blinked in surprise. The small-arms industry, still a



HELLSTROM: underground at no cost

craft operation and owned by a few highly conservative families, has not been noted for production pioneering. How had Smith & Wesson, which supplied guns for World War II from the same building in which Jesse James' revolver was made, become the first to visualize and build a new idea in plant protection against aerial attack?

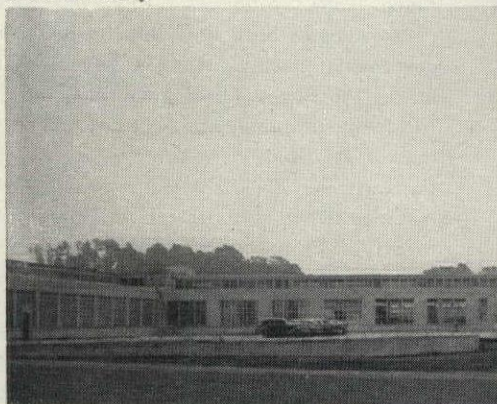
The answer was Carl Hellstrom, a Swedish-born engineer who is the first non-family member ever made a Smith & Wesson president. Small arms manufacturers had never paid much attention to plant layout and materials flow—the ABC of mass production. Hellstrom did—and boosted war output from 100 to 1,100 guns a day. In his spare time, he sketched the floor plan of a new plant.

Hellstrom decided to build a reinforced concrete underground area that would provide shelter for personnel and room for key machinery in time of war. He also decided that this underground construction could be made to pay for itself by providing an underground route for transport of both workers and heavy material in normal above-ground operations.

He paid \$35,000 for 120 acres of tax-abandoned swamp land that proved ideal for his purpose. The swamp was drained

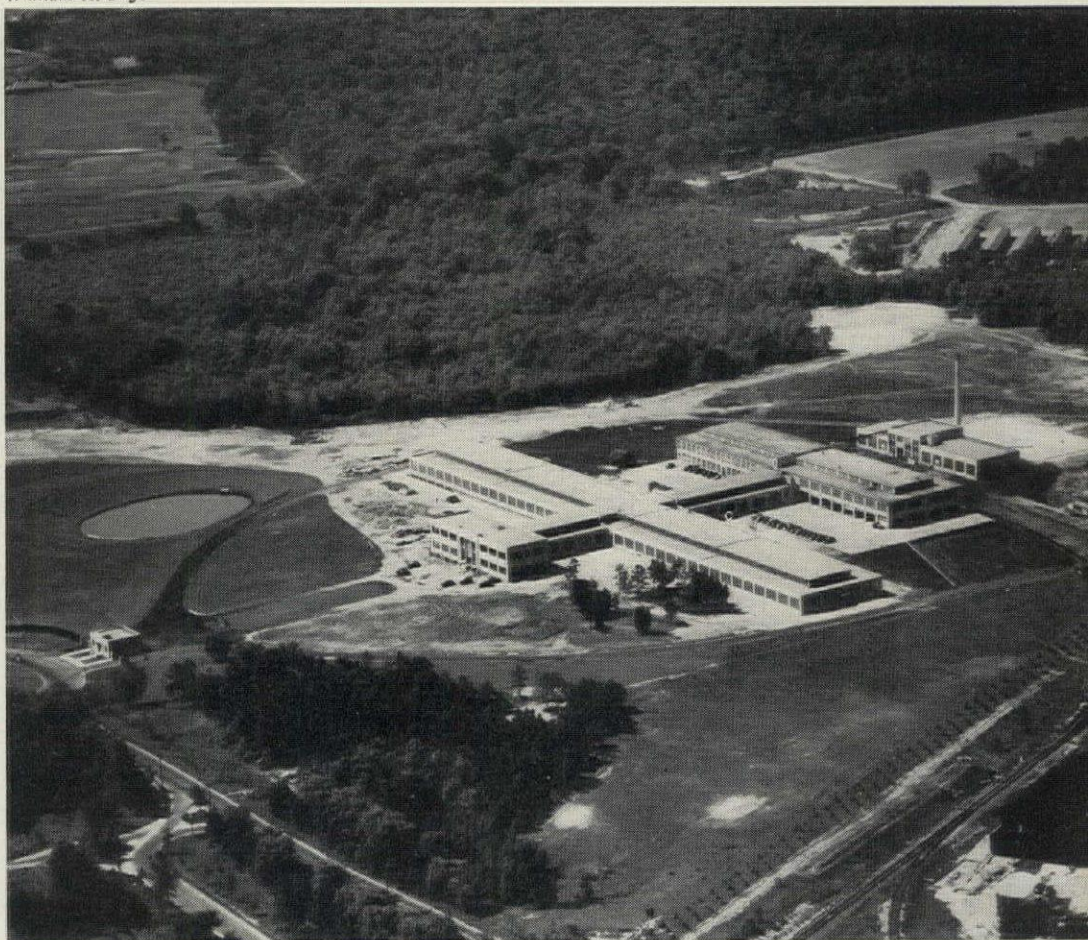
(Continued on page 14)

Frank McCarthy

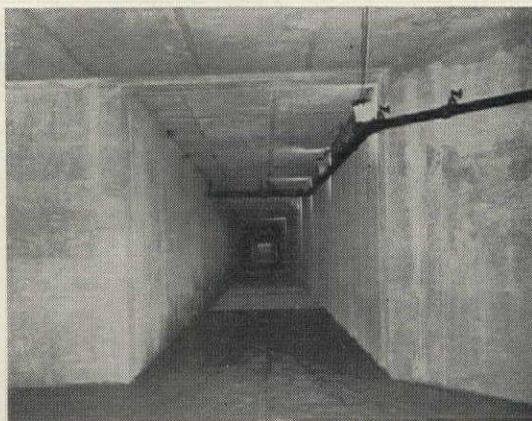


SMITH & WESSON CO. produced half the small-arms Allies used in World War II from 1863 plant (inset). Rear wing view of new plant shows movable walls which cool drop-forge section.

William R. Frye



NEW PLANT is one and two-story brick construction, with plenty of windows. Mirror lake, into which swamp was drained, shows at left. Two airstrips will be finished at side of building.



REINFORCED CONCRETE tunnels connect air raid shelters under main plant area.



RAMPS and hydraulic lifts exploit underground area for truck transport.



into an artificial lake—which provides additional water storage in case of fire. Clay from a high bank at the swamp's edge was used for fill. On a firm clay and gravel stratum underlying the swamp, the system of massive concrete tunnels connecting with shelters was built. Now strategically placed hydraulic lifts and stairwells connect these with the above-ground plant; trucks can be lowered to traverse the length of the plant without going through operating areas. Transformers (a prime bombing target) are placed in reinforced concrete underground walls and interconnected so that if one transformer blows out, others will automatically carry the load. The shelter area is equipped with toilets, rest rooms, hospital, and its own suction-type ventilating system, with air ducts built into the firewalls and equipped with filters.

The plant was built by the Ernest F. Carlson Co., Springfield, and architect Edwin Carlson drew detailed plans from Hellstrom's sketches. In spite of the large underground area and extensive use of piling in foundations, cost was kept to less than \$6 per sq. ft.

PREFABRICATION

THE WINNER

First industrialized house looks like a sure bet as Lustron clinches loan

The Lustron Corp. was happily signing contracts with dealers and tightening the last bolts in the big presses that will stamp out its enameled steel houses. Lustron had got what it needed to start the presses humming: a second loan, for \$10 million, from the RFC.

RFC had already staked \$15½ million on the Lustron house—this had all been spent for the gleaming machinery that now stood waiting in the huge Columbus plant. When this first loan was made in June, 1947, both Lustron and RFC had faced the fact that more capital would be needed to finance the initial stages of production. But they had hoped that private capital, attracted by new government insurance for production loans to prefabricators, would be forthcoming. Then FHA's Title VI, under which this insurance was offered, expired and Congress failed to renew it.

For a while, things looked black for Lustron. The steelmen who are running the Department of Commerce program of voluntary steel allocation decided that steel was too scarce to go into all-steel houses. But Lustron's Carl Strandlund showed hundreds of thousands of letters from people who wanted to buy his steel house. Housing Administrator Raymond Foley backed him up. Finally the steelmen reversed their decision, approved 59,000 tons of steel for metal houses—the bulk to go to Lustron. Then RFC decided it could make a second loan under its regular business loan program. It handed over \$10 million without additional security, but made the collateral

posted for the original loan available first for the second one. Lustron will pay it back, with 4 per cent interest, in eight monthly installments, starting March, 1949.

While Lustron beamed, other steel users raged. They saw no reason why a new competitor should be helped into business on government money. R. C. Ingersoll, who makes the famous steel home utility unit (all-in-one plumbing and heating), charged that White House pressure had been used for Lustron. C. J. Rodman, president of Alliance Ware, Inc. (steel plumbing fixtures), said that the Commerce Department had shown marked favoritism in giving Lustron most of the steel earmarked for industrialized housing. He thinks Lustron is tooled up to make four times the fixtures it will need for its houses. "We cannot but conclude," said Rodman sourly, "that the government is seeking to protect its own investment at the expense of private industry."

MARKET

APARTMENT HOTEL CO-OP

Cooperative boom reaches New York's expensive Hampshire House

When Arnold Sigurd Kirkeby* picked up New York's glittering but bankrupt Hampshire House in 1946, many a hotelman's jaw dropped at the mere \$3.5 million he had put down. Now Kirkeby's rivals were due to gape some more.

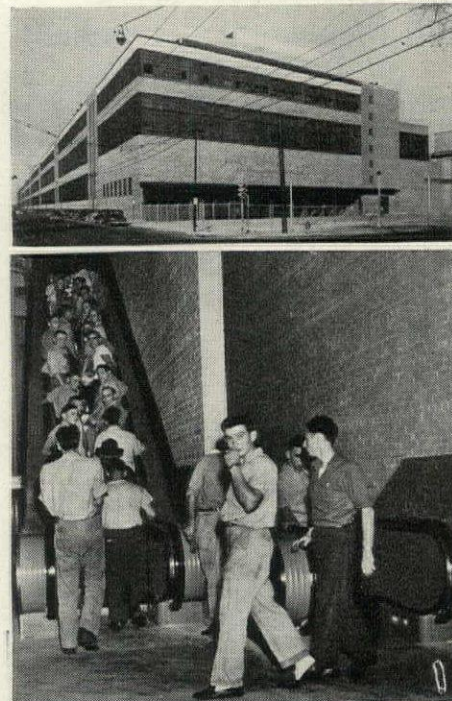
Hampshire House is the most fashionable of New York's expensive apartment hotels. It is also one of the newest: because the depression halted construction, it was not finished until 1938. Even at the depressed building prices of the thirties, Hampshire House cost \$7 million to build. Its 37-stories overlook Central Park, are loaded with opulent fittings chosen by Dorothy Draper. Apartments range from one-room studios to seven-room duplexes, have wood-burning fireplaces, terraces.

Last month Kirkeby's comfortable tenants got some news: the cooperative apartment boom was about to wash over Hampshire House. Kirkeby had allocated 10,000 shares of stock, at \$300 per share, among the hotel's luxurious units and invited tenants to buy.

A typical apartment—living room, two bedrooms, kitchen—will sell for \$25,200 (84 shares), carry annual maintenance charges of \$6,552 (\$78 per share). Present owner Kirkeby will become managing agent at \$25,000 a year, get a 10-year lease for operation of the restaurant and bar, cocktail lounge, all other concessions.

As a cooperative apartment hotel, Hampshire House will have only one predecessor. 825 Fifth Avenue, one of the few cooperative ventures to weather the depression. A few of 825's tenants gave up their apartments during the Thirties, but the managing agent, Brown, Wheelock, Harris &

* Owner of Los Angeles' Town House, Chicago's Blackstone, New York's Gotham.



FIRST FACTORY INSTALLATION of a moving stairway was made by Albert Kahn Associates in the new Buick sheet metal plant at Flint. The five-flight stairway permitted Buick to build vertically on its traditional site in Flint—instead of spreading horizontally out in the country

Stevens, Inc., kept the building full. The success of 825 inspired its builder, Sam Minskoff, to launch another cooperative apartment hotel last spring—1 E. 66th Street, also to be managed by Brown, Wheelock, Harris & Stevens. A typical apartment (living room, two bedrooms, kitchen) in this 18-story and penthouse structure, will sell for \$24,700, carry annual charges of \$3,754.40.

SHORTAGE EASES

Houses just slightly harder to sell

The portly old National Association of Real Estate Boards waded out for its semi-annual dip in the real estate market, found the water just slightly cooler than last year. On the basis of real estate board reports in 187 cities, NAREB said that:

► Housing shortage is easing. One-fourth of all cities said they have reached a normal supply of single-family dwellings (last year 99 per cent were pinched by housing shortage). Thirteen per cent of the cities reported normal balance in supply and demand for apartments. The biggest cities are the worst off—all still short in both used single family homes and in apartments. But 14 per cent of the big cities said they have enough new houses!

► The heat is off used house prices. Houses older than 10 years are selling for a lower price in 64 per cent of the cities; houses less than 10 years old are priced lower in 56 per cent of cities.

► But the price of a new house is still going up. Over 57 per cent of cities found the price of new houses higher than last year; 52 per cent expected an additional upward movement during the rest of this year.

► There is still a big market for well-located commercial space. Some 81 per cent of

cities reported a shortage of retail space, as compared with 90 per cent last year. Office space is still short in 76 per cent of cities—81 per cent were short last year.

CITIES

TWO FOR REBUILDING

Huge slum and blighted areas may soon be cleared in two cities

Two great cities last month took the first steps to cut out the cancer of blight and to recreate livable neighborhoods over vast surfaces of their downtown area.

► Chicago rolled up its sleeves when the New York Life Insurance Co. said it would spend \$18 million to rebuild ten slum blocks on the South Side. This will be the insurance company's first housing project outside New York State and the first private enterprise project under the Illinois Blighted Areas Redevelopment Law, passed in 1947.

► San Francisco designated its huge Western Addition area (2.2 sq. miles) for redevelopment, becoming the first city to take action under California's Community Redevelopment Act (1945).

In both cases, groundwork for these steps had been laid by Republican governors, who intend to show that private enterprise plus state leadership is the formula for tackling the giant job of urban redevelopment. On the eve of a probable Republican victory in the Presidential election, this pattern looks like the one that may supersede the old New Deal public housing plan of federal aid direct to municipalities.

Over one-tenth of Chicago (23 sq. miles) rats swarm, garbage-littered alleys stink, firetrap tenements lean. About one-fourth of these slum miles are in the Black Belt, where Negroes live 86,000 to the sq. mile—exploding in slum strips through the jungle of railheads and factories on one side, eating away at the "restricted" well-to-do neighborhoods of the University section on the other. Here, at the edge of the park ribbon that mercifully binds Chicago's lake shore, the New York Life Insurance Co. plans to make a rebuilding start: 1,400 apartments, to be set in 60 green acres (only 10 per cent land coverage). Intended chiefly for Negroes, the apartments will also be available to other groups now resident in the area. Rents will range from \$75 for 3½ rooms to \$100 for 4½ rooms.

Back in Taxes. Chicago's Land Clearance Commission figures it will cost \$2 per sq. ft. to acquire and clear the land, which will be sold to New York Life at 50 cents per sq. ft. The \$2,500,000 deficit will be borne equally by the city and the state. Chicago voters last November okayed \$15 million worth of bonds for slum clearance,

(Continued on page 16)



Quonsets line up with control tower building to house customs, cargo and operating facilities.

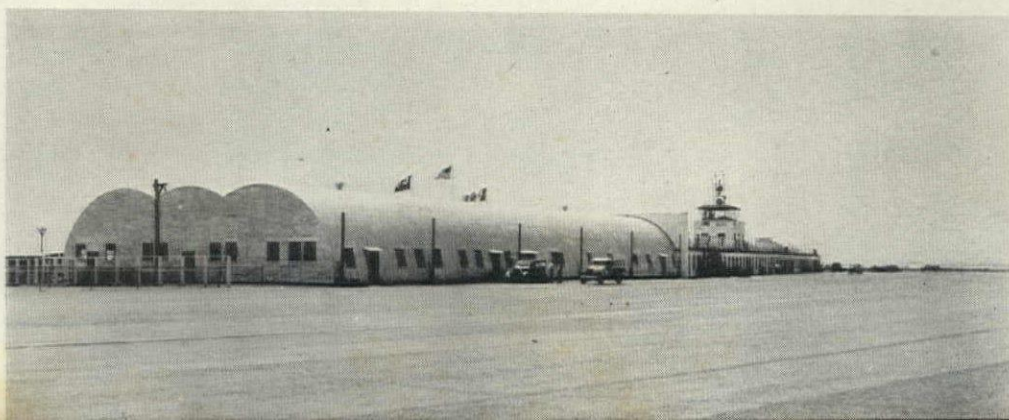
QUONSETS will be U. S. front door for Europe's air travelers

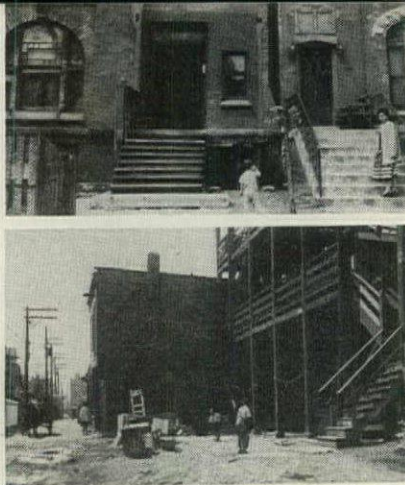
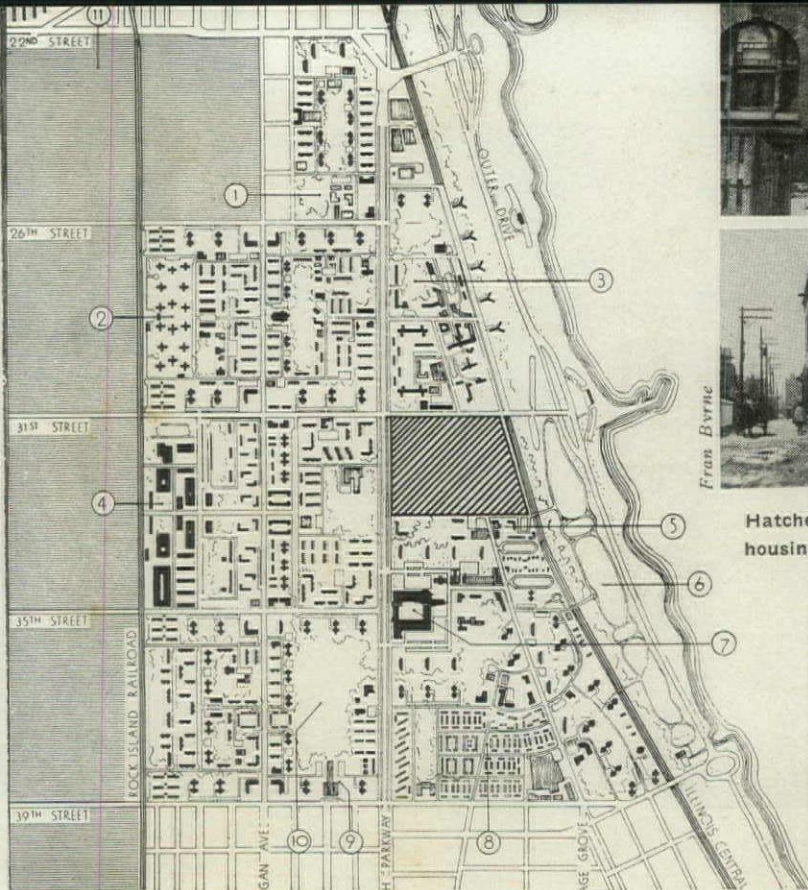


Outbound cargo building interior shows Spraykote insulation applied to steel-ribbed walls.

The world's biggest commercial airport, just 15 miles from Times Square, opened on July 1. To meet its deadline for "Idlewild," the Port of New York Authority turned to the Great Lakes Steel Co.'s war-spawned Quonsets, now a familiar part of U. S. landscape. Some 64,000 sq. ft. of floor space arrived in 175,877 pieces, was clipped together in exactly 15 weeks. Port Authority architect Walter P. McQuade designed interior treatment. When giant Idlewild is finally finished, sometime in 1960, it will be able to launch 1,000 flights a day, have more elaborate terminal buildings.

View from control tower overlooking the Quonset customs building shows how Quonset was joined to existing concrete-block control unit building. The projecting wall backs up Quonset arches which extend above control building's flat roof. View below shows front of customs building.





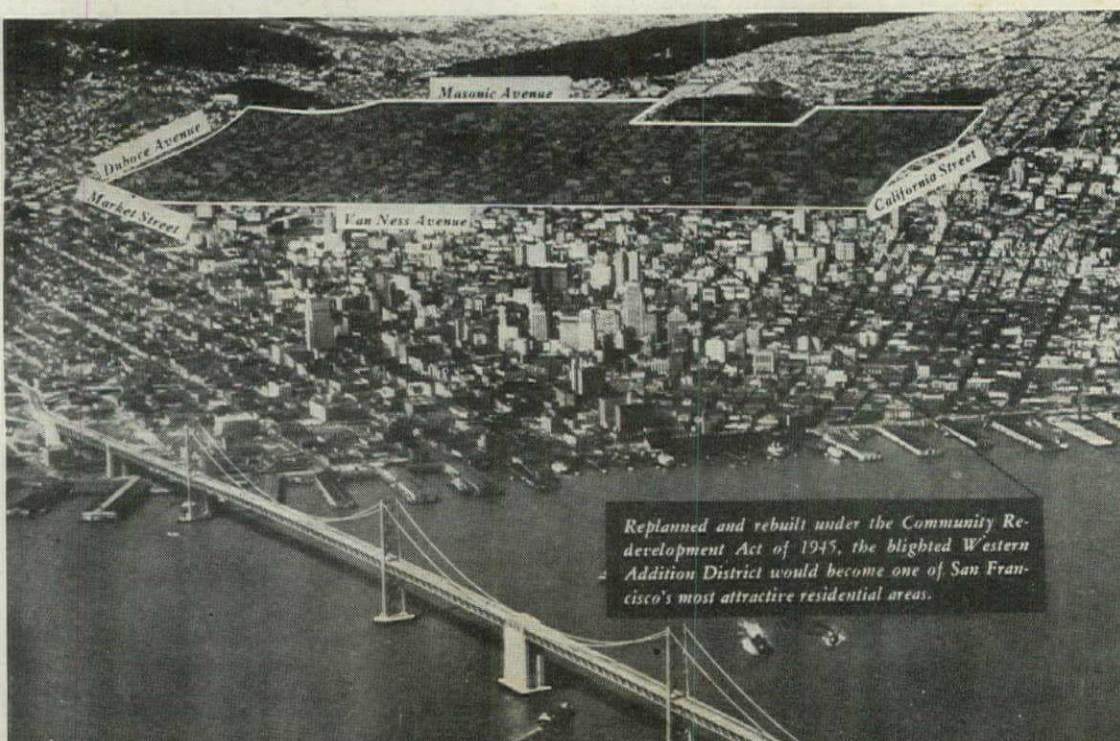
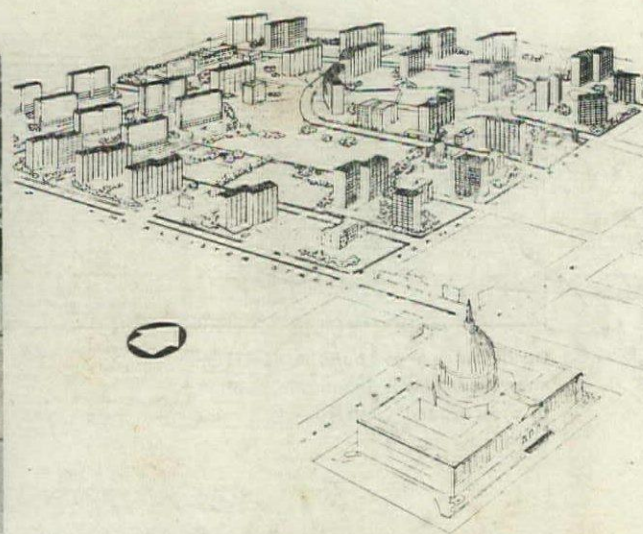
Fran Byrne

Hatched area shows New York Life housing project.

1. Mercy Hospital
2. Chicago Housing Authority project
3. Michael Reese Hospital
4. Illinois Institute of Technology
5. Chicago Memorial Hospital
6. Burnham Park
7. Shopping center
8. Ida B. Wells Homes
9. Wendell Phillips High School
10. Proposed playfield

CHICAGO: New York Life's \$18 million housing project will clear ten blocks of slums in area where schools and hospitals are a heavy investment

SAN FRANCISCO: Two square miles of blighted Western Addition area could be readied for private rebuilding at a cost of \$53 million



Replanned and rebuilt under the Community Redevelopment Act of 1945, the blighted Western Addition District would become one of San Francisco's most attractive residential areas.

another \$15 million for rehousing. Some \$20 million in state funds are presently available for these purposes. The city expects to recoup its outlay to write down land cost in taxes. The N. Y. Life project will pay full local taxes; right now the city is spending more in services to the slum area than it takes back in taxes.

Green Negotiated. Illinois Governor Dwight Green, who personally handled some of the negotiations with N. Y. Life, thinks this company's lead will inspire other private investors. Michael Reese hospital and the Illinois Institute of Technology have already announced housing projects as a part of their expansion plans in nearby districts (FORUM, Sept. '46).

San Francisco's blighted section—the 2.2 sq. miles of the Western Addition—is, in some ways, the best place in the city to live. West wind blows over the district ten months of the year, keeps it cool and scatters the fog. Hills tilt and bend its gridiron street pattern, here and there pin-points of green space break through its crowded melange of big, bay-windowed old houses.

Although the Western Addition shows few of the open sores that mark slums in eastern cities, back of the Victorian facades the symptoms of blight are easy to see. Blight first laid its creeping finger on the Western Addition after the great fire of 1906. Its then fashionable houses escaped the fire. Burned-out families crowded in, and many owners converted their properties to rooming houses and small apartments. Now dozens of families occupy a single dwelling, share cooking and bathroom facilities. Few of the houses meet firelaws. Elbowing junk shops, garages and warehouses in the familiar pattern of mixed land use, the crowded old frame houses lie at the heart of the city like an enormous tinder-box.

Warren Nursed. California's Governor Earl Warren, now the Republican vice-presidential candidate, nursed along the legislation which may ultimately rebuild the Western Addition. The law authorizes the state to pay half the cost of acquiring land for private redevelopment, the city to pay the other half. San Francisco figures that it will cost about \$53 million to clear the whole Western Addition. While no funds for this purpose have as yet been raised, official designation of the area for redevelopment means that the city can begin to talk in tangible terms: of a bond issue to its voters; of specific sites to private investors.

NOTES

Some try parklets, others publicity

Atlantic City finally succumbed to the steel hand of the machine age, admitted 100 electrically driven rolling chairs to its famed boardwalk. But the electrical chairs

(Continued on page 18)

clay tile sails the seven seas...



In postwar cruise ships like the Alcoa Cavalier and her sister ships,

genuine clay tile contributes to the luxury appointments which provide
comfort and convenience for pleasure-seeking passengers.

When marine architects designed these cruise ships they considered the special seagoing conditions imposed
upon a shipboard swimming pool. A roll of the ship shifts the weight of the water and brings changes in pressure
upon its sides. Sun and sea create extreme exposure conditions.

Genuine clay tile was selected because it bonds together strongly, resists warping,
chipping, cracking, corrosion, the effects of heat and cold
and the constant "working" of the ship's structure.

THE MODERN STYLE IS

GENUINE CLAY
tile

here's why the modern sty

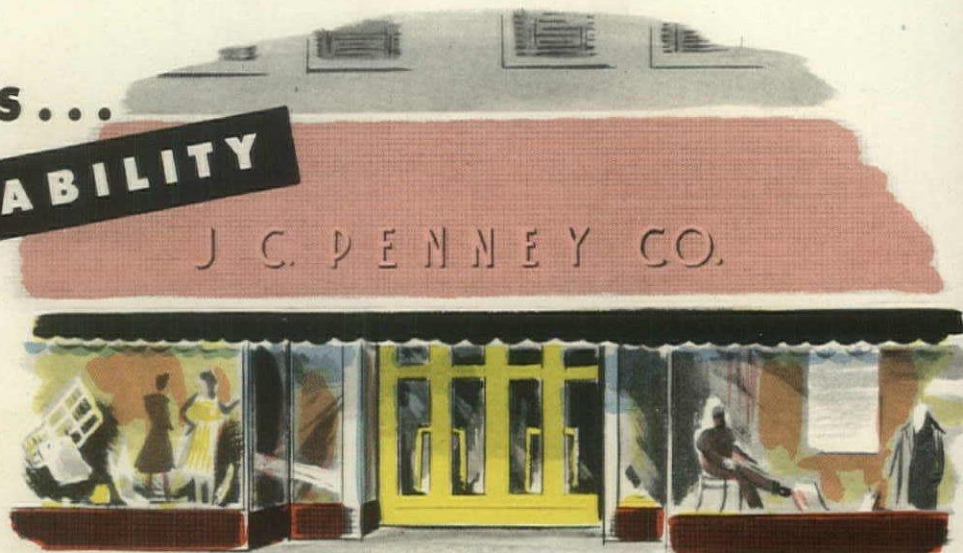
CLAY TILE PROVIDES...

DURABILITY

in Pine Bluff, Arkansas, and other locations, J. C. Penney Company believes in putting its "best front forward" by using clay tile on its store exteriors.

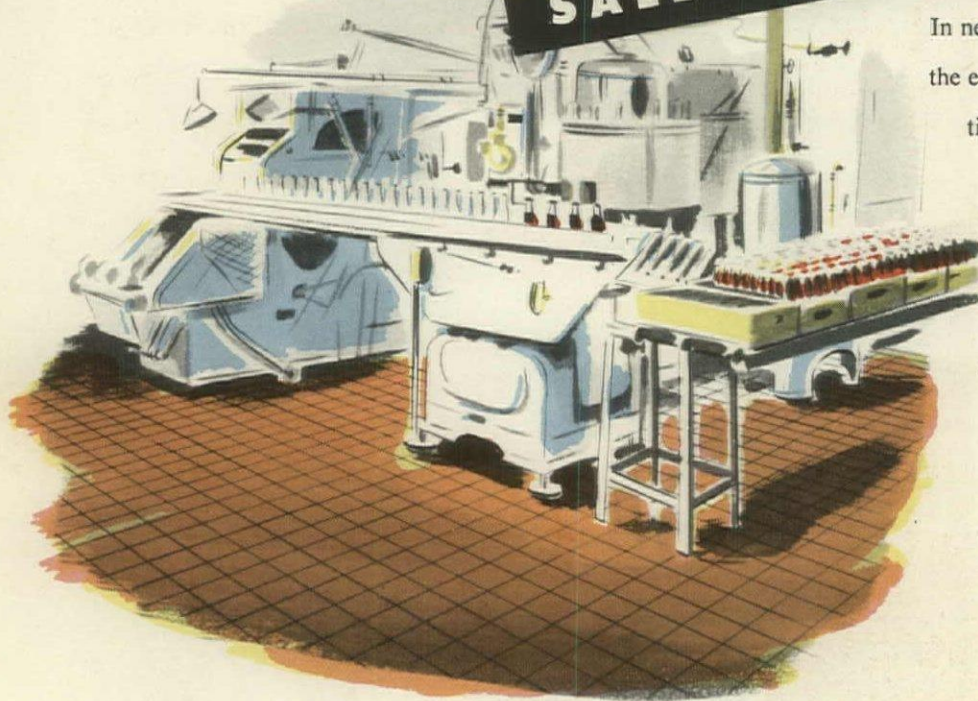
When undertaking any type of new construction or modernization, remember that durability and low maintenance costs are vitally important.

Experienced merchants prefer weather-resistant, colorfast clay tile which provides permanent beauty and charm . . . let clay tile be a silent salesman to make *passers buy*.



CLAY TILE PROVIDES...

SALES APPEAL



In new Dr. Pepper bottling plants in North Carolina, the extensive use of wide windows and glistening clay tile brightens the interiors and invites visitors who see on every hand the accent on cleanliness.

Floor cleaning, always a problem in bottling plants, is simplified here because the quarry tile floors can be washed in a jiffy.

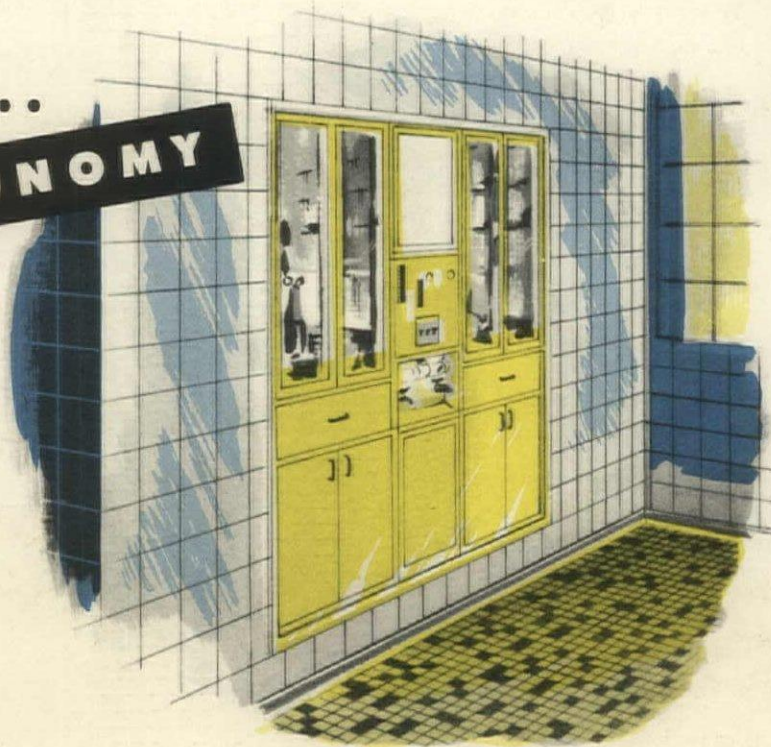
The tile floors in the syrup laboratory and water purifying room appeal to the public's desire for sanitary conditions. Here is further proof that clean plants can help sell the product.

genuine clay tile ...

CLAY TILE PROVIDES ...

ECONOMY

Hospitals are faced with the twin problems of keeping patients happy and maintenance budgets low. The use of genuine clay tile for floors, walls and corridors meets both requirements. In the Swedish Hospital, Seattle, Washington, and in various VA hospitals, clean clay tile gives patients confidence that sanitary conditions prevail. The maintenance load is greatly reduced because clay tile is so easy to keep clean. Tile walls never need re-painting.



CLAY TILE PROVIDES ...

MODERN DESIGN

In "Mr. Blandings Builds His Dream House," Cary Grant selects genuine clay tile for bathroom walls and floor . . . nationwide, the modern style is clay tile because the varied sizes, shapes and color combinations of tile make it adaptable for any type of design. Also tile's baked-in beauty is permanently pleasing and distinctive. Today every home can have clay tile because the installation cost is surprisingly low. Since clay tile is easy as china to clean, modern homemakers have less heavy housework.



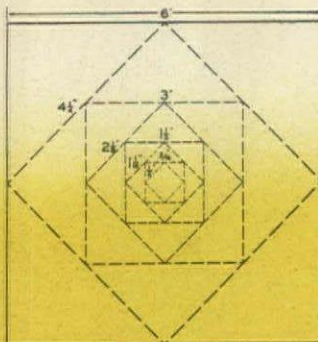
FACTS ABOUT GENUINE CLAY TILE

What it is: Made from clay and/or other ceramic materials, tile is burned at a high temperature to make it durable.

Types: Clay tile is of two general types—glazed and unglazed. Glazed tile has a glass-like finish which may be clear, opaque, white, black, colored or polychrome. It may have a smooth, mottled, veined or rippled effect. A glazed finish may be "bright," "semi-matte," or "matte."

Unglazed tile has no glaze on its surface. The same ingredients are used throughout the entire tile as appear on its face.

Sizes: The sizes range from small "dots" $11/32$ " square to 9" square. Thicknesses vary from $1/4$ " to $1 1/2$ ". The most common sizes bear a geometric relationship to a 6" square, as shown in diagram at right.



Shapes: Wall surfaces require trim shapes, many of which have been standardized by the industry in cooperation with the National Bureau of Standards. A chart is available illustrating and identifying the most popular shapes throughout the industry. To obtain chart use coupon below.

Standards: The National Bureau of Standards has recommended practice for grading, labeling and certification. These recommendations are widely followed by the tile industry.

How to get more information about tile

Tile Council of America
10 East 40th Street
New York 16, New York

I would like to receive information about genuine clay tile for walls and floors as checked below.

☐ Data Sheet on Tile. 4 pages. Describes the types, sizes, shapes, and colors of clay floor and wall tile manufactured by the tile industry.

☐ "Ceramic Tile in Church Construction," reprint of article by Alfred A. Frantz which appeared in Church Management.

☐ "Basic Course in Tile Setting" . . . Introductory textbook for apprentices. Available free to apprentices and to dealers employing apprentices. Others may obtain this textbook for \$2.75.

NAME _____

COMPANY _____

STREET _____

CITY _____

ZONE _____

STATE _____

... ..

Contact your local tile contractor

Good tile installations are the result of proper planning and skilled workmanship. Your nearby tile contractor and dealer offers an extensive background in using real clay tile. Many of these contractors have their own showrooms and are qualified to assist in design and selection.

For the name and address of the nearest clay tile contractor, consult the classified section of your telephone directory. Phone him for information.

THE TILE COUNCIL OF AMERICA

ROOM 3401: 10 EAST 40th STREET
NEW YORK 16, NEW YORK

ROOM 320: 639 SOUTH SPRING STREET
LOS ANGELES, CALIFORNIA

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

Participating Companies

American-Franklin-Olean Tile Company
Lansdale, Pennsylvania
Architectural Tiling Company, Inc.
Keyport, New Jersey
Atlantic Tile Manufacturing Company
Matawan, New Jersey
B. Mifflin Hood Company
Daisy, Tennessee
California Art Tile Corporation
Richmond, California
Cambridge Tile Manufacturing Company
Cincinnati, Ohio
Carlyle Tile Company
Ironton, Ohio
General Tile Corporation
El Segundo, California
Gladding, McBean & Company
Los Angeles, California
Mosaic Tile Company
Zanesville, Ohio
Murray Tile Company, Inc.
Cloverport, Kentucky
National Tile & Manufacturing Company
Anderson, Indiana
Olean Tile Company
Olean, New York
Pacific Clay Products
Los Angeles, California
Pacific Tile and Porcelain Company
Hynes, California
Pomona Tile Manufacturing Company
Los Angeles, California
Robertson Manufacturing Company
Trenton, New Jersey
Sparta Ceramic Company
East Sparta, Ohio
Summitville Face Brick Company
Summitville, Ohio
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HERE IS A CLEVER use of ANDERSEN WINDOWALLS—as an inverted corner in a bedroom. These windows turn the sunny outdoors directly into the home, bringing plenty of fresh air to ventilate the room on torrid summer days.

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In this installation three Andersen Casement Window Units, No. 4428, with one-light glazing have been arranged together.

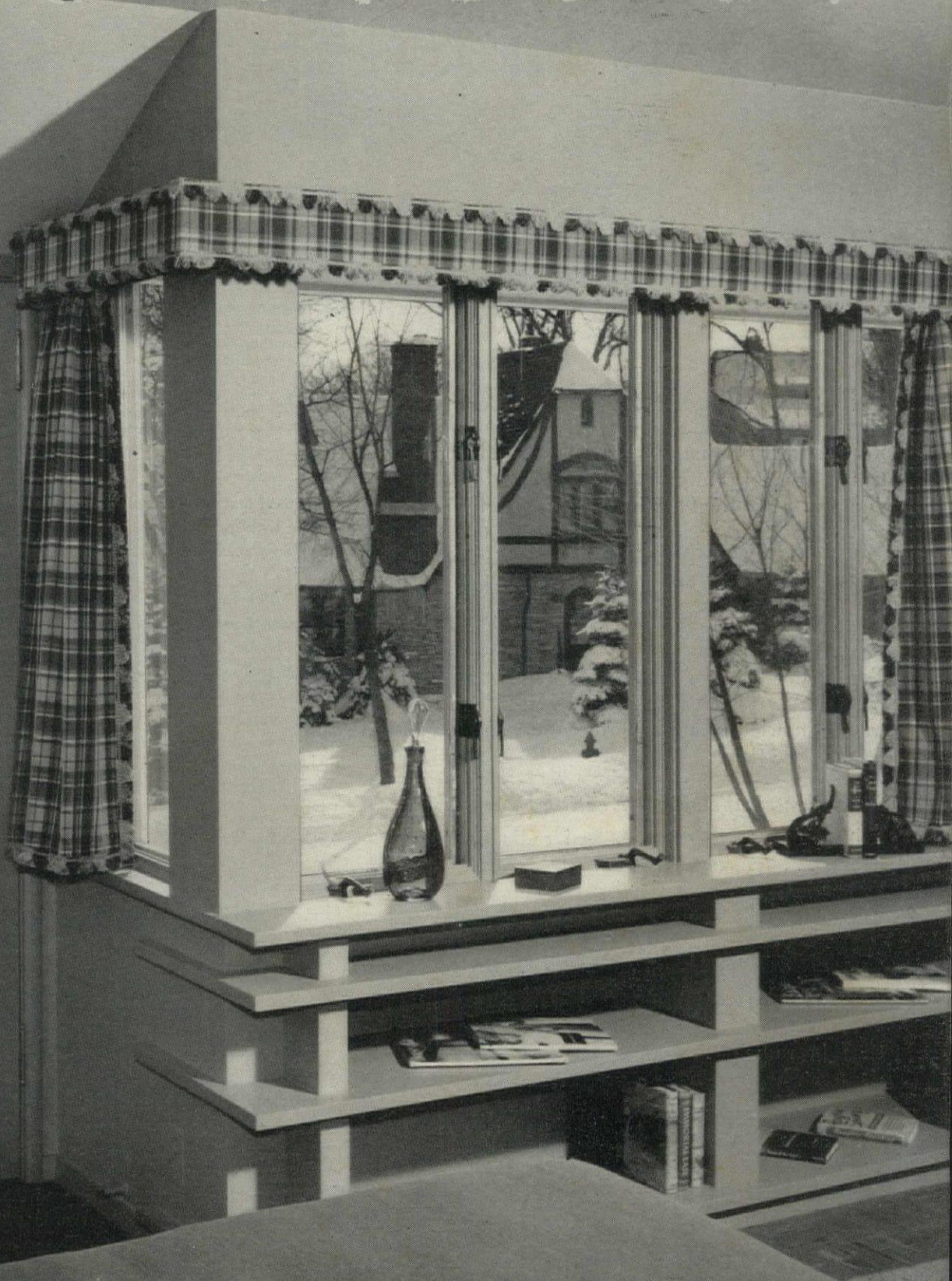
Specification data on ANDERSEN WINDOWALLS is in Sweet's Architectural and Builders' Catalogs, or will be sent by us upon request. See your local lumber or millwork dealer for further information.

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*Lions Club Model Home, Minneapolis;
Robert Cerny, Architect*



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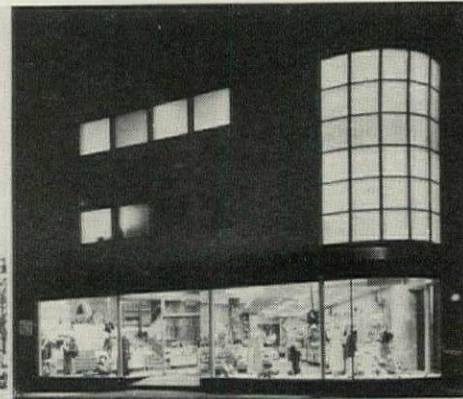
665 FIFTH AVE., NEW YORK 22, N. Y.—PLaza 9-3316
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MODERNIZATION BOOM HOLDS

With the boom in store remodeling showing no signs of slackening, store owners are increasing their interest in top-quality design. Today's competitive retail market has put a premium on the skilled designer's ability to move merchandise. Even more important, the store owner has been sold on the dividend of contemporary "open" planning: flexibility for meeting the changed merchandising requirements of the future.

These trends were very much in evidence at the second annual store modernization show in New York last month. The new flexi-



bility made possible by technical advances in the building industry was emphasized by both the exhibits of materials and equipment and the clinics conducted by store design experts, store managers, and equipment manufacturers.

The show's director, John W. H. Evans, has organized a national yearly competition for the best store modernization. This year's prize winner is a women's specialty shop in Trenton, N. J. (above). Victor Bohm was the architect; Belli Co., the contractor; Milton Rifkin and Michael Granick, owners.

are limited to a speed of four miles an hour, may be withdrawn if they prove shattering to the easy seaside pace.

Miami, used to superlatives, claimed one more. Real estate analyst Roy Wenzlick said it leads the nation in housebuilding. A Wenzlick survey showed that Miami started 69 houses for every 1,000 families in the first quarter of this year. This is more, in proportion to population, than any other city and compares to a national average of 5.3 houses per 1,000 city families.

New York, sentimental about Washington Square, the little park where Fifth Avenue begins, registered a divided opinion on what seemed to be the Square's future. New York University, whose present buildings face two sides of the park, last month bought another blockfront. Some, including Planning Commissioner Robert Moses, welcomed institutional ownership of the key block which closes the south axis of Fifth Avenue and saw the purchase as a starter for large-scale redevelopment of the area. Others, especially present Square residents, said the University was trying to turn the neighborhood's only public park into its own campus. But all agreed that the purchase ended the threat of a tall apartment building, which would shadow the park (see FORUM, May '48).

Milwaukee, which voted \$3,500,000 worth of bonds to finance veterans' low-rent housing, asked for bids on the first 580 units last

month, got only three. These averaged 62 per cent above the housing authority's estimate of cost. The authority had been most optimistic about general construction, which showed as 85 per cent above estimate. Subcontracting bids were much lower: plumbing, 12 per cent below estimates; electrical, 6 per cent below estimates; heating, only 4 per cent above estimates. The authority figured that the cost of each house would be \$13,100, instead of a hoped-for \$8,100, and wondered whether to ask the city for more equity money or raise rents above the announced \$50 a month.

Chicago, after three years and seven months of work on a revised building code (cost: \$80,000), faced the fact that city politicians were, as usual, stalling on adoption. "Sometime after the November elections," an anonymous alderman guessed Chicago might get its new building code. But important sections of the revised code were already crumbling. One of them: the section which lifted Chicago's long ban on prefabricated houses. Now being rewritten, this section currently looks more like a slammed door than an open one.

Pittsburgh started to plant some "parklets." About 150 by 200 ft., these will be landscaped areas in crowded sections, where children can splash in wading pools and grown-ups sit on park benches on summer evenings. Parklets are a venture in public and private cooperation. The city is buying

(Continued on page 20)

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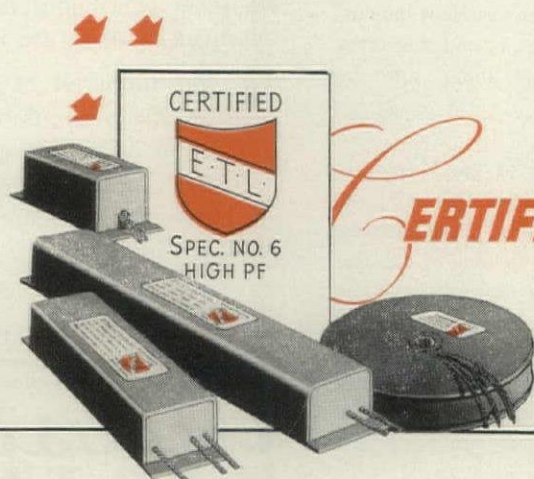


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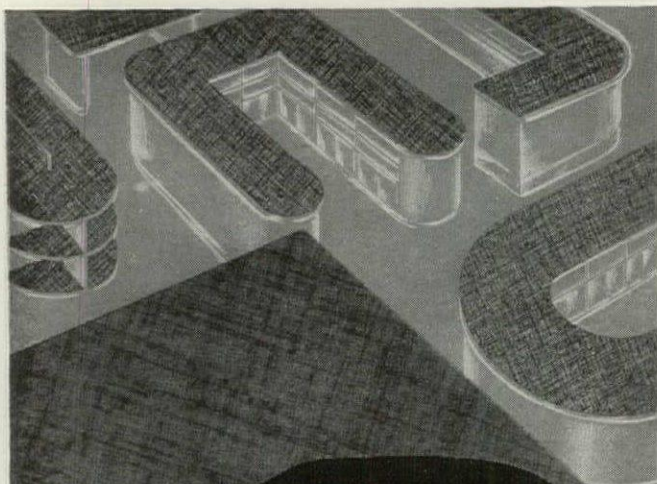
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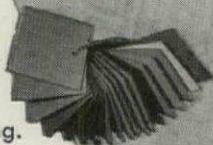
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or leasing the land; Pa Pitt's Partners, a businessmen's welfare association, is paying for development. Four parklets will be ready by next summer—Pittsburgh hopes other private groups will decide to sponsor some more.

Baltimore appointed its first full-time director of municipal planning—Cranbrook graduate, National Resources Planning Board alumnus, Arthur D. McVoy. Applauding, the *Baltimore Sun* put its finger on the big bog that has swallowed many a hopeful municipal plan: "What is needed is not only a speeding up in planning work but a campaign to acquaint the people generally with the work that has been done and will be done to map the future course of Baltimore. Planning is almost pointless if the public is not aware of it and if individuals—real estate, business and commercial interests and prospective home buyers—are not stimulated into taking advantage of it."

Big and Getting Bigger. Some 298 U. S. cities sprawled over their boundaries last year, the International City Managers Association said. Biggest sprawler: Dallas, which annexed 6,477 acres. Most cities try to let out their corsets this way, but are likely to run into trouble. "Suburbs usually resist annexation on the grounds that it may mean higher tax rates for their residents," the Association wearily reminded.

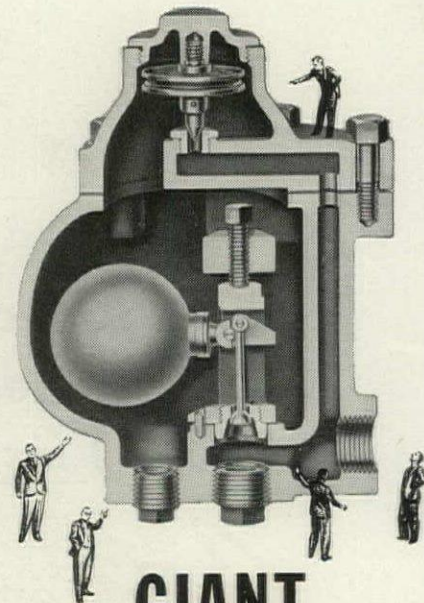
OPINION

Taxes, children, jet propulsion

Hobart C. Brady, president of the National Association of Real Estate Boards, warned that the cost of government today can only be paid for by a reduced standard of living—especially in housing. The house that now sells for \$8,000, Brady said, includes \$2,000 in accumulated taxes. These are the "passed-along" taxes of the lumbering industry, other material suppliers, the building contractor. Brady calls this the result of "the great illusion that government benefits could be paid to millions... and that taxes could simply be 'passed along' into the cost of goods."

Frederick J. Adams, head of the Massachusetts Institute of Technology's planning department, said that cities have become traffic conglomerations—instead of cultural centers. Adams thinks things could be better if cities were designed for children instead of adults. Neighborhoods, he said, should be small enough to give children "self-contained educational, social and economic life."

(Continued on page 22)



GIANT Performance

If you own a building or work in a building heated by low pressure steam heating, you have a stake in the Giant Performance of this remarkable Webster Trap.

It's the heavy-duty Webster Drip Trap—for returning air and water of condensation to the basement promptly and continuously. Proper condensate drainage means:

- (1) Fast, quiet, trouble-free heating
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Webster Float and Thermostatic Drip Traps are made for the pressure and capacity conditions encountered at all drip points—15 to 150 lbs. per sq. in. Used on process equipment and unit heaters as well, wherever continuous draining and overload capacity are required.

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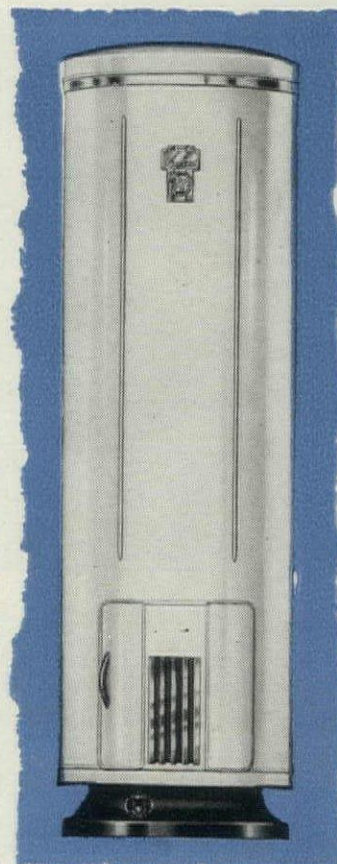
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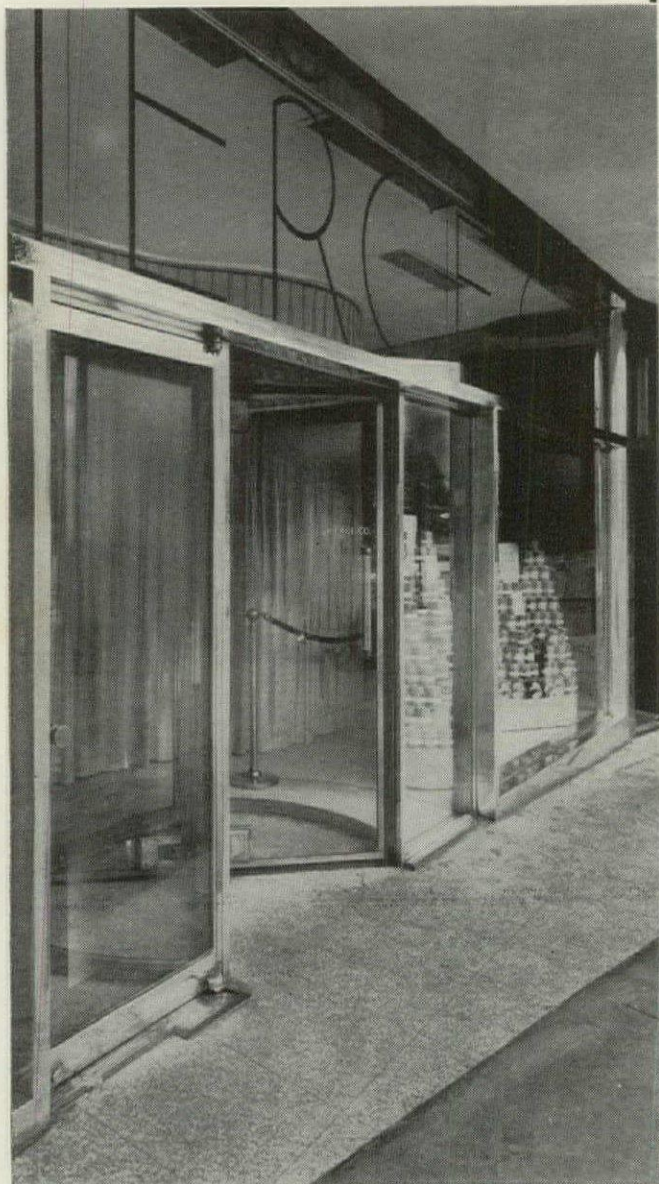
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Enhance appearance, increase wear-resistance and provide an entry way where the hazard of slipping has been banished (especially on wet days) by using ALUNDUM* Aggregate for terrazzo or concrete . . .



. . . or you may prefer ALUNDUM Floor Tile or Ceramic Mosaic Tile. The hard, tough grains of aluminum oxide give ALUNDUM Floors their wear-resistance and slip-proof quality. Don't neglect the slipping hazard when it is so easy to make your entrance and all heavily traveled floor areas non-slip.

See our catalog in Sweets (SA and SE)

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J. Gordon Lippincott, an industrial designer, has decided that civilization has become about as complex as it can get and is now headed in the direction of simplicity. This reassuring opinion is the theme of his just-published book, *Design for Business*. Lippincott thinks the "evolution of any new development is generally from a simple beginning to extreme complexity. Then after the complexity has become completely overbearing, some new and simple concept is born." Examples: the jet-propelled engine, which eliminates the many precision parts of the internal combustion engine; the large city, based on a complex network of electric railways, subways, elevated railways, etc., and now headed for decentralization, based on air travel. Lippincott sees the same trend in construction and thinks "we are entering the design era of the stressed skin surface . . . There is little doubt that sooner or later monocoque design will be applied to housing, furniture and other products."

The Chicago Tribune approved the city council's decision to put up nine temporary school buildings and drew a planning moral. Over and above the fact that the birth rate peak has been passed, the Tribune said, "another factor that should encourage use of temporary buildings is the knowledge that some neighborhoods, in which school attendance is now high, will be certain to lose population as they deteriorate. In this respect, Chicago is paying for its failure to make and enforce a genuine city plan that will stop neighborhood blight."

TREND

Eyesores down, air conditioners up

Fair and Colder. Despite midsummer heat, the U. S. seemed to be getting colder and colder. Shipments of air conditioning equipment amounted to \$52.1 million during the first quarter of this year, the Commerce Department said. This was 17 per cent more than the air conditioners shipped in the fourth quarter of 1947.

Clear View Ahead. Eyesores may no longer strip Maryland's highways if the state legislature passes the roadside zoning bill which will be introduced next session. Just approved by the state legislative council, the bill would cover heavily traveled highway sections not already under local zoning laws, would not be retroactive. Said the council: "Since the motorist now pays for the highway, the abutting property owner should not be permitted to exploit the highway traffic for his benefit, by uses which impair the safety, capacity and appearance of the road."

(Continued on page 26)

SUNROC

Engineered to Specifications

Sunroc specialization pays off when water cooler design must conform to specific or abnormal needs. Here are three typical examples.

The triple-purpose **SUNROC SUPER COOLER**, in one compact unit, supplies properly chilled drinking water, 3 ice-cube trays (24 jumbo cubes), and about 2 cubic feet of refrigerated storage space.



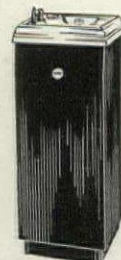
SUNROC CAFETERIA COOLER MODEL CAFE 28

is ideal for diners, lunch rooms, tea rooms . . . or as an auxiliary cooler in restaurants and cafeterias, to save waitresses' time. Capacity, 8 gallons per hour.



EXPLOSION-PROOF SUNROC WATER COOLER MODEL SAFE

is Underwriter-approved for hazardous installations. It was specially designed to cope with this danger; its static condenser makes it invaluable where water is scarce.



The water coolers you need will be found among the 17 superb Sunroc models—so, *standardize with Sunroc and be sure!* For complete information, write Dept. AF-8, Sunroc Refrigeration Company, Glen Riddle, Pa.

America's most complete line of water coolers, \$199.95 up, F.O.B. Glen Riddle, Pa.



"SUNROC SERVES THE WORLD . . . a cool drink of water"

MICARTA

for Table Tops?

of course . . . and also for DOZENS OF OTHER USES

Maybe you've always thought of MICARTA* as the material for table tops, bars and counters . . . and of course you were right, but only *partly* right. For consider how *useful* MICARTA is in many other applications:

Counter fronts
Kick plates
Push plates
Wainscots
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MICARTA is a highly decorative plastic laminate *building* material. It's made in three types: Micarta Sheet, $\frac{1}{16}$ " thick; MICARTABORD, $\frac{5}{32}$ " thick for wall applications; and Micarta laminate, $\frac{7}{8}$ " and $1\frac{1}{4}$ " thick, for counters, bars and table tops.

MICARTA color is inherent. Sheets are available up to 4' x 8'. Two types of finish — either high polish or satin — and twenty-one colors and types to choose from, including decorator colors, pastels, linens, mother of pearl, foam and natural wood laminates, protected by a surface of melamine resin. Micarta is obtainable in two grades: "Standard" and "cigarette proof."

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If you want to know how MICARTA can 'take it' try these tests:

Pound it. Micarta is hard, durable, immune to a remarkable amount of abuse.

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These unusual homes will sell for \$7800 . . . with a down payment of \$1800 to non-veterans and only \$800 to veterans! And every home includes a Bendix automatic Washer — and a Bendix automatic Dryer, as well!

No doubt about it — homes planned for easier living must include automatic washing and drying equipment. Naturally, Merrick-Kleist chose Bendix. Because Bendix — first in the automatic washing field — is the world's most-wanted automatic washer — the world's most accepted automatic dryer!

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BENDIX^{automatic} Home Laundry
Your customers live better with Bendix

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THE ALL NEW BENDIX DE LUXE—
Compact, efficient, counterheight for easy convenience. (Automatic soap injector optional.)



THE MATCHLESS BENDIX DRYER—
Beats the weather to a frazzle, saves work, saves time! Plan for this Bendix duet!

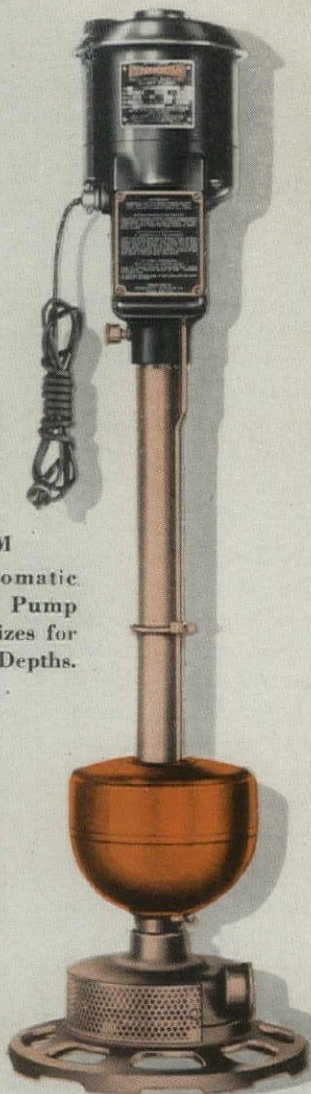
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THROUGHOUT

MODEL M

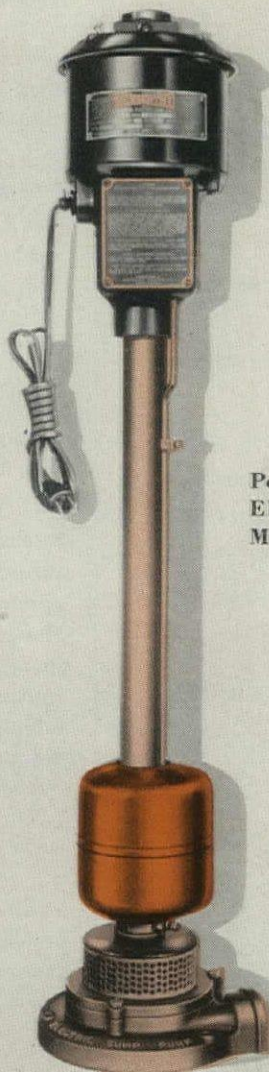
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Made in One Size only.



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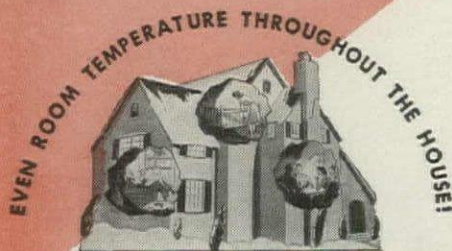
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Backyard Glean. Aluminum garages are going up in more and more backyards, according to their manufacturer, the Smith-Orr Co., Detroit. Smith-Orr designed the first aluminum garages in 1946, ships a pre-cut unit.

Too-Low Taxes? The strange case of a property owner who thinks real estate tax assessments are too low appeared before the Florida Supreme Court. The Kent Corp. argued that tax assessments of Fort Lauderdale houses are far below current selling prices and so not in line with the state "full cash value" requirement. Replied city attorneys: inflated prices during a period of housing shortage should not be given too much weight in determining the value of property. The Kent Corp. counsel insisted that market price is a fair yardstick because the inflated value of a tax dollar is the same as that of a purchasing dollar. Last year, the counsel said, the city assessed houses at 24 per cent of what they sold for on the market. The Kent Corp., which owns non-residential property, thinks present house assessments throw too much of a tax burden on other kinds of real estate.

Furniture Complaint. In Long Island, where new houses have been springing up like mushrooms, furniture retailers gloomed. Their complaint according to *Retailing Daily*: new home owners have no money left to buy furniture; only the bare essentials are moving out of the stores and into the new houses. A major exception: television sets, now the easiest household appliance to sell.

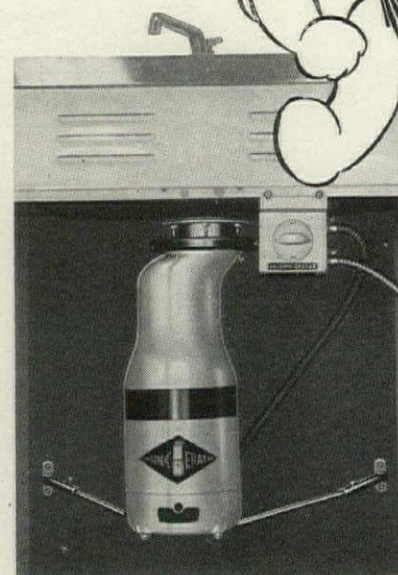
Furniture Trend. Double-duty furniture sweated under the spotlight at the July 4 opening of the Chicago furniture market. Manufacturers agreed that the trend to the smaller house (plus housing shortage) has reshaped furniture design. The poor man's folding davenport, for instance, has become everybody's double-duty sofa. Said the Simmons Co.'s merchandising manager: "Double-duty sofas date back at least to the early days of this country. But before the war, these were low income group items. In those days, if a family needed more room it just moved to a bigger house. Today we are making sofa beds for every income group."

Trailer a la Mode. Contemplating stiffer municipal regulation of trailer camps, the Trailer Coach Manufacturing Association announced a new platform: a lawn and patio for each trailer; an electric meter for each trailer; individual bathrooms.

IN-SINK-ERATOR Garbage Disposer

Model "900"!

WITH SIMPLIFIED
ELECTRICAL HOOK-UP
FOR EASIER
INSTALLATION



The IN-SINK-ERATOR Model "900," built on the integral design principle employed by IN-SINK-ERATOR for ten years (longer than any other in the disposer field) comes complete with a positive acting, reversing control switch and a simplified electrical hook-up for easy installation in custom dwellings or project housing. IN-SINK-ERATOR's automatic reversing action, complete self cleansing streamlined design and two-directional shredding have set the pace for ten years. It's the disposer the plumber likes, too . . . because it's distributed EXCLUSIVELY THROUGH PLUMBING CHANNELS.



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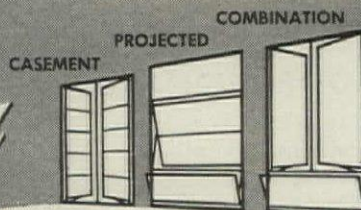
Specification Solution—Selection of 787 Fencraft Projected Steel Windows, 2 Fencraft Casement Windows, 12 Fencraft Combination Windows—801 windows total.

Add one more outstanding building where *Standard* Fencraft Windows were selected for efficient fenestration with savings clear across the board. First, savings result from the economies of mass production; second, from simplified installation because window dimensions are co-ordinated with those of other wall materials. And savings in the future will come from easy washing, easy screening and durability assured by famous Fenestra quality.

The Fenestra* family of Fencraft Windows . . . Projected, Casement and Combination . . . permit design freedom plus economy. For information on the many types and sizes available, see Sweet's Architectural File for 1948 (Section 16a-14). Or mail the coupon.

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

Name _____

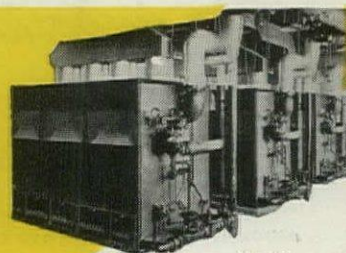
Company _____

Address _____

FOR WIDEST *selection*

RADIATION HEATING

Choose the boiler for your domestic, commercial or industrial radiation heating job from the *thirty-six* basic sizes in the Bryant line. Rated from 67,500 to 3,966,000 Btu per hour, Bryant Boilers are available in hot water, vapor and steam types . . . a size and type for any radiation heating application.



Model 630



Model 443

WINTER AIR CONDITIONING

These Bryant Winter Air Conditioning Units provide the design and operation features that you want for single or multiple installations. Made in conventional basement model with cast iron heat exchanger, and vertical types with either cast iron or *Hevigage* steel heat exchangers. 17 different sizes; inputs 45,000 to 250,000 Btu per hour.

Model BA-88



Model VB



Model VS-304



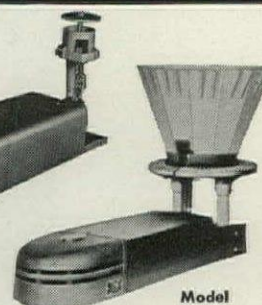
CONVERSION BURNERS

Old-fashioned furnaces become modern, fully-automatic gas heating plants with Bryant Conversion Burners. Bryant provides three types in two basic models: round burner and baffles for conventional round furnaces, rectangular burner for rectangular boilers and furnaces, and a single-port, spread-flame budget model for special applications. Ten sizes.

Model 94-S



Model 97



Model 94-R

SPACE HEATERS

Heat a single room . . . cabin, office, study, laundry . . . or a complete home with these Bryant Space Heaters. They provide welcome warmth by both radiation and circulation, require less floor space than the ordinary radiator, eliminate the hazards of old-style, open-flame heaters. Seven different sizes, inputs 15,000 to 60,000 Btu per hour, manual or automatic control.



Model VC-426



Model WV-401

FLOOR FURNACES

Bryant Floor Furnaces are engineered for ease of installation and operation. They are designed to fit between standard floor joists, provide floor level access to ignition and temperature control. They feature Bryant electric *Dial-Lite* ignition, are made in three sizes for automatic or manual control with inputs from 25,000 to 45,000 Btu per hour.



Model FF-361



All Bryant products are approved by American Gas Association for use with natural, manufactured, liquefied petroleum or mixed gases.

IT'S BRYANT... ALL ALONG THE LINE!



Model 26



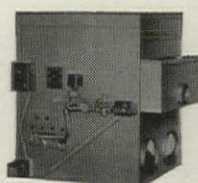
Model 85



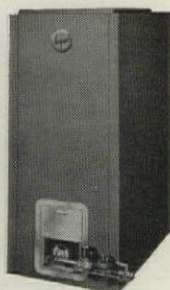
Model US-322

UNIT HEATERS

Bryant Unit Heaters complement the smart interiors of modern stores and offices, adapt themselves readily to factories and warehouses and in other commercial or industrial establishments. Model 85, in five sizes from 65,000 to 255,000 Btu per hour, has tubular steel heating sections; Model US-322, six sizes with inputs from 60,000 to 210,000 Btu per hour, features the *Hevigage* steel heat exchanger.



Model SGF-362



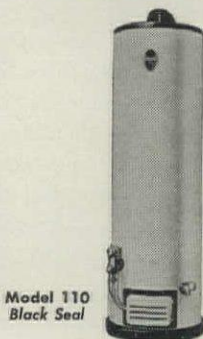
Model GS-57

WARM-AIR HEATING

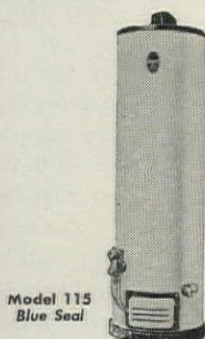
These Bryant Gravity Warm-air Furnaces are built for budget homes. They include a standard basement model for replacement of old, worn-out furnaces in existing housing or for new, low-cost housing; plus the splendid new Bryant Suspended Gravity Furnace with smooth-running propeller-type fan for use as a central core in small homes. Model GS-57 is made in four sizes, inputs from 70,000 to 140,000 Btu; Model SGF-362 in 55,000 and 70,000 Btu inputs.



Model 103 Red Seal



Model 110 Black Seal



Model 115 Blue Seal

WATER HEATERS

Here's the automatic storage water heater line that is taking the country by storm... the Bryant *Red Seal*, a standard economy model; the Bryant *Black Seal*, a superior water heater with five exclusive features; and the *Blue Seal*, with the Bryant *Protect-O-Rod*—the water heater that is *built to grow old*, backed by a 10-year protection plan. Bryant Water Heaters offer special burners for each type of gas, are made in 20, 30, 40, 50-gallon sizes.

The most complete line of gas heating equipment in the nation...at your service!

Unit for unit, the complete Bryant line of automatic gas heating equipment covers every phase of radiation, convection and conduction heating. It is backed by powerful national advertising, by a great array of tested sales aids; supported by extensive sales and service training activity and a nationwide distribution and parts service organization set up for easy access by dealer and customer. And it's yours to tie onto... for bigger sales, more trouble-free installations and a host of satisfied customers. Let the Bryant distributor in your territory tell you how... now!



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

bryant

AUTOMATIC HEATING

BRYANT HEATER COMPANY

Cleveland, Ohio

One of the Dresser Industries

Mr. Travelletti Gets the Treatment . . . Boost for Basements . . . Comment on the Urban Traffic Tangle . . . House Prices vs. Veterans' Salaries . . . Henry Churchill's Atom City.

A HOUSE DIVIDED

Forum:

In criticizing Mr. Travelletti's house (June '48, p. 110) FORUM did something which I had long hoped for. I wish you would take some similar example every month and point out what is wrong with it, rather than printing many examples with little if any critical text. As John Hills, my Yale classmate, pointed out in his letter (FORUM, June '48, p. 26), you seldom "distinguish good from bad" as you should. Therefore, I say keep up the good work begun with Travelletti.

W. H. METCALF, JR.

New Haven, Conn.

Forum:

Re: Mr. Rene P. Travelletti: Though he lives in a House-Divided there is ample evidence that his life is neighborly and gentlemanly, his financial remuneration is adequate and all-in-all he is considered a darned good man—up-to-date and all that—but doesn't force it down your throat, don't y'know. . . . To the person who suggests that a 1½ story house with a living room-porch wing projecting into the garden might have been a more forthright solution his friends would say: "Maybe you're right—but boy this is really nice—I wish I had roll screens on my porch."

The education of the client has made tremendous strides in the last ten years. The plan has taken on great significance not only in arranging furniture but also in determining cost via the all-powerful square-footage rule. Because the section and specifications (the real cost-determinants) require more time and study due to their complexities it may take 20 additional years before the educational process can illustrate to the client the folly of the House-Divided. The fact that the elevations must evolve from and with the section which must evolve from and with the plan which must in turn evolve from and with the specifications . . . may never penetrate the vast morass of quasi-knowledge surrounding those prime necessities of building—the clients. Surely this principle of design which allows of no time-lag between thoughts on plan, elevation, section and specification can never be forwarded by persons who use such mouthings as "the architecture of the street side"; "the back" (as opposed to the front); "nudism"; "modernism"; "exhibitionism" and "choose between sweet and sour modern."

Until the architect, the engineer and the builder can be coordinated into the designer (the *magister operari* of medieval days) who after leading the client through the intricacies of a logical solution will then carry the ball directly through to the banker, we will continue to have fairly logical plans (which no one "sees") coupled, but not wedded, to fairly "presentable" elevations (which everyone "sees"): Houses Divided. Then the client is not afraid, the architect gets his fee and we continue to be products of the salesman philosophy in which we "sell" ideas and the client is always "right." Utopia: no one is offended. . . .

R. B. CUTLER

Staten Island, N. Y.

Forum:

I enjoyed the presentation of a *House Divided* . . . and would like to see more examples of "semi-modern" domestic architecture with the pros and cons discussed. In this instance, I would vote for Mr. Travelletti, as I think most of his points are well taken and he has made a good case for his design and plan arrangement.

Particularly do I agree with Mr. Travelletti in his provision of needed parking space on the lot and arrangement of the driveway for easy ingress and egress. To have designed the garage with the doors facing directly toward a "high traffic street" would have required backing out to the street. While this would give more lot space on the east side of the house, it would have introduced a traffic hazard for the owner, his family and guests as well as users of the highway. . . .

EARLE S. DRAPER,

Housing and Planning Consultant
Washington, D. C.

Forum:

Your timely article "A House Divided" really brought into the open the major cause of "compromise architecture" now running rampant throughout the U. S. I want to congratulate the editors of FORUM for taking a major step in demanding honest straightforward architecture.

I cannot help agreeing with the editors almost wholeheartedly, and for that reason I cannot keep from adding my two cents to what I believe will be (and should be) quite a controversy.

I presume that Architect Travelletti meant to say that the house was not for

immediate resale. The resaleability of any house cannot be completely disregarded, and this holds true even more if the house isn't going to be sold in the near future. Family habits change constantly and cannot be disregarded. . . . The possibility of resale is always present, and if the house for sale is tied down by some nostalgia for a half-baked "style," only a limited clientele will bite and possibly be hooked.

The house is well placed on the site for the most part; however, location of the bedrooms facing south, with major light sources in the south wall, undoubtedly makes for a sleeping room slightly on the warm side. Possibly, the architect's family prefer warm bedrooms. . . .

And now—this business of designing to suit the character of the neighborhood. My-oh-my, this is running true to "style." I suppose that if Architect Travelletti had chosen a site amongst some of the sad reminders of our rampant eclectic past, he would have twisted the facade to conform to whatever "style" prevailed in that neighborhood. Why not build up the neighborhood and give it something worth having instead of staying in line with the middle of the road traditionalists in creating another copy of some bygone day? Oh! I see, the neighbors wouldn't like it—it would make their beautifully authentic Cape Cod, or what have you, rather dull and dated.

And what is all this stuff about nudism? High windows were created to give privacy and yet give maximum light, ventilation and protection from unwanted street noises. You can still have your wall space, too!

I'm sorry, but I have to agree with FORUM when they said that the house was given the "treatment." To bear this out, I call attention to the glaring fact that even though future bedrooms, bath, and storage are said to be "provided" for, these future rooms certainly wouldn't be habitable—not even by local code regulations. Where is the necessary light and ventilation that would be demanded? Does the architect plan some fitting dormers on either north or south side, or possibly a skylight or two? Those two port holes won't be enough, I'm sure. Furthermore, what about headroom and how about that step in the future floor?

As I see it, the wish to change the facade was deliberate—even to the meticulous cropping and placing of the chimney o.c. with the ridge. The fireplace in the study probably is genuine and will draw, but I

(Continued on page 32)

DOUBLE DUTY INSULITE

(BILDRITE SHEATHING)

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TWO services at one cost.

Remember that fact because it's exactly the kind of fact your clients will remember . . . and appreciate . . . and give you credit for.

Double-duty INSULITE (Bildrite) SHEATHING not only encloses a house but it provides insulation at the same time . . . for no more cost. That's double for your clients' money . . . and they like it. Specify double-duty Insulite.

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

INSULATES AS IT . . .
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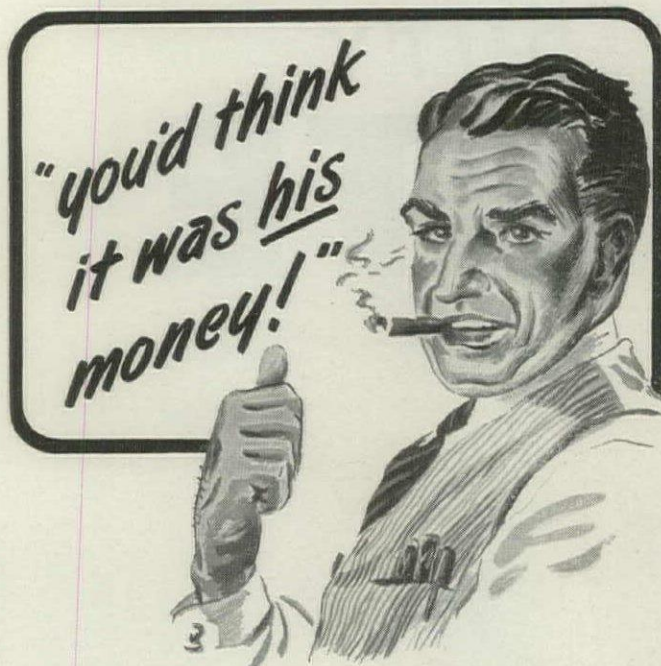
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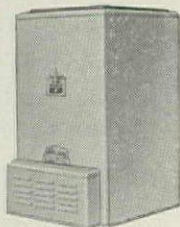
LETTERS



Honest! We hope he's talking about one of the many architects and builders who *insist* on WEIR-MEYER heating equipment—that is, one of the men who are thinking of tomorrow by making sure today's home builder gets his money's worth. Dependable WEIR-MEYER equipment is honestly built, honestly priced. For all fuels.

A complete line of gravity furnaces and Air Conditioners, including new Hi-Boy models. Cooling and dehumidifying equipment may be added at time of installation or later.

GAS



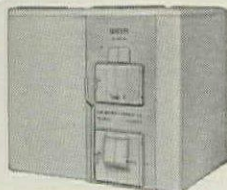
Dependable economical Oil-Fired heating equipment for every installation from small homes to large industrial, commercial, and institutional applications.

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believe more than a little time was spent in detailing the construction. I'd like to see the drawings for the set-up. And, while I'm about it—why paint the brick?

... I feel that I'm being rather harsh with Architect Travelletti, but nevertheless, I've waited for a chance like this too long already to stop now.

About that overhang and the glare it was supposed to eliminate. In the first place, I see no legitimate reason for sticking it on the sidewall. The architect could have made good use of the ceiling joist extension. But continuity of structure is subordinated to obtain a desired result. An honest expression cannot be hoped for if this is done. ...

I admire Architect Travelletti for sticking to his guns as regards the straight-line kitchen arrangement, but I can't help feeling that Mrs. Travelletti or the maid has found that it is quite a distance through the breakfast room to the dining area or to the court.

And speaking of the maid—poor thing—where does she relax in her off-moments? In the compost yard or the vegetable garden? I presume that the maid lives on the premises when I make that statement. I think it's high time that *everyone* that lives in a house should be given due consideration in the planning stage.

To conclude finally (I could go on), the house is not only divided—it gives no indication whatsoever that there may be any indoor-outdoor relationship in any part of the house. The house certainly does *not* lack exhibitionism. What else could painted brick, an out-of-character entrance, a "dummy second story," etc. imply? The difference between the front and rear "treatments" almost presupposes that a split-personality or two men worked on the design.

And to really conclude—why does Architect Travelletti feel that he has to choose between sweet and sour modern? What have we here—a couple of new "styles?" I see no choice at all, in this sense. Either we will choose modern, contemporary, honest, straightforward design or subjugate our way of life to the limitations of an eclectic, traditional, time-worn, sentimental "style" of architecture. ...

JAMES E. WESTPHALL

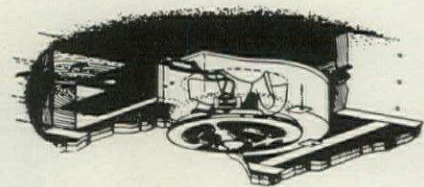
Los Angeles, Calif.

DREAMY TECHNICIANS

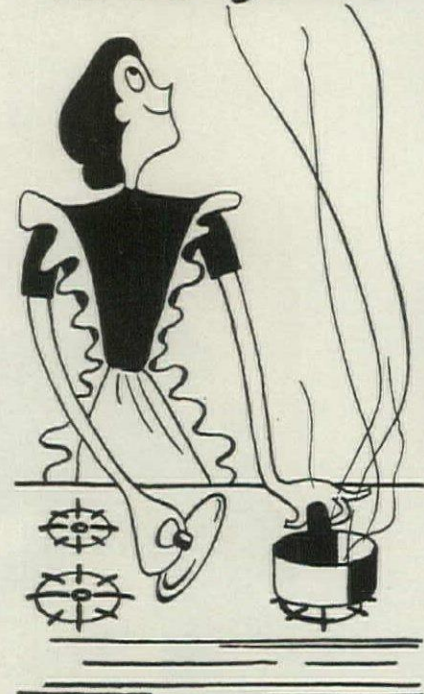
Forum:

Interested in the clever manipulation of statistical figures (FORUM, June, p. 16), we took the trouble to determine that the storage space provided in the basementless house cost \$1.35 per cu. ft. as compared to

(Continued on page 36)



WOMEN LOOK UP TO Blo-Fan



BLO-FAN equipped kitchens benefit Mrs. Housewife 6 ways. Ask the woman who has one.

1. Ceiling installation, directly over the range, where a fan belongs.
2. Elimination of unpleasant cooking odors, greasy walls and foul, contaminated air in the house.
3. Minimizes house cleaning and redecorating.
4. Minimum ceiling opening, attractive grill.
5. Blo-Fan combines the efficiency of a fan with the power of a blower.
6. Trouble-free operation assured by totally enclosed motor, cooled by the air stream.

It's an architect's job to provide functional design in the kitchen...Look up to

Blo-Fan
ELECTRIC CEILING VENTILATOR

for the most efficient ventilation
PRYNE & CO., INC.

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**For Finer
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Bruce Hardwood Floors

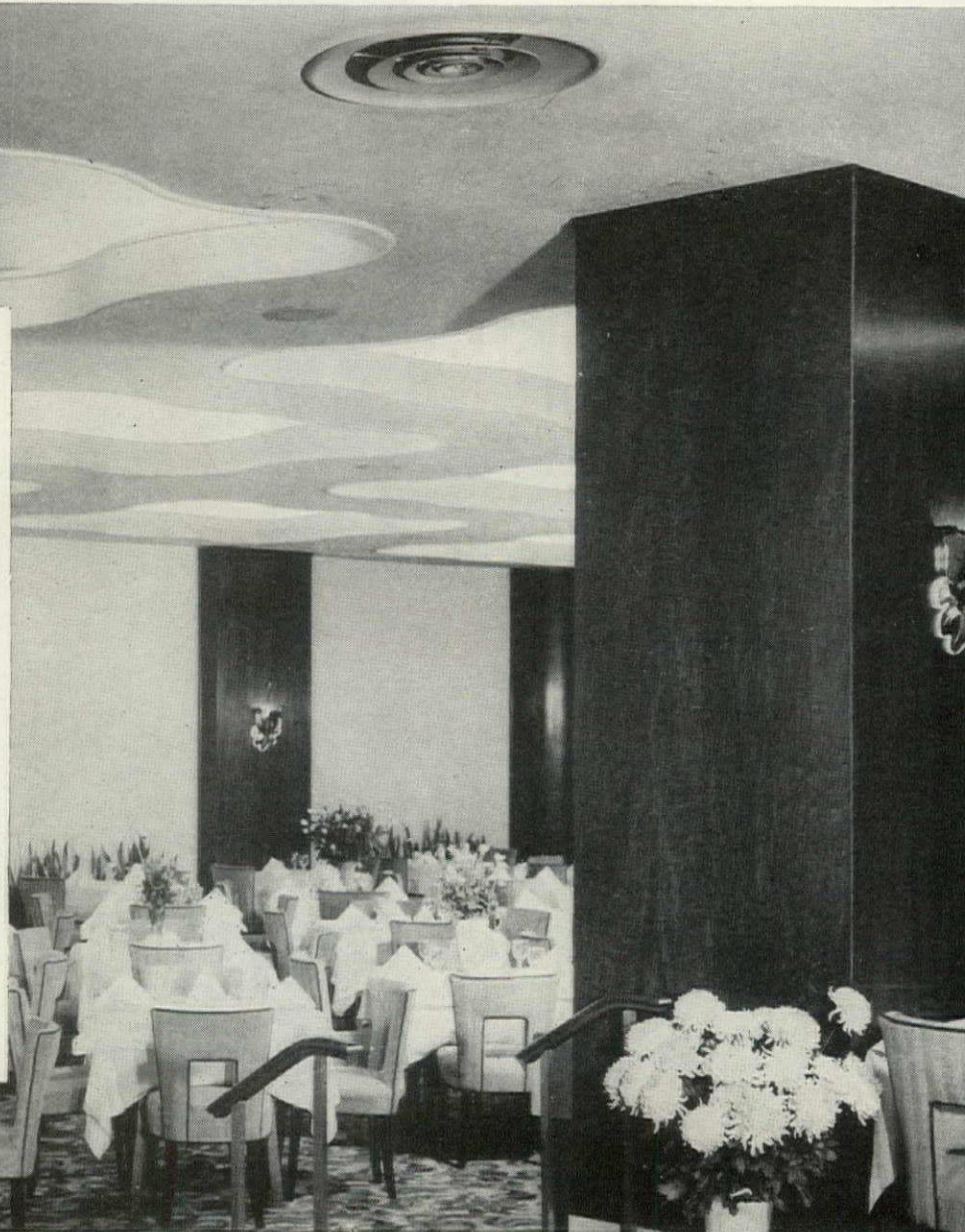


Prefinished and Unfinished



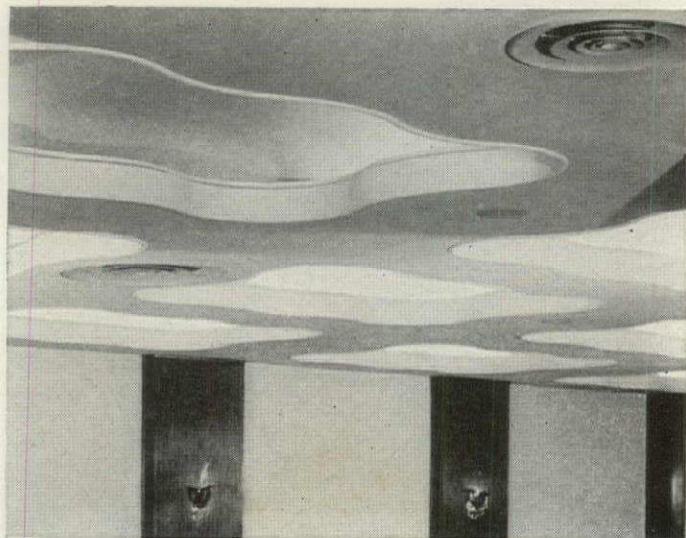
Hotel LaSalle

selects
SABINITE*
Acoustical
Plaster Ceilings
because...



Happ and Happ, architects for the remodeling; Paschen Contractors, Inc., general contractors; Zander Reum Co., plastering contractors

SABINITE absorbs sound



The strikingly beautiful ceiling of the Lotus Room, the LaSalle's sleek new cafe-restaurant. SABINITE lends itself perfectly to the unusual design.

The new LaSalle Hotel is the result of an intensive, one-year rehabilitation program that has made this world-famous hostelry one of the finest in downtown Chicago. An essential element in this rehabilitation program was the acoustical correction of lobbies and public rooms with ceilings of SABINITE, the acoustical plaster finishing coat that absorbs sound.

Why SABINITE?

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eliminates the mechanical effect generally associated with acoustical treatment. SABINITE can be adapted to any decorative plan. When you use SABINITE, no ceiling pattern is imposed on the designer.

SABINITE is incombustible . . . because it is made of gypsum and other minerals that will not burn.

SABINITE is readily available, and can be applied by any competent plasterer.

When working on any acoustical correction problem, why not call for your USG representative? He will be glad to show you how SABINITE can help.

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



United States Gypsum

For Building • For Industry

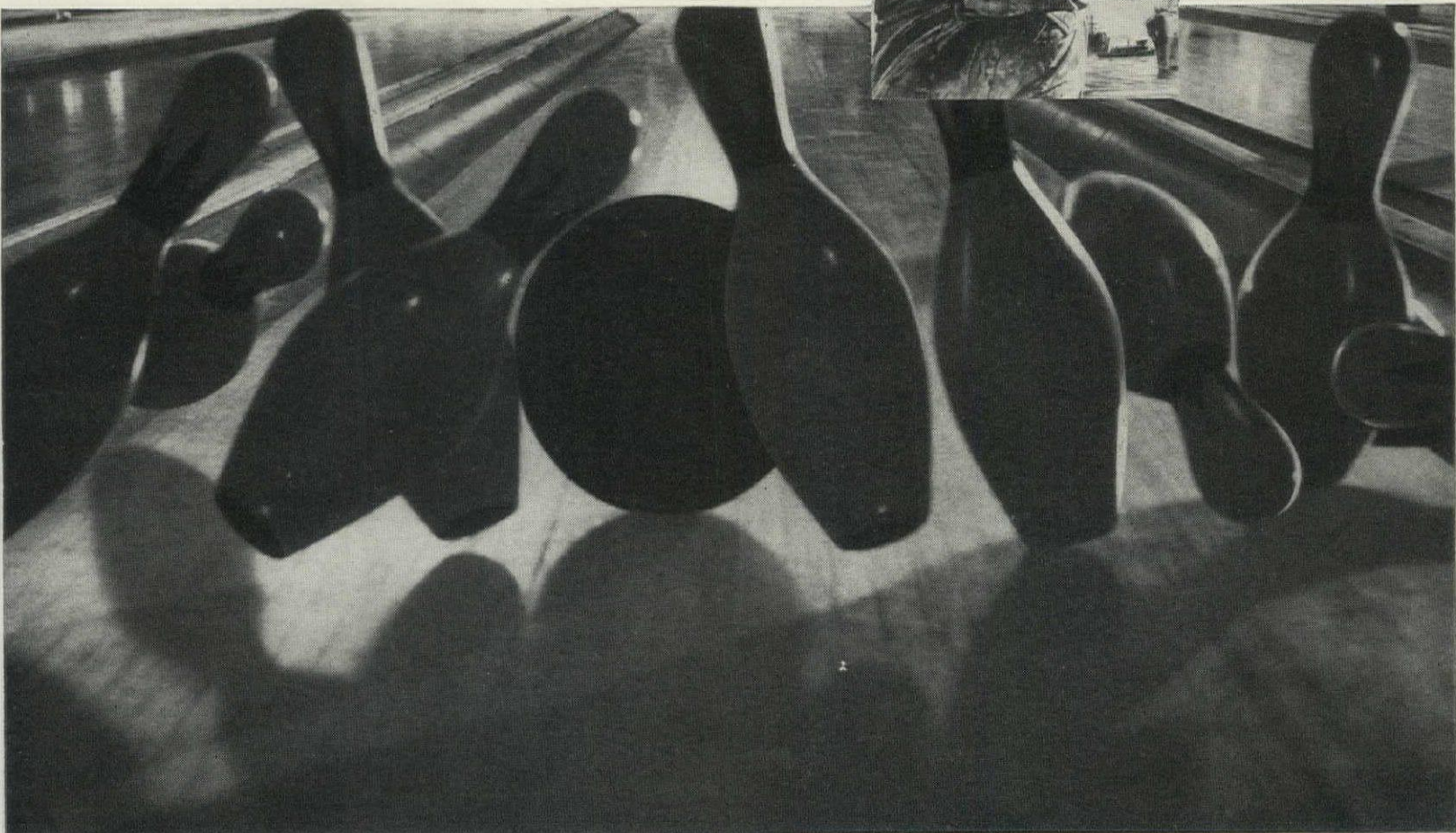
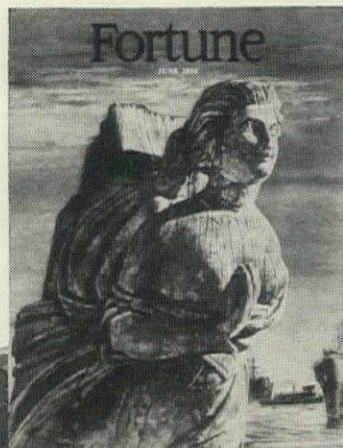
Gypsum • Lime • Steel • Insulation • Roofing • Paint

put an idea where it counts . . .

The right approach...the right pin...and all of them go down. And the force of a conviction that first strikes the *right mind* will travel through many minds.


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LETTERS

**Now...the benefits of
DIFFERENTIAL HEATING
are available in
EVERY INSTALLATION
REGARDLESS
OF SIZE!**



DUNHAM

**VARI-VAC
DIFFERENTIAL HEATING**

JOB-SCALED! FOR ANY BUDGET!

DIFFERENTIAL HEATING, the system that for so many years, has provided greater comfort with lower maintenance and fuel costs for the largest, most deluxe installations in the United States and Canada is now applicable to modest sized buildings too. Seven varying sized JOB-SCALED SYSTEMS provide a Vari-Vac System designed to meet the exact requirements for every type of installation. Vari-Vac Job-Scaled Systems are another Dunham achievement based on the forty-five years of heating experience of the originators and manufacturers of Differential Heating. This present development makes it possible for you to provide the greater heating satisfaction and substantial saving in operating costs for which this system is world famous.

Through the utilization of Variable Vacuum (Vari-Vac) the Dunham system provides varying degrees of radiation temperatures positively controlled to give comfort in severe or mild weather—eliminates overheating and underheating.

Dunham Differential systems have been installed in Rockefeller Center, Rochester General Hospital, University of Rochester, N. Y., University of Montreal, Canada, Eastman Kodak Co., Bausch & Lomb, Parkchester, St. Mary's, Rochester, Minn., and thousands of similar projects. This practical, nation-wide heating-system experience is available to you for the installation of Vari-Vac in apartment houses, factories, hotels, office buildings, and institutions of every size.

Complete details on the Dunham Vari-Vac Systems—JOB-SCALED to fit any installation—are yours by writing to
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DUNHAM

HEATING MEANS BETTER HEATING

35 cents in the "old fashioned" basement.

Will the Housing and Home Finance Agency subsidize the home builder for this supercost to further "prove" its point?

Will HHFA provide home buyers content to accept 4,822 less cu. ft. of elbow room?

Will HHFA conjure the idealistic level property where extra depth foundation walls are never needed?

Will taxpayers continue paying HHFA "technicians" for such dreaming?

SCHREIER PATTERSON & WORLAND,
Architects

Washington, D. C.

- 1) Although the ground floor utility ell costs more per cu. ft., its total cost is \$435 less than the conventional basement—a considerable factor in the choice of most homeowners.
- 2) Most basement space is either wasted or so inconvenient that the theoretical flexing of elbows is hardly a lure.
- 3) Few sites in the U. S. require foundations deeper than a 4 ft. frostline.
- 4) Probably.

THE PROLIFIC MACHINE

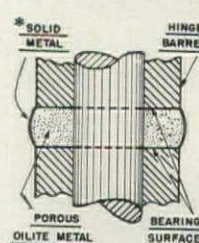
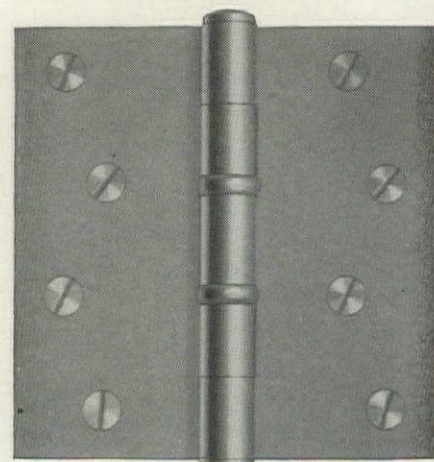
Forum:

I read with much interest the editorial ... dealing with the problem of congestion on city streets (FORUM, May, p. 12) ... It has always seemed to me as a citizen (which means that I am at times a pedestrian, sometimes a driver of an automobile, and at still other times a user of public transportation facilities) that we are running a losing race in providing facilities for mechanized traffic. The program, always years behind, has been to widen streets, provide arteries capable of handling more vehicles per hour, add new parking facilities, etc., but the practical results always seem to be that increasing the ease by which vehicles can be brought into a congested center only induces more to come in, in even greater proportion than the new facilities can accommodate. I believe that in an ideal case if the boulevard and street systems of a metropolis could be entirely redone, that the net effect, when completed, would be simply to attract an even larger number of vehicles than before, probably to a greater extent than the modernized system was designed to handle. In short, better streets while adequate cannot ever hope to catch up with the traffic load.

The only solution apparent to me is a drastic one and that is to abolish all private vehicles from the congested zones. I believe our streets could just about keep up with the demand for their use by delivery and public transportation vehicles, if all private automobiles (perhaps even taxicabs) were rigorously excluded.

Such a proposal is obviously predicated on the substitution for the individual auto-
(Continued on page 40)

**McKINNEY
BUTT HINGES
with OILITE bearings**
*give long life to
high frequency doors!*



Oilite Bearing

*Solid metal to protect exposed surface and drive lubricant to bearing surfaces.

OILITE is a bronze metal having the ability to hold about one-third of its volume in free lubricant. Its application as a door bearing was introduced by McKinney after exhaustive experimental work.

For doors that must take a lot of swinging back and forth—opening and shutting continuously day after day—McKinney Butt Hinges with OILITE Bearings assure a long life of smooth, quiet, trouble-free operation.

The doors ride on a slick, smooth film of lubricant automatically provided by the bearing itself and only to the bearing surfaces.

OILITE Bearings will not corrode—hence, these hinges are ideal for exterior doors or any doors exposed to moisture.

McKinney Butt Hinges with OILITE Bearings are available in all sizes, styles and finishes. All sizes are equipped with two or more bearings to carry the vertical load.

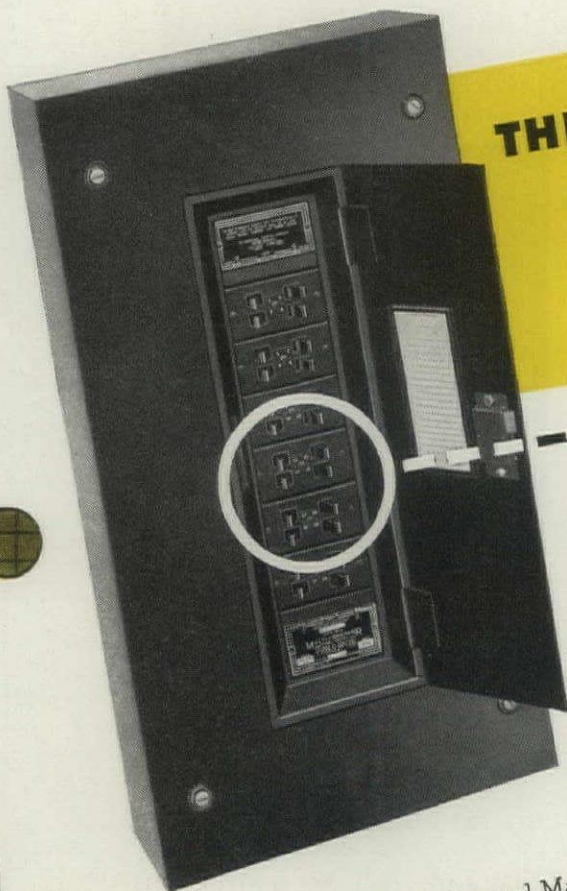
McKinney Butt Hinges with OILITE Bearings are recommended especially for schools, hospitals, hotels, office buildings, apartments and other buildings where high frequency doors prevail.

See Sweet's Architectural File
for details or write

McKINNEY
MANUFACTURING COMPANY
PITTSBURGH 13, PENNSYLVANIA

THE NEW NMO

"PLUG-IN" PANELBOARD



- ✓ Easy to Wire
- ✓ Simple to Add or Change Circuits
- ✓ Smaller—Yet More Gutter Space
- ✓ New Thermal-Magnetic (Coilless) Multi-breaker Units
- ✓ Application—wherever large number of branch circuits for lights, appliances and business machines must be switched and protected.

Compact, 4-circuit Thermal-Magnetic (Coilless) Multi-breaker units, equipped with positive-pressure contact jaws, grip cylindrical silvered bus bars.

"Plug-in" feature permits easy removal and insertion of units for future changes in circuit ratings or additional circuits if space for expansion is planned.

Low heating, permitting small size, is achieved by exceptionally high silver content in breaker unit contacts, and elimination of bolted current carrying connections.

Smaller size greatly improves utilization of wall and column space. Yet panel has more gutter space (5½" in 15" box) because of compact Multi-breaker unit. Narrow column type has twice number of circuits previously available in cabinets of similar height.

NMO panelboards are furnished with 100 and 200 ampere mains, 120/240 Volt A.C. with 15, 20 and 30 ampere single and double-pole branch circuits.

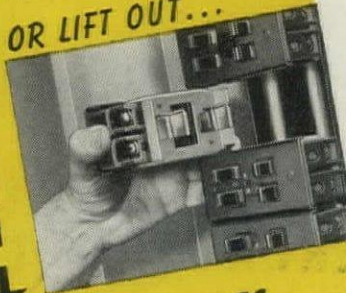
Coilless THERMAL-MAGNETIC MULTI-BREAKER UNIT PROVIDES 2-WAY CIRCUIT PROTECTION

1. Thermal trip element holds harmless momentary overloads but trips if overload continues.
2. Magnetic element functions instantly on both moderate and heavy "shorts."

1 SWING OUT...



2 OR LIFT OUT...



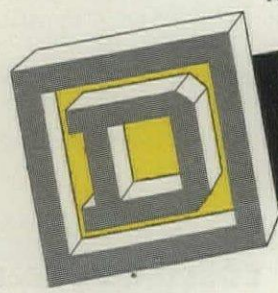
3 ATTACH WIRES...



4 "PLUG-IN"



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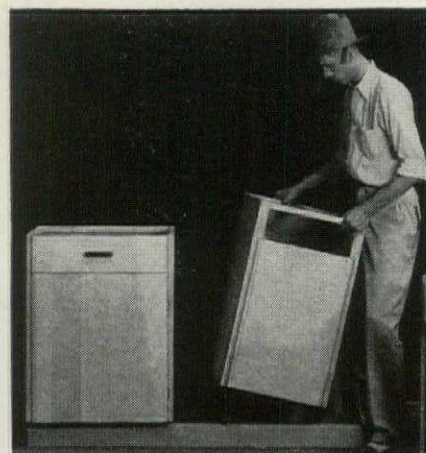
LOS ANGELES

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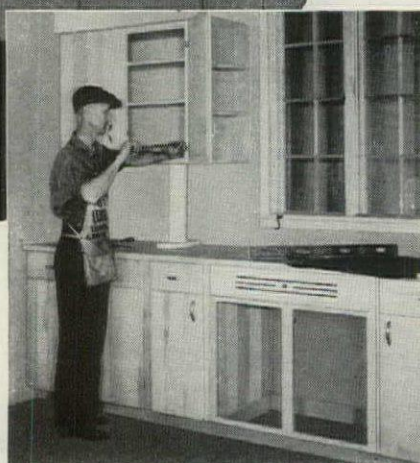
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come to you K.D., completely machined and neatly packed in dust-proof cartons. Made of kiln-dried Ponderosa Pine, they are chemically treated to resist moisture before leaving the factory.

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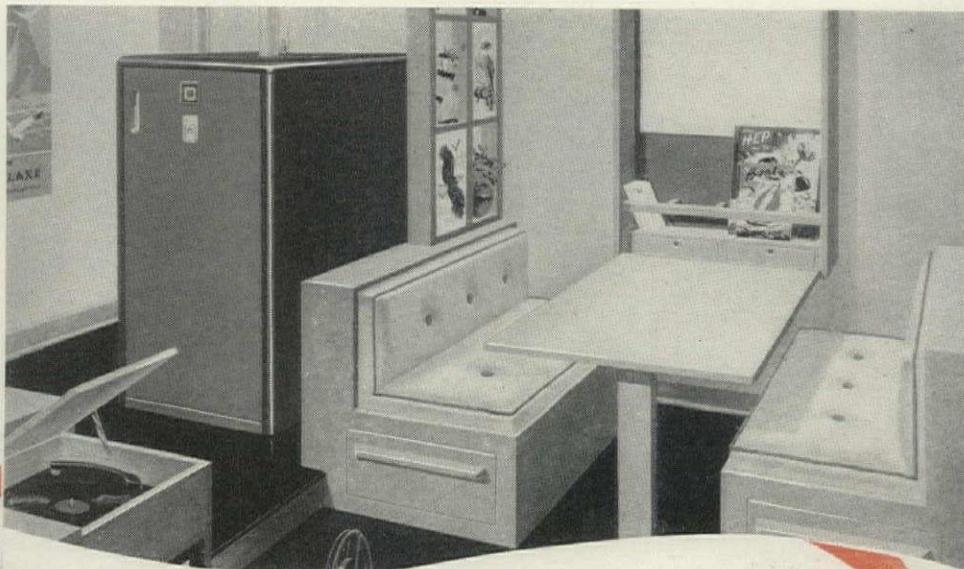
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You can be as modern as you like in planning basement recreation rooms when you choose American-Standard Heating Equipment. This inviting room owes a great deal of its charm to the trim OAKMONT Oil Boiler in the corner. But there's more than good styling to the Oakmont. Inside its smart Canyon Two-Tone Red jacket are all the sound engineering features needed to provide average sized homes with the carefree comfort and cleanliness of automatic oil heating.



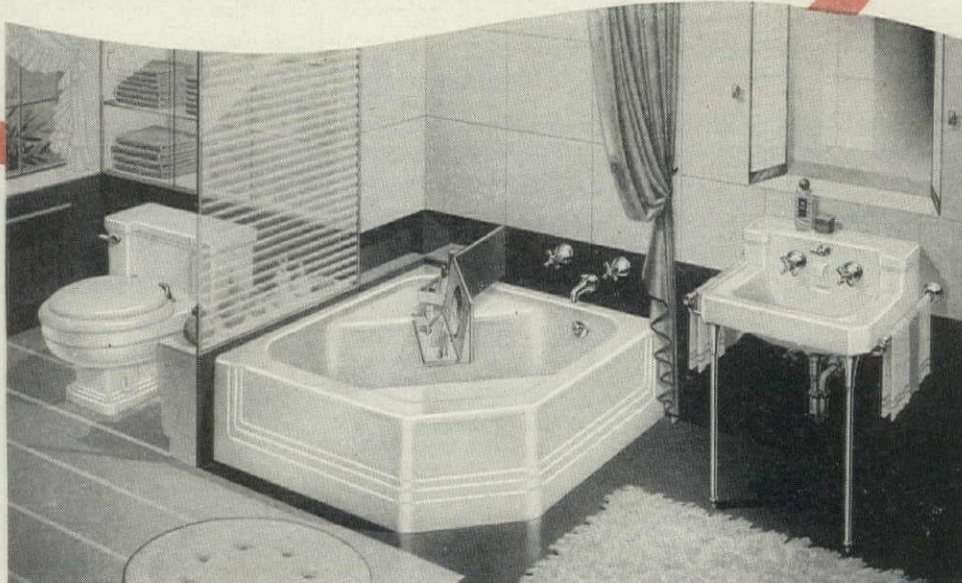
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buy . . . yet they cost no more than others. That's another reason why more American homes have heating and plumbing by American-Standard than by any other single company. For the latest information about the complete American-Standard line, contact your Heating and Plumbing Contractor. **American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pennsylvania.**

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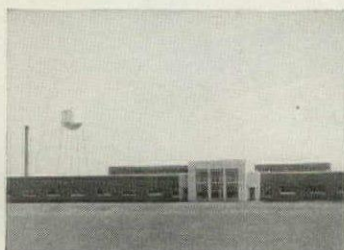
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mobile of a public transportation system vastly better than anything known to date. It would doubtless call for utilization and integration for the particular needs of a given area of all modern transportation vehicles. Such a program would both justify and necessitate major improvements in each class of vehicle and, if anybody can dream them up, the development of some new types.

CHARLES A. SCARLOTT, Manager
Engineering Publications
Pittsburgh, Pa.

AVERAGE INCOMES

Forum:

In your April '48 issue, on page 12 is an article headed "Counter-Offensive." The statement is made:

"According to the Economic Report of the President of January 14, 1948, the average income of all American families in 1946 was \$3,806. . . . According to a report of the Veterans' Administration, the average selling price of new houses bought by veterans with the aid of G. I. home loans was \$8,200, or \$1,315 less than the amount the average family could afford."

Now in all sincerity—being a Veteran myself and having a little better than the "average" salary set forth above—I have this question in my mind:

How does the average income of veterans compare with the national average set forth above?

I know this may be a hard question to answer; so if that is impossible perhaps this can be answered:

What was the average income of the veterans securing those loans?

From my experience and knowledge of veterans I have a distinct feeling that the national average is very much above the veteran average, and feel that it is this fact, as much as any other that the proponents of veteran housing have failed to consider in their planning.

If investigation should disclose I am right in this regard, you could do the veteran a very distinct service by publicizing the same.

ROBERT S. GOOD,
Registered Abstractor
Chester, Mont.

Forum:

Mr. Good's letter raises two questions:
1. How does the average income of veterans compare with the national average income?

2. What is the average income of the veterans buying new homes with VA loans?

The second question cannot be answered
(Continued on page 44)

COMING SOON

ONE DOES THE WORK OF FOUR!

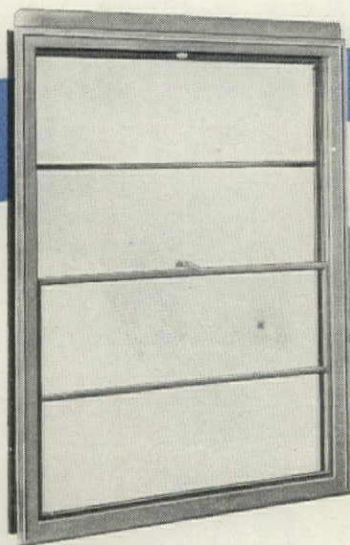


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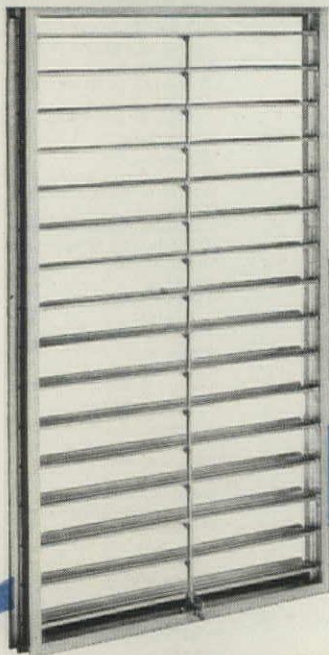
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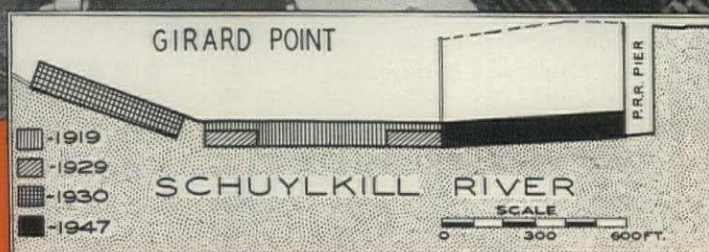
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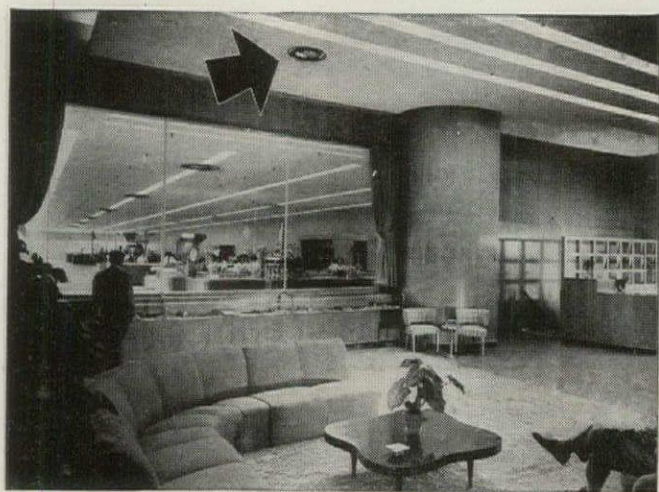
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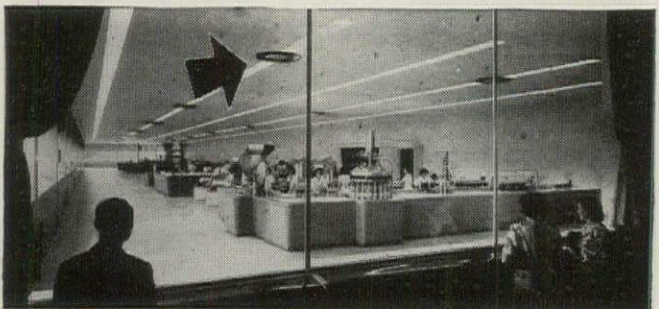
JOHNSON & JOHNSON specifies Kno-Draft Air Diffusers in New Plant

Picked for appearance and performance

ARCHITECTS, THE BALLINGER CO. • INDUSTRIAL DESIGNER HERBERT ROSENBERG



APPEARANCE: Note the simplicity of design of the Kno-Draft Air Diffuser (arrow) in the reception room of the new Johnson & Johnson plant in Cranford, New Jersey. It enables these diffusers to blend with either modern or period interiors. In their original aluminum, Kno-Draft Diffusers furnish an unobtrusive decorative accent. Painted to match the ceiling, they become self-effacing.



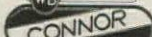
PERFORMANCE: A close-up through the show window in the reception room discloses the manufacturing area of this modern plant. Those Kno-Draft Diffusers in the ceiling are delivering conditioned air in a pattern that eliminates drafts and maintains uniform temperature and humidity throughout the area. Since Kno-Draft Diffusers can be adjusted to control air direction, volume and throw, "custom-made" air patterns were created to meet the exacting requirements of product quality control and employee comfort established in this baby products plant.

Send for your **FREE** copy of our new handbook on air diffusion. It contains all the data to enable you to create "custom-made" air patterns and eliminate drafts. Please write Dept. T-104.



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since the Veterans Administration does not have the information. The first question can be answered for 1946 from a report of the Bureau of the Census on "Income of Nonfarm Families and Individuals: 1946" (Current Population Reports, Series P-60, No. 1). Table 5 of this report shows the following *median* income of various types of nonfarm families and individuals:

All families and individuals . . . \$2,976

Families with World War II veteran as head . . . \$2,778

According to these figures, the median income of families headed by World War II veterans was 6.6 per cent below that of all families.

You will notice that the level of *median* income as reported by the Bureau of the Census is lower than the level of *average* income given in the Economic Report of the President and used in my study for the Construction Industry Information Committee (\$3,806). This is fully explained in the Appendix to the study.

It may be reasonable to assume that the percentage difference between the average family income as given in the Economic Report of the President and the average veterans family income (if available) would be about the same as the percentage difference shown in the Census report. On this basis, the average veterans family income would be \$3,540 as against a general national average of \$3,806. On the formula that a family generally can afford to buy a house costing up to two and one-half times the annual income of the family, an average veteran's family income of \$3,540 would support an average house priced at \$8,850, as against an actual average of \$8,200 reported for May through August 1947 by the Veterans Administration.

In view of the raw data used in the above calculation, these figures cannot be considered precise but they give at least an idea of the orders of magnitude that are involved.

Washington, D. C.

MILES L. COLEMAN

ATOM CITY

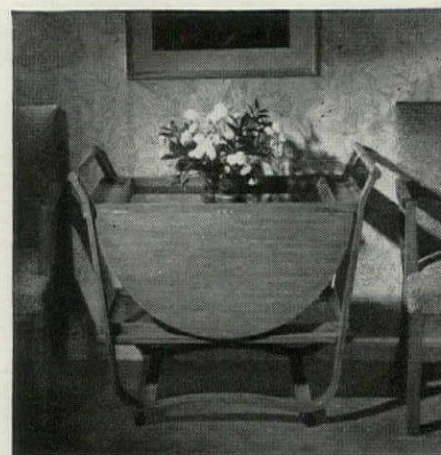
Forum:

Because of the very inadequate textual presentation of "Atom City" (Apr. '48, p. 10), I should like to reply briefly to Mr. Baker's critical letter (June, p. 38).

1. The areas within the hexagons are expendable. Period.

2. The buildings forming the hexagons are for (a) manufacturing critical war material (b) protecting the workers (c) providing incidental shelter for the inhabitants.

(Continued on page 48)



4487 Tea Wagon with two trays

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4487 Tea Wagon with leaves raised for dining



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Designer: Adolph Novak, New York City
Fabricator: American Wood Workers, Philadelphia

One sees gleaming, translucent beauty in functional panels. Another sees easy combination with wood or metal. A third sees excellent optical properties for the transmission and diffusion of light. What *you* see will depend, of course, upon the current design problem on your drafting board.

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In Los Angeles it encloses a swimming pool. And in other American towns and cities, architects are using this astonishing acrylic plastic for such unusual applications as astradome-shaped skylights, picture windows, shatter-proof glazing in psychiatric hospitals, portable skating rinks, toilet partitions, edge-lighted radiant walls and *entire rooms* in clubs.

Do your designs call for exceptional strength-lightness, shatter-resistance, practical decoration? Then learn the full story of PLEXIGLAS and its use in architecture. For your personal file, we've reserved a copy of the installation details of the Bonwit-Teller partition illustrated. Please let us know where to send it.

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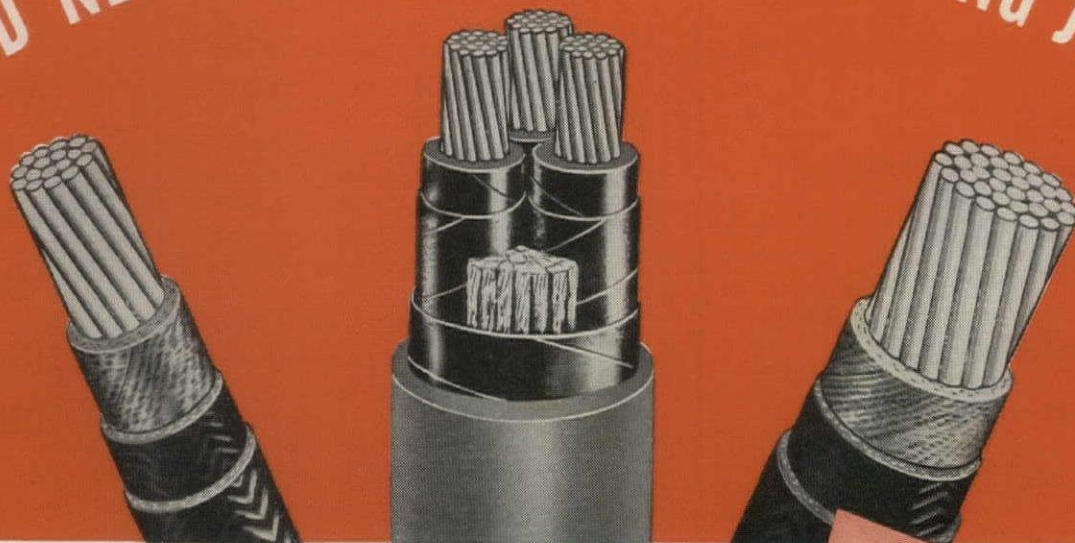
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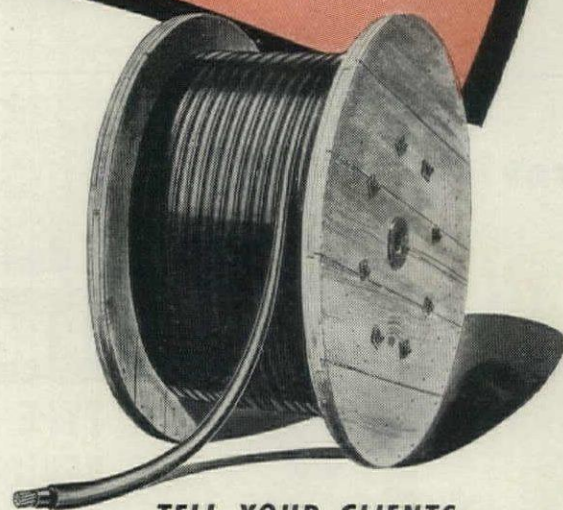
Aluminum can save money, too, by taking the load off your structure. Aluminum cables weigh less; need less support. A 500 mmc insulated cable with Alcoa E.C.* Aluminum conductor, for example, weighs about half as much as the identical copper cable.

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*E.C.: Electrical Conductor Aluminum

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tems—produced by the Conti-
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Corp., 521 Fifth Ave., N. Y. 17.

See Our Announcement Next Month

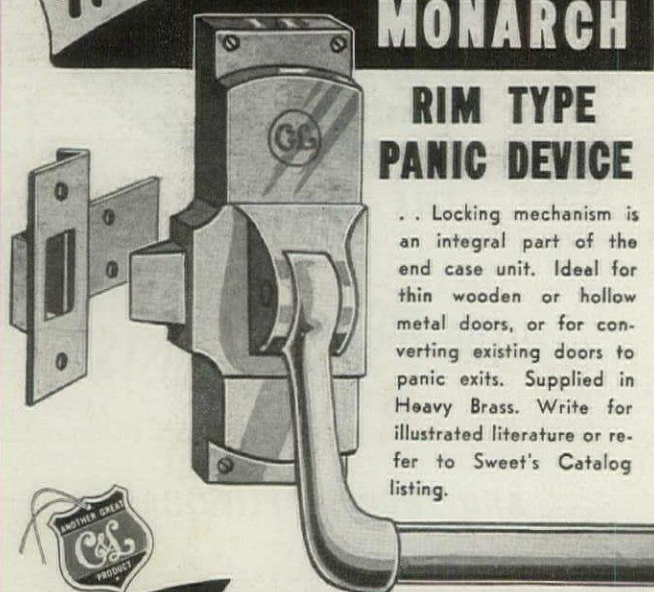
provides

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**RIM TYPE
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... Locking mechanism is an integral part of the end case unit. Ideal for thin wooden or hollow metal doors, or for converting existing doors to panic exits. Supplied in Heavy Brass. Write for illustrated literature or refer to Sweet's Catalog listing.



SPECIFY

MONARCH FOR CERTAIN DEPENDABILITY

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3. These buildings are (a) shock and blast proof; they limit the extent of blasts, (b) radiation proof.

The hexagon was used for reasons obvious to any geometrician, engineer or member of the Apidae family.

No attempt was made to devise an "atomic bombproof" complex. Since people, other than workers, are of no interest to the military mind, it is the workers and what they make to destroy others that are primarily protected from destruction. The pivotal towers are for the storage of paper-work, without which our civilization and its defenders could not survive.

During normal times the city would be a reasonably pleasant place in which to live. It is well organized for social purposes, as well for safe, high-speed traffic and efficient industrial processes. It is not a substitute for cities in general, but it is a substitute for caves or chaos.

I am well aware of the similarity to Early Renaissance city plans. Whether that resemblance makes anything better or worse according to what frame of reference, I cannot say.

I also have read Le Corbusier, Jose Luis Sert, the Smythe report and Lord Byron. I have spoken with atomic bomb authorities. And some place, some where, I have said something about decentralization, too.

HENRY S. CHURCHILL

New York, N. Y.

OPEN SEASON ON REPUBLICANS

Forum:

What rebate do you allow for cancellation of my subscription? The senators neglected to pass the Housing Bill so I quit the business of constructing low cost homes.

After subsidizing Europe to the extent of 6 billions, also the farmers, education, and letting in 205,000 more D. P.'s to fill our obsolete housing no action upon the greatest domestic issue—housing—is taken by the senators. The Republican majority is responsible. . . .

As usual the Washington officials pay no attention to the millions of people needing new homes and the millions engaged in some aspect of the building business. . . . Only 1,102 homes were started in Chicago in 1948 of which 184 were rental housing. No rental housing was started in May. By fall the Republicans will be faced with a complete stoppage of low cost home construction. For my part I won't vote for any Republican senator for any office and when I hear anyone holler . . . about lack of housing, I will tell them to do the same.

(Name withheld)

Chicago, Ill.

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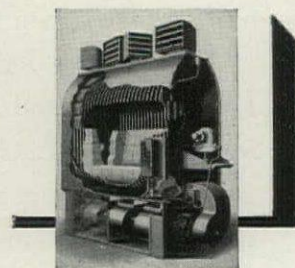


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"Credit to the Community"

Attractive, Efficient PUBLIC WORKS BUILDINGS of

Facing tile

You have a unique problem when you design or build a public works building. You work, not for one person or a small group, but for everyone in town.

The demands are many. Your "clients" want good looks, efficiency, utility in these buildings that house the machinery so vital in daily community life. They also want all-around economy and lasting value.

With Structural Clay Facing Tile you meet all these demands, and more!

You can add attractive design and colorful, easily cleaned interiors to filtration and sanitation plants, water works, power plants and other utilities. Facing Tile will help you create buildings that look and *are* a "credit to the community."

And look at all the benefits you give the taxpayer! Facing Tile is modular sized . . . fast-building . . . long-lasting . . . fireproof . . . structurally strong—a wall *and* a finish *in one!* Hosing or soap-and-water cleaning is the only maintenance required—no repairs or refinishing is ever needed. There's no decay, no cracking or scratching, even under the heaviest traffic. Facing Tile is available, glazed or unglazed, in a variety of light-reflecting colors. See Sweet's, write the Institute or contact any member for full information.

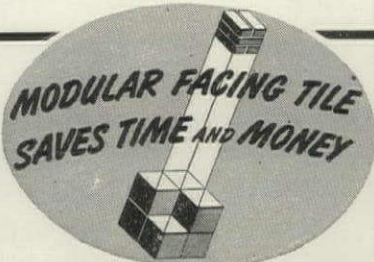
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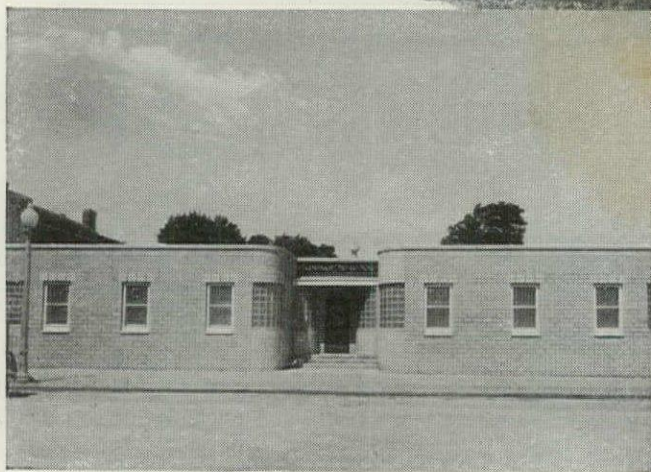
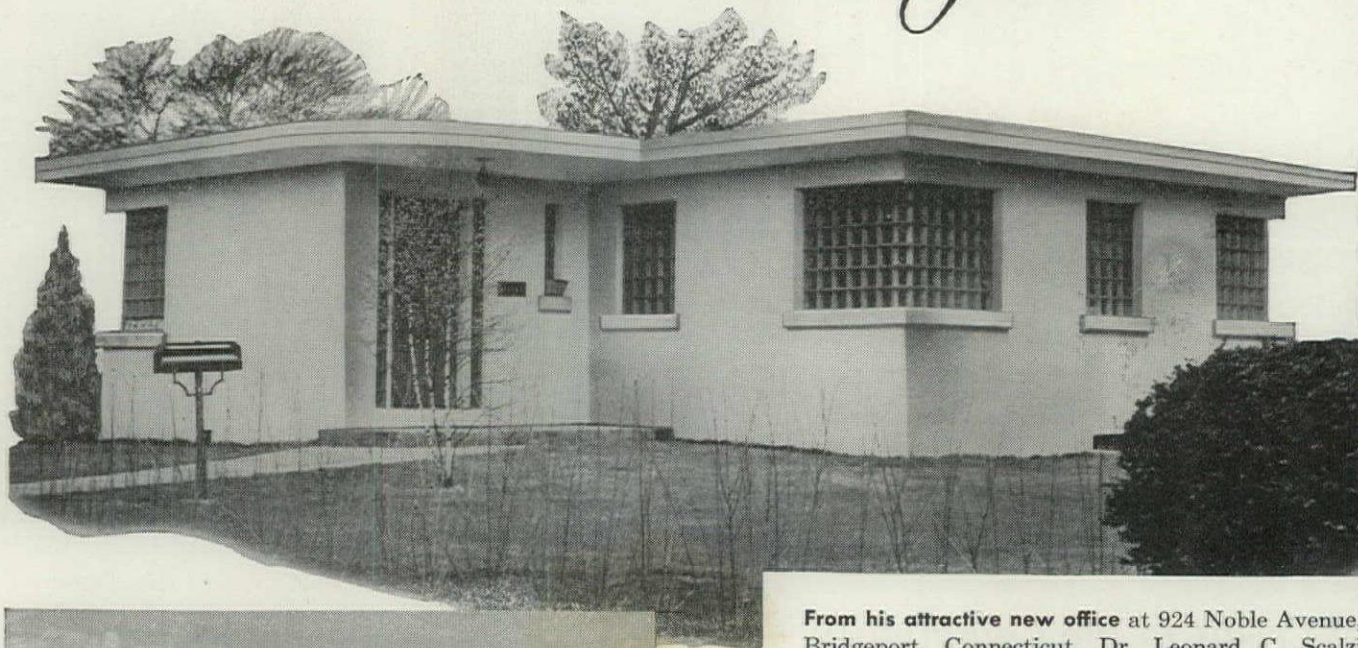


INSTITUTE MEMBERS

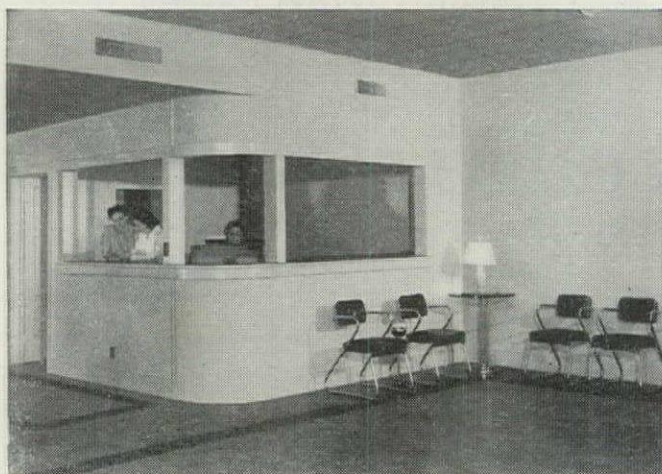
Belden Brick Company, Canton, Ohio
Continental Clay Products Co., Kittanning, Pennsylvania
Charleston Clay Products Co., Charleston 22, West Virginia
Hanley Company, New York 18, N. Y.
Hydraulic Press Brick Co., Indianapolis, Indiana

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Mapleton Clay Products Co., Canton, Ohio

HERE'S THE IDEAL *All-Year air*



"We have been most pleased with our Servel unit. I can unhesitatingly recommend it as an efficient, economical method of year-round air conditioning," writes Dr. A. C. Traverse, of the Stephenson-Traverse Clinic, 515 College, Alva, Oklahoma.



"We selected Servel All-Year Air Conditioning for our Clinic because of its low cost and economy of operation. The heating and cooling efficiency of this unit is excellent," writes E. A. Weinheimer, M. D., 201 E. Jackson, El Campo, Texas.

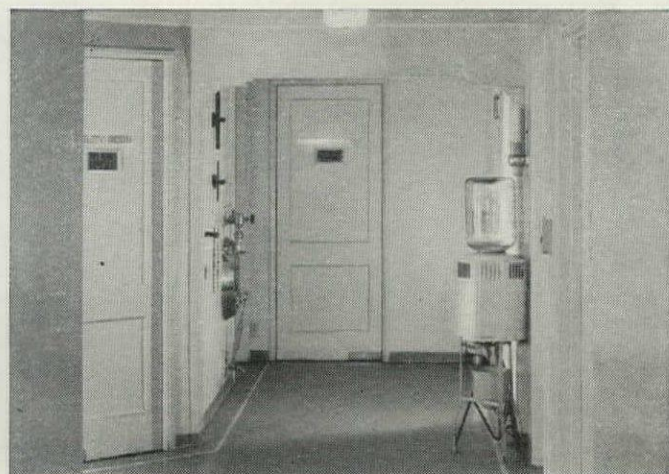
From his attractive new office at 924 Noble Avenue, Bridgeport, Connecticut, Dr. Leonard C. Scalzi writes: "It gives me a great deal of pleasure to tell you how completely satisfied I am with the performance of the Servel All-Year Air Conditioner which was installed in my offices last September.

"As you know, I had originally planned on using electrical air conditioning equipment, and I am glad now that I changed my mind. The Servel unit is so simple to operate, so efficient, so quiet, and so economical, that I am quite sure I made the wiser choice.

"When you told me about the Servel All-Year Air Conditioning, you mentioned the hundreds of owners who were completely satisfied with its performance. You may now add me to that list!"

Cordially,

Leonard C. Scalzi M.D.



Interior view of Cottage Hospital, Pomona, Cal. Dr. W. D. Stahl says: "The Servel unit has exceeded my expectations, especially since it was possible to utilize the existing duct system previously used for forced air furnace. It has proved most satisfactory."

conditioning **FOR DOCTORS' OFFICES**

**Servel *All-Year* Air Conditioning wins
praise from M.D.'s the country over**

You've got many points in your favor when you talk Servel Air Conditioning to doctors planning to build or modernize offices, clinics, or small hospitals. Hundreds of Servel units are already successfully providing an ideal indoor climate—the year round—in doctors' establishments, in homes, offices, and stores the country over. All the owners are delighted with the efficiency, simplicity, and economy of Servel operation, as the representative testimonials on these pages indicate.

Cools in summer, heats in winter

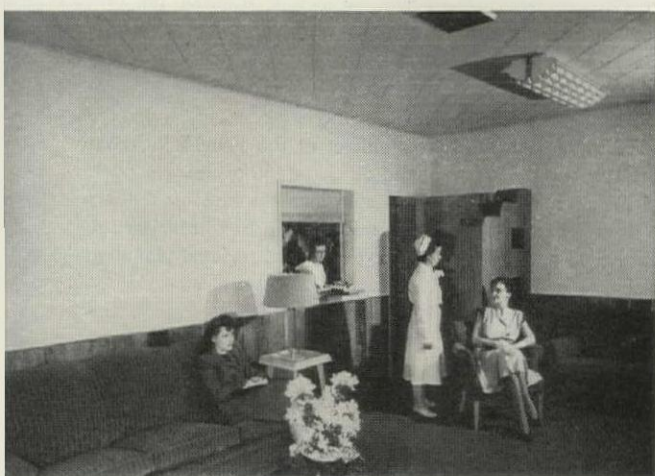
With one simple unit, Servel supplies *complete, year-round* air conditioning. In summer, at the flip of a switch, Servel circulates refreshingly cooled air, from which sticky, wilting humidity has been removed. Servel also filters out irritating dust, dirt, and pollen.

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filtered air at prevailing outdoor temperatures.

Planning your clients' buildings around Servel *All-Year* Gas Air Conditioning gives you an opportunity for many innovations in design. You can effect construction economies, too, which will materially reduce the net cost of the conditioner.

Doctors are air conditioning-conscious. Make the most of your opportunities by talking Servel *All-Year* Air Conditioning to them and to other interested clients. Send today for complete information on Servel's long list of successful installations in doctors' offices and clinics, in homes, in retail stores, and in offices the country over. Get the facts from your local Gas Company, or write Servel, Inc., 2808 Morton Avenue, Evansville 20, Indiana.



"Ideal for efficient work in medical offices," says Dr. Fred L. Scott, of Huntington Park, California, about the temperature and humidity conditions maintained in his offices throughout every season by the economical Servel *All-Year* Air Conditioner.



Behind the scenes with FORUM contributors



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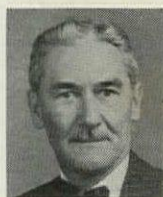
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Moleta FLAT OIL PAINT
ARCHITECTURAL The Truly Washable Paint



LOEBL, SCHLOSSMAN & BENNETT is the Chicago Architectural firm which designed the planned community for American Community Builders, Inc. (p. 70). Jerrold Loebl and Norman Schlossman are both graduates of Armour Institute of Technology, have been partners since 1925. Richard Bennett joined the firm in 1947 after a career practicing in New York and Boston, teaching at Rensselaer Polytechnic Institute, Yale, Columbia, Vassar and Pratt Institute and acting as head of the Bureau of Design and Styling at Montgomery Ward. Loebl has been active in public housing in Chicago and is currently a director of the National Public Housing Conference. Schlossman is a member of the Committee for a New Chicago Building Code.

Philadelphia's **BALLINGER CO.**, pioneer firm in the field of industrial architecture and engineering, was organized in 1878, spans three generations of Ballingers, all architects. At present 150 non-family architects and engineers are also employed, offering an integrated service from design through actual construction. One of their most recent jobs is the Container Corp. branch (p. 90) designed with Walter Gropius as consultant architect.



W. STUART THOMPSON, designer with partner Phelps Barnum of the Crucible Steel Warehouse in Chicago (p. 96). is a graduate of Columbia who won the Carnegie Fellowship to study in Athens from 1913-16. His work since then has been divided between America and the middle east (Turkey, Albania, Greece) with emphasis on libraries, museums, schools and hospitals. Former partners include John V. Van Pelt and Henry S. Churchill.



HARPER RICHARDS, who designed the Montreal branch of Abbott Laboratories (p. 98), is a Chicago industrial designer, graduate of M.I.T., who started practicing architecture in his hometown of Greenville, Miss. in 1931. Switching three years later to New York City, stage design and commercial art, he worked for Raymond Loewy, opening the Loewy Chicago branch in 1937. He started his own office in the same city in 1943 after a stint of war work in Texas.



JAC LESSMAN, designer of the Hollenden Corners bar in Cleveland (p. 101), heads the New York firm of Lessman Interiors which has specialized in hotel and restaurant work for nearly 20 years. A graduate of Crane Technical School in Chicago, Lessman's only job before opening his own office was with Albert Pick Co., hotel outfitters, in the same city. Today his work may be seen in almost every large city throughout the east and middlewest.



FREDERICK LANGHORST, architect of the Four Winds Bar (p. 102), is a 1931 graduate of Cornell University, a pupil of Frank Lloyd Wright and a former employe of William Wilson Wurster. At present practicing in San Francisco, he has added to office duties those of city and regional planning, teaching at the University of California and membership on the editorial board of *California Arts and Architecture*. His wife, Lois, also an architect, is associated with him.



HERMAN H. SIEGEL and **ERNEST D. RAPP** are, respectively, architect and designer of the Canterbury restaurant on Long Island (p. 104). Siegel maintains a New York practice specializing in shop and restaurant design. Both are graduates of New York University, Rapp also of Vienna's Kunstsgewerbe Architectural School.

"THERE'S A SMOOTH-SURFACED
ASBESTOS ROOF"

"YES, NO EXCESS WEIGHT
FROM SLAG OR
GRAVEL"



"AND REMEMBER, THESE FELTS ARE
FIREPROOF, ROTPROOF, WEATHERPROOF"

Yes—it's Flexstone^{*}

Each ply is a flexible covering of stone!

● The secret of a Johns-Manville Flexstone Roof is in the *felts*. They're made of fireproof, rotproof, enduring *asbestos*.

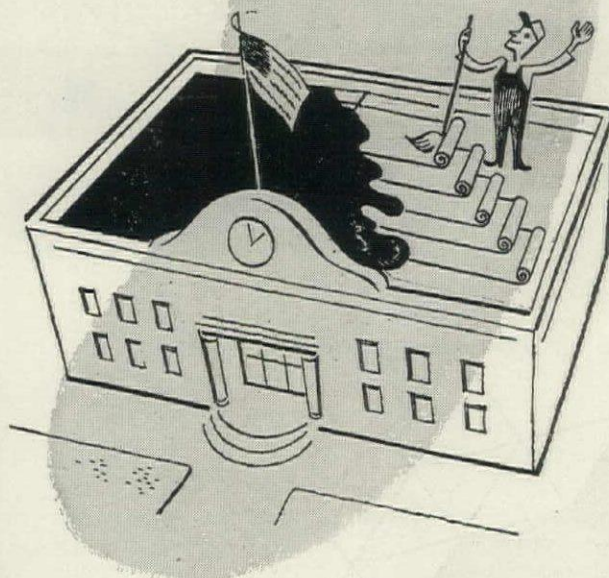
Flexstone Built-Up Roofs won't dry out from the sun... need no periodic coating. They're *smooth-surfaced*, too—permit thorough drainage... make any damage easy to locate and repair. They are engineered to each job... applied only by J-M Approved Roofers.

J-M asbestos felts are perforated to make application easier... give you a smoother job and conform better to irregularities in the roof deck.

Send for Flexstone brochure BU-51A. Contains complete specifications. Address: Johns-Manville, Box 290, New York 16, N.Y.



^{*}Reg. U. S. Pat. Off.



Made of ASBESTOS

Johns-Manville **FLEXSTONE** Built-Up Roofs

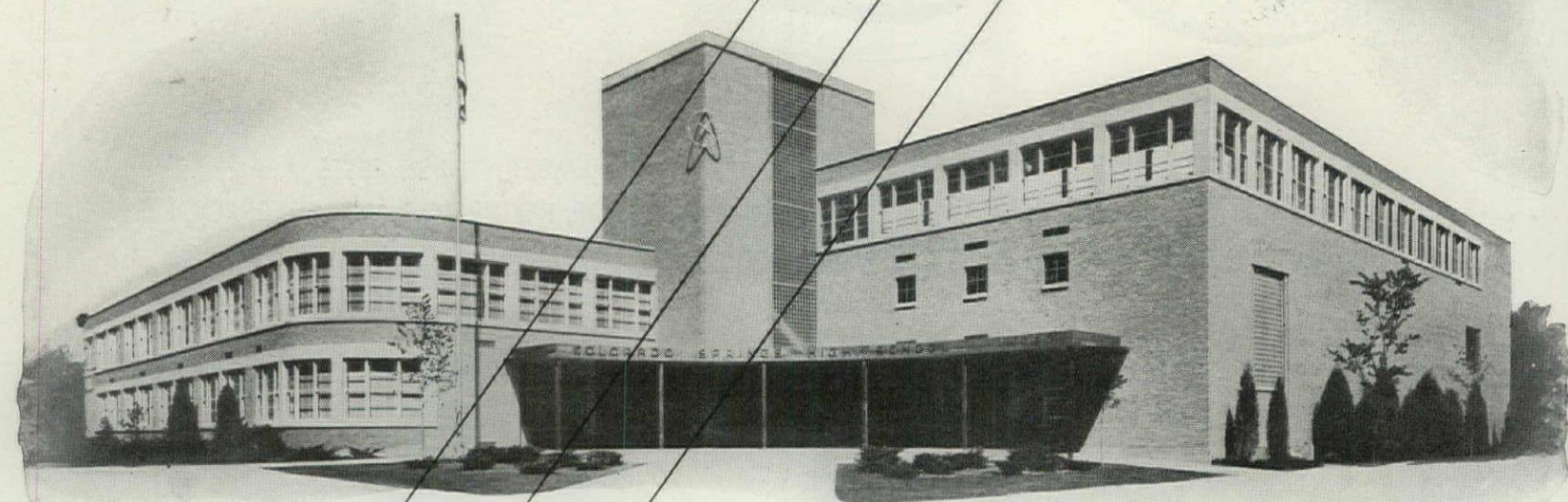
The symbol that gave new meaning to *Modular Coordination*

You first saw this symbol in 1943.

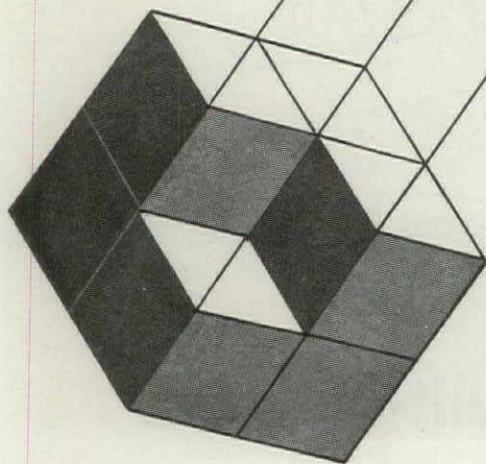
You saw it when the manufacturers of brick and structural clay facing tile announced their acceptance of the four-inch module as a unit of measurement. With this symbol modular coordination received its first endorsement by any complete industry in the building materials field.

Since then other manufacturers have followed this lead until today modular coordination is an accepted fact of great importance to the building profession offering real economies in design and construction.

This foresighted support of modular coordination is typical of our efforts to merit your confidence in specifying and building with brick and structural clay facing tile. Other important contributions we are making to the building industry include such projects as materials research, apprentice training and brick engineered homes.



To help you design and build in modular sizes we offer two basic handbooks, "Brick Engineering" and "Tile Engineering", at \$2.50 each. Write to Desk AF-8, Structural Clay Products Institute, 1756 K Street, N.W., Washington 6, D.C.



Next month watch for "Guided by an imaginative hand . . .", a four-color impressionistic painting of brick and tile in schools.

2217 BUILDINGS IN ONE



Photograph by James S. Hornbeck

Architects: Skidmore, Owings & Merrill

INTO the Sloan-Kettering Cancer Research Institute went 46 years of building experience—covering 2217 buildings of all kinds and types.

Together with the adjoining additions to the Memorial Hospital, the Institute represents Turner's 22nd and 23rd hospital jobs respectively—making a total of \$70,000,000 of hospital construction alone.

Turner's wide and varied experience in the construction

of buildings of all types has resulted in a unique advantage to prospective owners—a high degree of skill in the finishing of fine, monumental buildings combined with the necessary speed and “dollar consciousness” that less ornate, more functional industrial construction demands.

Sloan-Kettering is one of many important buildings Turner either now has underway or has recently completed—several of which are pictured below.

TURNER CONSTRUCTION COMPANY

FOUNDED 1902

420 LEXINGTON AVENUE, NEW YORK 17, N. Y.

BOSTON

CHICAGO

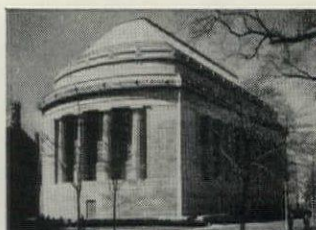
PHILADELPHIA



John Hancock Mutual Life Insurance Co., Boston, Mass. Architects: Cram & Ferguson



Pan American Union, Washington, D. C. Architects: Harbeson, Hough, Livingston & Larson



Girard College Chapel, Philadelphia, Pa. Architects: Thomas, Martin & Kirkpatrick

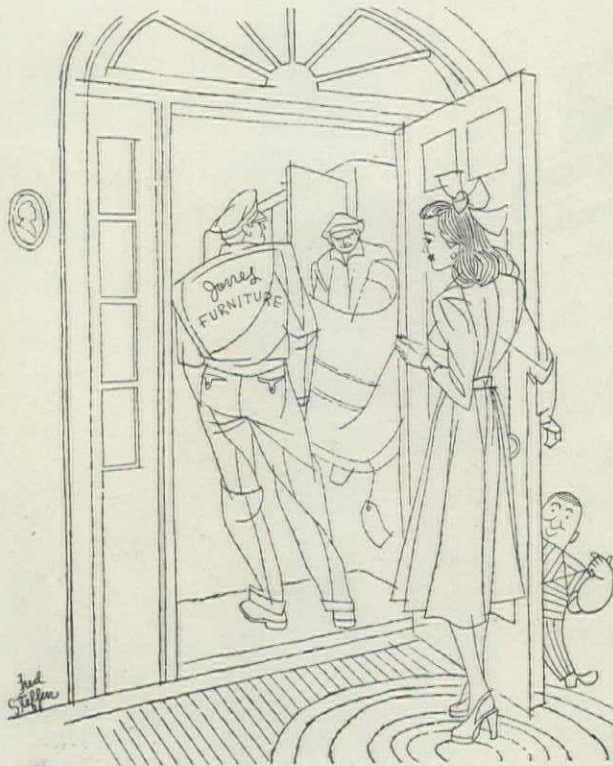


The New York Historical Society, New York, N. Y. Architects: Walker & Gillette



Tiffany & Co., New York, N. Y. Architects: Cross & Cross

ANNOUNCEMENTS



Durable OAK FLOORING WELCOMES STYLE CHANGES

Besides providing initial beauty in a new home, oak floors lend themselves perfectly to future changes in decor.

Completely new color schemes, for instance, find their perfect complement in the warmth and hospitality of oak. A new chair or rug, of whatever style or color, will always harmonize with the charm of natural oak grain and texture.

Appearance and wearing qualities of wall-to-wall carpets are enhanced when laid on oak. They stay firm and smooth, they look better and clean more easily.

Owners thus have a wide latitude for desired changes, knowing that new ideas or styles will meet with a warm welcome, from always beautiful, always durable oak floors.

ASK FOR ARCHITECTS' DATA BOOK—which gives quick and usable information for specifying, laying, finishing and maintaining oak floors. Available from your local oak flooring dealers or from the National Oak Flooring Manufacturers' Association, 814 Sterick Building, Memphis, Tenn.



OAK FLOORS

BEAUTY • DURABILITY
ADAPTABILITY • ECONOMY

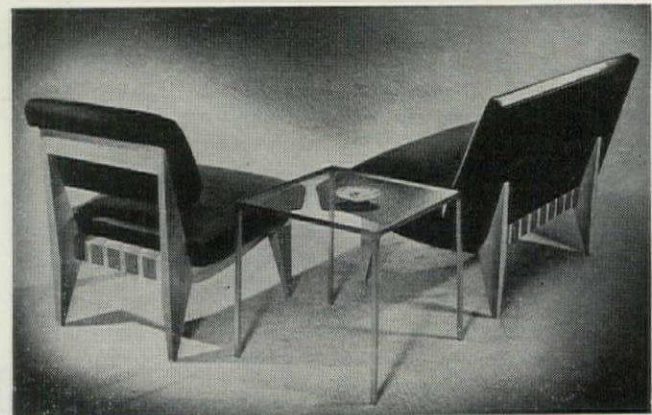
NEW DEVELOPMENTS IN THE FURNITURE DESIGN PROJECT sponsored by the New York Museum of Modern Art. Six design-research teams have been chosen as part of this \$55,000 program (February FORUM, p. 54), to collaborate in technological laboratory work on methods and materials for low-cost modern furniture: Marcel Breuer with U. S. Forest Products Laboratory; Charles Eames with the University of California; Carl Koch with Massachusetts Institute of Technology; Robert Lewis and James Prestini with Armour Research Foundation, Illinois Institute of Technology; Donald Wallance with Midwest Research Institute and Yale University School of Forestry, and Harry Weese with Armour Research Foundation. \$5,000 has been assigned to each group participating in this research division as well as a prize of \$2,500 for the best final report on work, methods and findings.

DELMAR KROEHLER of Kroehler Manufacturing Co. has been appointed Chairman of the Manufacturers' Advisory Committee of the Museum Design Project, a group which will put winning designs immediately into mass production and retail them in more than 200 cities. A reference service has been set up to supply information on technical questions to any of the entrants in the international competition which closes October 1st. Questions should be addressed to the Museum of Modern Art, 11 W. 53d St., New York, N. Y.

NATIONAL HOME WEEK, September 5-12. Part of the National Association of Home Builders' drive to bring forward the brighter side of private building's record, this week will be marked in cities throughout the country by on-site demonstrations of building methods, tours of housing projects and exhibits of home and apartment construction from planning stage to completion.

FURNITURE FOR HARD WEAR

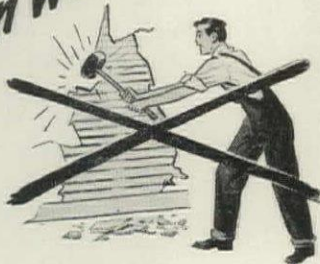
David Royter



WILLIAM ARMBRUSTER DESIGNS manufactured by the Edge-wood Furniture Co., 208 E. 27th St., New York 16, N. Y. The chairs, settees and tables of this 30-unit line are planned for maximum use, especially in public places (hotels, department stores, terminals). The group above shows typical heavy jointing for strength at points of strain. Upholstery is fitted in separate panels so that only the injured panel need be replaced in case of burns or tears. A shallower seat depth (27 in. instead of the usual 30) aims to give more back support and eliminate getting-up scramble. The settee is priced at \$130; the chair (in foam rubber) at \$82.50; the glass lamp table, in bronze frame, \$50 or steel \$38.

(Continued on page 58)

DON'T
knock down walls

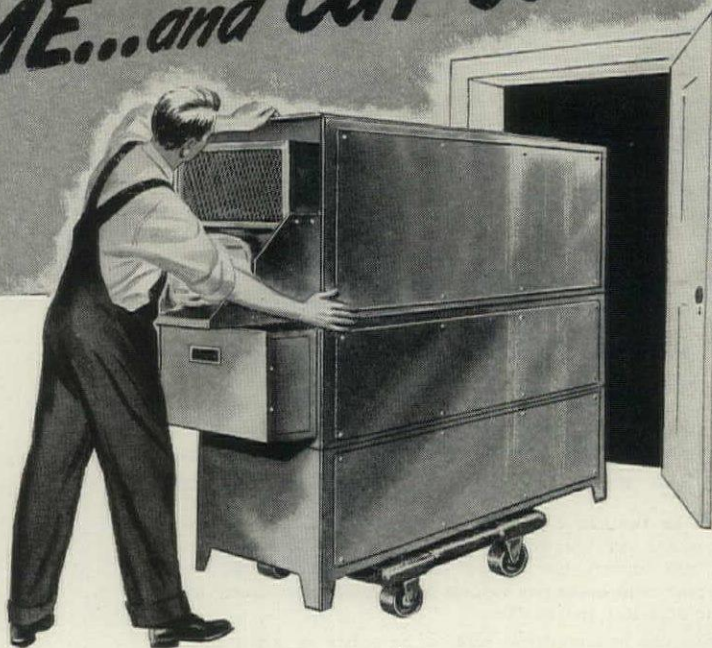


DON'T
waste time with
small parts



DO SAVE INSTALLATION
TIME...and CUT COSTS

...with G-E
Central Plant
Air Conditioners



ALL sections of the new General Electric Central Plant Air Conditioners can pass easily through a standard 30" door... the two smallest models completely assembled. This compactness allows a wide choice of location for the unit. It means time and money saved in installation, too.

28 different arrangements

Both vertical and horizontal models are designed on the building block principle—12 different vertical arrangements—16 horizontal arrangements. They cover a cooling range from .8 to 58

tons... and a heating range from 28,100 to 1,310,000 Btu's per hour.

All units are pre-fabricated, pre-engineered and pre-matched to assure fast assembly if shipped in sections. The welded sheet-steel construction is rigid, light in weight, making it easy to handle, inexpensive to ship.

For a smoother, quicker, less expensive air conditioning job, get full information from your local G-E air conditioning representative today. Or fill in coupon below.

GENERAL  ELECTRIC
Better Air Conditioning

General Electric Co.
Air Conditioning Dept., Sect. A8138
Bloomfield, N. J.

Gentlemen: Please send me your new booklet on the new G-E Central Plant Air Conditioners.

Name.....

Address.....

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

ANNOUNCEMENTS

AWARDS

THE SHOPPING CENTER OF THE FUTURE planned by a Syracuse University team was awarded first prize of \$500 in the student competition sponsored by the 1948 Store Modernization Show. Cooper Union rated second (\$250); University of Illinois, third (\$125); honorable mentions went to Columbia University and Virginia Polytechnic Institute. Actual business blocks near each campus were chosen for interior and exterior redevelopment with provision for supermarket, department store, restaurant, movie house, parking, nursery and garden areas and several other representative store types. Prize-winning drawings and models are available for loan to Chambers of Commerce interested in promoting similar developments in their local business centers. Requests should be made to John Evans, Managing Director of the Store Modernization Show, Grand Central Palace, New York, N. Y.

Prizes for the BEST WOVEN TEXTILES DESIGNS in the Moss Rose Manufacturing Co.'s student contest went to: Joan Patterson, Cranbrook Academy (\$500); Evelyn Jeslee, Layton School of Art (\$200); \$100 each to Lyda Weyl and Joseph Brobowicz, both of Cranbrook, and to Jo-An Dankel of Rhode Island School of Design.

A SMALL BANK FOR ARIZONA won first prize for Richard Nevara, University of Illinois, in the nationwide competition held by the Beaux Arts Institute; Marvin Good, University of Pennsylvania, won second prize.

The best design for YACHTING FACILITIES AND COUNTRY CLUB in the Yale's School of Fine Arts contest was awarded to Jerome Nagel.

A practical and comfortable STUDENT'S DESK AND CHAIR was best realized by the steel and aluminum design of Irving Neitlich in one of City College of New York's design awards. It also featured a removable linoleum top to minimize damage from amateur carvers. Work was done in Jacques Martial's class. Other jury awards went to Louis Resnick (for a toy television set); George Lerner (for a plastic coat-hanger); Bernard Halpern (for a rotating television set). Projects were prepared in 15 sessions of evening classes.

NEW OFFICES

YORK AND SAWYER, architects, Washington office at 1308 18th St., N. W. (continuing the practice of the late Jarrett White A.I.A.); James Souder, associate-in-charge.

J. ROWLAND SNYDER, A.I.A., 1636 Connecticut Ave., Washington, D. C.

MAUREY LEE ALLEN, architect, (formerly Allen, Koehler, Steffes, Narovec, architects) Zuelke Bldg., Appleton, Wis.

LOUIS REDSTONE, A.I.A., now city planner as well as architect, 3510 Woodward Ave., Detroit, Mich.

RUSSELL, CROWELL, MULLGARDT & SCHWARZ (formerly Mauran, Russell, Crowell & Mullgardt) 1620 Chemical Bldg., St. Louis 1, Mo.

SAMUEL JUSTER, architect, 366 Broadway, New York 13, N. Y.

ROY BLASS, architect and engineer in private practice, (formerly of Blass and Beckman) 30 N. LaSalle St., Chicago, Ill.

(Continued on page 60)



When bathroom floor space is at a premium...

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

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

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

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

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

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

Fiat Metal Manufacturing Company

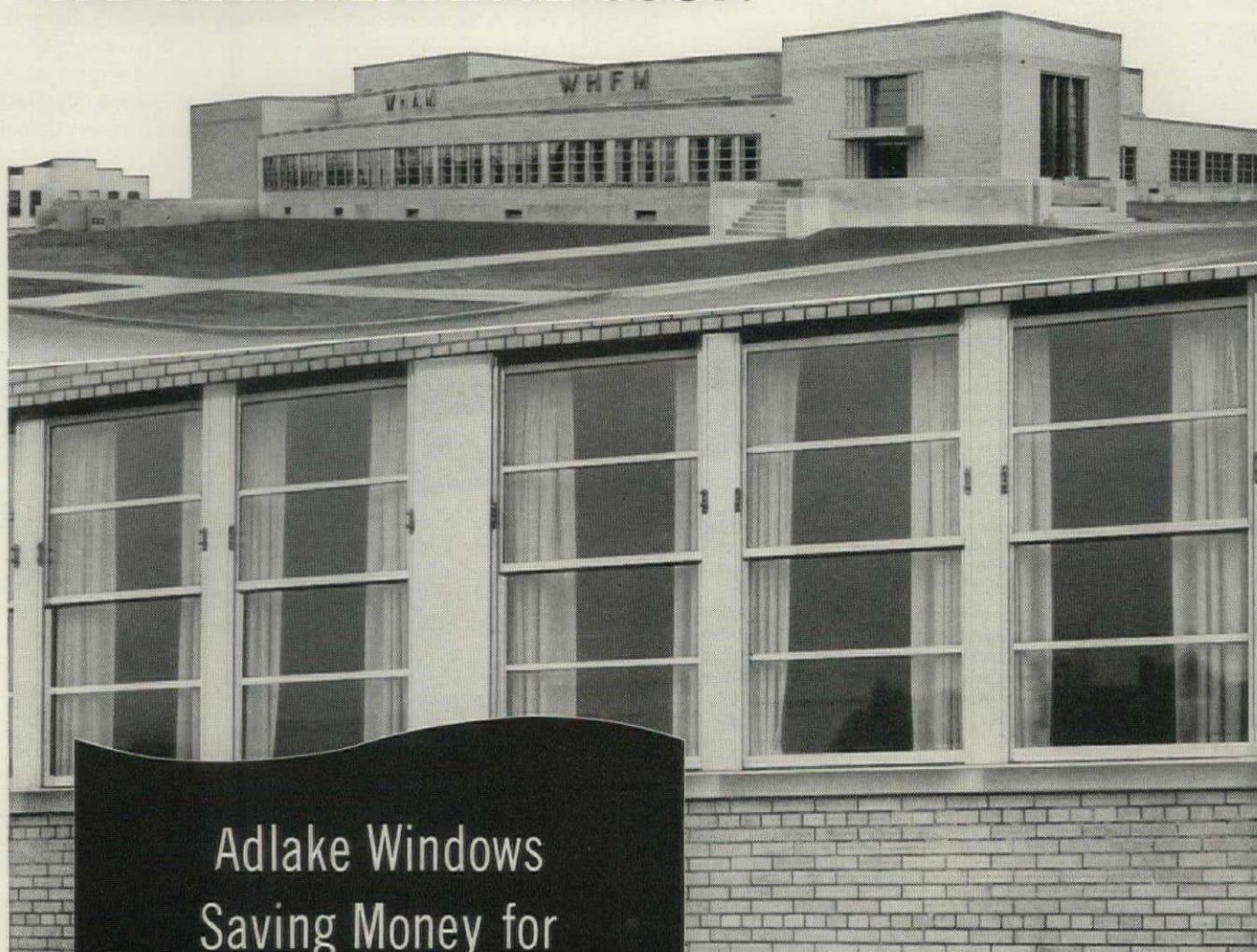
1203 Roscoe St., Chicago 13, Illinois

Long Island City 1, New York

Los Angeles 33, California

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

NO MAINTENANCE COST!



Adlake Windows Saving Money for Radio Station WHAM

The 103 double-hung ADLAKE ALUMINUM WINDOWS (Series 600) in Rochester, New York's station WHAM-WHFM will save the station a considerable sum, over a period of years, through *eliminating* maintenance costs. The windows will ultimately *pay for themselves* through this economy. Adlake Windows require no painting, no maintenance other than routine washing! And they *last as long as the building*.

ONLY ADLAKE WINDOWS have the combination of woven-pile weather stripping and patented serrated guides that assures minimum air infiltration and absolute finger-tip control.

Adlake Windows never warp, rot, rattle, stick or swell. They look lovely and operate smoothly for the life of the building.

INFORM YOUR CLIENTS about the wiping out of maintenance costs and the long, worry-free service they can expect from Adlake Aluminum Windows. For complete data, drop us a post card today at 1101 North Michigan Avenue, Elkhart, Indiana. No obligation, of course.

Architects: Kaelber & Waasdorp;
Contractor: John Pike & Sons.

Adlake Aluminum Windows offer these "plus" features:

- Minimum Air Infiltration • Finger-tip Control
- No Warp, Rot, Rattle, Stick • No Painting or Maintenance • Ease of Installation

THE Adams & Westlake COMPANY

Established 1857 • ELKHART, INDIANA • New York • Chicago

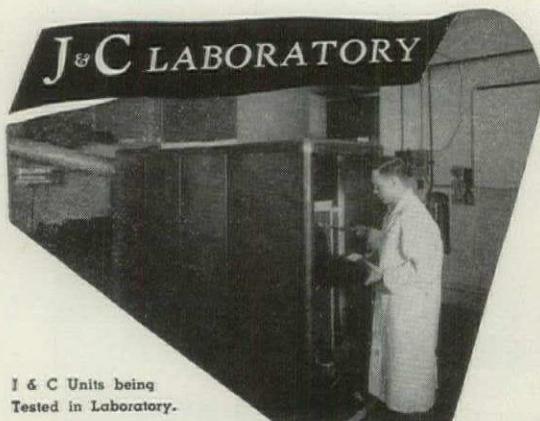


Furnishers of Windows
to the Transportation Industry
for over 30 years

All Adlake double-hung windows carry this seal



ANNOUNCEMENTS



J & C Units being
Tested in Laboratory.



PROVES PERFORMANCE

PRECISE MEASUREMENT . . . Of exact static pressure drop across each J & C unit and proper blower size for each J & C Model.

EXHAUSTIVE TESTS . . . of J & C units provide installation engineers with the data needed for correct installations.

ONLY IN THE LABORATORY . . . may technicians definitely establish:

- Correct Pressure Loss Measurements
- Proper Temperature Rise
- Accurate Flue Gas analysis
- Known Heat Transfer

NO GUESSWORK . . . The J & C laboratory, working for you, permits accurate installations because performance capabilities are precisely determined.

THE COMPLETE LINE . . . COMPLETELY PROVEN

J & C, America's largest and most complete Warm Air Heating Line, offers over 100 types and sizes with outputs from 3,800,000 down to 100,000 Btu in the Famous Tubular Series . . . other models down to 52,500 Btu. Exact engineering plus endless testing provide the J & C features that give you an "edge" when you specify or install J & C.

A PRODUCT OF
JACKSON & CHURCH COMPANY, SAGINAW, MICHIGAN
WORK WELL DONE SINCE '81

L. H. KEMP, specialist in theater and cinema design, 24 King St., W., Toronto, Ontario, Canada.

TEAS & STEINBRENNER, engineering partnership, Bank Bldg., Malverne, N. Y.

GILBERT ASSOCIATES, INC., engineers and consultants, Houston office, Oil and Gas Bldg., Houston 2, Texas; Aaron Campbell, vice-president in charge.

ZAY SMITH ASSOCIATES, industrial designers, 431 N. Clark St., Chicago, Ill.

CHANGES OF ADDRESS

VAN EVERA BAILEY (permanent address) 543 Prospect Ave., S. Pasadena, Calif.


GORDON DRAKE (temporary address) Box 767, Monterey, Calif.

JOSEPH MCGINNISS, architectural specifications, 101 Park Ave., New York 17, N. Y.

HENRY DREYFUSS, industrial designers, New York office, 4 West 58th St.

CORRECTION

KARL VAN LEUVEN, JR., designer of the expanding California house (pp. 132-3, April, '48 FORUM) is not a registered architect as was stated in the text.



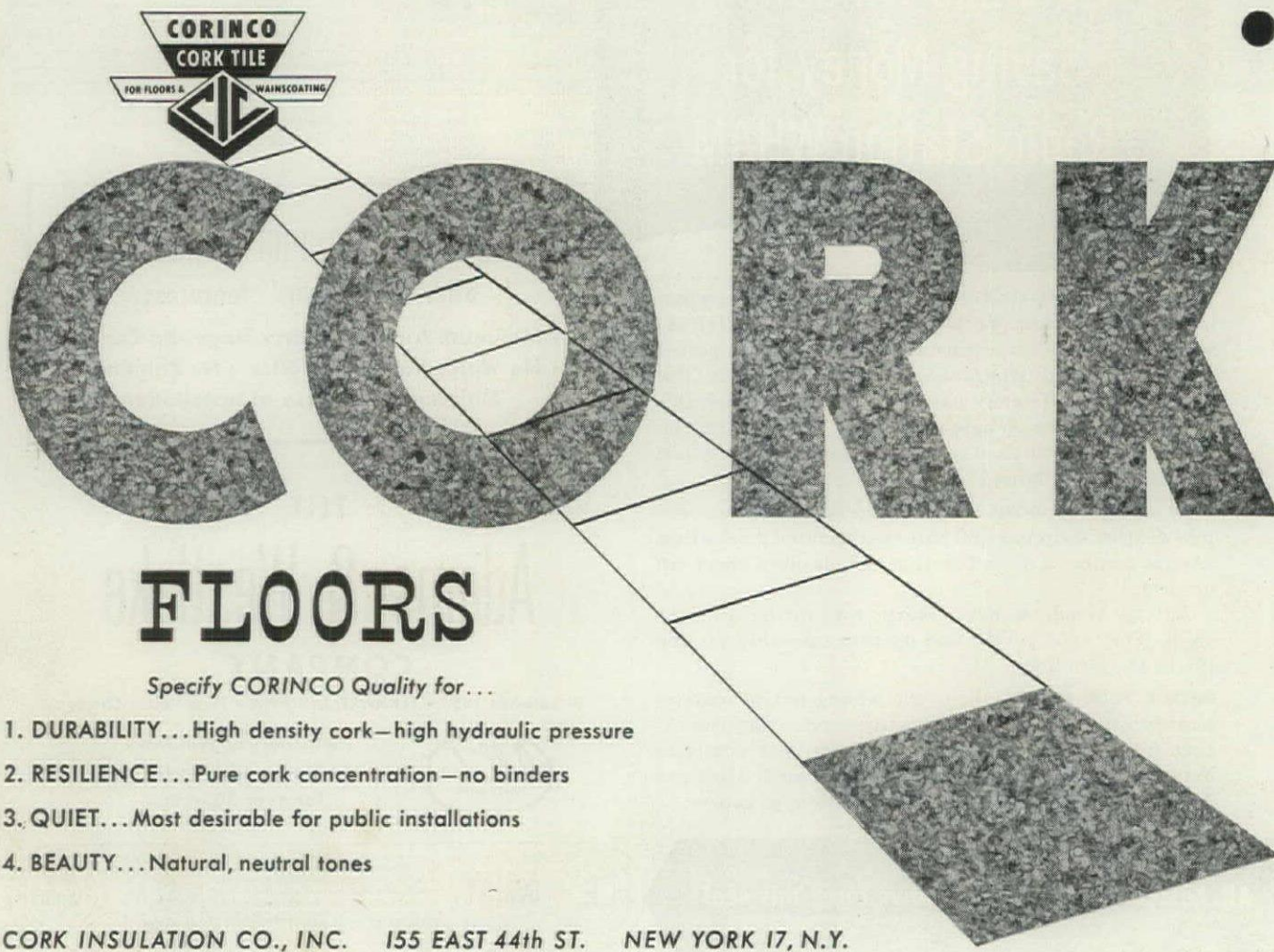
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FLOORS

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CORK INSULATION CO., INC. 155 EAST 44th ST. NEW YORK 17, N.Y.



Interior of Quality
Is Inexpensively
Beautifully

**Church Job
To Farnsworth**

At least five Houston families constructed throughout the nation homes just like the model by the Quality Institute. To show, by actually building homes, how much quality can be packed into a square foot of space, the Quality Institute offered a \$100,000 prize. The Quality Institute was founded last February by Robert Copper and Braden Inc. Actual content of the institute was given to the American Institute of Architects Forum, and John H. Harkness, president, noted New York architect named executive secretary. Fred Mack and the architects Frank Mack and Sam Kamrath, were designated as Houston members of the Institute.

designs in home styling
view today to the general
at the Rever Quality House
Kirkfield Drive and Dewberry
in Oak Forest.
rooms are furnished in a
re which enables household
add pieces whenever de-
sire, according to the Kam-
Store Company which de-
signs the furnishing as "ex-
tending rooms."
functional modern divan, up-
hoisted in cloud gray, is the first
that visitors will see
center, in the air-conditioned
room. A pair of twin
fine sectional chairs in a

the rating game
den is a

...the cultivator you need for that odd-shaped plot of ground that you'd like to utilize. With the **BOLENS HUSKI** tractor and cultivator you can get the most out of it... plenty of vegetables for your own family and if you like, a crop for the market. **BOLENS HUSKI**

Much Interest Is A

The modern, functional furniture featured in the Heavy Quality line has been made available to thousands of households, according to the Kamini Corporation.

TREND

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notes

W. HAWKINS
Associate Editor
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**House
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The modern furniture featured in the Revere Quality has been made available to householders, according to the Kaminspired deal of interest since the house last Sunday. Mr. Kaminspired said:

TREMENDOUS SU

The first house to be completed for the Revere Quality House Institute was opened to inspection June 6 in Houston, Texas. On that day alone, four orders were received for duplicates. To date, the builder has had over 40 orders. During the first two weeks the house was on view, 30,000 people went through it. On the fourth week-end, 15,000 more visited the house. Houston newspapers ran over 20,000 lines (nearly 10 pages) of stories and advertisements featuring the house, which was designed by MacKie & Kamrath, Architects, Houston, and built by Frank W. Sharp, Builder, also of Houston. Homeseekers rejoiced in the convenience and beauty of the house, and in the knowledge that it embodies real quality. Architects and builders from Texas and adjoining states have asked how they, too, can participate in the Institute's work We expected success, but we are frankly amazed at the tremendous enthusiasm the first house has aroused. This extraordinary response indicates that the Institute fills a vital need. Associate memberships are open to architects and builders. For details, write:

REVERE QUALITY

REVERE QUALITY HOUSE INSTITUTE
P. O. Box 1134, Grand Central Station
New York 17, N. Y.

The Revere Quality House Institute is a public service activity, sponsored by Revere Copper and Brass Incorporated with The Architectural Forum as co-sponsor.

REVERE
COPPER AND BRASS INCORPORATED
Founded by Paul Revere in 1801
230 Park Avenue, New York, N.Y. 10017

230 Park Avenue, New York 17, N. Y.
Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; New
Bedford, Mass.; Rome, N. Y.—Sales Offices in Principal Cities.
Distributors Everywhere.

Pennekas' easements provided the new Quality House by the Muir-Landford company, are one of the features attracting the attention of the thousands who are daily passing by the new home on Wakefield drive and Dr. Barry L. Roth, Mackie and Kamrath, Larcher, who designed the house, and W. H. Sharp, who built it, consider the Pennekas type window an outstanding development.

Forrest L. Bule pointed out that the steel frames are no slender than the wood frames, but they are a better view and more daylight.

"TWO LEVEL" easements will lead to each other. They will be used in many ways, open, airy, sleek, down-swept, warp, stick, slipper. Pennekas windows may be used after a change of the upper lip.

"Pennekas' easements add beauty to the house," said Eryd Mack and Kay Kamrath, the architect.

In addition, they give more daylight, afford better ventilation, are absolutely weatherlight. They are also a new type of window for the house, said provided by Muir-Landford, an improved

R. W. Holtz was awarded a contract at \$42,000 for a six-story residence at 100 West Union. Mr. and Mrs. The brick and measure 100 by 100 ft. staff at once is the archi-

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Said The Architect To The Client . . .

*"Here are the 3 reasons why
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throughout"*

1. You Can Depend On The Full Line of Frigidaire Products. The Frigidaire line of commercial refrigeration and air conditioning products is the most complete in the industry. It's easy to find exactly the types and sizes you need — so you don't waste money on too much or too little capacity.

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Illustrated at right are just a few of many types of commercial refrigeration and air conditioning products which bear the Frigidaire trademark. Frigidaire also offers a complete line of electric appliances for the home.



Meter-Miser and
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Water Coolers



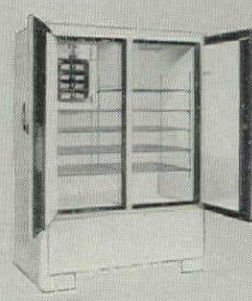
Cooling Units



Room Air Conditioners



Store Air Conditioners



Reach-In Refrigerators



Bulk Ice Makers

You're twice as sure with two great names



FRIGIDAIRE made only by **GENERAL MOTORS**

Don't Miss . . .

"Satellite Town for American
Community Builders, Inc."

on page 70
of this issue!



America's first PLANNED POST-WAR CITY...

... planned for "a better life" ...

... planned with **MOR-SUN FURNACES**

On the sloping hills south of Chicago, Park Forest, a city for 30,000 people, is being built in one integrated operation . . . America's first "planned" post war city designed for "a better life".

Its creators, the American Community Builders, have taken all the essentials for an ideal community . . . for a comfortable, pleasant life.

The first section, Park Forest, is well under way, and each of the 3,010 rental homes therein will have its individual MOR-SUN gas furnace to supply forced warm air heat. In the summer the blowers in these furnaces will be utilized to create comfort by circulating air throughout each house.

MOR-SUN is proud to be part of this superhousing project, this "better life" city . . . proud to be part of what Collier's Magazine (Feb. 14, 1948 . . . "City to Order") calls "one of the most important experiments in housing and in living attempted in many years"!

General Contractors . . . American Community Builders, Inc., Chicago

Architects . . . Loeb, Schlossman & Bennett, Chicago

Heating Contractors . . . Sunbeam Heating & Air Conditioning Co., Chicago

MOR-SUN Midwest Sales Representative . . . Wallace Landau, Chicago

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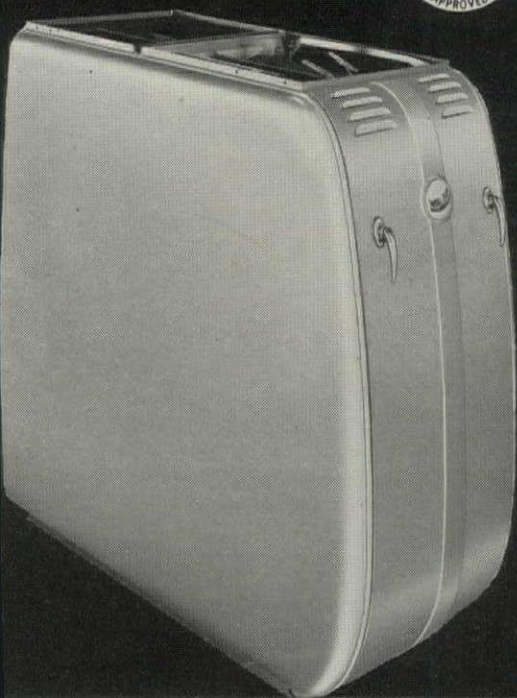
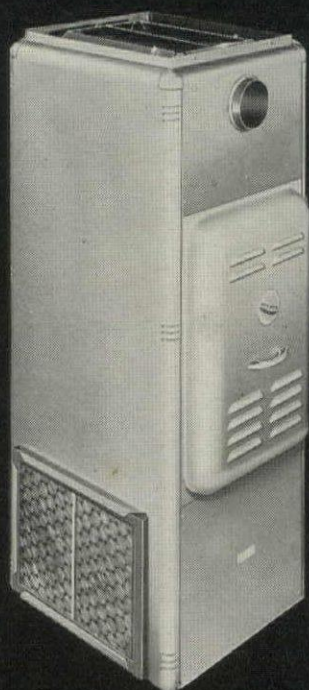


BUFFALO 7, N. Y.

"The Sun Never



Sets with MOR-SUN"



Hold Heat Where It Belongs with Flintkote Insulating Wool

*Inside in Winter
Outside in Summer*

Nobody has to "sell" the value of home insulation anymore. That's an accepted fact.

But there still remains for the architect and builder the responsibility for *selection*. Your clients depend on you to get them the most value for their building dollar.

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And Flintkote Insulating Wool is efficient. The ASHVE Guide establishes its thermal conductivity as "K" = .27 BTU.

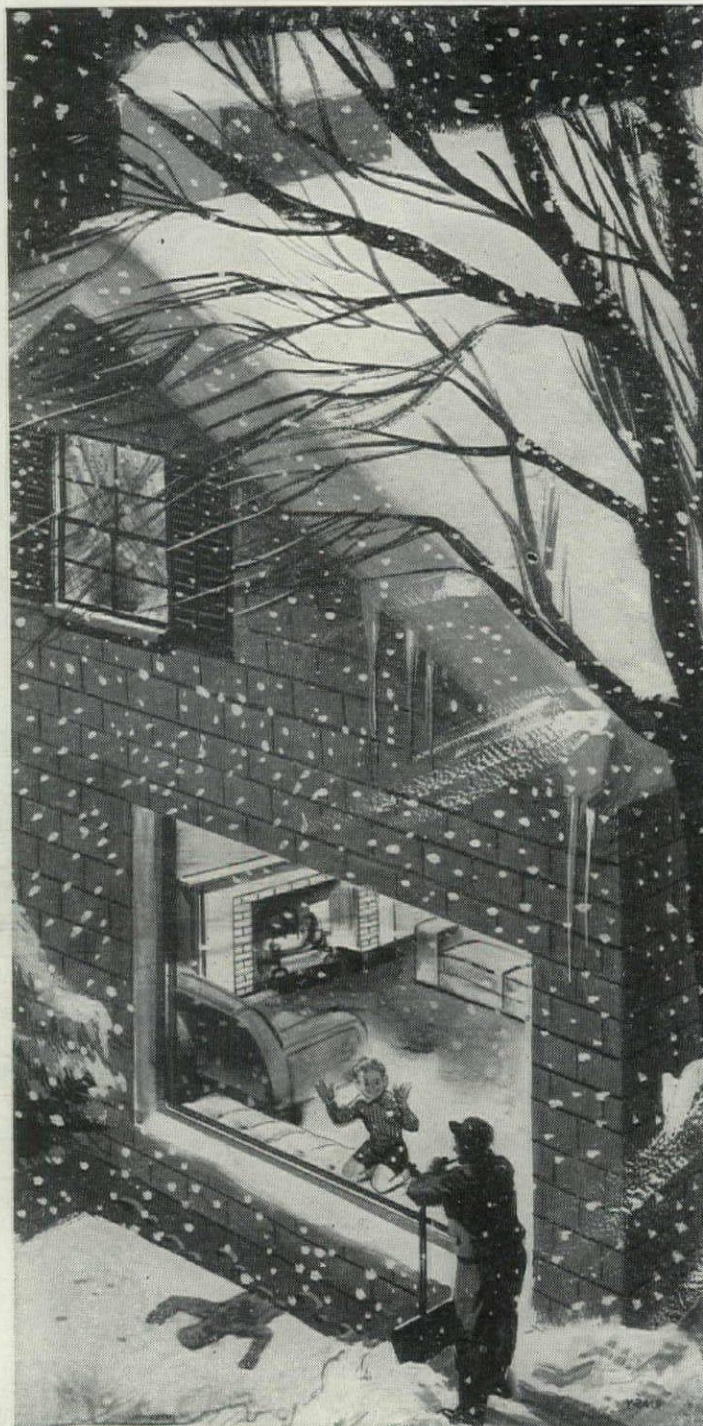
So give your clients the great home comfort, fire protection, the easy installation, the economy and permanence that add up to more insulation per dollar with Flintkote Insulating Wool. Specify this proven product in every home you design.

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the extra years of service cost no more!



FOUR CONVENIENT FORMS FOR EVERY TYPE OF JOB



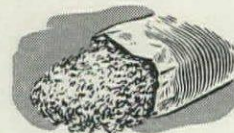
Roll Blankets—A low density insulation with a vapor barrier on one side and a vapor porous paper on the other. Has a nailing flange for easy application. Several widths and thicknesses.



Batts Blankets—Same construction as Roll Blankets only in a smaller unit size, in 15" width only.



Bantam Batts—A handy size to snugly fit 16" studding where no vapor barrier is required. One size in 3" thickness.

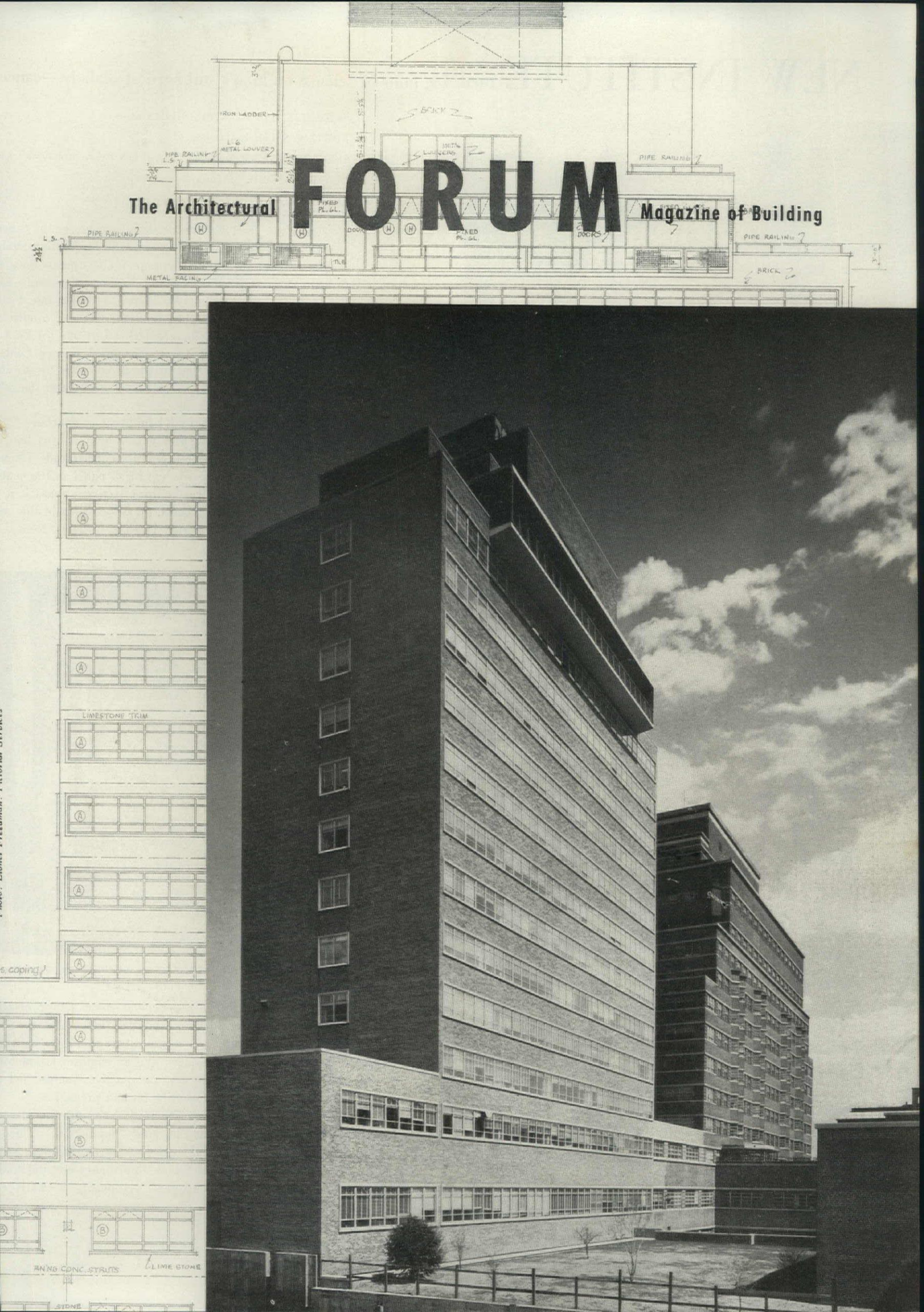


Pouring Wool—A nodulated wool designed for hand pouring over a finished ceiling. Vapor barrier, if required, should be installed before wool is poured.

The Architectural

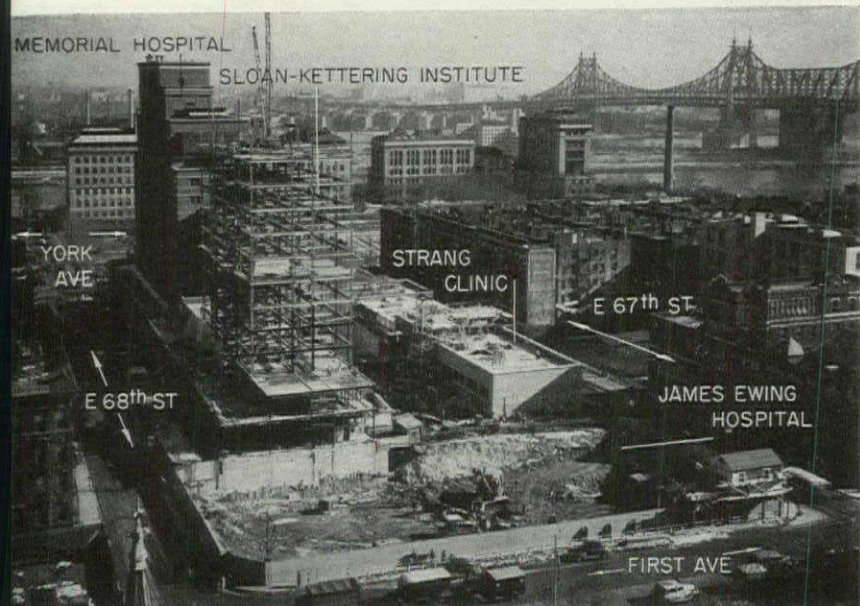
FORUM

Magazine of Building

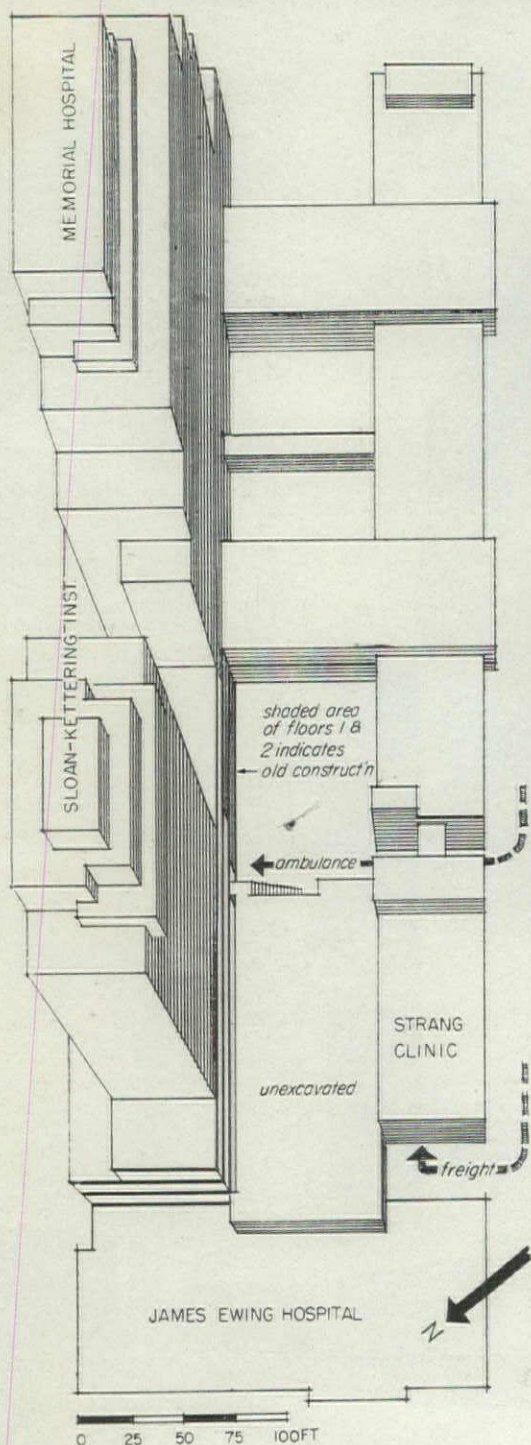


NEW INSTITUTE turns big guns of science on man's stubbornest malady—cancer

R. F. Leppert Jr.



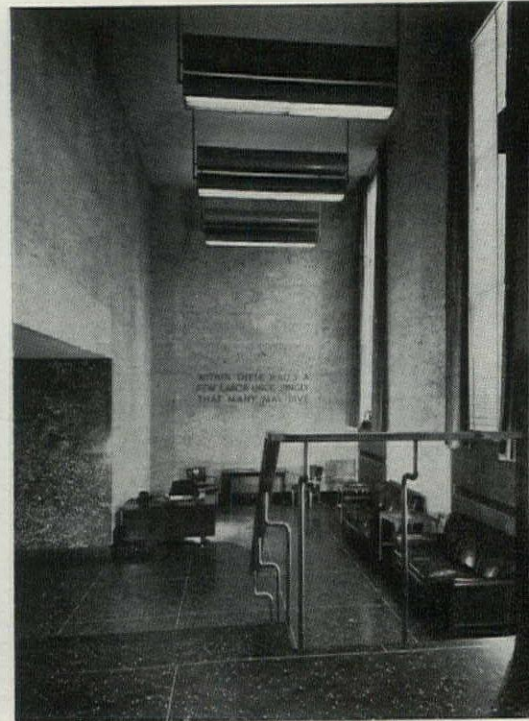
INSTITUTE IS SECOND UNIT OF A THREE-PART CANCER CENTER



Lionel Freedman: Pictorial Services



TO HOLD COSTS TO MINIMUM, EXTERIOR AND LOBBY SHOW SPARTAN SIMPLICITY OF FINISHES



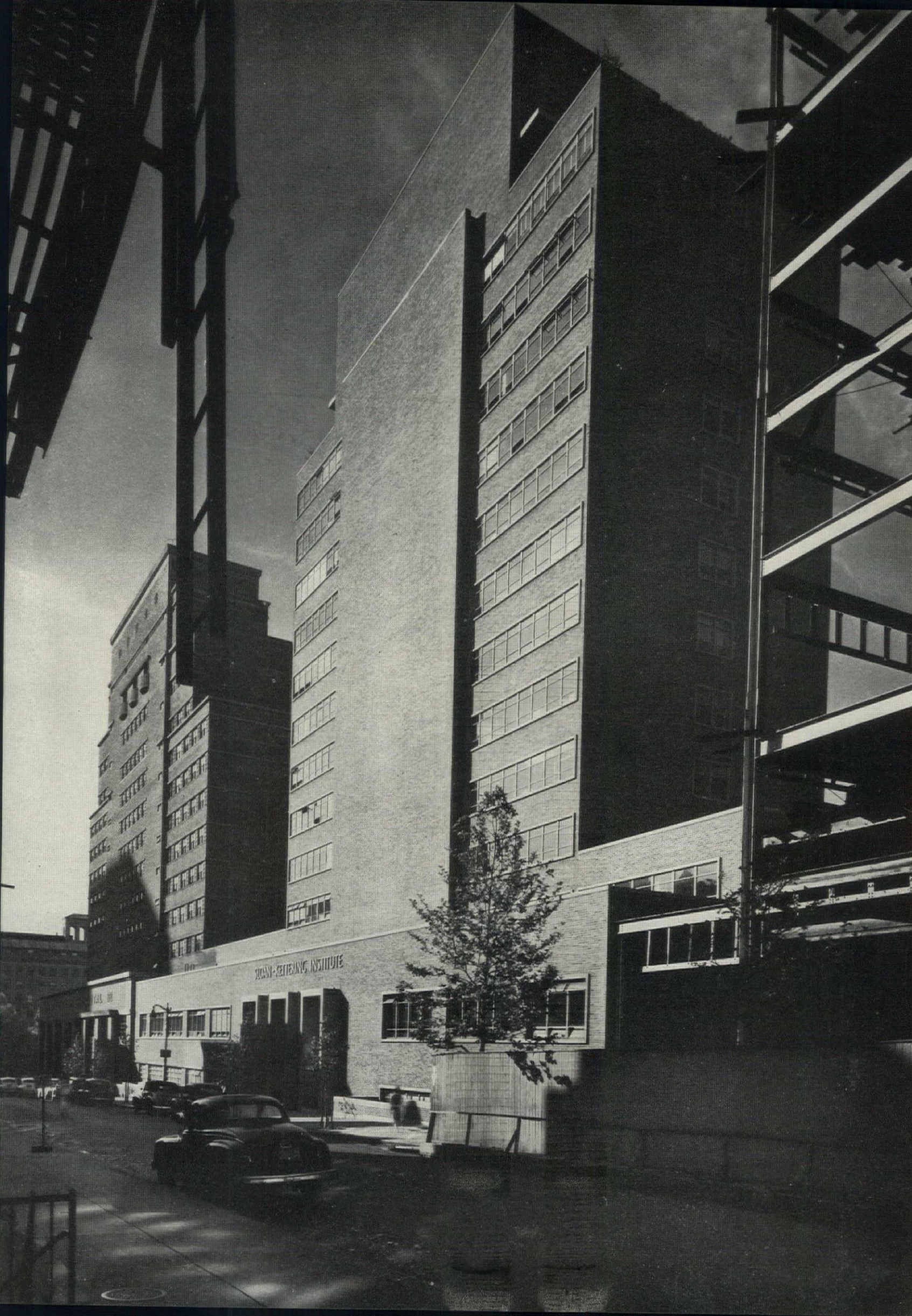
SKIDMORE, OWINGS & MERRILL, Architects
EDWIN A. SALMON, Consultant
SEEYLE, STEVENSON & VALUE, AUSTIN RICE, Structural Engineer
GUY B. PANERO, Mechanical Engineer
TURNER CONSTRUCTION CO., General Contractors

Now that the atom has been split, the conquest of cancer is perhaps the most intricate and tantalizing question facing science. As in the case of atomic fission, many lines of investigation need simultaneous exploration; and—like fission again—massive concentrations of skilled talent and research facilities are required. Both of these conditions will be met in the new Sloan-Kettering Institute for Cancer Research. Part of New York's Memorial Cancer Center, the Institute stands between two hospitals—the 9-year-old 256-bed Memorial (FORUM, November 1939) and the 300-bed James Ewing, now building.

Architecturally, the new SKI building is Spartan—120,000 sq. ft. of laboratory space with a minimum of fuss and furbelows. The monumentality of its north facade (facing page) is incidental. The soaring brick panel in the center actually houses all service facilities—stairs, elevators, restrooms, air supply and exhaust. Wrapped around this service stack are the laboratories, laid out in 24 ft. bays.

Design of the Institute presented some rather bizarre problems. Noise of blasting and steel erection had to be held to the minimum. An ultra-centrifuge had to be fixed to bedrock: it took a physicist and an engineer six months to install it. Use of the new radio-active isotopes led to some tricky problems of ventilation and protection.

The two hospitals provide a large concentration of specialists and a large, steady hospital "population." The institute, on the other hand, will provide the hospitals with investigation and research which no ordinary hospital could afford. This intimate functional relationship is clearly expressed in the two-story wings connecting all three institutions.



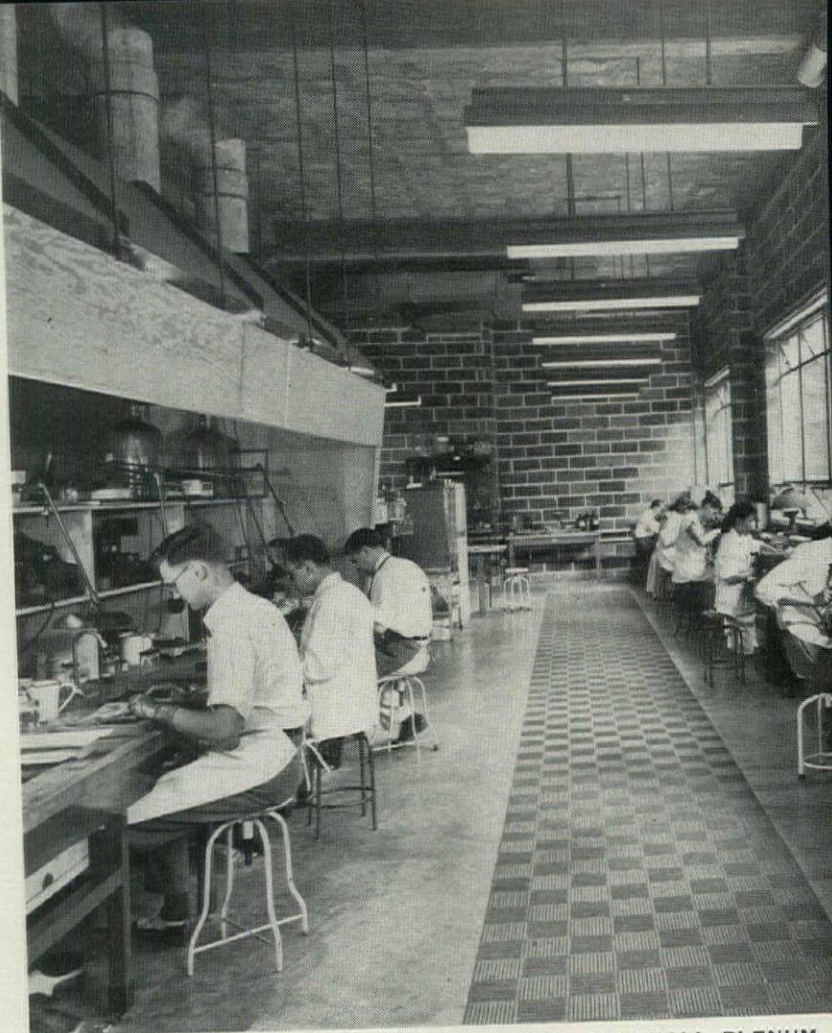
Canny framing and centralized utility core permit flexible lab layout at Sloan-Kettering Institute

Structurally, SKI is unexceptional. In a period of skyrocketing costs, two innovations held costs down: The steel frame was designed out of standard units, so that stock material could be used; and dry construction was employed as much as possible. A floor system of precast concrete blocks proved economical (right, below). Pipes were left unfurred and cinder block walls unplastered in many of the laboratories.

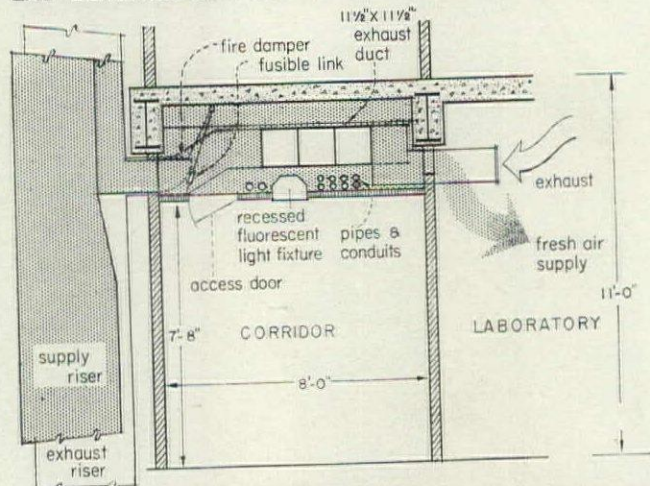
The need for flexibility in laboratory layout—essential to the constantly shifting emphasis of cancer research—has been effectively met at SKI. Vertical ducts serve all floors, carrying hot, cold and distilled water; compressed air and vacuum; gas and electricity; ventilation and waste disposal. Lateral distribution of most utilities is accomplished by a hung ceiling in the corridors (see section at right) which permits a take-off at regular intervals. The actual layout of the various labs was based on process diagrams worked out by the respective department heads. Some of them had very special requirements. Work with radio-active isotopes required separate exhausts with no possibility of back-drafts. Infra-red spectroscopy involved an air conditioned, dustproof room.

As in most such projects, the integration of SKI and the hospitals into a cancer center involved negotiation with a bewildering array of boards, foundations, faculties and commissions. The project thus involved much more than mere architectural adroitness. It is a measure of its success that all hands seem agreed that the new center will be "completely integrated in aims, function and architecture."

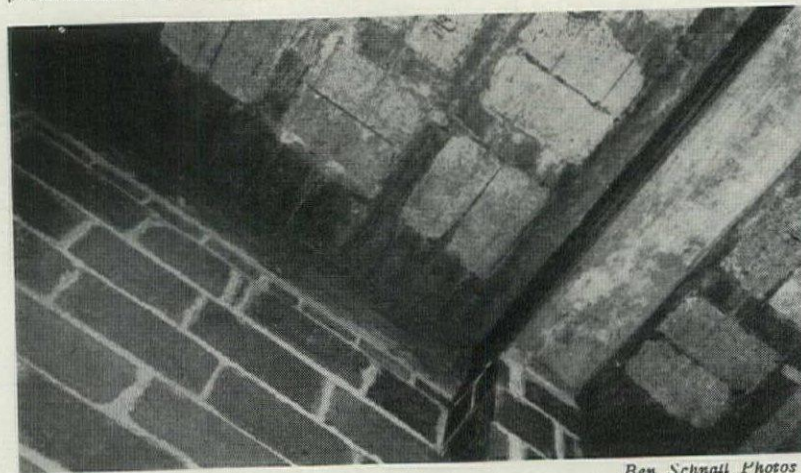
CONSTRUCTION OUTLINE: Exterior walls—face brick with load bearing hollow cinder concrete masonry back-up units. Columns—structural steel, American Bridge Co. Floors—reinforced concrete joists and two-way slag block floor arches, Republic Fireproofing Co., Inc. **ROOFING**—built-up, Johns-Manville Corp. **WINDOWS:** Sash—stainless steel, Detroit Steel Products Co. Glass—Pittsburgh Plate Glass Co. and Blue Ridge Glass Corp. Glazing compound—Tremco Mfg. Co. **ELEVATORS**—Otis Elevator Co. Elevator doors—The W. S. Tyler Co. **FLOOR COVERINGS:** Asphalt tile—Tile-Tex Co., Inc. Linoleum—Armstrong Cork Co. Ceramic floor tile—American Franklin Olean Tile Co. **WOOD & METAL TRIM:** Ornamental metal—General Bronze Co. Trim—stainless steel. Doors—Roddiss Lumber & Veneer Co. Folding door—Modernfold Door Co., Inc. **HARDWARE**—P. & F. Corbin Co. **PAINTS**—Pratt & Lambert and DeVoe & Reynolds Co. **ELECTRICAL INSTALLATION:** Switchboards and fittings—Metropolitan Electric Mfg. Co. Rigid electrical conduit—General Electric Co., Walker Bros., Spang-Chalfant Co. Wires and cables—Habitshaw Wire Div., Phelps Dodge Copper Prods. Co. Lighting fixtures—The Miller Co. Fluorescent lamps—General Electric Co. Wiring devices—Hart & Hegeman Electric Co. **PLUMBING INSTALLATION:** Air compressors, vacuum machines and gas boosters—Beach-Russ Co. Pumps and ejectors—Chicago Pump Co. Bathroom fixtures—Crane Co. Toilet partitions—Sanymetal Products, Inc. Cabinets—G. M. Ketchum Mfg. Co. and Miami Cabinet Div., Philip Carey Mfg. Co. Valves—Sloan Valve Co., Jenkins Bros., Schade Valve Co. Laboratory drain pipe and fittings—Duriron Mfg. Co. Laboratory lead specialties, traps, pot sinks, etc.—Glaser Lead Co. Laboratory outlet fittings, faucets, etc.—American Radiator-Standard Sanitary Corp. and Murray & Sorensen. **HEATING AND AIR CONDITIONING:** Up and down feed system of the two-pipe vacuum and gravity heating type. Air conditioning—Carrier Corp. Condensation coolers—Patterson-Kelley Co. Flash tank—Almirall & Co., Inc. Registers and grilles—Tuttle & Bailey Mfg. Co. Valves—Lonergan Co., d'Este Div., American Chain & Cable Co., Jenkins Bros. and Fulton Sylphon Co. Vacuum heating specialties—C. A. Dunham Co. Temperature control—Johnson Service Co. Radiators—Shaw Perkins Mfg. Co. Convectors—Modine Mfg. Co. Heating coils—John J. Nesbitt, Inc. Insulation—Johns-Manville Corp. Aerofuse ceiling outlets—Tuttle & Bailey, Inc. Pipes—National Tube Co. Sheet metal—Republic Steel & Bethlehem Steel Co. Refrigeration machine—Chrysler Air Temp. Condensers—Davis Engineering Co. Brass fittings—Chase Brass & Copper Co. and American Brass Co.



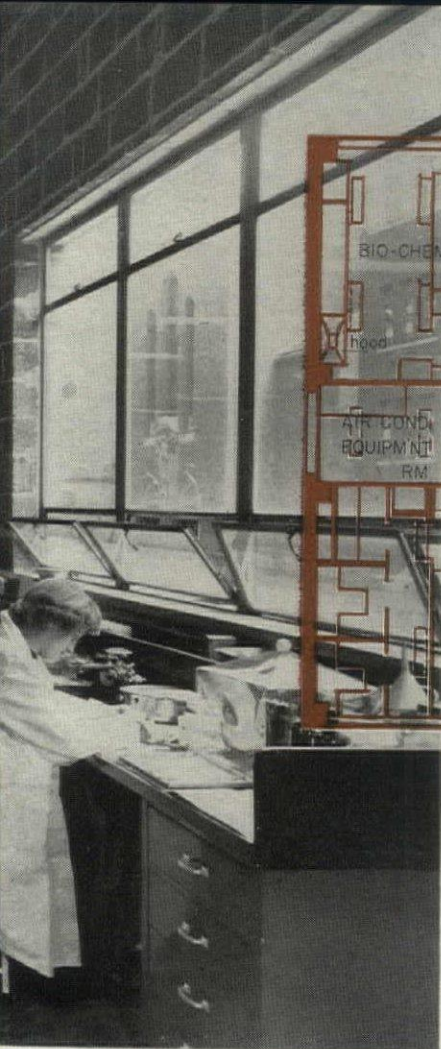
LAB BENCHES GET VENTILATION, UTILITIES FROM HALL PLENUM



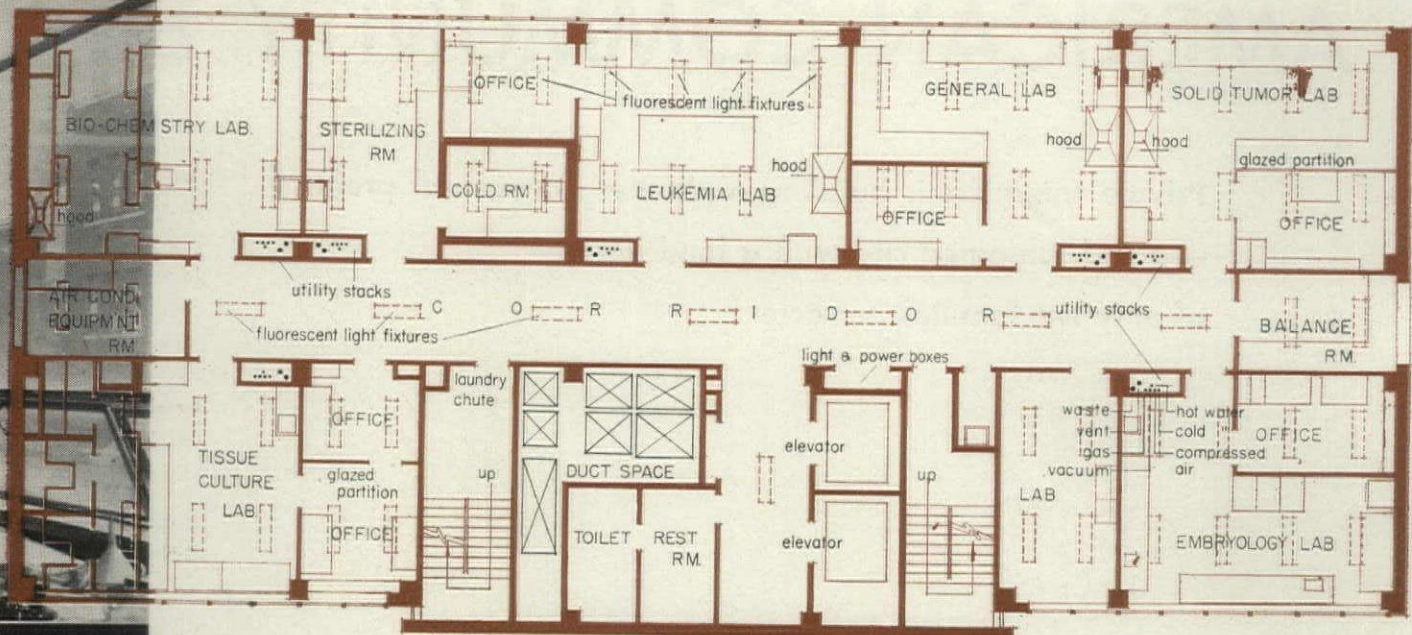
ALL UTILITIES ARE CARRIED IN CORRIDOR CEILING, with provisions for take-offs at regular intervals. A suspended ceiling forms a plenum chamber for incoming air. Individual hood exhausts over work benches connect to return ducts running down center of plenum. Floor construction (below) employs precast concrete tiles set in concrete ribs.



Ben Schnall Photos



ARE RANGED ALONG INNER WALL



FOURTH FLOOR LAYOUT IS TYPICAL. Size of individual laboratories may be varied, thanks to modular framing and central utility core. Placement of stairs, elevators and washrooms in stack along north wall, gives most work space good exposure and view.

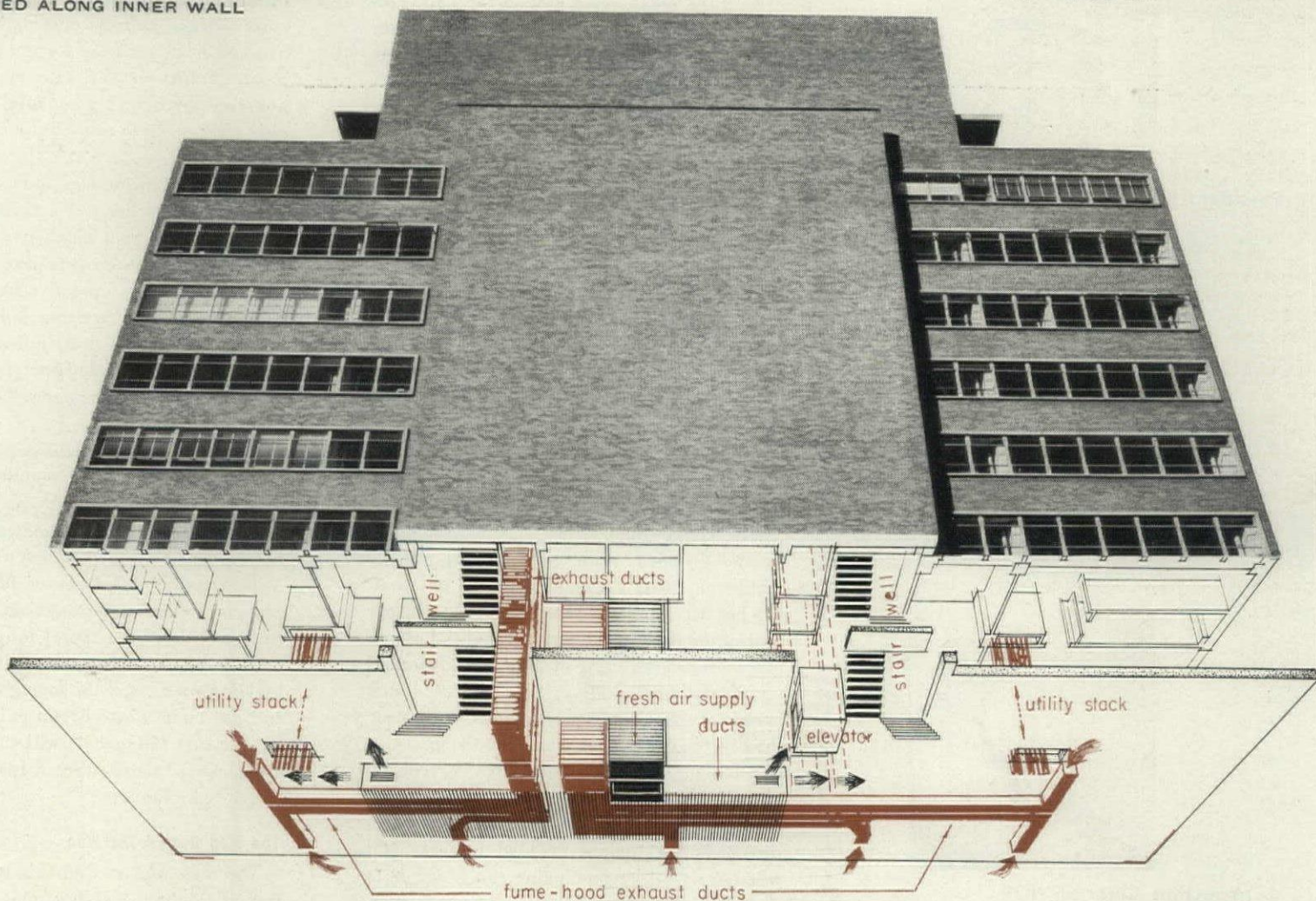


8th FLOOR

Basement—Ultra-centrifuge machine, service, maintenance shops, machine room.
1st—General offices and main lobby, library.
2nd—Pathology laboratory.
3rd—Clinical investigation laboratory.

4th—Immunochemistry laboratory.
5th—Physics and Biophysics laboratory.
6th—Laboratory.
7th—Experimental chemotherapy.
8th—Protein chemistry laboratory.
9th—Steroid Biochemistry laboratory.
10th—Laboratory.

12th—Animal maintenance.
13th—Director's offices, conference rooms, dining-room, kitchen, special laboratory.
14th—Living quarters.
15th—Machinery and fans.
Top—Tank house.



AMERICAN COMMUNITY BUILDERS

**Private enterprise is building a planner's dream for profit
—a self-contained city with a land density
of only ten families per acre.**

American Community Builders, Inc.

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Sam Beber, Vice President

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Hart Perry, Secretary

Israel Rafkind, Asst. Secretary and Comptroller

Charles Waldman, Engineer

Carroll F. Sweet, Sr., Director

Loebel, Schlossman & Bennett, Architects

Richard Senior, Construction Chief

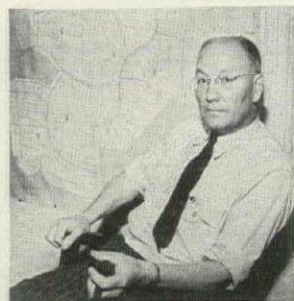
Photos: Fran Byrne



President KLUTZNICK



Promoter MANILOW



Construction Chief SENIOR

Ever since the New Deal's first Greenbelt town displayed its tree-studded lawns, curving streets and leisurely pedestrian shopping centers to a traffic-jammed Washington, D. C., planners and real estate men have asked one question: Is large-scale community planning economically feasible without government subsidy?

With the breaking of ground for Park Forest, \$30 million satellite town now under construction 27 miles south of Chicago's Loop, private enterprise is for the first time answering this portentous question. Big merchant builders like Fritz Burns and David Bohannon have already proved that planning pays off in the 500- to 1,000-house development. But never before has the Building Industry adopted community planning on a scale large enough to change the face of a whole countryside. The Park Forest experiment intends to do just that.

On 2,400 acres of rolling, wooded farmland only 39 minutes by commuter train from Chicago's Loop, a complete new city with a population of 30,000 persons (approximately the size of Ann Arbor, Mich.), will take shape in the next five years. It is, of course, far and away America's largest current housing venture. More important, it is a planner's dream: a city without smoke, clatter, traffic jams or smells, dropped down, so to speak, in the middle of a park. A density of only ten families per acre and a coverage limited to 11 per cent of the building site places it ahead of any other project in terms of land use. Informal street and house siting, plus an integrated system of schools and playgrounds, put it near the top for convenient, unruffled living.

Some of these amenities have, of course, already been incorporated in the subdivisions of private builders and have produced extra dividends for their farsighted owners. But whether sound land planning can be made to pay off in a development of Park Forest's magnitude has remained a moot question. American Community Builders, Inc., developers of the current project, believe it can.

Achievement of this end on the gigantic scale required, however, involves a number of striking differences between Park Forest and

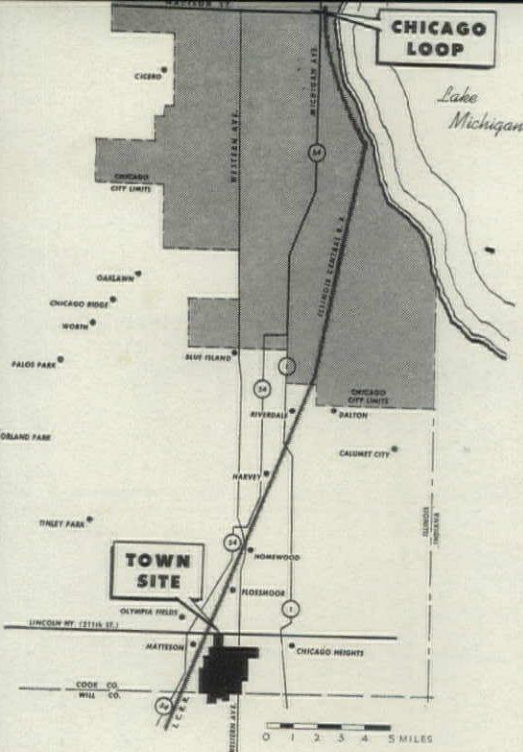
its predecessors—differences which may well set the pattern for future projects of this type. First and most important is the establishment of a solid core of rental housing to stabilize the giant gamble in its initial stages. Second is the shift of emphasis from house rentals to shopping center rentals as a major source of income. Third is the incorporation of an industrial section which may eventually employ about half the citizens, thus providing a sound economic base for the entire development. Fourth is the sale of single family houses—where the big potential profit exists—only after a stable community has been established.

This set of principles did not spring full-blown from the head of a master mind. The planning experiment which may make building history started as an orthodox subdivision in the thoughts of an operative builder, changed its course on the drafting boards of a top-notch architectural firm, jelled into its final form under the critical supervision of a group of former public housing officials, and the Chicago office of FHA.

As now underway, plans call for 3,010 units of rental housing for a population of 11,000 to 12,000 persons, plus schools, churches and the large shopping and recreation center to be completed within the next year and a half. Approximately 4,000 houses for sale and 475 acres of industrial development will be started on the heels of the rental project. Construction of this first rental area (which includes building roads, and the laying of sewer, water and gas mains) was begun only last October, but the first 100 tenants will start moving into their homes this month and 1,000 units should be ready by January.

The Men Behind the Plan

The man who started this behemoth on its way is Nathan Manilow, one of the biggest builders in Chicago, owner of the Manilow Construction Co. and president of the Metropolitan Chicago Home Builders Association. A promoter with a sharp eye on the dollar Manilow was introduced to the facts of planning as builder of a 2,500-family, defense



housing project, Jeffery Manor. Although orthodox in both layout and house design, it gave Manilow ideas.

When he began thinking of another development he and his associate, Carroll Sweet, Sr. got in touch with Jerrold Loeb, of the architectural firm Loeb, Schlossman & Bennett. They decided to take a virgin area and plan it from the beginning. Loeb also brought in Elbert Peets, famed planner of the green-belt town, Greendale, near Milwaukee. While Loeb's office dug into the realities of land planning, siting and financing, the scope of the development began to expand.

In the spring of 1946 preliminary plans were outlined to Philip M. Klutznick, brilliant public houser and Omaha lawyer, then in Washington as commissioner of the Federal Public Housing Authority. "I saw the possibility of a back-breaking but interesting job," comments Klutznick. Shortly afterward American Community Builders was incorporated, with Klutznick as president, Loeb as vice president and Manilow as treasurer.

A Changing Perspective

Before Loeb and Klutznick joined the operation, Park Forest was simply a plot of land and a general idea. As the development expanded from a large-scale project into a complete city plan, original ideas had to be junked and brand new problems tackled. One result was the all-important switch from sales to rental housing. Explains Klutznick:

"Study of such projects as Radburn and the Greentowns indicated that if we wanted to create a town, we had to bring a sufficient population into the area right away or else we might never achieve our objective. The only way that we could visualize doing this was with rental housing." Architect Loeb also points out that developing such a large area from the beginning with houses for sale could end in a belly-smacker if home-buyers began defaulting. Another factor was the common bugaboo of inflation building. "We were afraid of a sales market," says Klutznick. "As a matter of fact, this is no time to build rental housing either. But we think we fall

into a different category. The profit on rental housing is secondary to our central concept of building an integrated town with commercial and industrial advantages and increased values of the abutting land for residential use." In other words, in the manner pioneered by Clyde Nichols of Kansas City and later used so successfully by the Metropolitan Life Insurance Co., Park Forest hopes to make its major profits from shop rents while establishing a stable and attractive community. After that the houses for sale should make up for initial low returns on rental housing.

The idea of a shopping center which subsidizes rental housing is nothing new. It is, in fact, something of a current building trend which ACB sums up as "bringing families to stores." Their center is still in the planning stage, but estimates show that the completed town should offer merchants \$13 to \$18 million in purchasing power per annum. This is not to be taken lightly nor will it be given away free by the ACB builders. However, they have their own ideas about how it should be set up. Preliminary surveys by orthodox real estate experts, based on the traditional gridiron commercial area, were inclined to exaggerate the amount of space needed for shopping facilities. American Community Builders is convinced that an integrated community can avoid duplication of stores without sacrificing competition. They are working out a "Grass-On-Main-Street" center which will provide periphery parking for approximately 3,000 cars, central pedestrian shopping without the traffic nuisance. Says Jerry Loeb:

"What we're doing might be called a horizontal department store. The shops will be split up, but we're not going to put a fish market next to a jewelry store. We will have the same control over location of units that a department store does. But this control will be to the benefit of merchants." This, of course, will also be to the benefit of ACB.

The problem of building a self-contained, self-supporting community inevitably brings up the question of home base work opportunities. This is where industry comes in. Unlike the government's satellite towns which tried too late to lure industry into their areas, and unlike the Bohannon and Burns developments which were forced to build near established business, Park Forest has included new industry in its initial plans. This is the way it works: ACB's site, cannily chosen, is bounded on the north by a transportation band which includes the New York Central, the Michigan Central and the Belt Line railroads. Since these large companies make most of their money from freight, they maintain special departments to work on the problem of locating new industry along their lines. Park Forest, as an established city, would be an A-1 spot from the railroads' point of view. American Community Builders already has had informal discussions with them on such an undertaking. However, an acute labor shortage in the building trades forbids immediate action. ACB, with its giant housing operations, can't risk losing men to plant construc-

tion on the industrial site. Says Klutznick: "We've had a half a dozen propositions so far, but we're not ready to push anything yet."

Cutting the Costs

Even with a housing scheme geared to the sidelines of commerce and industry, balancing advanced planning principles against cold cash became something of a feat. And ACB, despite its intention to make a reasonable profit, will not do it at the expense of cherished planning goals. Having set up an ideal density of only 10 families per acre, they have had to "work like hell from an architectural and engineering standpoint to effect some corresponding economies." As Klutznick says, "You can decrease density by 25 per cent only if you reduce costs by 25 per cent."

The American Community Builders' solution to the cost problem, aside from the shopping center subsidy and future sales housing, is mainly the familiar story of large-scale construction. Because of the project's size and careful advance planning, they were able to contract for 90 per cent of both labor and materials at one whack—and with few escalator clauses—before construction started.* Standardization of design and building methods also accounted for considerable saving.

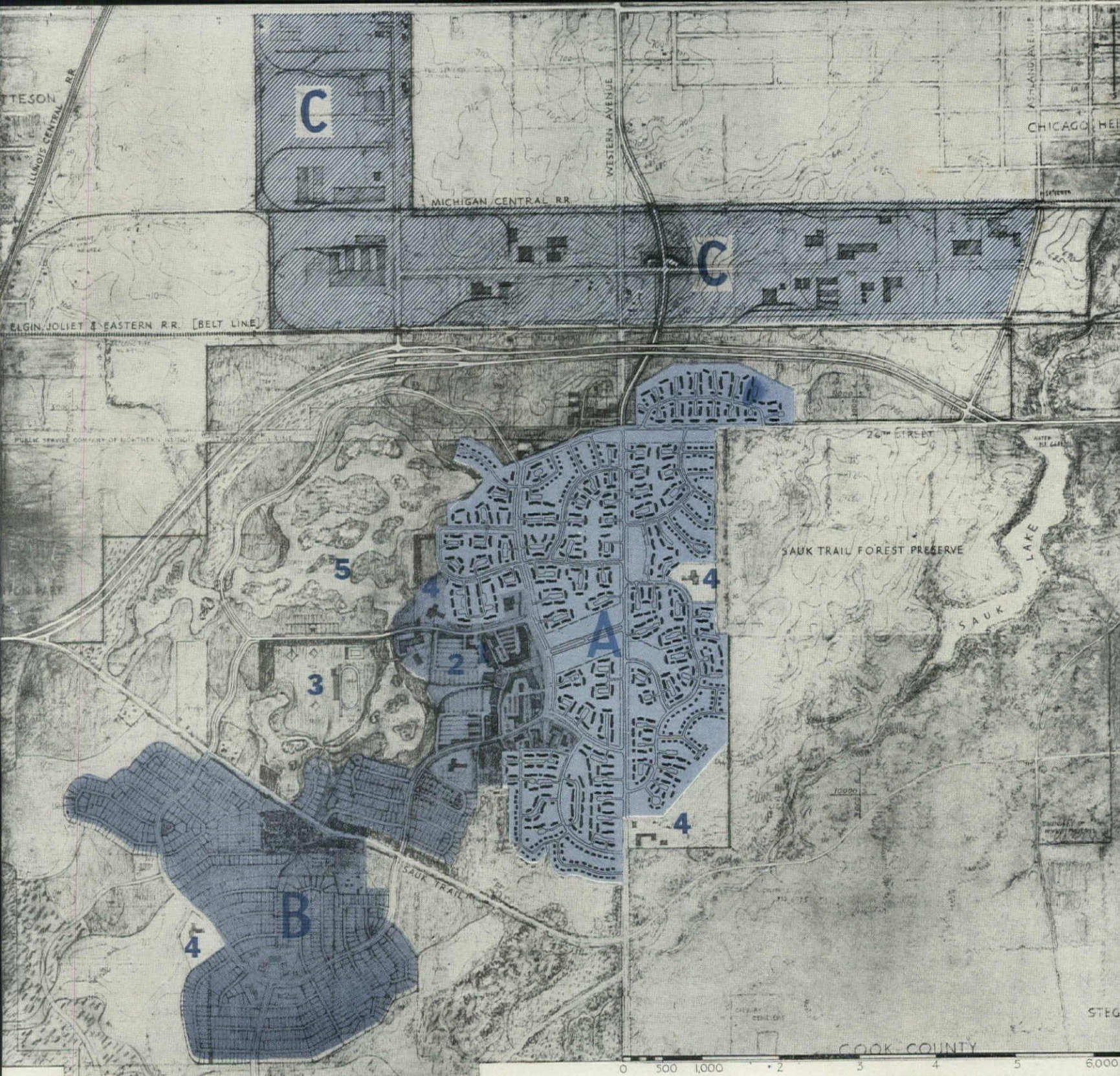
Where they almost fell on their faces was with utilities, since these were completely non-existent on the site as purchased. "The utilities on this job could kill you," hyperbolizes Klutznick, voicing the developer's fear of going broke on expensive service installations. Worst hurdle was the water system, only utility to be wholly owned and operated by ACB. Two 300 ft. wells with a capacity of 2,100 gallons per minute and a half million gallon water storage tank had to be constructed, plus a water softening plant with a daily capacity of one million gallons.

Sewage was less of a problem. Park Forest has been able to connect with the already established sanitary district of Bloom Township. Gravity flow and lift stations plus a two-mile interceptor line had to be set up for carrying sewage into the township's disposal plant, but an entire new system was unnecessary.

Saving has also been effected on storm sewers. Natural drainage is possible from many parts of the residential area to a lower swampy section of 100 acres at the east side of the property. This is being converted into a lagoon where storm water will be held until it can be released without flooding the creeks it empties into.

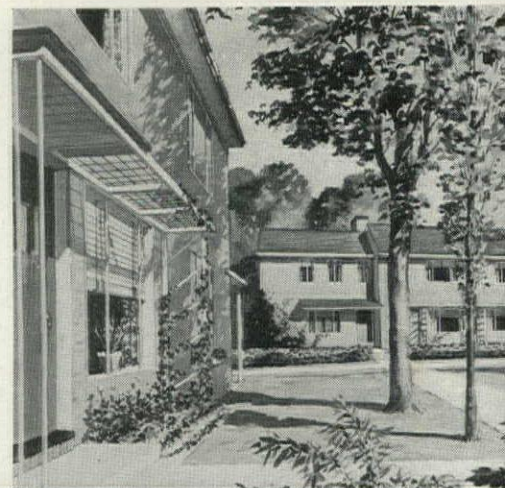
The heating utility was a stroke of luck. A major natural gas pipeline crosses the property and tapping it will provide fuel for the entire project. This has several advantages besides the obvious one of little initial construction. There is no need for large-scale fuel storage tanks, gas is currently cheaper than coal or oil and its use will permit a smokeless town, one of the planners' ardent objectives.

* Major exceptions: a \$90,000 steel contract, unobtainable without an escalator, and the labor contracts for plumbers, masons, plasterers and cement workers.



- A MULTIPLE HOUSING AREA**
(units to be rented)
- B FUTURE DETACHED HOUSE AREA**
(units to be sold)
- C INDUSTRIAL AREA**
- 1 SHOPPING CENTER**
- 2 PARKING**
- 3 HIGH SCHOOL AND ATHLETIC FIELD**
- 4 GRADE SCHOOLS**
- 5 LAGOON**

THE SITE PLAN of Park Forest is roughly divided into five neighborhoods, each with its own playgrounds, school and churches. The large shopping and recreation area is centrally located and to the north is the district reserved for future light industry. In accordance with modern planning concepts, the street system has been laid out on an informal ring pattern with main thoroughfares surrounding residential neighborhoods and curved to fit the rolling site.



Large-scale building methods are the key to economy and speed in constructing 3,000 apartments at a clip

In building a development of this size, co-ordinated scheduling is an absolute necessity. Neighborhood groupings (see plot plan, opposite page) have therefore been treated as building units to be worked on separately. Construction is divided into four major jobs which follow each other on these separate building sites. When the first construction job—installation of utilities—is finished in one unit, it is immediately started in the next section. Foundations are then laid in the first unit, followed in turn by framing and exterior finish. Thus, the building operation moves like an assembly line.

Hold-ups have been few which is surprising in view of the extreme shortage of labor on the Chicago market. Klutznick's negotiations with the Building Trades Council, begun six months prior to construction, are mainly responsible. All phases of possible dispute—union labels, power tools, prefabricating—were thoroughly thrashed out. There was no single master agreement, but separate deals were put through, most importantly with the carpenters, lathers, bricklayers and plasterers, the shortest trades on the Chicago market. Premium pay for these tight trades is common but ACB is not paying it, mainly because it can offer longtime steady work. Of the current thousand workers, there is a turnover of only four to six per day. "But we could use 300-400 more men right now," Klutznick adds.

However, available manpower is juggled with care. For instance, planned construction scheduling makes possible the installation of \$300,000 worth of glass by a peak of six glaziers. The use of brick veneer with wood framing allows a splitting of the construction load between bricklayers and carpenters rather than relying completely on either trade. Use of heavy equipment is another scheduling factor. "When you are using heavy equipment at high cost per day, it is worth while to work seven days a week if the men can stand the gaff," says Klutznick.

The use of prefabrication and site fabrica-

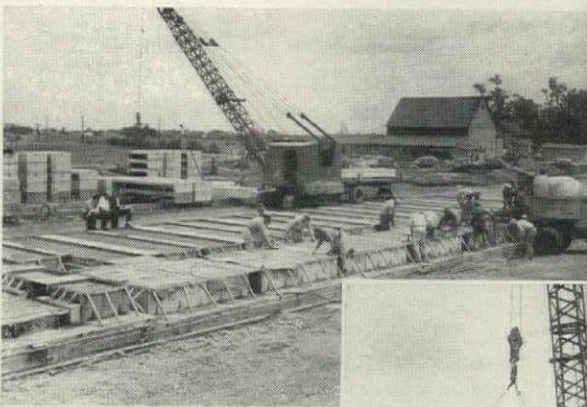
tion also effect economies of manpower. Foundations are poured on the site, but other cement members (porches, stoops, bay windows) are made in a special outdoor casting plant, in mold beds rather than forms. Done in the conventional manner, each forming operation would require 90 men, 50 of them skilled laborers. This method requires only 35 men—four carpenters, six iron workers, six cement masons and 19 common laborers. At present there are 75 mold beds in use daily and 30 types of molds, the largest forming a 5,700 lb. porch, the smallest a 200 lb. stoop.

Lumber prefabricating is done in a mill which ACB has erected on the site. During the winter months, when outdoor work was almost at a standstill, enough lumber was dimensioned in the mill for 60 buildings and enough trusses fabricated for 500. (Lumber which cannot be predimensioned is cut in gasoline-saw sheds which are hauled around the site on skids). When prefabrication is completed for a number of buildings, the material is taken to "dumps" in the area.

"You don't dare find yourself with carpenters sitting around waiting for nails," explains Klutznick. "You have to store and if you don't think about it in advance it can break a job. You can't guarantee me that there won't be a railroad strike or a plant breakdown tomorrow. And anyway the bricklayers want to see enough brick around to keep them going. To get results, the materials have to be choking the boss."

Layout and Design

The jumble of half-finished houses, brick and lumber stockpiles and busy machinery which is the current landscape at Park Forest will, in a few months, develop a semblance of its final order. The finished layout places houses in 11 superblocks within which are smaller residential groupings around planted courts. Feeder streets from the main throughways serve each small group of houses and parking space is provided in the court. In



CEMENT MEMBERS are cast in mold beds, using concrete as the forming medium, and are removed from the molds by compressed air. This method adds 3,500 PSI to the compressive strength, uses 60 per cent less material. After 24-hour setting, trucks cart castings away for stockpiling.

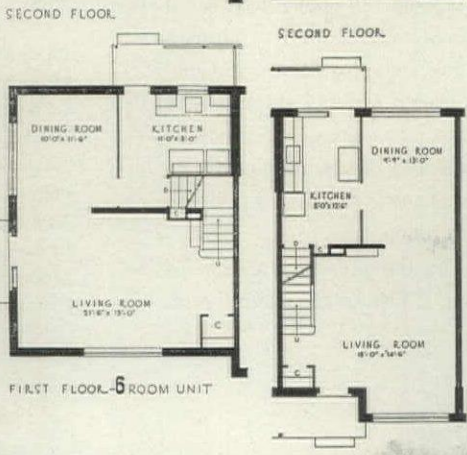
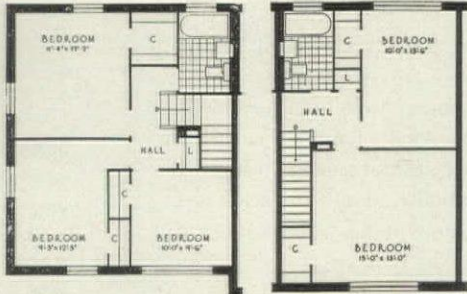
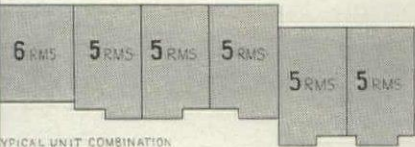


Photos: Fran Byrne

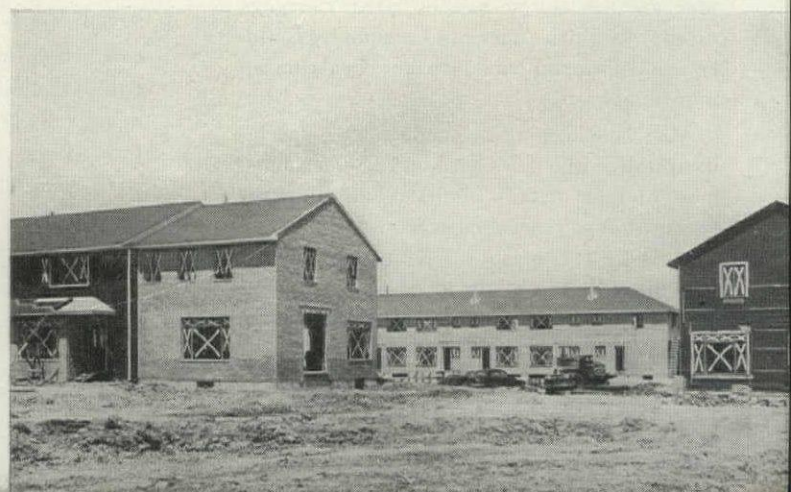
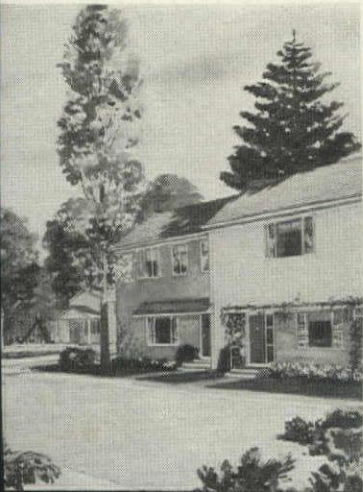
addition, each grouping boasts a "tot yard," in which housewives can park their children within view of the kitchen window.

Rental units are of two types: twin houses and the so-called "town and country houses" containing six apartments. All are two-story, private entrance units with individual heat control. Original plans, scotched after careful cost analysis, called for three-story walk-ups. These would have required common stairways, janitorial service, etc., undesirable expenses since the project's aim is to achieve a comparatively low rental.

As finally designed, the 3,010 rental units are divided between 204 one-bedroom, 2,104 two-bedroom and 702 three-bedroom apartments. The houses are standardized as to plan, but the architects have made a point of individualizing the facades. Different porch and roof treatments and finish materials (brick veneer, wood siding) are the most important variations. While not the best modern architecture in the country, these units are far above the level of ordinary housing project design.



UNIT PLANS are all duplexes with full basements except for the one-bedroom design which is on one floor and has only a half-basement. Compact use of space without crowding and open planning in the living-dining area are especially noteworthy. Laundry drying must be done in the cellars since no outside clotheslines will be permitted. At present there are no garages, but they will be erected later if needed. A typical "town and country" unit with five five-bedroom apartments and one six-bedroom is shown far left. The photograph below shows unfinished houses now under construction.



Park Forest financing is biggest rental deal ever processed by the Federal Housing Administration

"We were fortunate," says Nathan Manilow, "in that the Chicago office of FHA is one of the few in the country with the vision to recommend a \$30 million job like this."

American Community Builders began negotiations with FHA in the fall of 1946. Final approval of their housing scheme came through in September, 1947, one year and countless revisions later. According to E. J. Kelly, director of the Chicago FHA, the project is the largest ever processed by the Federal Housing Administration where commitments were issued at one time and where construction will be progressive on contiguous sites. However, since FHA is not allowed to make mortgage commitments of more than \$5 million for a single job, the Park Forest project had to be broken into nine separately financed mortgage areas, each with its own corporation. The nine 4 per cent mortgages were then assumed by the New York Life Insurance Co., Northwestern Mutual and the Sun Life Assurance Co. of Canada (see financial breakdown, right).

These commitments are for the first 3,010 rental units only and cover but 315 acres of the 2,400-acre site. Although FHA Title VI, Section 608, allows loans up to \$1,800 per room, the mortgages on this project average only \$1,762, a total difference of \$590,000 between the possible mortgage commitment and the one granted. "As a speculation, we would have fought for that extra half million," says Klutznick. "We may still have to."

Progress payments on each of the mortgages is made monthly on the basis of work done during the past month. At the present time, ACB is making heavy requisitions on three of the mortgage areas where construction is far advanced. In other areas, where activity is limited to grading and installation of utilities, the monthly payments are much lower. The construction schedule is set up so that none of the three insurance companies is favored as to requisitions.

American Community Builders itself is a \$2 million corporation with all stock owned by its own members. In the giant building operation it handles three specific jobs: management of the entire project; general contracting (plus 25 per cent of actual construction); installation and operation of the water utility system. For corporate purposes, ten wholly-owned subsidiaries have been set up. First is the Park Forest Water Co. The other nine are the aforementioned FHA mortgage areas with which American Community Builders, as contractor and manager, deals on an individual basis.

ACB bookkeeping is handled by a special comptroller who rides herd on 2,500 accounts, most of them details in the relationship between ACB as general contractor and the nine Park Forest companies. Klutznick himself tries to get by on a minimum of statistics, using only the following controls: a daily progress

chart, a monthly financial statement, a monthly requisition report and semi-weekly personal spot checks. "Statistics in housing are good for historical purposes," he comments. "But perfect cost accounting on this job could increase rents \$1 per month."

The rent schedule as now set up is \$72 for three and one-half to four rooms; \$83.50-87.25 for five rooms, \$91-95 for six rooms. Average rental is \$85 and variations within each group are due to the location of apartment. Tenant selection is a complicated, form-filled process. ACB, shooting for its stable population, pays particular attention to the economic status of applicants, getting a Dun & Bradstreet report on each one before acceptance. Their incomes range from \$4,000 to \$12,000, with an average between \$4,500 and \$5,500.

AREA	NO. RENTAL UNITS	MORTGAGE	INSURANCE CO.	MONTHLY MTG. PAYMENTS
A	290	\$2,634,600	N. Y. Life	\$12,075.25
B	370	3,444,200	N. Y. Life	15,785.92
C	260	2,247,300	N. Y. Life	10,300.12
D	384	3,616,300	Sun Life	16,574.71
E	404	3,756,300	N. W. Mutual	17,216.37
F	220	1,810,900	Sun Life	8,299.96
G	190	1,653,000	N. W. Mutual	7,576.25
H	502	4,498,500	N. Y. Life	20,618.12
J	390	3,551,200	N. W. Mutual	16,276.33
	3,010	\$27,212,300		\$124,723.03

At present the economic base of the project is in Chicago, and Park Forest aims to be no more than a commuters' town. However, when the 475 acres reserved for industry are developed, a substantial number of citizens will be earning their money at home. Besides stabilizing the community, this will also establish a sounder tax base.

Current tax estimates are \$9 a month per rental unit, a figure which includes county, real estate, school district and sanitary district taxes. This is slightly lower than the prevailing Chicago rate. As the industrial district is developed, the tax situation will change, but tentative figures are unavailable since the industrial development itself is in a nebulous stage of planning. Another angle bearing on taxation is the form of government which the new city will eventually adopt. If Park Forest is incorporated before it has a population of 5,000 it can hire a city manager. After the 5,000 mark it is allowed the choice between a commission or mayor-council form of municipal leadership. Spokesmen for American Community Builders aren't saying which is the favored system. But city managers are notoriously efficient. And it is of special concern to ACB to keep taxes down since they will be directly reflected in rents.

Klutznick sums up the present situation as a stop-gap solution. "Too small a population

is not a good tax basis. If we stopped at 3,000 rental units, we might have a problem. Valuation against which taxes are levied would be too low to produce the revenue for proper operation of the type of town we envisage." He feels, however, that in planning roads, sewers, street lights and other utilities to avoid costly maintenance, they have sidestepped the worst snags and adds that "the commercial area, industry and house sales will completely correct the situation."

Here, of course, are the seeds of possible trouble. An industrial bust within the next year would put a crimp on plans for Park Forest's industrial development. Tightening of mortgage money could slow up the house-selling operation on the project. One good augury is that, although the rest of the country has passed the crest of industrial building,

Chicago (for no accountable reason) is still in the midst of full-scale industrial expansion with emphasis on decentralized locations—a set-up for ACB. Klutznick himself brushes the words of the fearful aside:

"What we are trying to do is prove that the ceiling for private enterprise in housing and community planning can be raised. If we don't succeed, we've still made an important contribution. We can do our planning in the future from that point of view. And if we come through, we will be repaid in the long term for our efforts. Fail completely we can't. We've passed that stage."

CONSTRUCTION OUTLINE: Foundation—paved concrete. Exterior walls—wood frame veneered with brick, stone, wood or U. S. Gypsum Co. asbestos shingles. Floors—oak. Ceiling—plaster. ROOF—asphalt shingles. INSULATION—rock-wool. SHEET METAL WORK: Ducts—aluminum. Remainder—galvanized iron. WINDOWS: Sash—steel casement, Fenestra, Detroit Steel Products Co. Glass—double strength quality A. STAIRS: Treads—oak. Risers and stringers—pine. FINISH FLOORING: Kitchen—asphalt tile. Bathrooms—ceramic tile. KITCHEN EQUIPMENT: Refrigerator—Servel, Inc. PLUMBING: Soil pipes—cast iron. Vent pipes and branch lines—galvanized steel. HEATING—gas fired forced warm air system, Mor-Sun, Morrison Steel Products Co.



Lionel Freedman: Pictorial Services

A Lakeside House is neatly fitted to a deceptively rural site within commuting distance of Manhattan

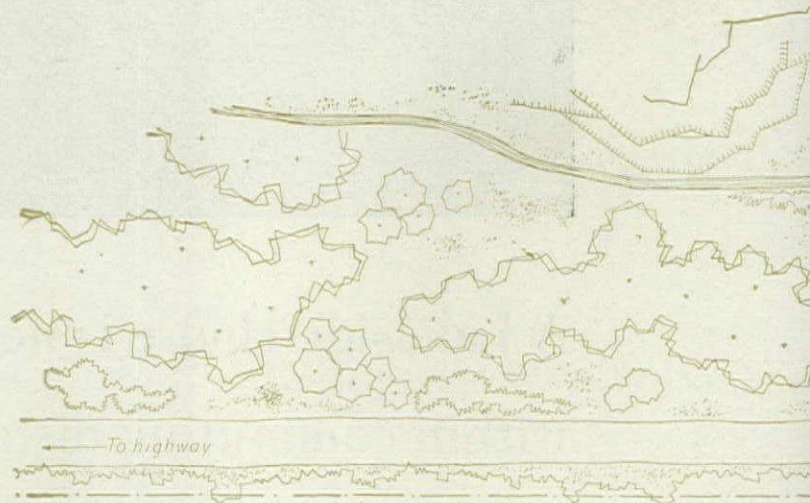
EDGAR A. TAFEL, Designer

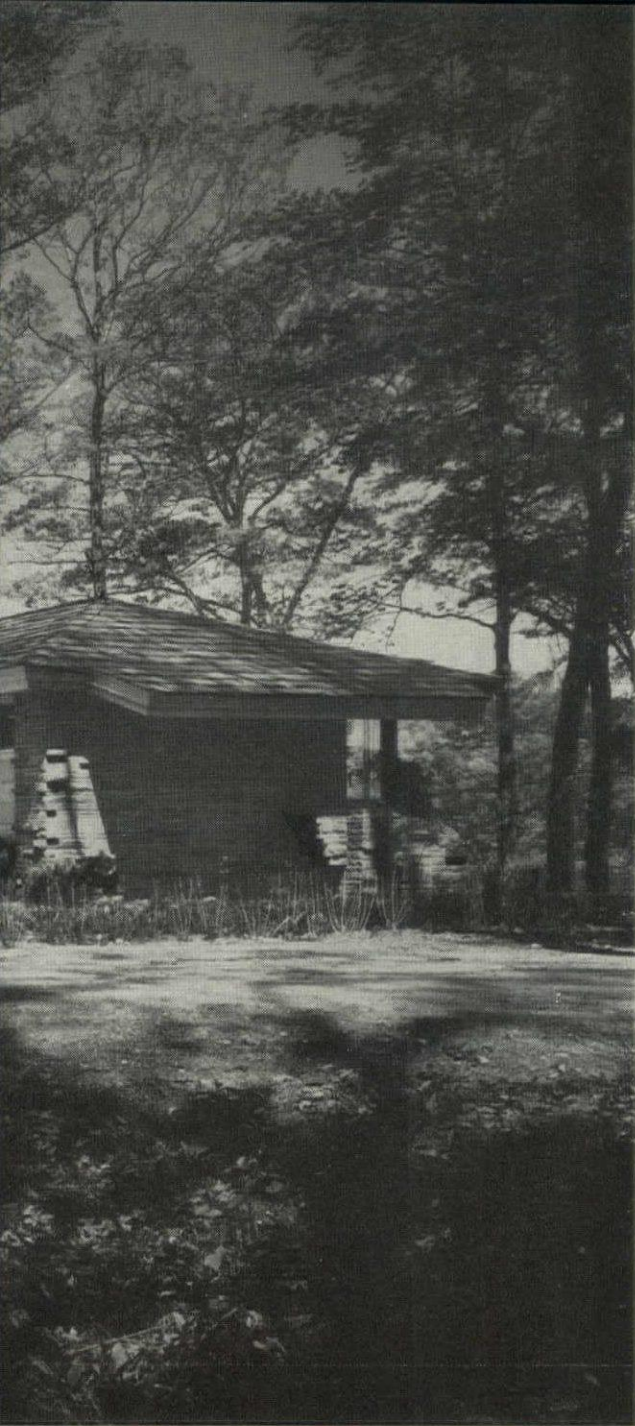
A. MILANO & SONS, Builders



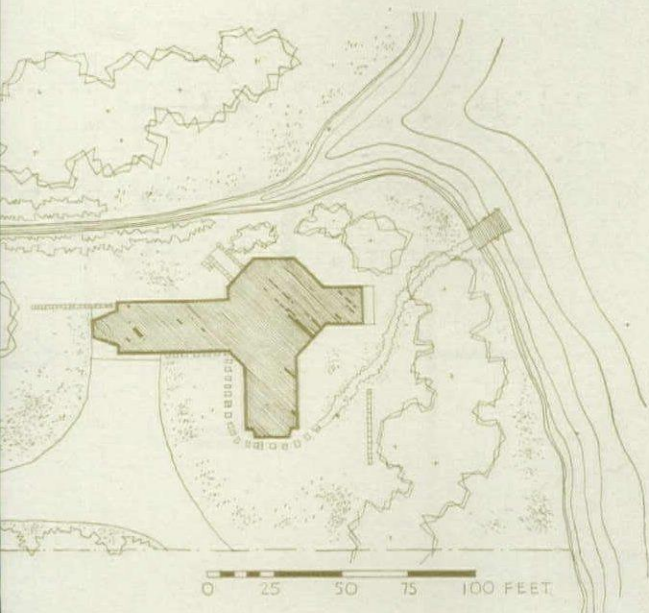
THE LONG LINES OF THE ENTRANCE FRONT OF THIS SIX ROOM HOUSE ILLUSTRATE DESIGNER'S THEORY OF GROUND-HUGGING COMPOSITION

This house was designed by Edgar Tafel for his parents. He thus began with a distinct advantage: his clients were sympathetic. In addition, they placed no sharp cost limitations on the project. These factors gave the designer more leeway than is usual in residential work and he has used it to good advantage. Nine years a student of Frank Lloyd Wright, Mr. Tafel has put some of his favorite theories to work. One of them is that a really successful design, above and beyond the demands of good plan and structure, must meet other and more subtle requirements as well. Thus, "to tie the house to the ground" he has employed great dipping eaves at either end: they have no other function—one protects a woodshed, the other a blank stone wall. The chimney mass at the intersection of the wings is much larger than required by fireplace and heater room flues. Its function is to serve as the focal point for the mass of the house when viewed from any point. He was fortunate in the site—a high wooded lot overlooking a small lake whose air of rusticity belies the fact that it is in Westchester County, within easy commuting distance of Manhattan. This air he has rather successfully caught, both in the siting and mass of the house and in its colors and textures as well.





XTURES, COLORS OF MATERIALS ECHO THE SETTING



Photos: Lionel Freedman • Pictorial Services



FROM OPEN CARPORT, AS FROM ALL ROOMS, ONE HAS FINE VIEW OF LAKE

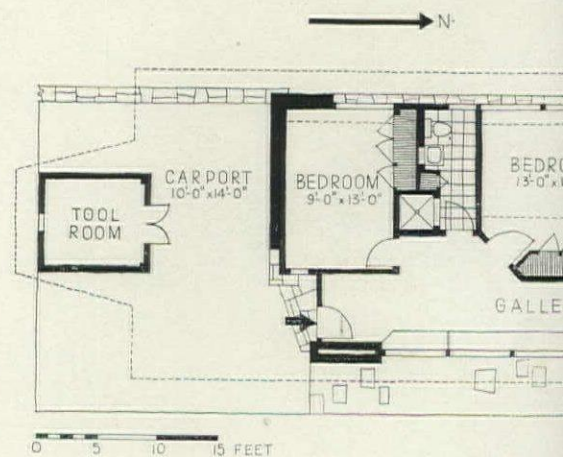
LIVING ROOM WING IS FRAMED TO CREATE A STRONG BRIDGE-LIKE EFFECT



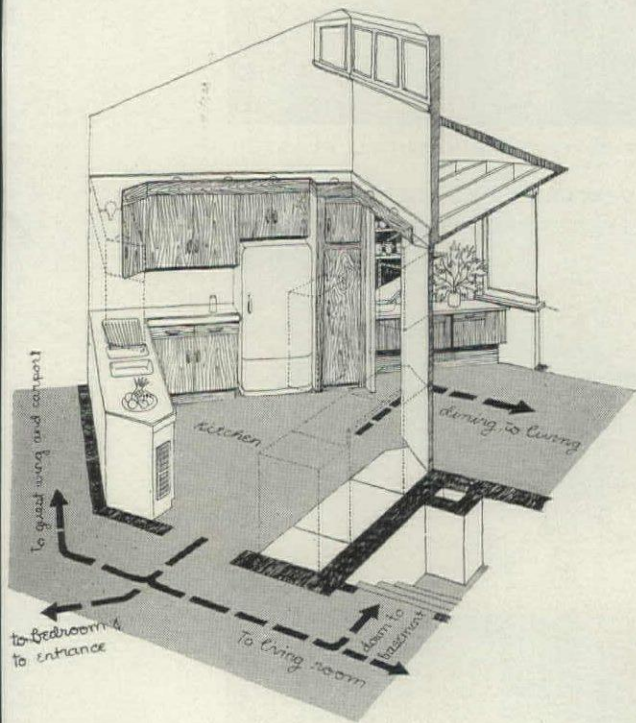


TRUNCATED HEXAGON OF LIVING ROOM GETS FORM AND COHERENCE FROM CYPRESS CEILING WHICH FOLLOWS LINE OF HIPPED ROOF

The organization of the Tafel plan was largely determined by the site. Its major asset—a fine view of a little, wood-locked lake—had the drawback of being toward the north, while the topography dictated that the main mass of the house run north and south. Within these limitations, the designer has maneuvered successfully. A six-sided living room, located at the intersection of the two wings, exploits the view and all exposures but south and southeast. Together with the dining area and clerestory-lighted kitchen, this hub of the house becomes a many-faceted area, well-lit and well ventilated. The rest of the house corresponds pretty closely to the owners' modest requirements—a minimum amount of housework for a middle-aged couple, both of them in business; two bedrooms for the married sons when they come to visit; a large screened porch overlooking the lake. Mrs. Tafel especially likes the interior kitchen: "It is a warm, beautiful room," she says, "The linoleum that looks so dark in the photographs is a lovely, deep red. Together with the warm (cypress) woodwork and the sunlight streaming through the high windows, it is a wonderful place to work. And at night the moonlight pours in—the effect is beautiful." Mr. Tafel also likes his son's handiwork, especially the writing nook off the entry (bottom, facing page).

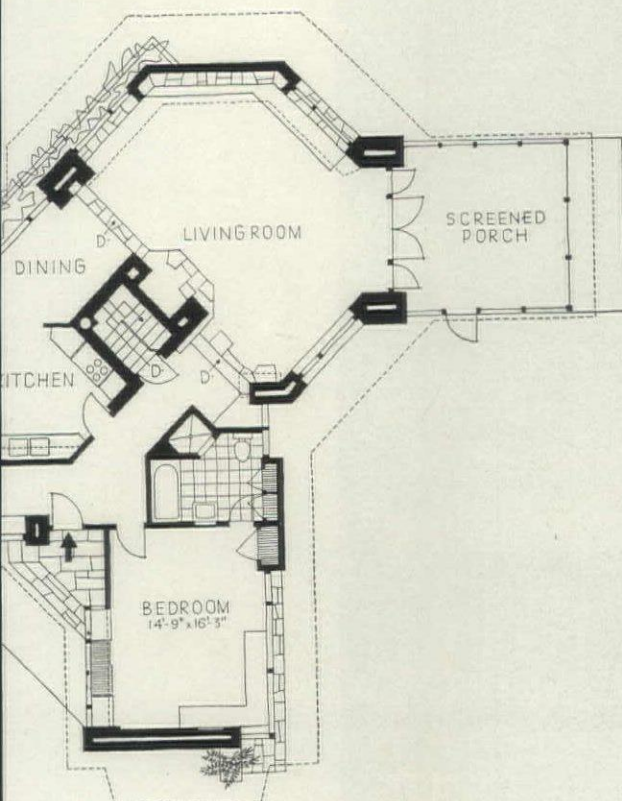


Photos: Lionel Freedman: Pictorial Services



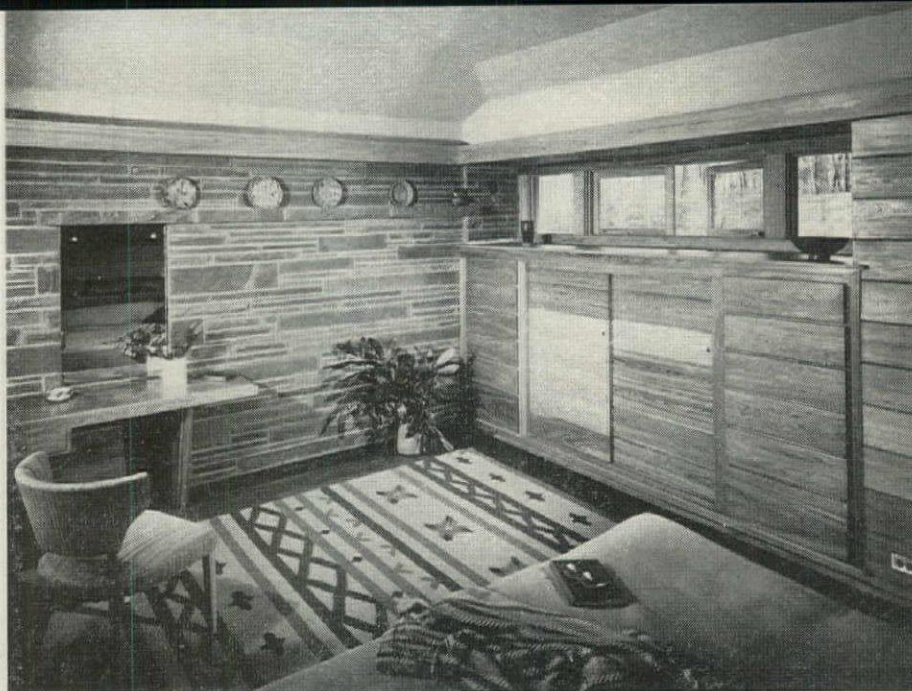
DINING BAY OPENS OFF LIVING ROOM AND INTO CLERESTORY-LIGHTED KITCHEN

WRITING NOOK OFF LIVING ROOM ENTRY HAS DESK, TELEPHONE, NORTH LIGHT

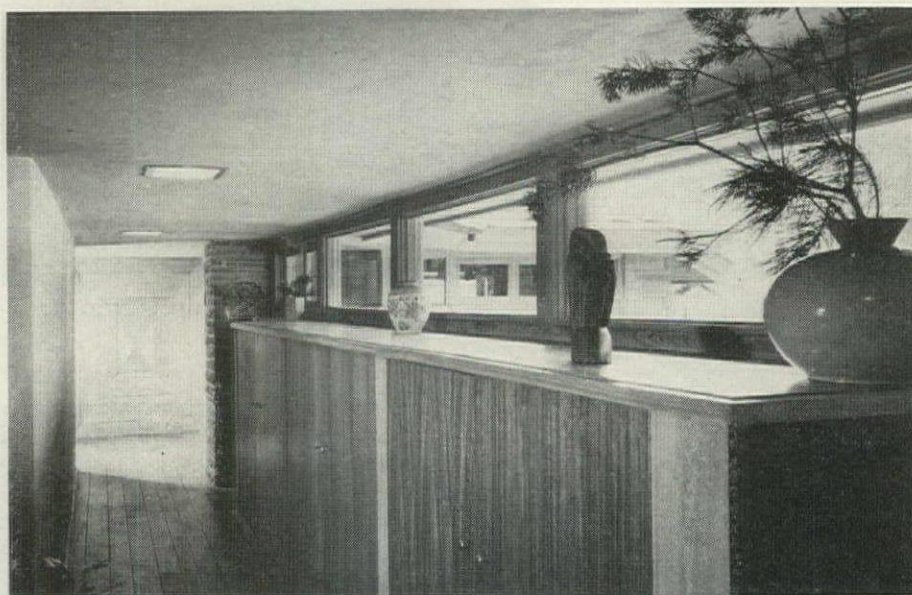


TAFEL RESIDENCE

CONSTRUCTION OUTLINE: Foundation—concrete block. Exterior walls—stone, cypress; inside—cypress, stone, plaster. Ceiling finish—cypress paneling and plaster. **ROOFING**—cedar shingles. **INSULATION**—rockwool, U. S. Gypsum Co. **FIREPLACE:** Damper—H. W. Covert Co. **SHEET METAL WORK:** Flashing—16 gauge copper. **WINDOWS:** Sash—cypress, casement. Weatherstripping—Chamberlin Co. of America. Glass—Libbey-Owens-Ford Glass Co. **FLOOR COVERINGS:** Main rooms—oak plank, Coughlin & Berk. Bathrooms—ceramic tile, U. S. Quarry Tile Co. **WALL COVERINGS:** Living room—stone and plaster. Bedrooms and halls—wood and plaster. Kitchen—linoleum, Armstrong Cork Co. Bathrooms—ceramic tile and plaster. **DOORS**—Roddis Lumber & Veneer Co. **HARDWARE**—Schlage Lock Co. and Homer Bronson. **ELECTRICAL FIXTURES**—General Lighting Co. **KITCHEN EQUIPMENT:** Refrigerator—Frigidaire Div., General Motors Corp. **LAUNDRY EQUIPMENT:** Washing machine—Bendix Home Appliances, Inc. **BATHROOM EQUIPMENT**—American Radiator-Standard Sanitary Corp. **HEATING**—warm air system, Holland Furnace Co. Thermostat—Penn Regulator Co. Water heater—General Electric Co.



BEDROOM WALLS ARE STONE AND CYPRESS, CEILING NATURAL PLASTER
MATCHED WOOD PANEL TERMINATES CUPBOARD-LINED BEDROOM HALL



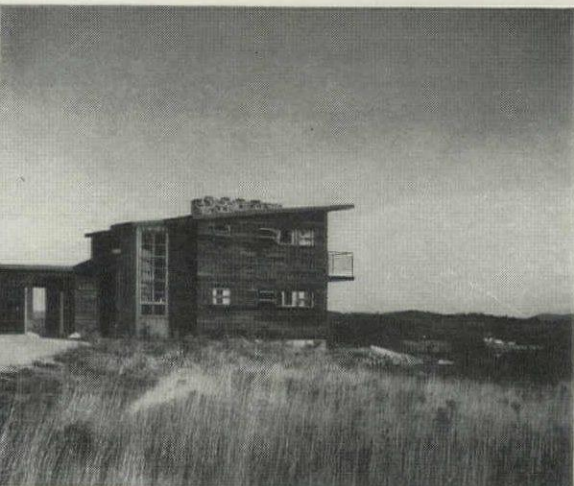
LARGE SCREENED PORCH OFF LIVING ROOM (RIGHT) OVERLOOKS THE LAKE, COMMANDS VIEW AND BREEZE



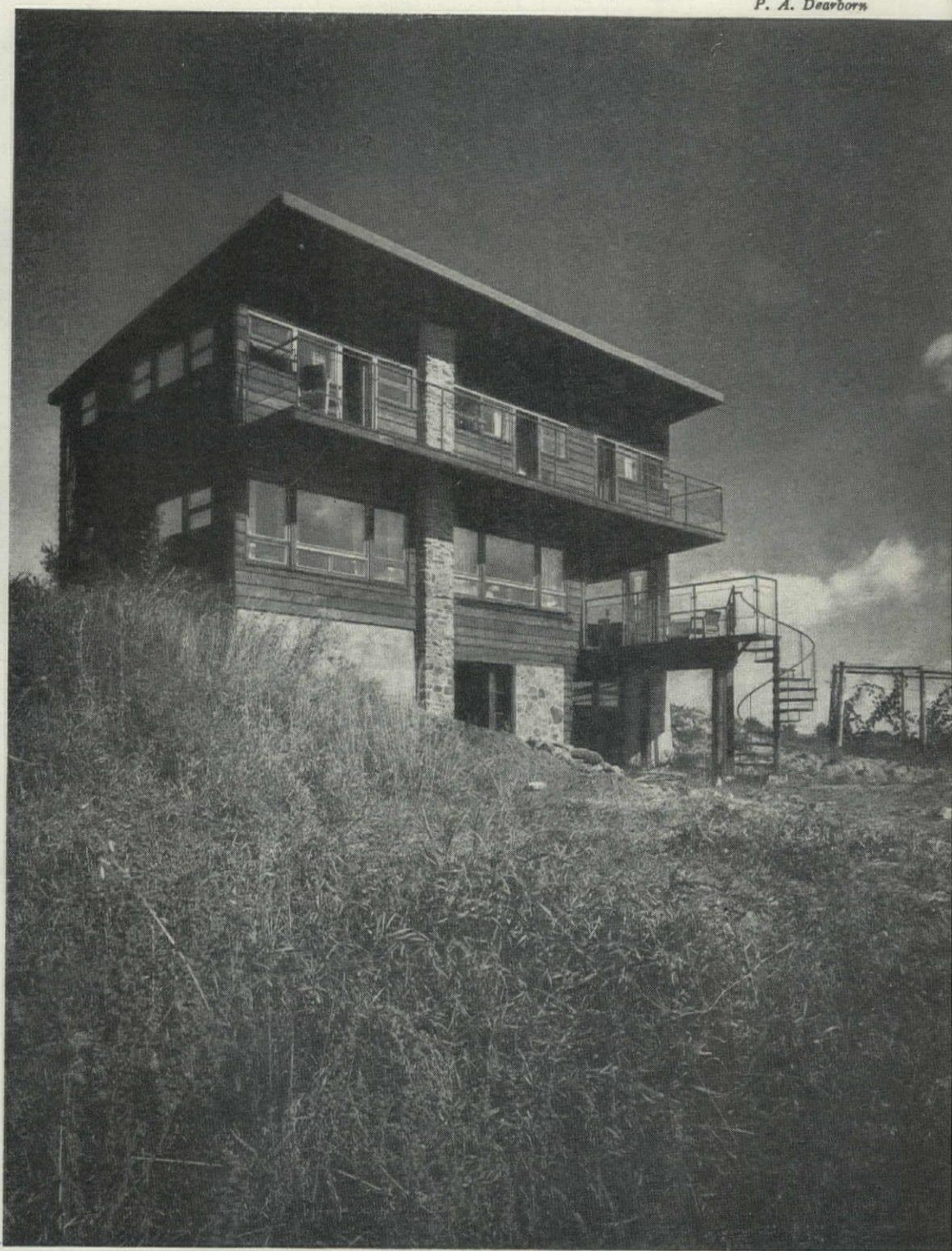
A vertical house built at the top of a sloping Maine meadow

LOCATION: BANGOR, ME.
EATON W. TARBELL & ASSOCIATES, Architects
T. W. CUNNINGHAM, Inc., Contractor
HAROLD L. TANDY, Owner

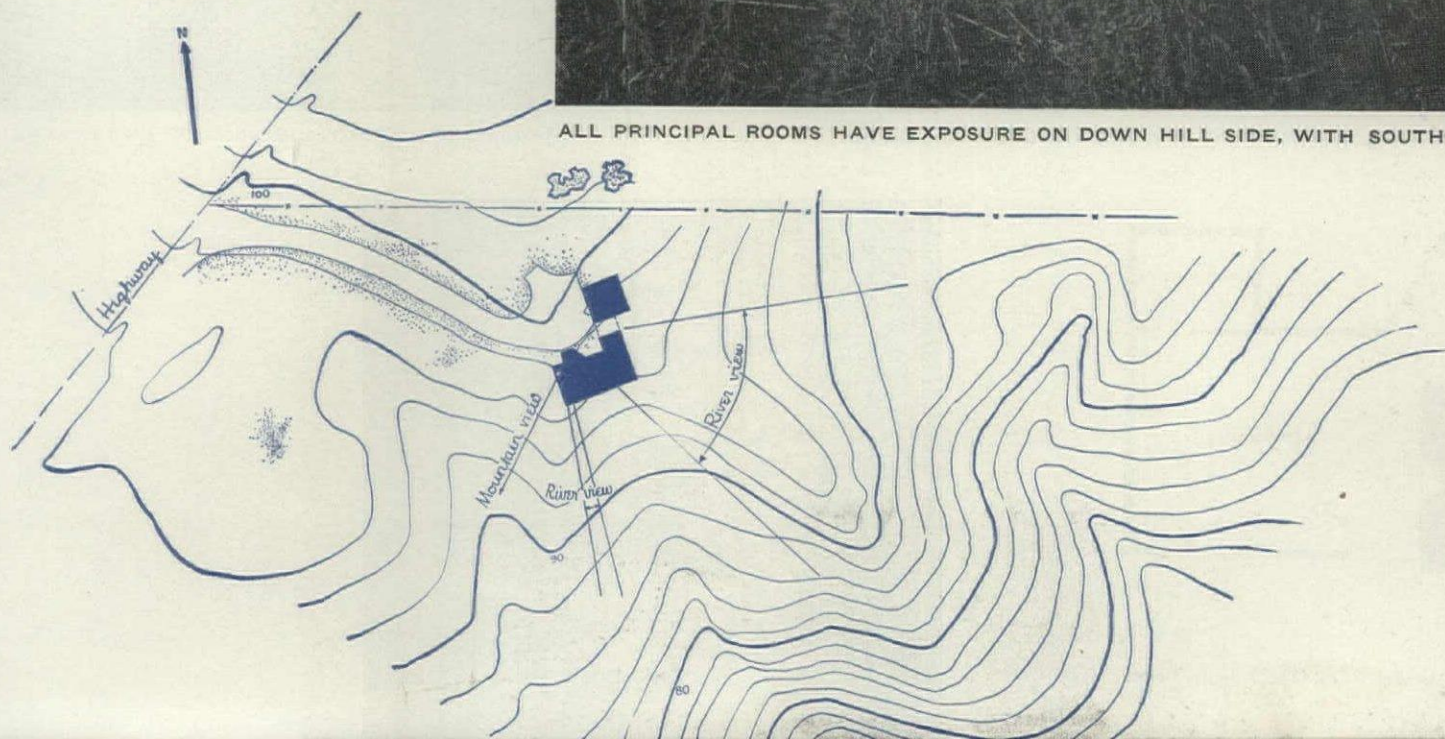
P. A. Dearborn

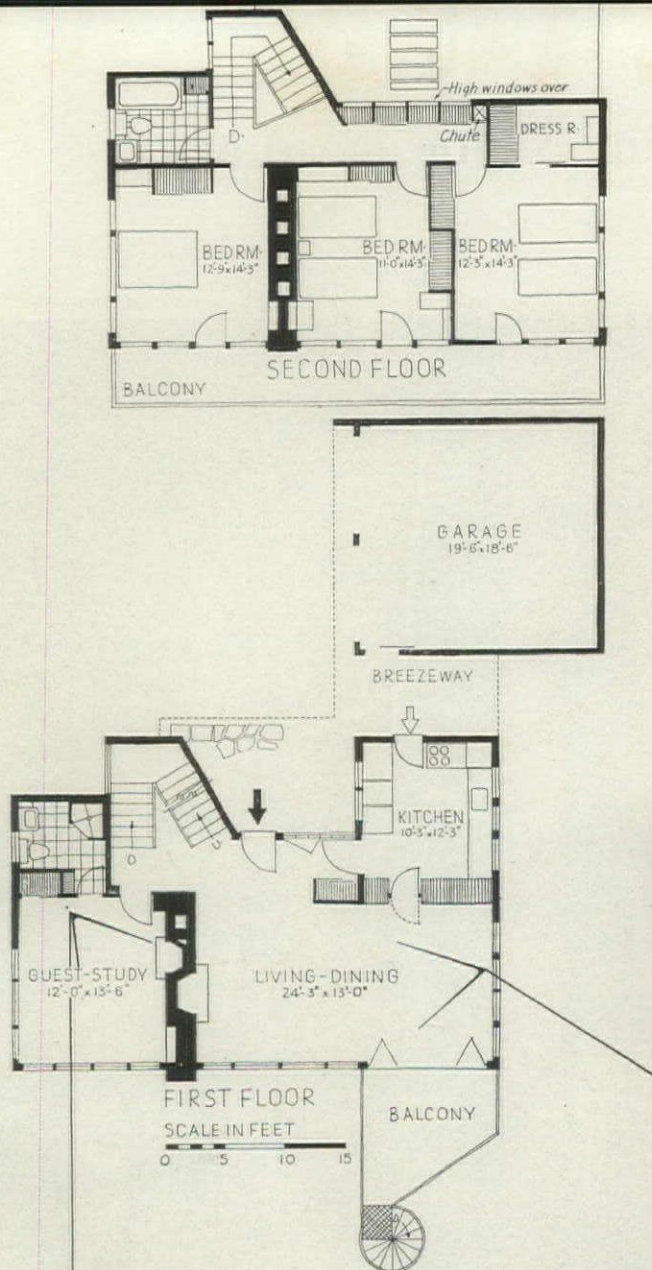


SITE IS 20 ACRES ON THE SIDE OF A LONG HILL



ALL PRINCIPAL ROOMS HAVE EXPOSURE ON DOWN HILL SIDE, WITH SOUTH SUNSHINE





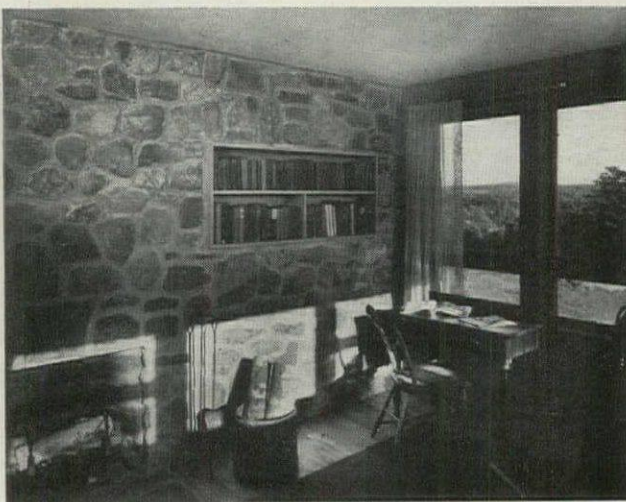
The owners of this house did not at first plan to build a modern home (see owners' excellent comment to right). But their site, a long open stretch on a hill above the Penobscot river in Maine, demanded it. They were determined to take advantage of the many exceptional possibilities and a Cape Cod cottage would have involved neglect of most of them.

View, orientation, and location on the plot were considered the most important factors. All rooms except the kitchen do enjoy the view to the south east, a vista down the river with wooded hills in the far background. The kitchen location allows the housewife or maid ample opportunity to see anyone approaching from the main road well ahead of his arrival at the house entrance.

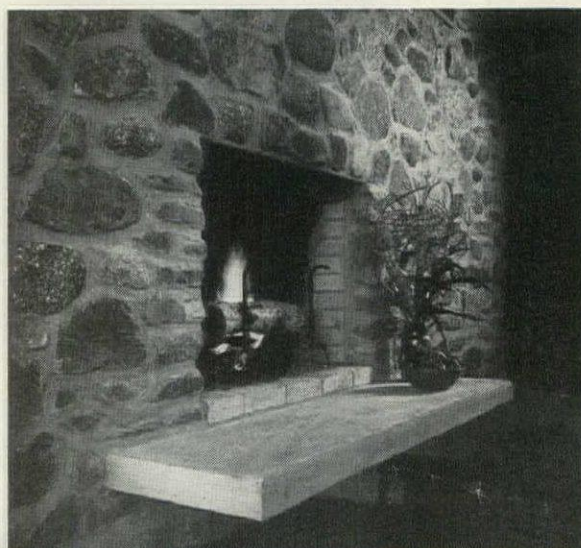
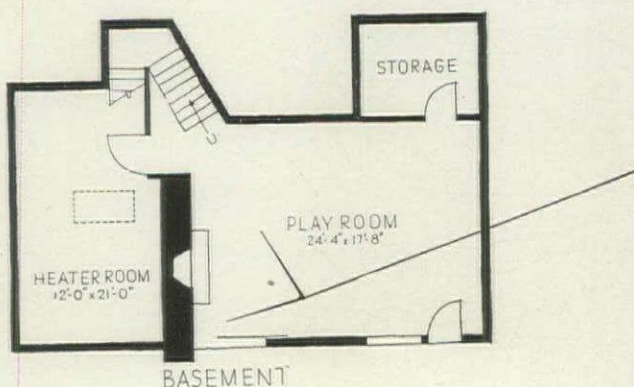
The spot chosen for the house shows good site planning; it is the edge of a break which permits opening the foundation level to the south, and angling the house to afford privacy from the highway.

Every area in the house gets sunshine, starting with the kitchen in the morning. Dining and living areas and bedrooms have winter sunshine all day, are shielded by overhangs in summer. In the plan cubage is hoarded and opportunities for expensive living are exploited.

P. A. Dearborn

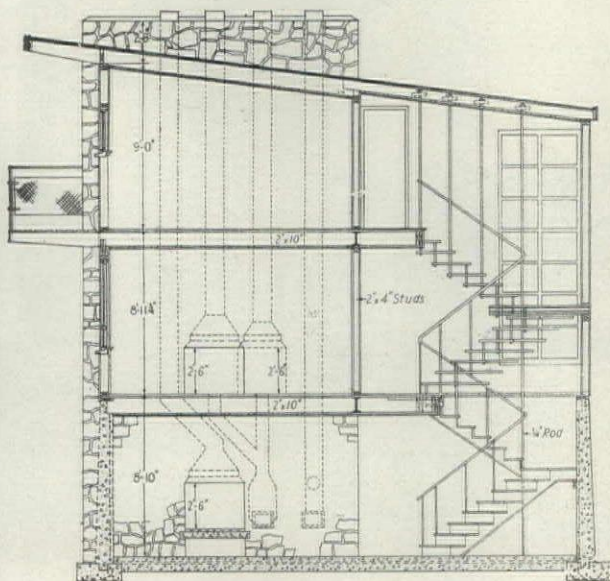


MASSIVE MASONRY CORE EXTENDS UPWARD THROUGH HOUSE, FOR FURNACE FLUE AND FIREPLACES IN STUDY, LIVING ROOM AND PLAYROOM

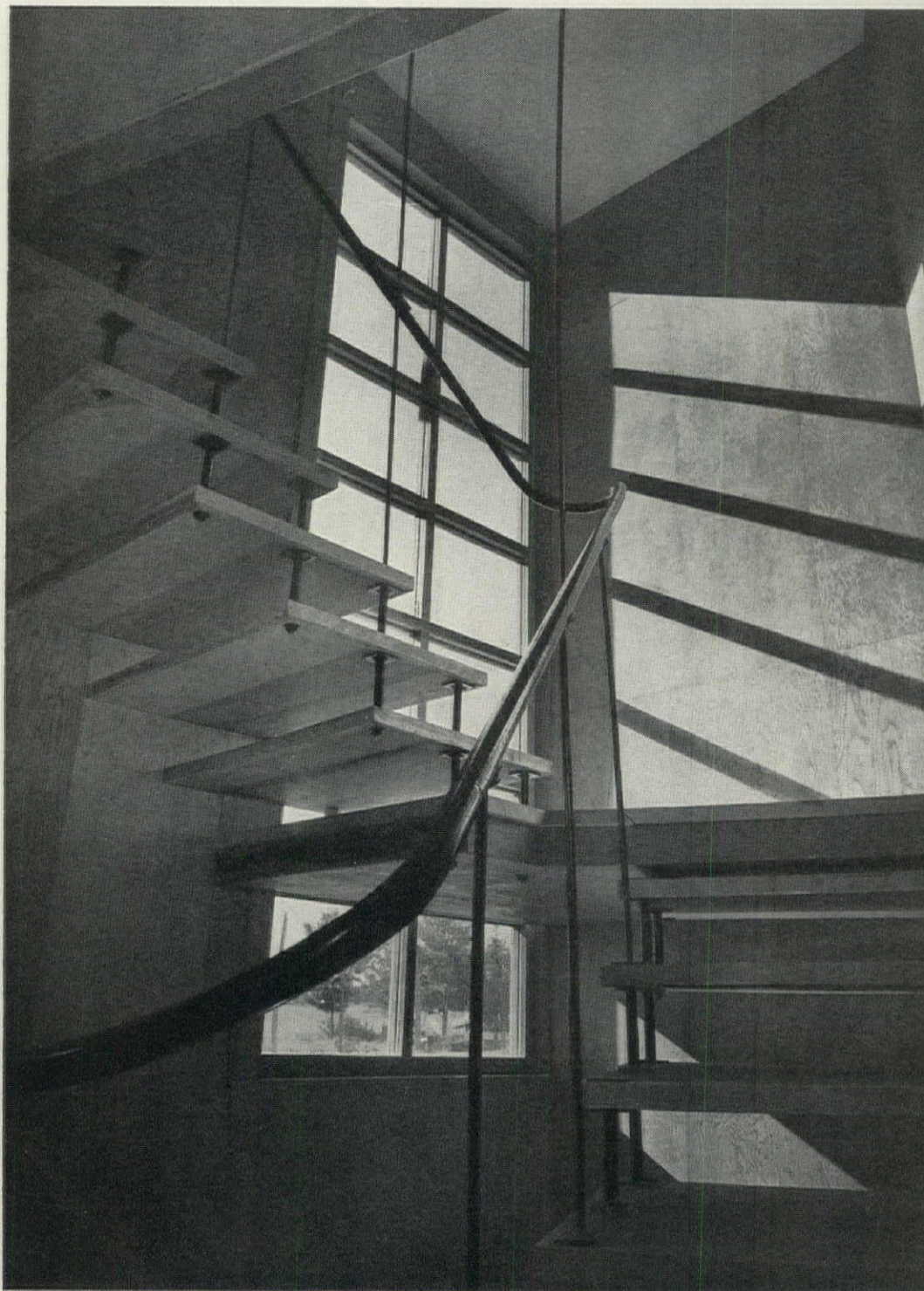


OWNER'S COMMENT: Since my wife and I are New Englanders, we at first visualized a neat Cape Cod house on one of our knolls, but after we had studied the views from various locations, considered the southern exposure, and remembered the plans of some of the modern houses, we began to be doubtful. The view seemed to demand many windows, shaded in summer but exposed to the sun in winter, such as we had read about, and we wanted the view from as many rooms as possible. The architects solved this problem of shading the windows on the first floor by placing a balcony over them. Each bedroom has a door opening on to this balcony, and the views from this higher point, our "hurricane deck," are even more awe-inspiring than from the first floor.

We have enjoyed the house thoroughly. For the first time in my life, I have watched the sunrise. Eating breakfast, looking out over the river, is a satisfying experience. While eating lunch one noon, five ships passed by on the river, and we hope to see the coast guard ice-breaker at work next spring. The views change constantly,—mist in the valley, trees coloring in the fall, and winter scenes. This last winter, the sun poured into our rooms and shut off the oil burner. The children have used the playroom for a Halloween party, square dancing, and a sing around the fireplace. Also, we have kept warm in spite of much below zero weather.

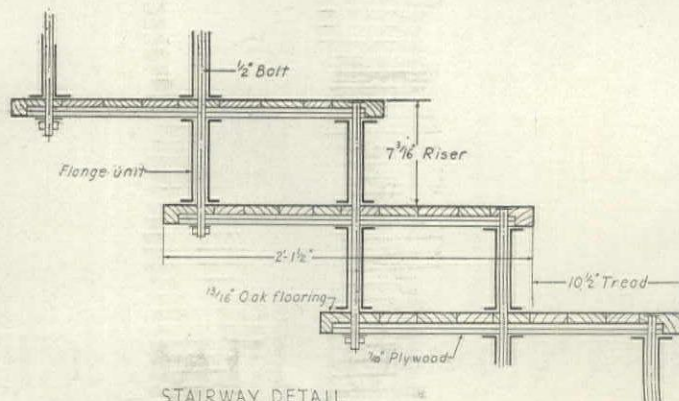


TRANSVERSE SECTION

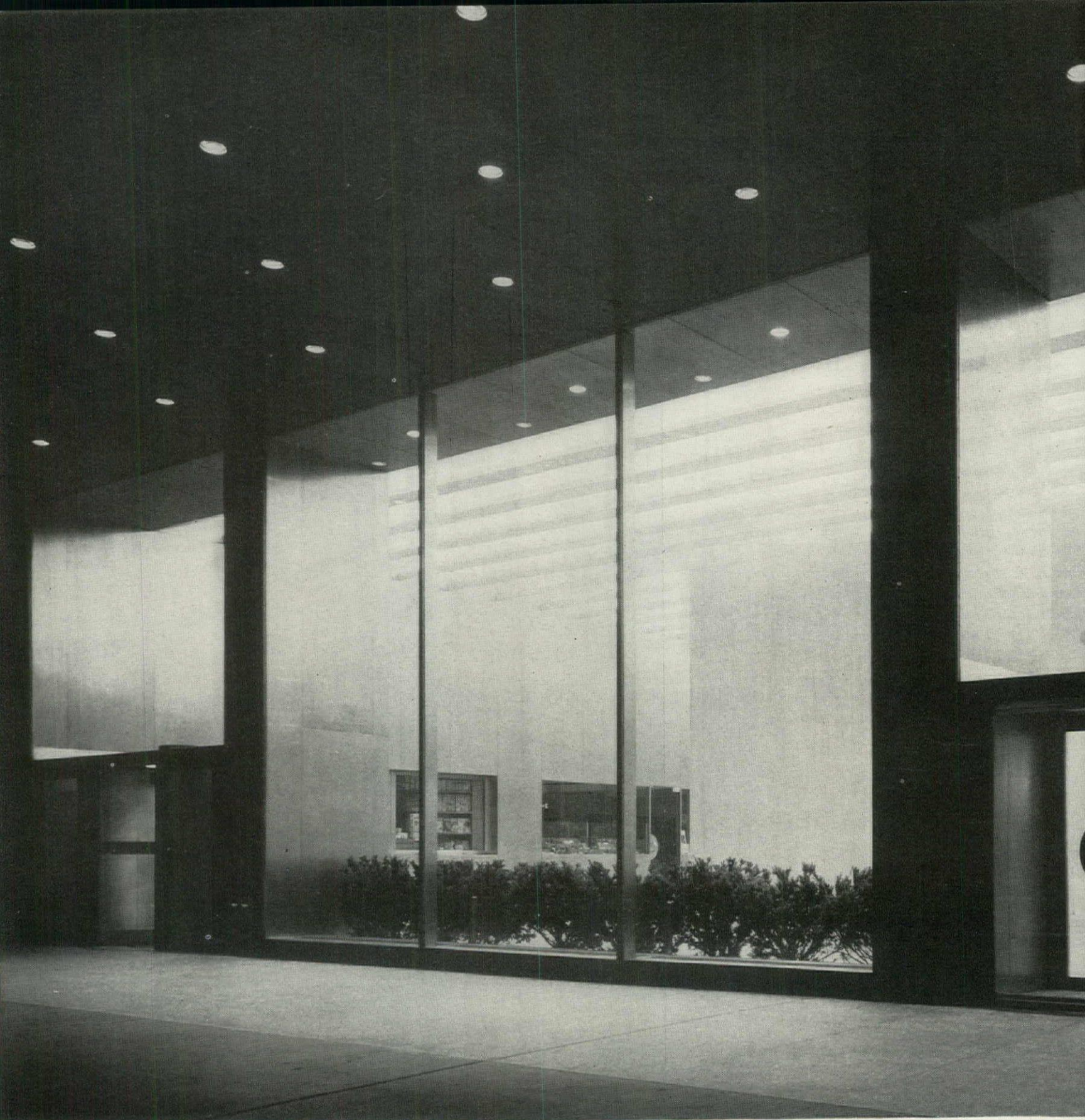


THREE FLOOR STAIRWAY OF PLANKS AND RODS IS DESIGNED TO BE OPEN, LIGHT

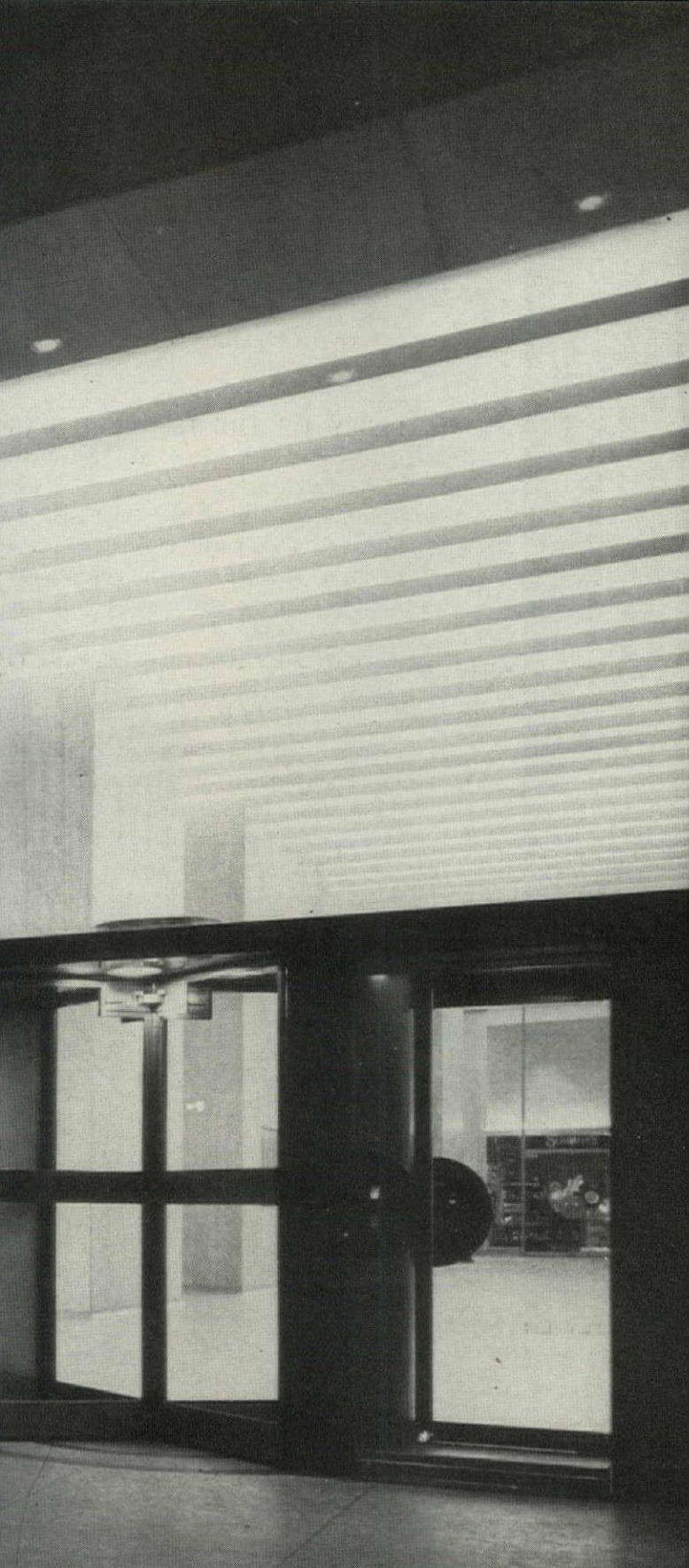
CONSTRUCTION OUTLINE: Waterproofing—Hydrocide, L. Sonneborn Sons, Inc. **STRUCTURE:** Exterior walls—cedar siding, pine sheathing, framing, and insulation; fir plywood or gypsum board interior, National Gypsum Co. **ROOF**—5 ply tar and gravel, The Barrett Co. **INSULATION**—Wood Conversion Co. **FLOOR COVERINGS:** Main rooms—birch. Kitchen and bathrooms—linoleum. **WALL COVERINGS:** Bathrooms—cement asbestos boards, Johns-Manville Corp. **PAINTS**—L. Sonneborn Sons, Inc. and O'Brien Corp. **GARAGE DOORS**—Crawford Door Co. **HARDWARE**—Lockwood Hardware Mfg. Co. **KITCHEN EQUIPMENT:** Range—Universal, Landers, Frary & Clark. Refrigerator—Westinghouse Electric Corp. **LAUNDRY EQUIPMENT:** Washing machine—Bendix Home Appliances Co., Inc. **BATHROOM EQUIPMENT**—Crane Co. **HEATING**—warm air, Petroleum Heat & Power Co. Water heater—Universal, Landers, Frary & Clark.



STAIRWAY DETAIL



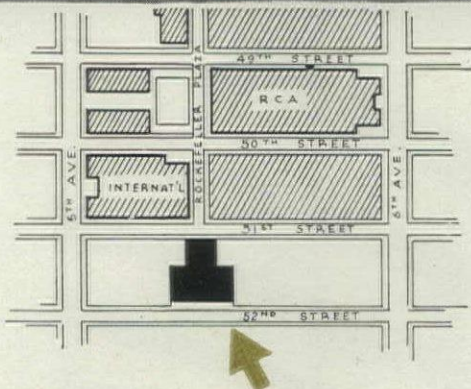
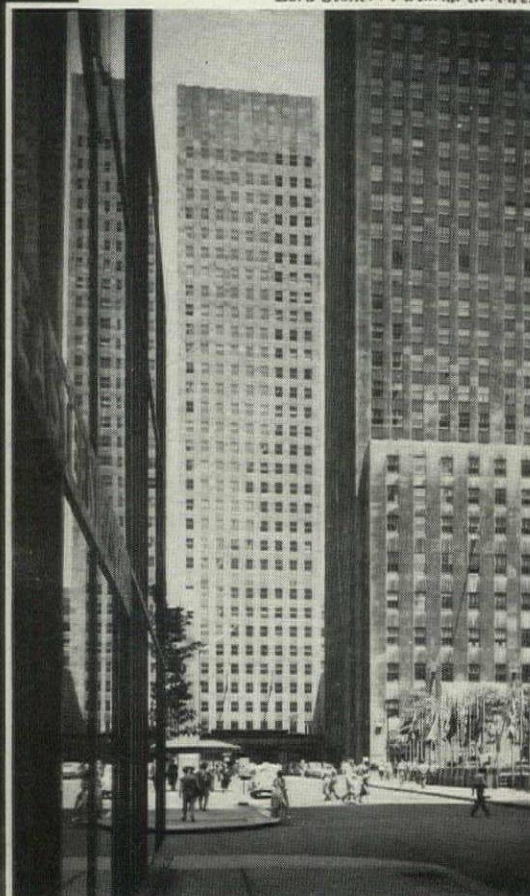
LOBBY AND TOURING CENTER in new Esso Building create



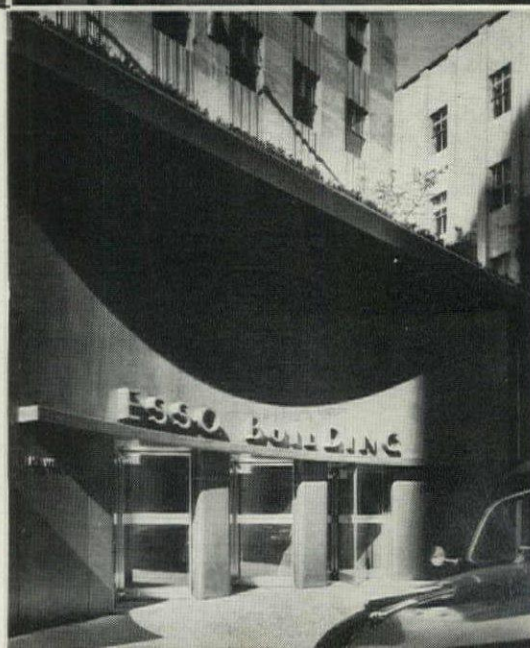
CARSON & LUNDIN, Architects
JOHN W. HARRIS ASSOCIATES, INC., Contractors

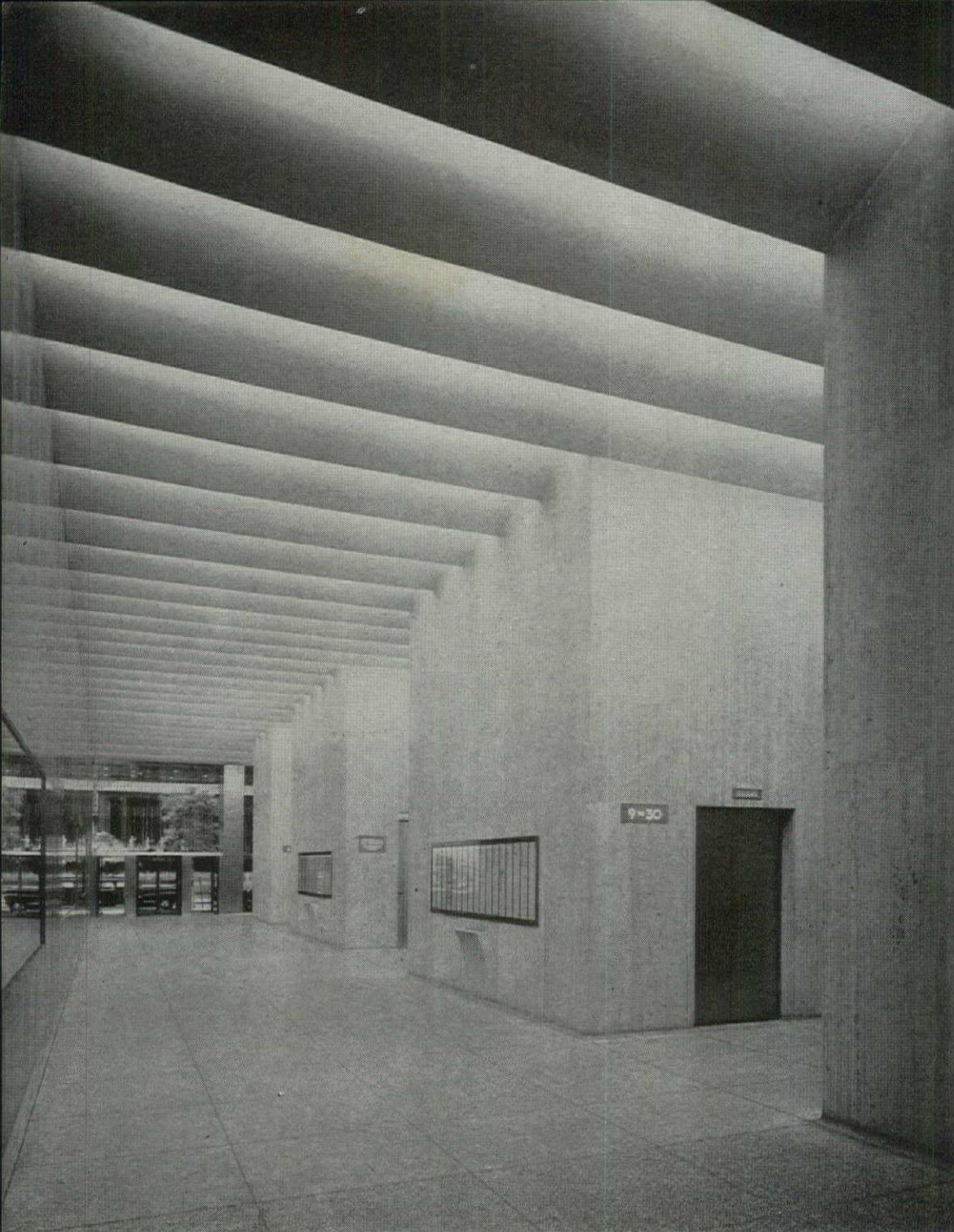
The private mid-block street which bisects Manhattan's Rockefeller Center from north to south is now stopped by the soaring, air conditioned monolith of the new Esso Building (see map, below). As a part of the center, the building has been designed in the same severe, limestone-cum-metal idiom. And though it sits astride a street which was originally scheduled to be pushed through to the Museum of Modern Art, two blocks to the north, it has a huge glass walled lobby which, in effect, is an extension of the street. Now that the building is complete, Esso has all of its formerly scattered offices gathered snugly under one roof. Off the lobby (left) is a lounge, designed to house (1) an information service for the building proper and (2) a travel bureau for motorists—a nationwide service of great importance as a good-will builder.

Esra Stoller: Pictorial Services



northern gateway to Rockefeller Center

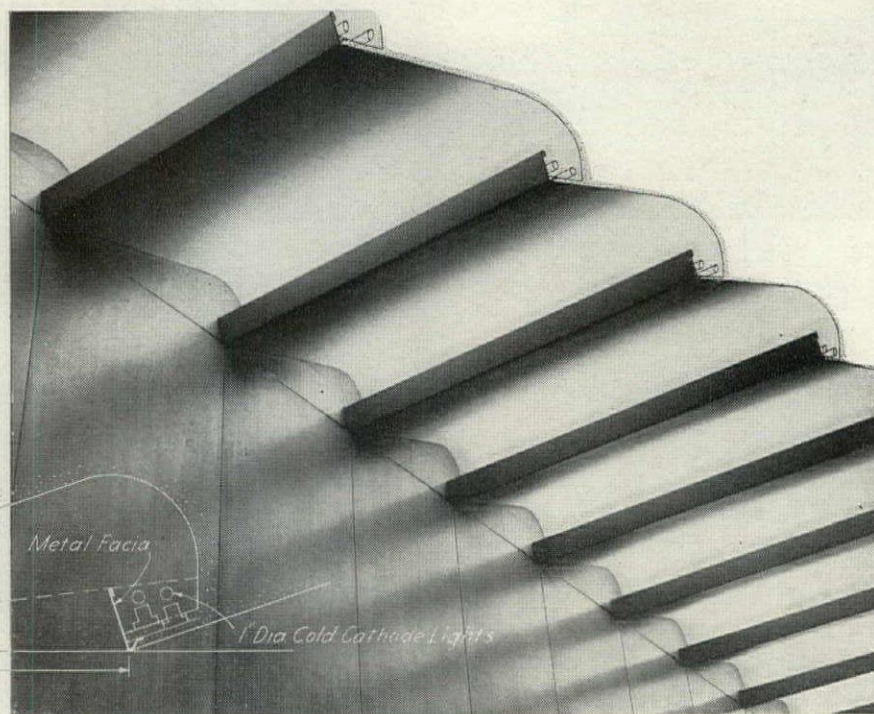
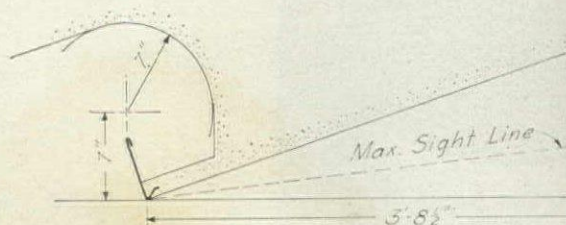




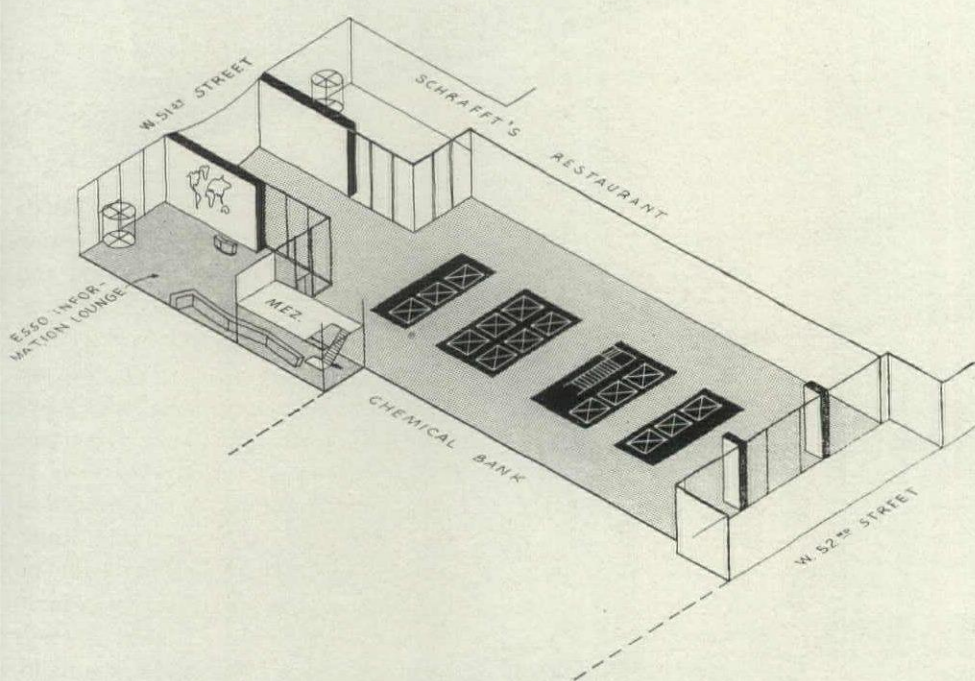
LOBBY OF THE ESSO BUILDING is designed to act as the extension of Rockefeller Plaza between 51st and 52nd Street. Hence the emphasis, especially on its north end, is toward a positive, straight-through appearance. Elevators are grouped in banks in a row down the center. The lobby flows past these on both sides, then narrows to channel traffic through a single bank of revolving doors in the center. Strategically located at this point is the information lounge—its glass walls inviting entrance from either lobby or street (see facing page). In design, the building's lobby is almost austere, easy to move through and easy to maintain. Main decorative feature—aside from marble-and-metal-sheathed walls—is the all-over lighted ceiling detailed below.

BUILDING LOBBY IS DIVIDED BY ELEVATOR BANKS, IS AUSTERE, DIRECT, BRIGHTLY LIT

CEILING CONSISTS OF CONTINUOUS LIGHT COVES OF ECCENTRIC PROFILE



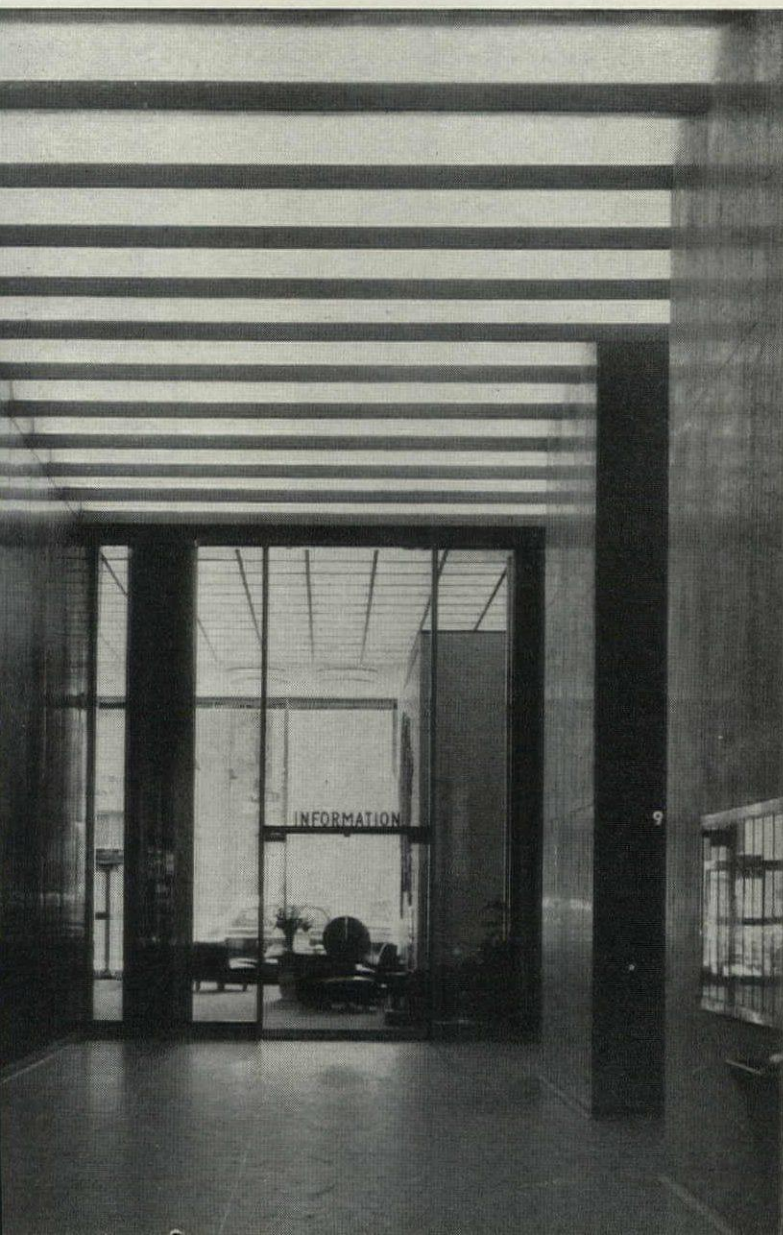
Skillfully designed and skillfully managed, the information lounge does a good job of public relations



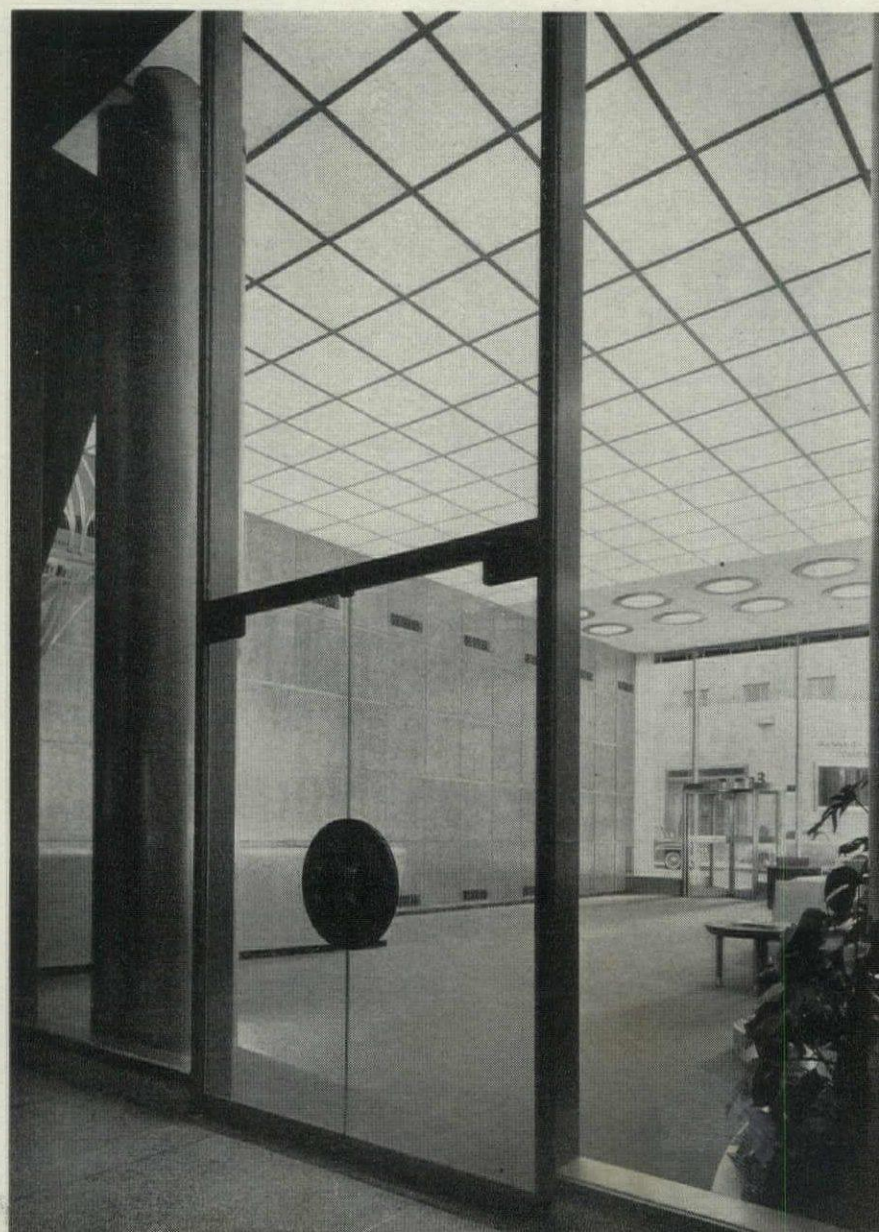
Two types of queries are handled at Esso's new information lounge—those from motorists wanting travel information and those relating to the oil industry in general or to the company proper (whereabouts of personnel, departments, etc.). Since tourists are more numerous in Rockefeller Center, the travel bureau occupies the largest portion of the space. Here the motorist can get up-to-date road maps of Mexico, U. S. A. and Canada; information on routes, accommodations, regulations in particular areas, etc. He can, if he wants it, get a routing for any trip, anywhere—one of the Bureau's services being information on the current status of every major highway on the continent.

In addition to the information service for the company, the lounge also serves as a reception center for visitors to the personnel. From here they are routed to reception rooms on various floors.

GLASS-WALLED INTERIOR CORNER OF LOUNGE OPENS OFF LOBBY



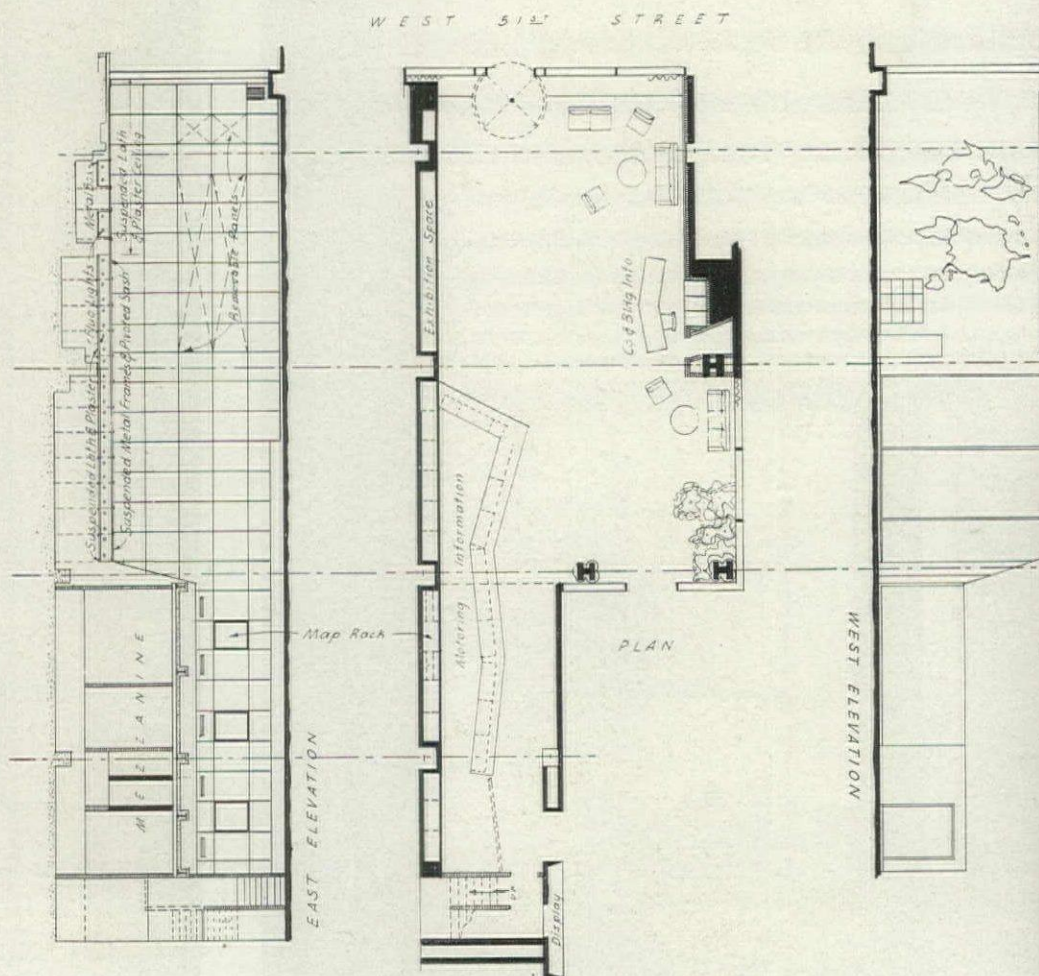
LOUNGE'S LUMINOUS CEILING IS EVENLY LIT BY COLD CATHODES





LOUNGE LOOKS OUT ON ONE OF MANHATTAN'S SLICKEST VISTAS—ROCKEFELLER PLAZA. MAP AT RIGHT IS IN BRONZE

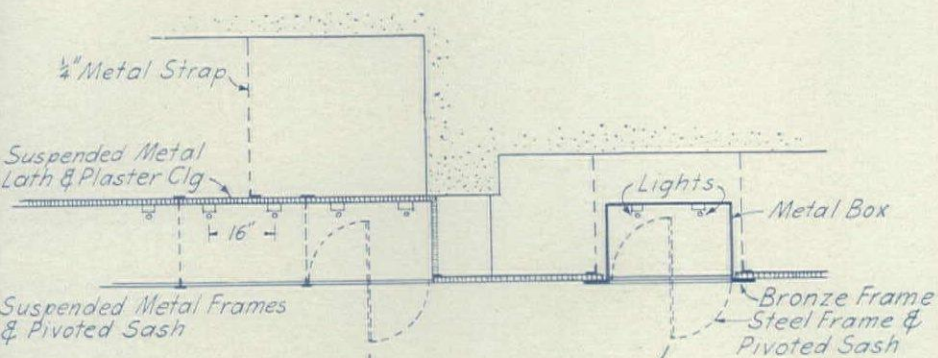
FINISHES AND EQUIPMENT: (Lounge):
 Insulation—Johns-Manville Corp. **WINDOWS:**
 Glass— $\frac{3}{8}$ in. plate, Pittsburgh Plate Glass Co. Bronze frames—General Bronze Co. **FLOOR COVERINGS:** Carpets—Bigelow-Sanford Carpet Co. **FURNISHINGS:** Rummel & James, Inc. Wood walls and counter—Jacob Froehlich Cabinet Works, Inc. **TRIM AND INTERIOR DOORS:** Atlantic Metal Products Co. and General Bronze Co. **EXTERIOR DOORS:** International Steel Co. **ELECTRICAL FIXTURES:** General Bronze Co., Gotham Lighting Co. and Cold Cathode Lighting Corp. **HARDWARE:** P. & F. Corbin. **(Lobby): ELEVATORS:** Westinghouse Electric Elevator Co. Cabs—W. S. Tyler Co. **WALL COVERINGS:** bronze, General Bronze Corp. and Roman travertine. Glass—Pittsburgh Plate Glass Co. **DOORS:** General Bronze Corp. and International Steel Co. **HARDWARE:** P. & F. Corbin and Oscar C. Rixson Co. **PAINTS:** Pratt & Lambert, Inc. **ELECTRICAL FIXTURES:** Cold Cathode Lighting Corp. **HEATING AND AIR CONDITIONING:** Buensod-Stacey Co.



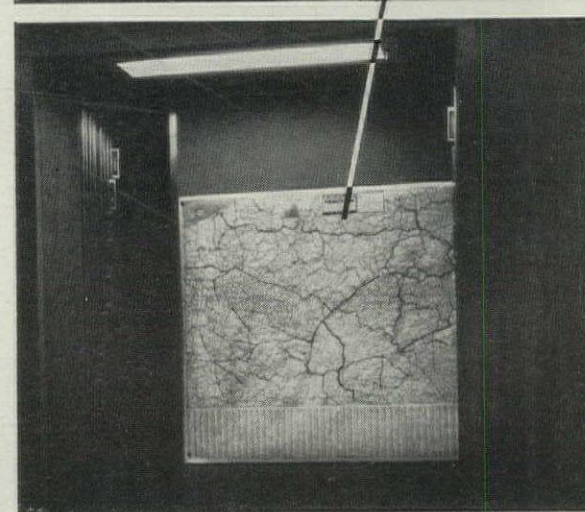
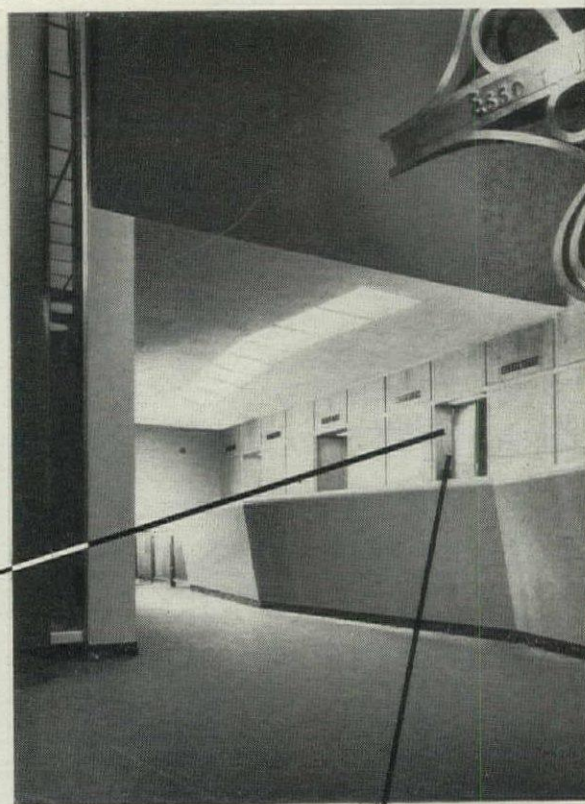
Esso's travel service handles the motorist's queries in a sedately efficient new lounge

For travel purposes, Esso divides the North American continent into about 25 sections and Esso's touring service has an accurate map for each of them. Many motorists only want a map and these are easy to store and distribute. But other motorists also want a routing—i.e., information on road conditions, advice on best routes, scenery, etc. And this requires not only an alert and well-informed staff but also continually updated information. In this installation, such information is recorded on files of reference maps neatly recessed in the panelled walls behind the counter. Each file contains a set of paired maps, mounted horizontally-sliding on metal frames. The left-hand set shows mileage and best standard routes between cities; the right-hand, current conditions along these routes. Each map frame has an index tab for easy recognition.

Other than a color scheme which uses wood and bronze as a foil for blue-green, beige, chartreuse and olive, the chief decorative feature is wall map, in bronze and perforated asbestos board.



BEHIND ZIG-ZAG COUNTER ARE BUILT-IN CASES WITH PAIRED MAPS SHOWING MAIN ROUTES AND UP-TO-DATE DATA ON ROAD CONDITIONS





CONTAINER CORPORATION
OF AMERICA



NO PARKING

CONTAINER PLANT

-finely composed masonry encloses an efficient factory

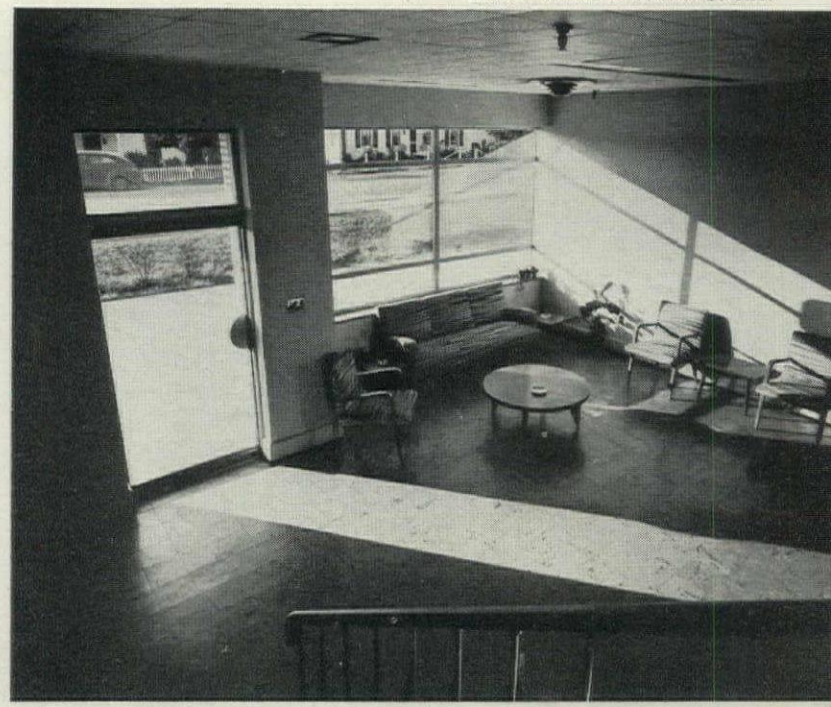
GREENSBORO, N. C., PLANT OF CONTAINER CORP. OF AMERICA
WALTER GROPIUS, Consultant Architect
THE BALLINGER CO., Architects-Engineers
H. L. COBLE CONSTRUCTION CO., General Contractors
CONTAINER CORP., Design Dept., Employees' Facilities

Inside and out, this factory bears the mark of the sure, confident designer. The physical demands were not dramatic—a structure was needed to house a carton-folding plant which uses large, but not sensationally large machines. Planning requirement was the facilitating of continuous production on one floor, with receiving and shipping sections, supplementary offices and service areas.

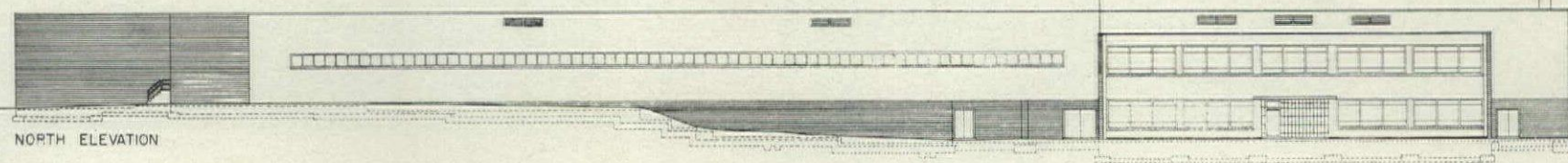
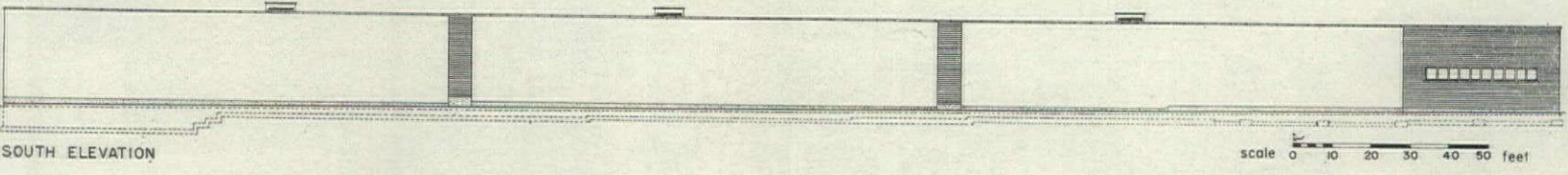
One of the distinguishing elements of the design is its refusal to overdramatize for architectural impact on the viewer, though it does succeed in standing as a compelling, pleasing structure. The architects worked scrupulously within the limits of form imposed by the industrial operation. The chief structural feature is use of 50 x 20 ft. bays in the manufacturing area. Most such factories, including others operated by the same corporation, have 20 x 20 ft. bays, which accommodate the machines but cramp their human overseers. The value of clear space surrounding the machines was realized fully in this building, and has pleased the operators of the plant.

The long brick planes of the exterior walls are interrupted and changed in color and texture calmly and deliberately, without change of essential material. Light buff brick masonry is weathered horizontally and flush vertically. In the dark portions all mortar is flush; result is an excellent textural contrast—the surface of the unfinished darker brick absorbs light and returns a soft image while the lighter colored brick planes throw uniform high lights back, emphasized by the long fine shadow lines of their deep horizontal joints.

Lionel Freedman: Pictorial Services

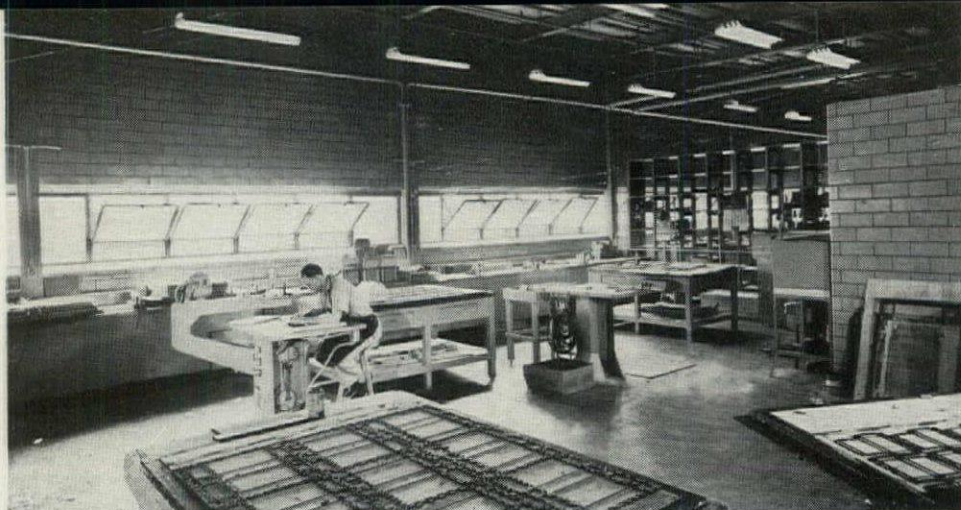
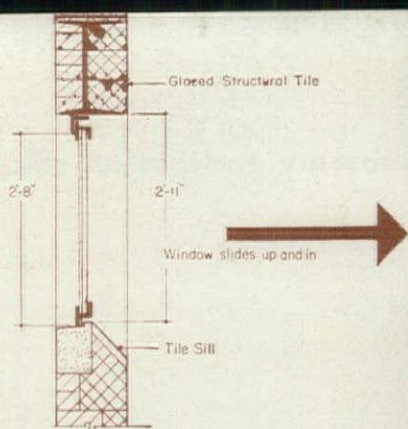


VIEW OF ENTRANCE AND LOBBY IN ADMINISTRATION WING



AIR CONDITIONED OFFICE WING IS ONLY SECTION WITH LARGE WINDOWS; REST ARE EYE LEVEL RIBBONS



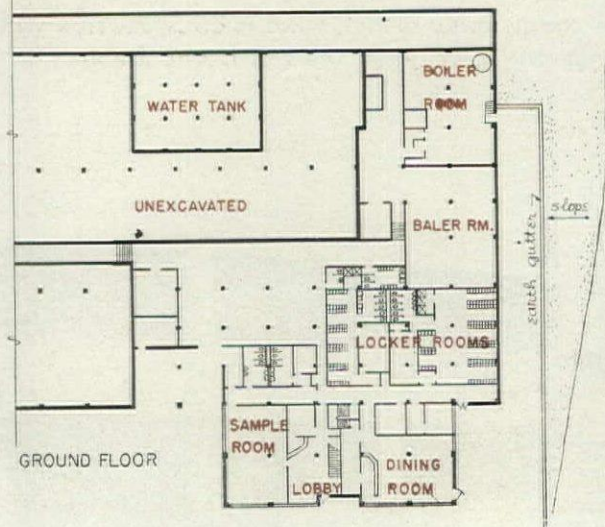
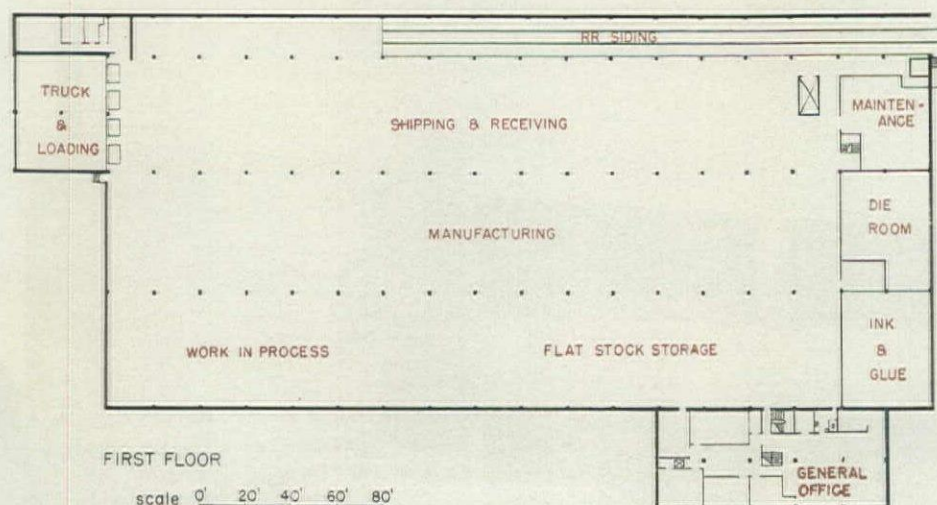


THE WORKING AREA HAS EYE LEVEL STRIP WINDOW TO AVOID CLAUSTROPHOBIA

VIEW OF MANUFACTURING AREA SHOWS SPACIOUSNESS ACHIEVED BY WIDE COLUMN SPACING; ILLUMINATION LEVEL IS 35 FT. CANDLES



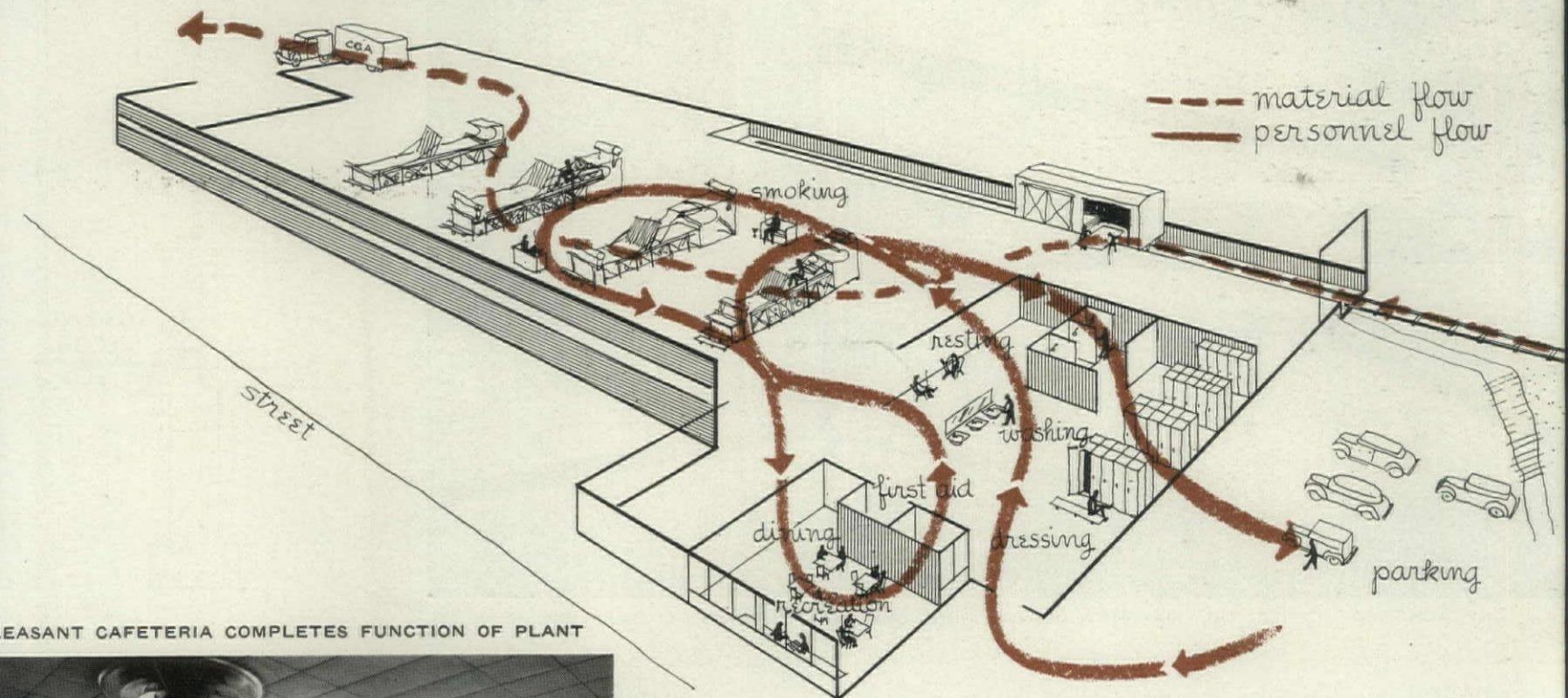
Hedrich Blessing Studio





LARGE WEST WINDOW OPENS SIDE OF AIR CONDITIONED EXECUTIVE OFFICE

MATERIAL FLOW is simple, direct. Railroad cars enter and are unloaded under cover; cartons are cut and formed; trucks, loaded in area also protected from weather, carry finished product away. Plant fits into economy of region, whose producers are packaging increasing amounts of tobacco and textiles.



PLEASANT CAFETERIA COMPLETES FUNCTION OF PLANT



Lionel Freedman: Pictorial Services

PERSONNEL FLOW. Lines show progress of factory employee through working day, from parking space to locker room, to machine station, to cafeteria, to rest room and smoking booth, back to locker room and to automobile. Windows for manufacturing area were considered in general a detriment in the hot southern climate—strip windows at eye level have function of curbing claustrophobia.

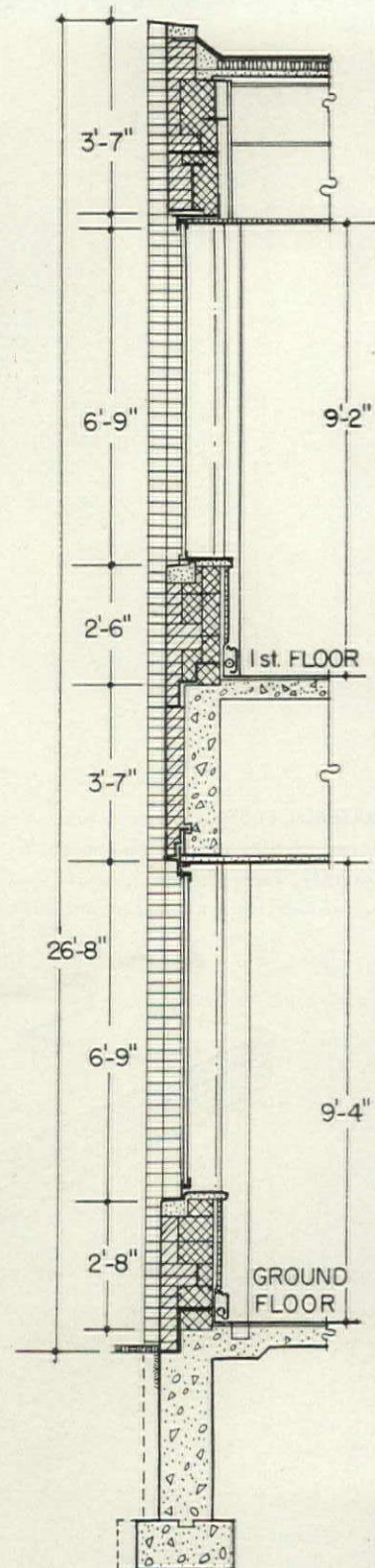
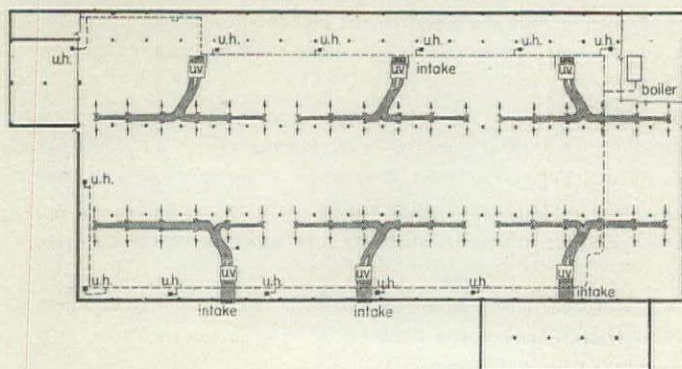
Colors of building are carefully worked out, as they are in all Container Corp. jobs (see Forum, February, 1948). Consultant Architect Gropius passed final approval on the color plan. Wanda Norstrom, of Container Corp., designed employee facilities. Office furniture was designed by Maria Bergson.

The plant was featured in an exhibit organized at the University of North Carolina by John Allcott, head of the Department of Architecture there. Allcott also suggested the flow sketch above.

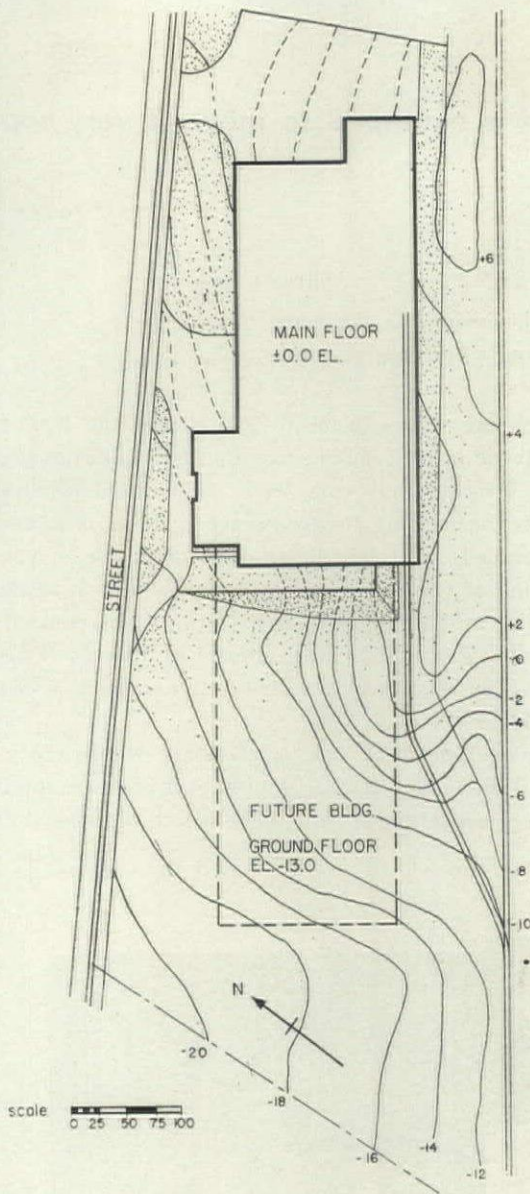


WEATHERED HORIZONTAL MASONRY JOINTS GIVE STRONG TEXTURE TO BUFF BRICK WORK

HEATING is accomplished in the factory area with unit heaters and a pre-heated ventilating system. This system filters, cleans and circulates air, overcoming the problem of paper-fiber dust. In the office section, corridors are heated with convectors, the rooms by baseboard radiation, with summer and winter air conditioning. Heating is automatic oil with winter and summer boilers.



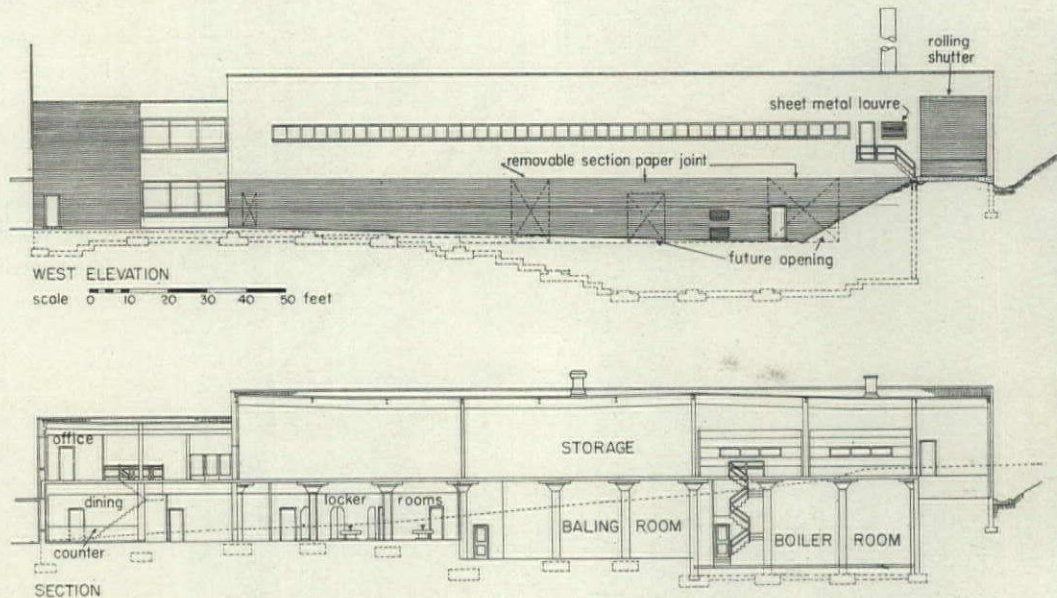
CONSTRUCTION OUTLINE: Foundations—reinforced concrete, Lehigh Portland Cement Co. Waterproofing—Anti-Hydro Waterproofing Co. **STRUCTURE:** Exterior walls—face brick, West Virginia Brick Co. over concrete or back-up tile. Interior walls—structural glazed tile, National Fireproofing Co., or back-up tile and plaster, U. S. Gypsum Co. Structural steel—Bethlehem Steel Co. Floors—reinforced concrete. Ceilings—Sanacoustic tile, Johns-Manville Corp. **ROOF**—precast roof slabs, Arnold Stone Co., Foamglas insulation, Pittsburgh-Corning Corp., 15 yr. bond finish, Philip Carey. **SHEET METAL WORK:** Flashing—copper. Roof drains—Josam Mfg. Co. **INSULATION**—Pittsburgh Corning Corp., Owens-Corning Fiberglas Corp. and Johns-Manville Corp. **WINDOWS:** Sash—steel, Hope Windows, Inc. Glass—Pittsburgh Plate Glass Co. **RAMPS AND ELEVATORS**—Monarch Elevator Co. **FURNISHINGS:** Cafeteria counter—Berryhill-Ward Co., natural birch with Formica top, Formica Insulation Co. Exterior doors—Herculite, Pittsburgh Plate Glass Co. Special doors—Kinnear Mfg. Co. **HARDWARE**—Schlage Lock Co. **ELECTRICAL INSTALLATION:** Wiring system and switches—Square D Co. Fixtures—Sylvania Electric Products Co. and Holophane Co. **PLUMBING FIXTURES**—Crane Co. Water pipes—bronze, Mueller Brass Co. **HEATING AND AIR CONDITIONING:** Heating—circulating warm air by steam heated coils. Air conditioning: Fan and filter—American Blower Co. Coil (heating and cooling)—John J. Nesbitt, Inc. Humidifier—Johnson Service Co. Compressors—Frick Co. Evaporative condenser, Carrier Corp.; Controls—Johnson Service Co. Boiler—Fitzgibbons Boiler Co. Oil burners—Petroleum Heat & Power Co. Radiators—convectors—Warren-Webster & Co. Vacuum pump—Nash Engineering Co.



Although no expansion of the structure is within view now, farsighted provisions were made for a large addition. The new section would be two stories, for machinery making corrugated shipping containers, a different type manufacturing process.

Plant was built with as much economy as was compatible with building theory of Container Corp. "The main idea was to get a plant that would be as inexpensive as possible to maintain," executives say, "a plant that would be set for good instead of having to be rebuilt ten years from now. We spent extra money in the beginning to save trouble later." Along this line of avoiding maintenance, salt glazed tile was used on interiors. Total cost of plant was about \$750,000, approximately \$8 per sq. ft. of floor.

Railroad siding holds five cars; interior loading is important in handling paper stock because of rain spoilage. Truck loading platform is also enclosed, with hydraulic ramp lifts which can be moved up and down to match the truck floor height.



LONG HANDSOME FACADE WITH RAILROAD SIDING AT STACK END IS USED AS AN EFFECTIVE BILLBOARD BY THE PLANT OWNERS



WAREHOUSE has a heavy but transient stock, and is equipped to move it very rapid



MAIN ENTRANCE; THE STRUCTURE IS STEEL, BRICK ENCLOSED

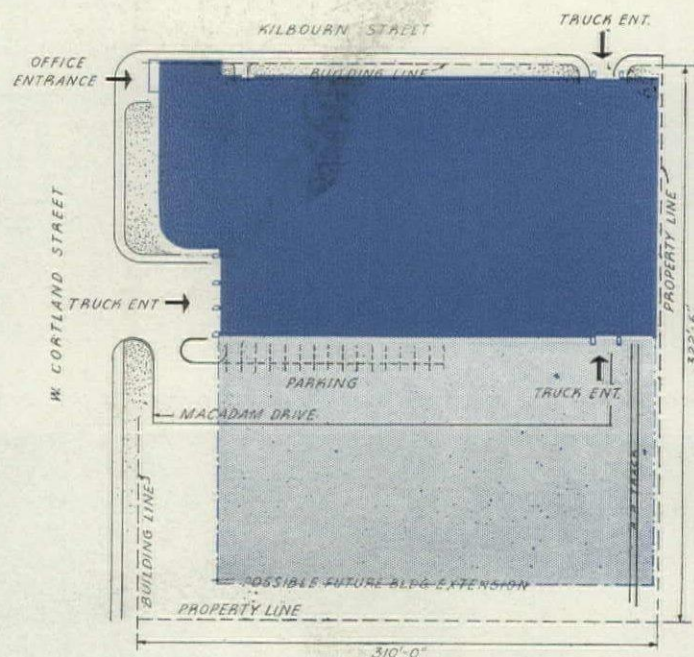
W. STUART THOMPSON & PHELPS BARNUM, Architects

GUY P. PANERO, Engineer

CAMPBELL, LOWRIE & LAUTERMILCH, General Contractors

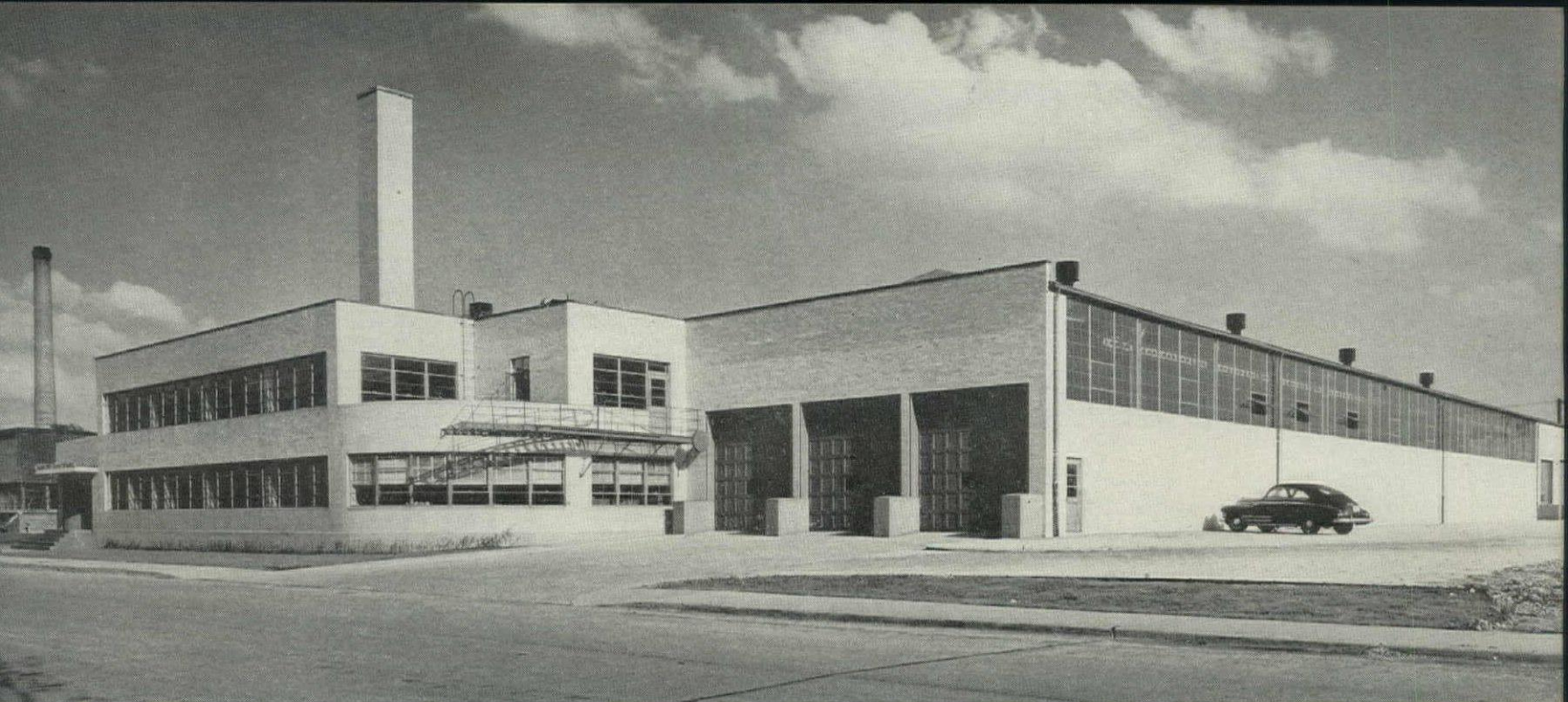
Selling heavy steel bar sections, cut to size, "over the counter," sounds like a fantastic operation, but this building is designed for just that purpose. It is the only completely mechanized warehouse in the steel industry, according to its engineers. Steel is received, stored, cut and shipped, all mechanically. Through use of cranes and a special method of vertical storage, a bar of steel can be taken from storage in $1\frac{1}{4}$ minutes, less than half the time required in manual handling. The entire floor area, framed in 50 x 20 ft. bays, can be covered by 3-ton overhead cranes, necessitating a warehouse housing staff of only 45 men.

The mechanical equipment of such a structure is obviously its most important and interesting feature, and here it is no disappointment. Besides the concentration upon swift handling of merchandise

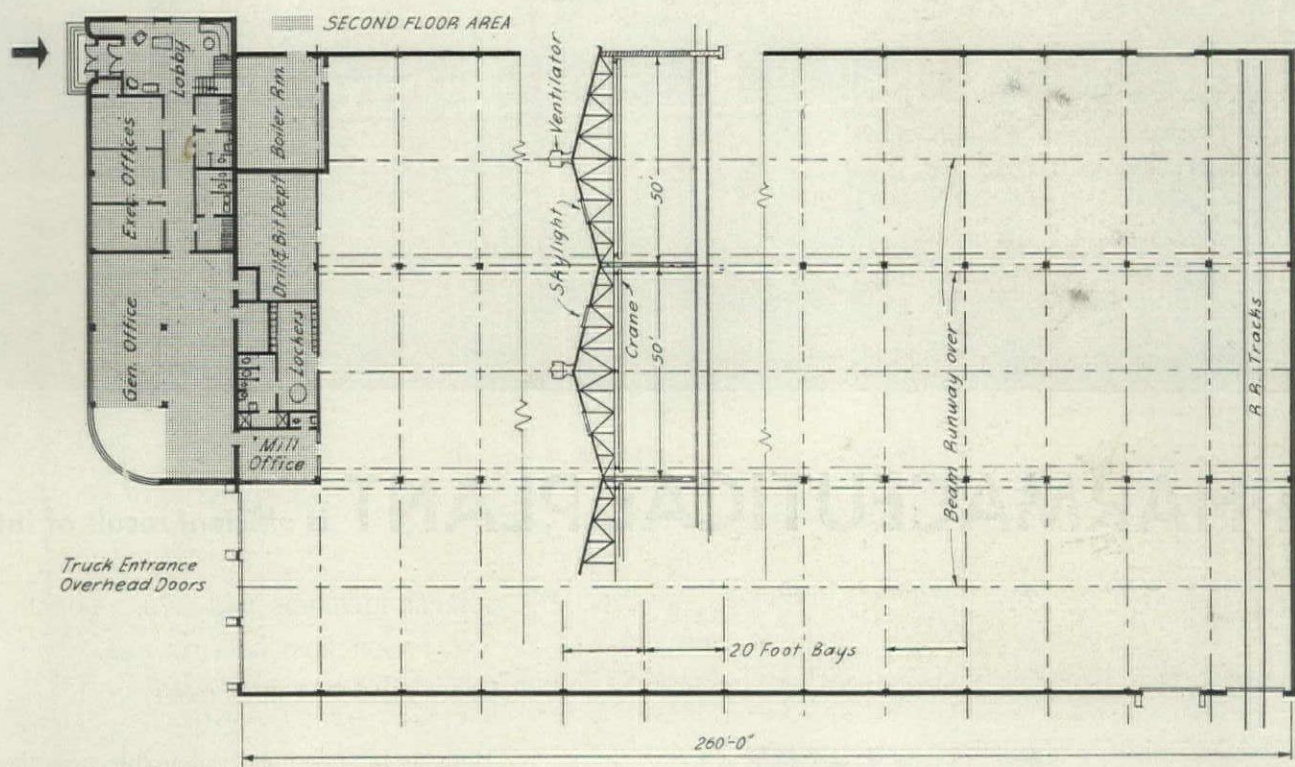


the clients were interested in getting a pleasant building to work in. Offices are air conditioned; the warehousing space is ventilated mechanically. A single low-pressure steam boiler, burning oil, furnishes heat for both the warehouse and the office. Steam is used to heat the warehouse area, then converted to hot water to heat the offices, a neat use of one source to maintain two different temperatures desired in the two sections.

CONSTRUCTION OUTLINE: Structural steel—Inland Steel Co., Bethlehem Steel Co. Acoustical tile—Celotex Corp. Structural tile—Charleston Clay Products Co. WINDOWS: Sash—steel, Mesker Bros. Glass—Owens-Illinois Glass Co. FLOOR COVERINGS—Armstrong Cork Co., Congoleum-Nairn Inc., Tile-Tex Co. HARDWARE—P. & F. Corbin and Stanley Works. ROOFING—Celotex Corp., Ruberoid Co. PAINTS—National Lead Co., Pratt & Lambert Co. and Devoe & Reynolds Co. PLUMBING FIXTURES—Crane Co. Wash fountains—Bradley Wash Fountain Co. Accessories—Halsey Taylor Co., National Tube Co., Philip Carey Co., Yeomans Bros. Co. ELECTRICAL FIXTURES—Mitchell Mfg. Co. and Quadrangle Electric Co. Cable—Hazard Wire & Cable Co. and Walker Bros. Switches—Harvey Hubbell Electric Co. Appleton Electric Co. and Bryant Electric Co. Floodlights—Trumbull Electric Co. and Square D Co. HEATING: Unit heaters—Trane Co. Radiators—U. S. Radiator Corp. Pumps—Nash Engineering Co. Furnace—Kewanee Boiler Co. Regulator—Barber Colman Co. Valves—Sarco Co. Pipes—Republic Steel Co. Covering—Philip Carey Co. Fittings—Grinnell Co. AIR CONDITIONING—Trane Co. Ducts—Chas. E. Crone. Compressors—Chrysler Corp., Airtemp Div. Fans—Herman Nelson Corp. Air filters—American Air Filter Co.



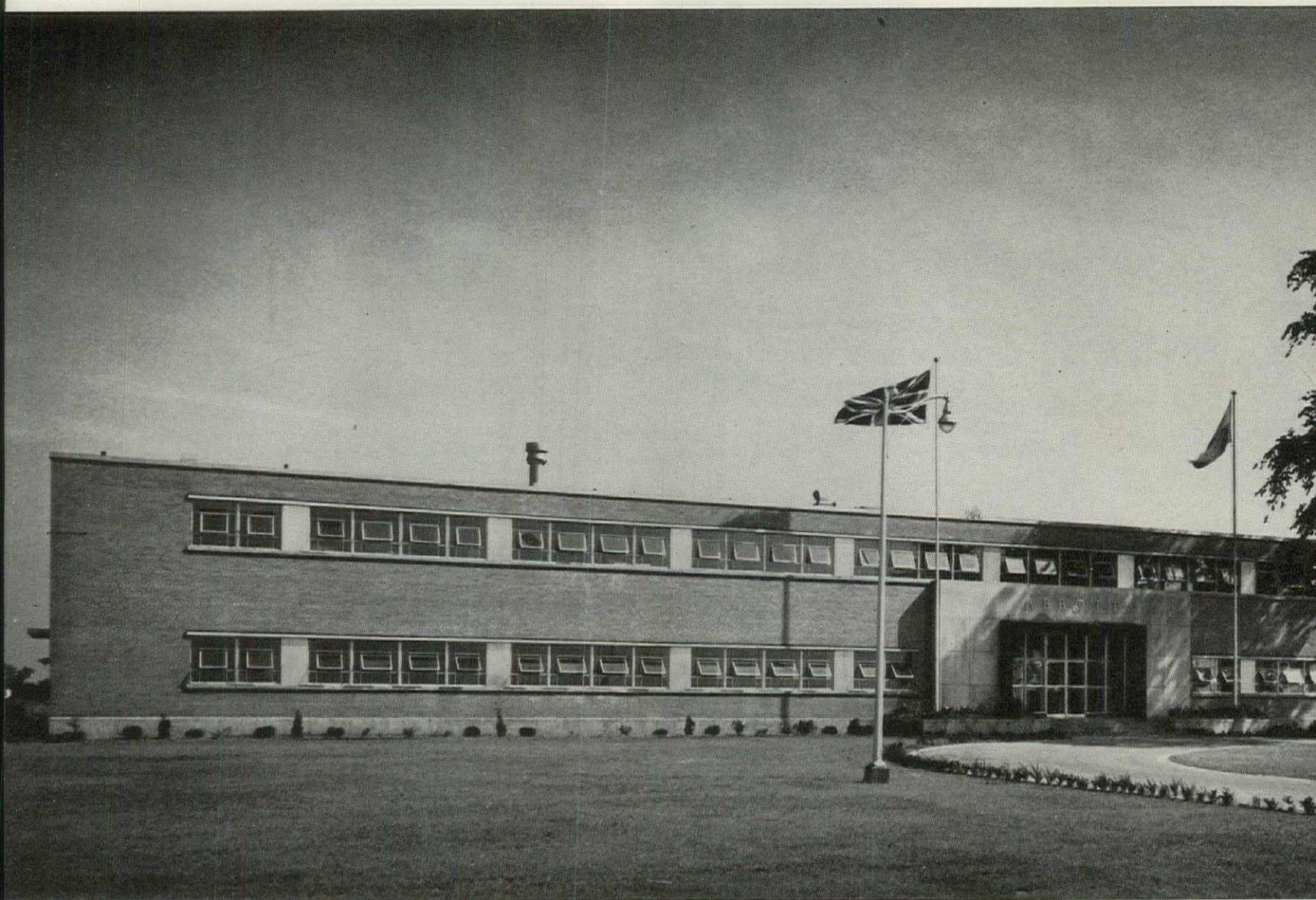
WAREHOUSE CONTAINS APPROXIMATELY 43,000 SQ. FT., HANDLES STEEL DISTRIBUTION FROM FREIGHT CAR THROUGH BOOKKEEPING



Photos: Hedrich Blessing Studio



VERTICAL STACKING of steel is innovation, simplifying handling by crane from above. Warehouse floor is concrete, with heavy reinforcing and special hardening agent.

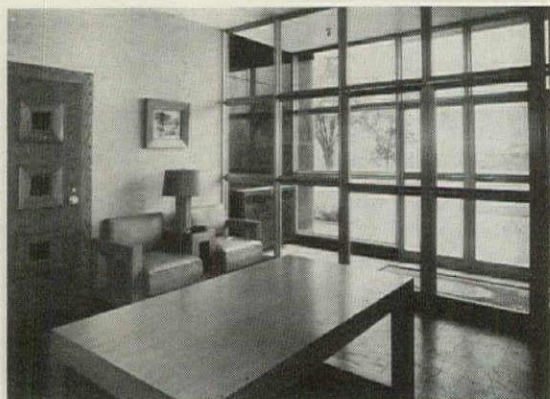


PHARMACEUTICAL PLANT is efficient result of intensive preliminary study

HARPER RICHARDS, Designer, H. J. DORAN, Architect

ANGLIN NORCROSS, General Contractor

ABBOTT LABORATORIES, Owner



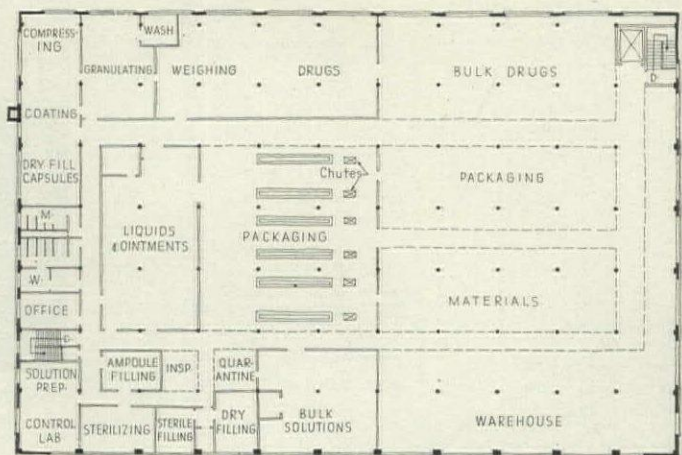
LOBBY ADJOINS THE ADMINISTRATION OFFICES

Here, as in most industrial architecture, the pressing problem was whether the space should be arranged on one or on several levels. There was enough land, nine acres, for a single-floor factory, on a level site. And both single-floor and multi-floor factory construction had been used extensively in the pharmaceutical industry.

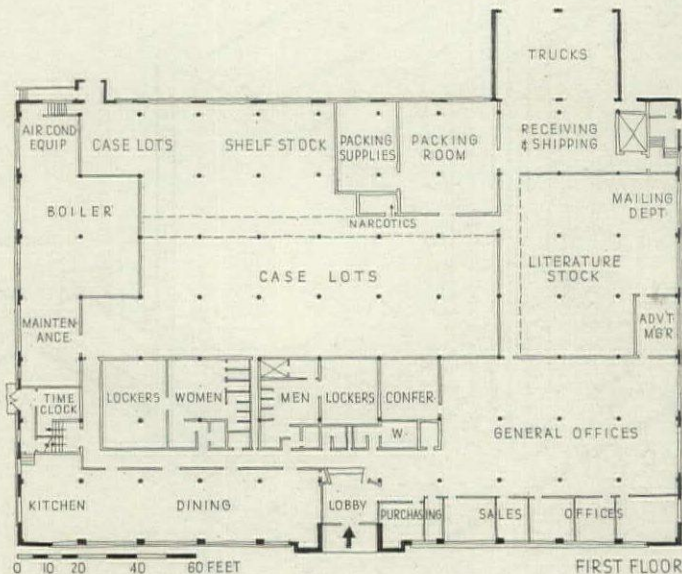
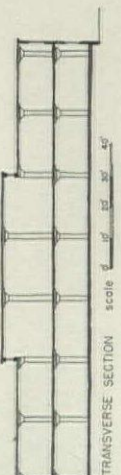
With both general alternatives having thus been successfully demonstrated, close study began on this specific problem. Components of the manufacturing task were grouped in lists of logical association, and the designer started work on the physical grouping. Arrangements of from one to six general divisions—on separate floors—were tried. An important factor was the mass periodic movement—rather than constant flow—of personnel and materials between departments. Materials were to be brought in, in bulk, at long-spaced intervals, while the finished product could be dispatched to the transport room in a constant flow of small units, suitable for chute transport within the building. The choice narrowed to a two-story scheme, against a good example of the always-tempting one-story layout, and attention then turned to costs. Single story estimate (steel framing with light-weight precast concrete roof): \$157,544. Double story estimate (reinforced flat slab construction): \$117,621. Work proceeded on the two-story plan, resulting in this satisfactory structure.



Gottso-Schleisner



SECOND FLOOR

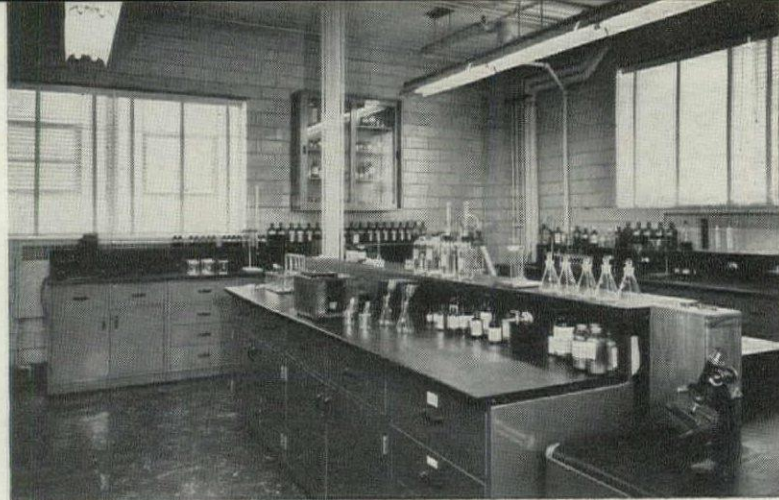


FIRST FLOOR

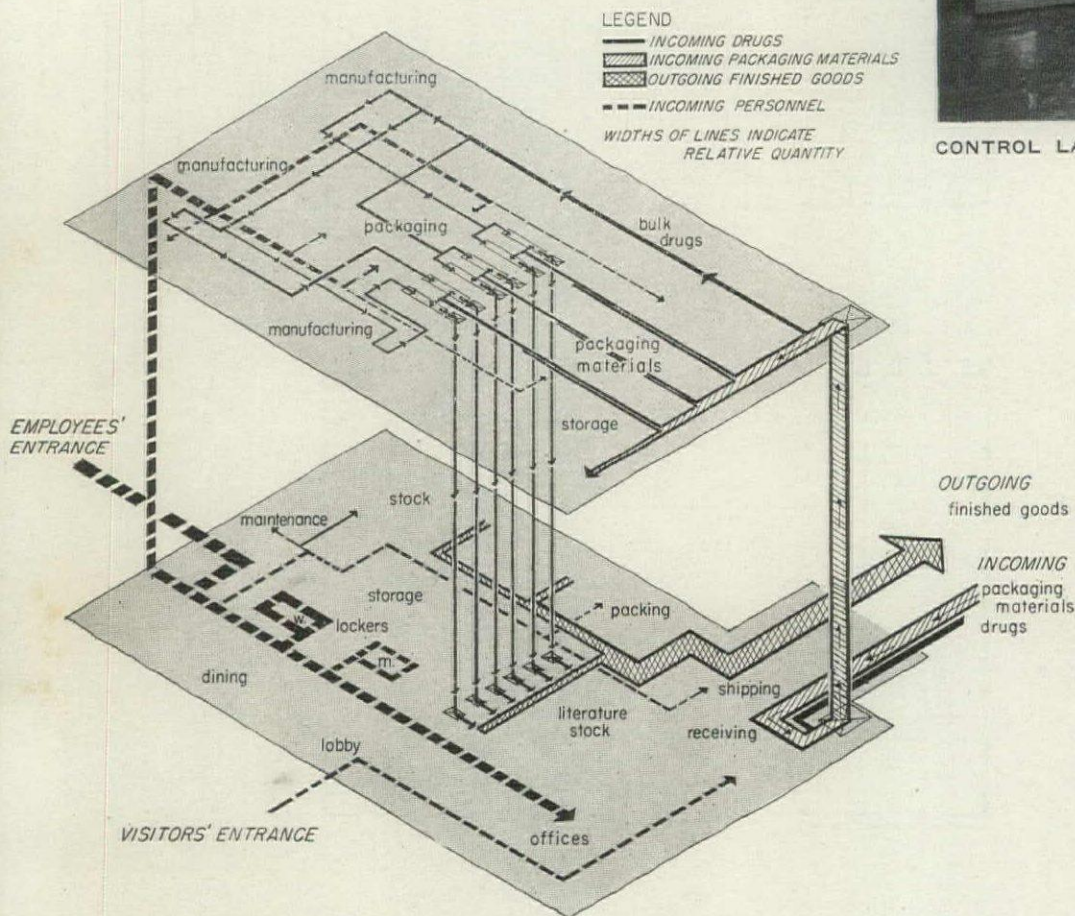
0 10 20 40 60 FEET

CLERESTORIES YIELD NATURAL LIGHT NEEDED FOR CLOSE WORK IN SECOND STORY INTERIOR ASSEMBLY ROOM





CONTROL LAB IS IN CORNER LOCATION ON THE SECOND FLOOR



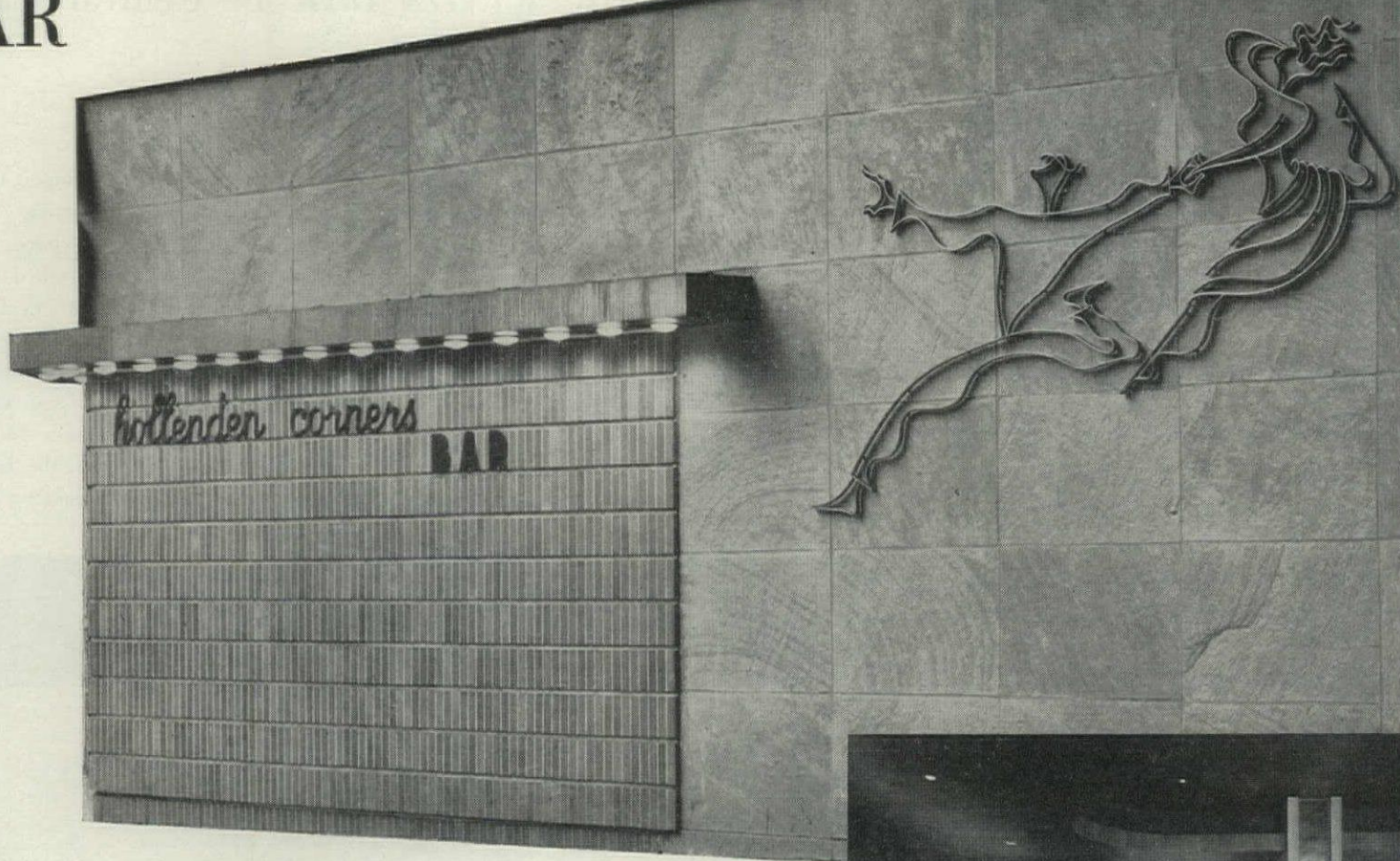
FLOW CHART SHOWS RELATIONSHIPS IMPORTANT IN A DECISION TO ARRANGE THE SPACE ON TWO LEVELS

WAREHOUSE SECTION ON SECOND FLOOR IS ADJACENT TO THE PACKAGING MATERIALS ROOM



CONSTRUCTION OUTLINE: Exterior walls—brick, hollow tile; inside—terra-cotta and plaster finish. Main entrance—limestone, granite steps and trim. Ceiling—acoustic tiles, Johns-Manville Corp. ROOFING—Barrett Co. WINDOWS: Sash—steel. Glass—Libbey-Owens-Ford Glass Co. ELEVATORS—Otis Elevator Co. FLOOR COVERINGS: Offices—asphalt tile, Johns-Manville Corp. GARAGE AND SPECIAL DOORS—Rolltite, Richard Wilcox Mfg. Co. HARDWARE—Raymond Hardware Co. ELECTRICAL INSTALLATION: Switches—Westinghouse Electric Corp. Fixtures—Curtis Lighting Co., Westinghouse Electric Corp., Holophane Co. Panels—Square D Co. PLUMBING FIXTURES—Bradley Washfountain Co. and James Robertson Co. HEATING: Offices and laboratories—forced hot water. Warehouse—low pressure steam. AIR CONDITIONING EQUIPMENT—Worthington Pump & Machinery Corp., Surface Combustion Co., Trane Co., Bell & Grosset Co. and American Air Filter Co. Boilers—Cleaver Brooks Mfg. Co. Radiators and valves—C. A. Dunham Co. Grilles—Tuttle & Bailey Mfg. Co. Regulators—Minneapolis-Honeywell Regulator Co. and Powers Regulator Co. Traps—Armstrong Machine Works. Water heater—Whitlock Coil Pipe Co. Airfilters—Farr Co.

BAR

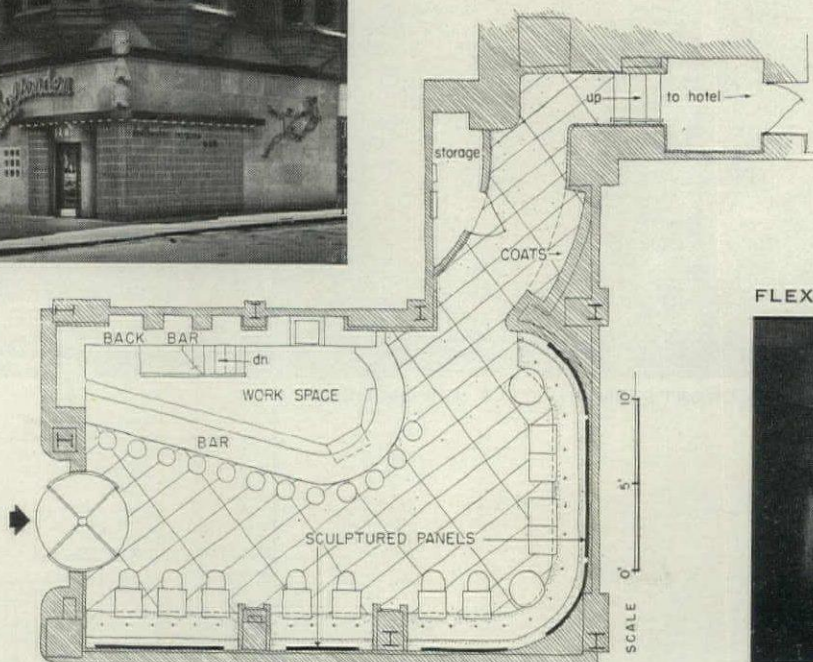
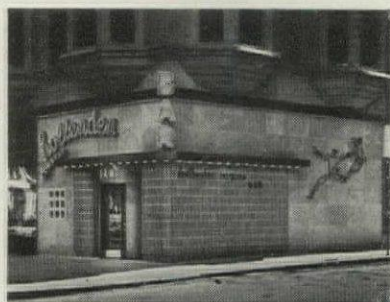


LOCATION: Cleveland, Ohio
JAC LESSMAN CO., Architects
ROBERT CRONBACH, Sculptor
CHARLES BERNSTEIN, Contractor

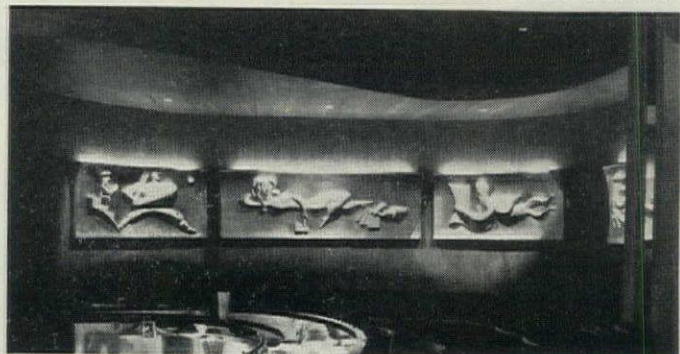
Designed for its newspaper customers, this small bar on a busy downtown intersection, exploits the light touch for both exterior and interior treatment. The facade makes eye-catching use of an illuminated canopy trim and hurrying barfly ribbon figures. An unobtrusive interior, with walls of English Oak prima wood and dim general illumination, is dramatized by six spotlighted sculptured wall panels. They have been designed as satirical sidelights on the working press and are entitled "Cheesecake," "Fire," "Interview," "Worried Reader," "Hatchet Murder" and "Baseball." All lighting except that spotting the sculpture is concealed.



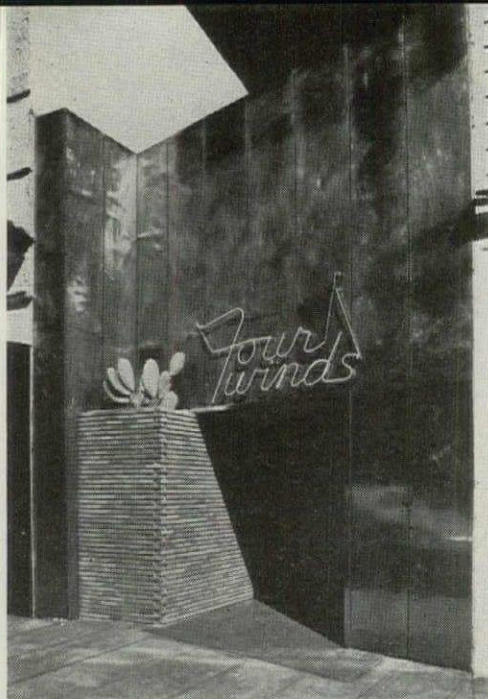
FOCUS OF ENTIRE ROOM IS ON DRAMATIC SCULPTURE



FLEXIBLE WOOD WALLS CURVE WITH LOW CEILING SOFFIT



C. W. Ackerman Studios



FOUR WINDS BAR in Central California

FRED LANGHORST, Architect

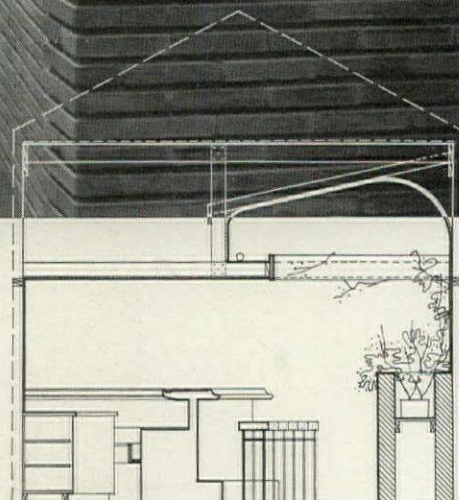
LOIS LANGHORST and ROGER LEE, Associates

VINCENT and ELMO MACCIORA, Contractors

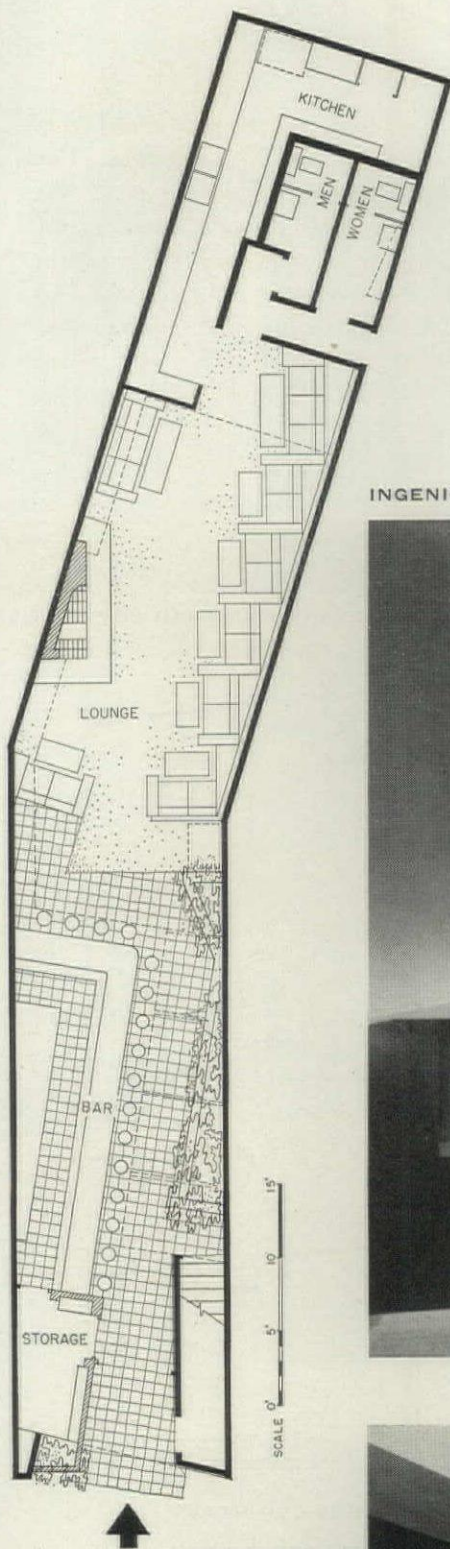
The idea of bringing the outside inside has apparently jumped from home to cocktail lounge in the fertile state of California. This small bar and restaurant devotes a largish amount of space to a brick planting area from which vines climb naturally upward over exposed beams. The effect is fresh and graceful—a far cry from the usual glassy cocktail cave. The owner's idea in remodeling was to change his bar from a meeting place for boisterous Sausalito shipyard workers to a quiet retreat for "gentlefolk," an end which this imaginative treatment plus use of simple wood planes and an open fireplace has successfully accomplished. Note also the handsome copper-clad entrance with harmonizing red brick planting box.



CONTRASTING TEXTURES, PLANTING AND LOW CEILING CREATE AN INVITING ATMOSPHERE

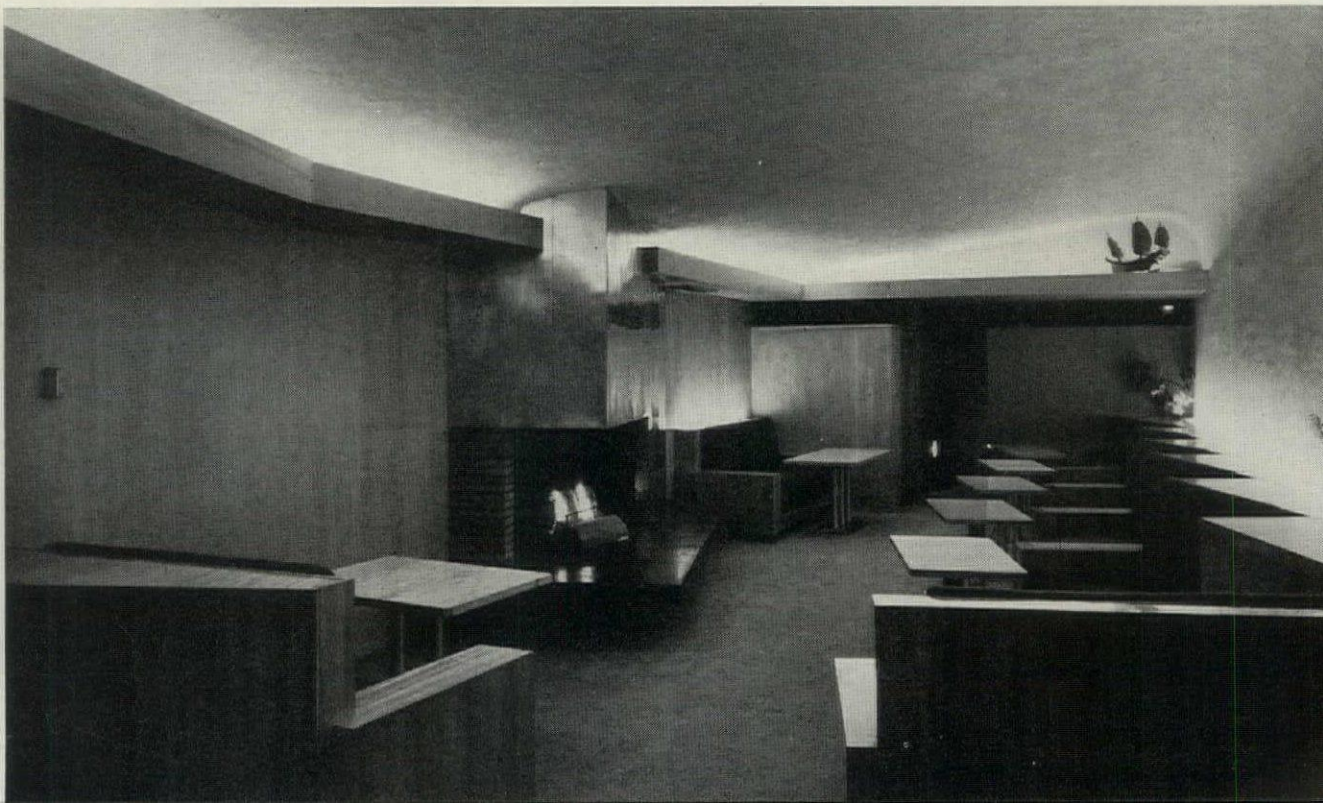
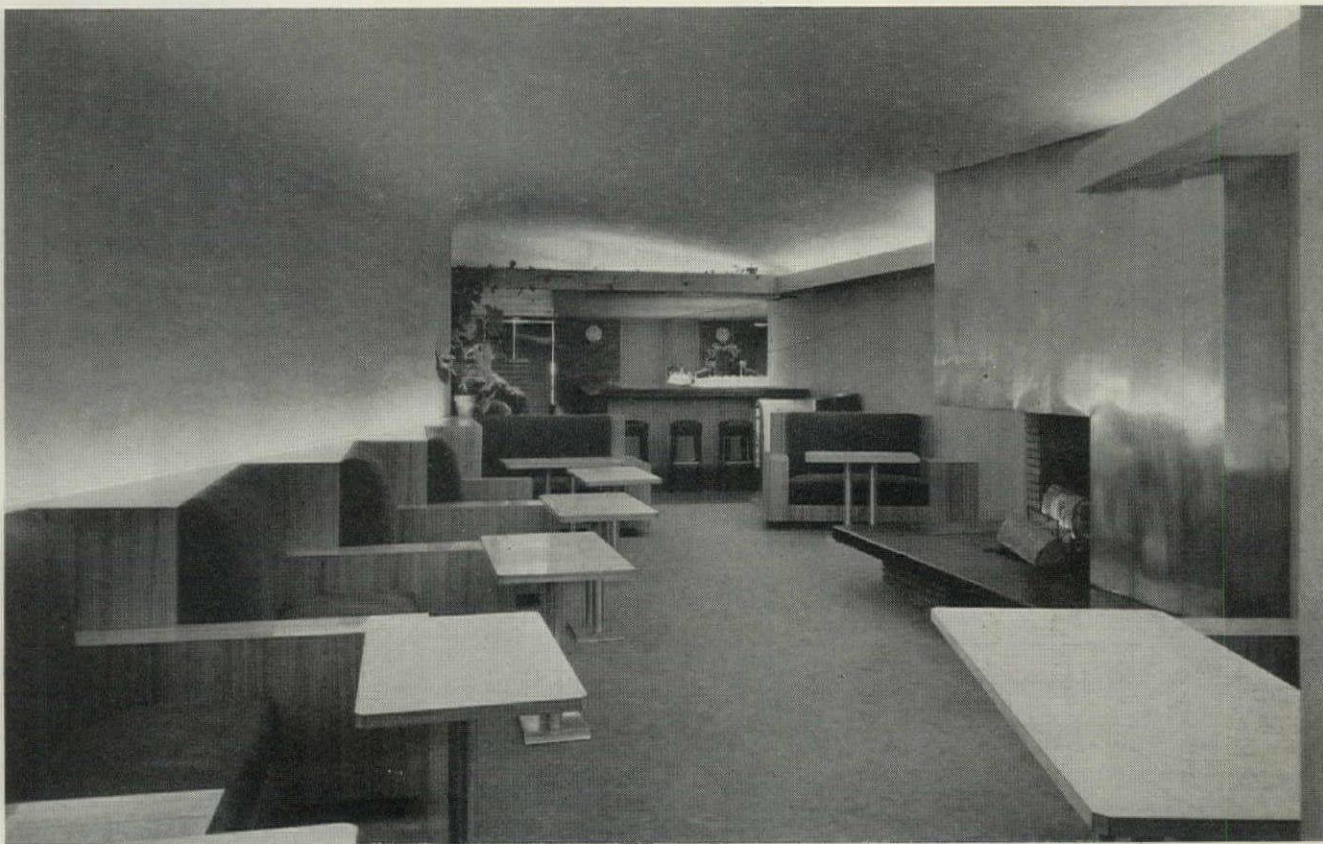


chieves warmth and color without Old English rafters



CONSTRUCTION OUTLINE: Exterior walls (front)—copper facing, Revere Copper & Brass Co., sheathing, building paper and studs, inside— $\frac{1}{4}$ in. Douglas fir plywood and Roman bricks. Floors—concrete slab. **WINDOWS:** Sash—casement. Glass—Libbey-Owens-Ford Glass Co. **WALL COVERINGS**—plywood, U. S. Plywood Corp.; stucco, plaster or Masonite, Masonite Co. Exterior door—copper, Revere Copper & Brass Co. **HARDWARE**—Schlage Lock Co. **PLUMBING FIXTURES**—American Radiator-Standard Sanitary Corp. **HEATING AND AIR CONDITIONING:** Ceiling air diffusing unit—Agitair Sturtevant Div., Westinghouse Electric Corp. Duct heater—Payne Furnace & Supply Co. Vent flue—Transite, Johns-Manville Corp. Roof ventilator—G. C. Briedert Co.

INGENIOUS LIGHTING AT VARIED LEVELS ELIMINATES COLD MONOTONY OF MUCH INDIRECT ILLUMINATION



CANTERWOOD BAR on Long Island

HERMAN H. SIEGEL, Architect

ERNEST D. RAPP, Designer

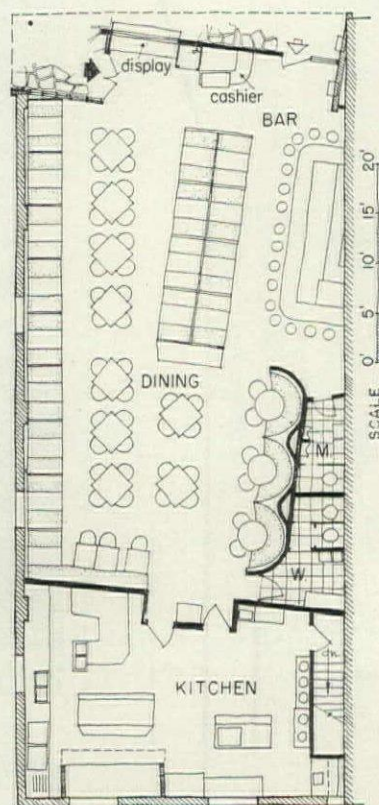
JULIUS MIHALY, Contractor

This bar and restaurant design although individual in treatment, has maintained a harmony with other shop fronts in the same building—a point which the architect considers most important. Redwood, corrugated asbestos, cement and stainless steel are combined in the lower portion of the facade while the original brick of the taxpayer is retained above. A corner entrance was chosen since the building, while not on a street corner, adjoins a driveway which gives it the appearance of a corner lot.

The open interior is roughly divided into three areas: the bar, a row of booths next to it and the restaurant proper. Direct and indirect lighting is used in combination and the booth section is handled with pin point illumination on tables only, leaving the balance of the booth in semi-darkness, thus emphasizing separation of booths and an intimate atmosphere.



UNRELATED FACADE DETAILS PREVENT A UNIFIED COMPOSITION



LOWERED BAR CEILING IS ESSENTIAL TO LIGHTING SCHEME, BUT ITS INCONGRUOUS CURVED MASS MAKES DESIGN TOP HEAVY

CONSTRUCTION OUTLINE: Foundation—concrete, Portland Cement Co. **STRUCTURE:** Exterior walls—common brick, white-washed. Interior partitions—studs, Rocklath and plaster, U. S. Gypsum Co. Floors—asphalt tile, Armstrong Cork Co.; carpet, "Pebbleweave," Mohawk Carpet Co. **WINDOWS:** Sash—steel, Truscon Steel Co. Glass—Pittsburgh Plate Glass Co. **WALL COVERINGS:** Mural—Philip Santry. **FURNISHINGS:** Circle Equipment Co., and Bolta Products Sales, Inc. Table tops—Formica Insulation Co. **DOORS:** hollow metal aluminum, Martin Katz. **PAINTS:** Pittsburgh Plate Glass Co. and Pratt & Lambert, Inc. **PLUMBING FIXTURES:** American Radiator-Standard Sanitary Corp. **HEATING:** Grilles—Tuttle & Bailey. Valves—American Radiator-Standard Sanitary Corp.

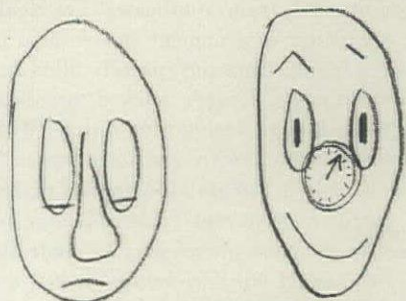


Ben Schnall, Photos

PRODUCTS AND PRACTICE

AIR RECOVERY deodorizes conditioned air for economical recirculation, diluting odors in a conditioned space, and cutting down on outside air requirement

The essential enemy of fresh air is smell, an annoyance that is hard to measure. Smell—and its immeasurability—has had much to do with the design of air conditioning systems. It is one of the few elements of interior climate which lacks a measuring device. The nose is the only portable meter devised thus far—a



YOUR NOSE—THE ONLY SMELL METER

meter difficult to read with consistent and notable accuracy. Nor is it easy to draw an odor graph. Lack of precision in the measurement of smell has fathered an imprecise and expedient approach to smell control. Most air conditioners have to a degree sidestepped the smell problem. Instead of trying to deodorize air, they have reached outdoors for a constantly renewed supply—processed by that very reliable deodorizer, Nature.

The only flaw in this convenient “natural” method is that a constantly renewed air supply has to be constantly reconditioned. Energy spent cooling or drying or humidifying air at the intake point flows expensively out at the exhaust; more energy must be expended to cool (or heat) the new supply of Nature’s product. This is a large reason why the total cost of air conditioning has remained relatively high.

Constantly renewed air supply means that an enormous number of cubic feet of air must be conditioned to make a given space comfortable. Discharging this conditioned air to be “freshened” by nature neglects the fact that—far from being “free”—the air has become a valuable commodity, due to the conditioning energy invested in it. Conservation of the conditioned air is obviously the only way to protect this investment.

Air Conservation. Attracted by the promise of reduced cost, air conditioners have recently turned their attention to new techniques of air recovery and recirculation. Air recovery methods, initially introduced in railroad passenger cars, now show promise of becoming standard practice in the booming environment industry. One big boost came recently from the American Hotel Association, which circulated among its members a research report pointing out the many advantages of an air

recovery system based on a positive means of air purification. The economies promised by such a system are of far-reaching importance. Such a system will effect substantial savings in operating cost and initial cost, the amount of savings depending upon the amount of outside air that would otherwise be required to produce satisfactory conditions. In areas where there are great concentrations of people, this factor is large; therefore, the saving would be large.

Two reasons have been responsible for the brief endurance of air in conditioning systems: in addition to smell, there was the matter of oxygen replenishment. As the oxygen in the air which had been conditioned (in temperature and moisture content) was used up, fresh air brought in new oxygen. But research has shown that the importance of oxygen replenishment has been exaggerated. The American Hotel Association report says:

“Only a negligible amount of outside air is required to meet oxygen requirements; actually, unavoidable infiltration (air that enters through doors and windows in any enclosure) will exceed in volume the outdoor air necessary for adequate oxygen replenishment.”

Submarines Don't Leak. Summed up in the *Heating Ventilating and Air Conditioning Guide* of the American Society of Heating and Ventilating Engineers, 1946 was another version of this verdict:

“Contrary to old theories, the usual changes in oxygen and carbon dioxide are of no physiological concern because they are too small to produce appreciable effect even under the worst conditions of human occupancy. Only in such unusually air-tight enclosures as submarines and some air raid shelters need the increase in carbon dioxide and the reduction in oxygen be considered.”

The only other reason for not continuing to recirculate air which had been cooled or warmed and circulated a few times, was more complicated, involving the dilution of airborne impurities—including odors. According to the report of the Hotel Association, these air contaminants are of four general classifications: dust, smoke, bacteria, and gases or vapors. Three of these contaminants were under control, and could be eliminated from “used” air. Dust is banished by air filters; smoke particles by employing electrostatic precipitators; and bacteria by ultra violet rays. But no practical equipment existed to extract gases and vapors from air before recirculation.

So the problem of air recirculation boiled down to impurities whose sources were the occupants of the conditioned space: body apparel and respiratory emanations, tobacco smoke, cosmetics, liquor and edibles in preparation

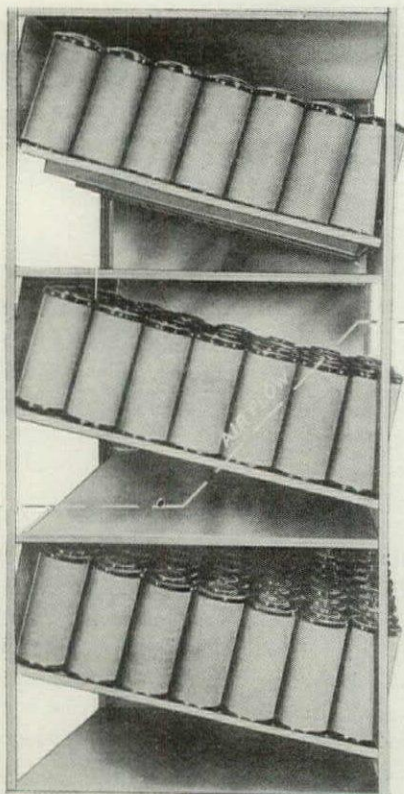
and serving. Resulting odors had to be eliminated or diluted if the air were to be reused indefinitely. When the barrier to recirculation of conditioned air had been narrowed to removing smells, work started on practical methods which could be used in most air conditioning systems.

Adsorption Answer. Three methods of deodorizing “used” conditioned air were considered: (1) condensation by reduction in the air temperature; (2) air washing or scrubbing; (3) adsorption. The first two were discarded as impractical or uneconomical for most air-conditioning systems. In the third, adsorption, an answer was found.

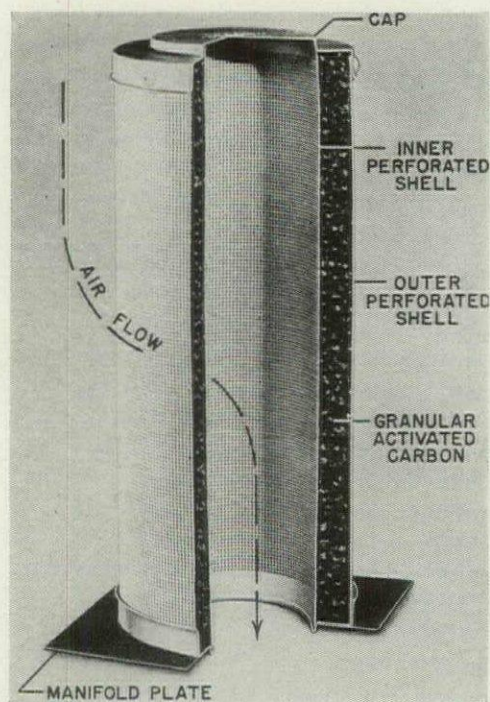
Adsorption is a natural phenomenon which occurs when gases and vapors come in contact with the surface area of an adsorbing agent. An almost instantaneous condensation takes place and the condensed impurities are held tenaciously until the agent is forced to release them.

An example of the principal of adsorption is the equipment manufactured by the W. B. Connor Engineering Corp. under the trade name “Dorex Air Recovery.” This system reclaims conditioned air after it has been circulated by passing it through banks of perforated cylindrical canisters which contain activated carbon, arranged for a minimum of air resistance. The specially processed and treated granular carbon is the most efficient adsorbent agent known. Its action with odors is much like that of a sponge in soaking up liquids, and after it has adsorbed a certain amount of smells, it—like the water filled sponge—can be relieved of its load. This relieving process is called reactivation and is not complicated.

Acres Per Pound. The type and grade of activated carbon employed in air recovery retains its effectiveness until it has adsorbed gases and vapors up to approximately 20 percent of its own weight. When this degree of saturation is reached the carbon is “reactivated,” a process which releases and disposes of all adsorbed substances and restores the carbon to its original potency. This process can be repeated almost indefinitely. The adsorbing surface of activated carbon exposed to the air consists not only of the relatively insignificant surface area of the carbon granules, but of the enormous aggregate area of the myriad capillaries (sub-microscopic crevices) within the structure of each granule. It has been estimated that if the entire exposed surface in one pound of activated carbon could be unfolded and extended it would approximate 140 acres or nearly one quarter square mile. It is the magnitude of this surface area which pro-



CANISTERS are arranged in banks intercepting the flow of air



CUTAWAY VIEW through a canister shows construction and operation

GRILLES contain same carbon, for placing over small ducts



vides maximum "activity" (adsorptive capacity) and, particularly, retentivity for all the vaporous and gaseous impurities which commonly pollute air in and around occupied areas. Its effect on the moisture content of air is nil, since activated carbon retains no water.

Canisters of activated carbon are available in three standard sizes, dictated by the nature and degree of air contamination which they must combat. The canisters consist of an inner and outer perforated cylindrical shell, the annular space between being filled with granular activated carbon. Cost of the most commonly used, containing a pound of carbon, is \$4.35 with average life between one and two years before reactivation, which costs about \$1.65. Cost for a bank of these canisters large enough to deodorize 1,000 cu. ft. of conditioned air per minute is estimated at \$184.

Also available are panels (see illustration) for smaller installations. Manufactured in several standard sizes with the same quality carbon as used in the canisters, the panels are installed to purify a predetermined percentage of the air volume flowing through the duct or casing and are particularly adaptable for application to package or self-contained unitary air conditioners, unit heaters, and cold diffusers, or unavoidably cramped central type air conditioning systems.

Dorex equipment should generally be located on the return air side of the air conditioning system, protected by the standard air filters adequate to prevent the accumulation of dust on the carbon. The use of oil-dipped filters with Dorex units should be avoided where possible, because the adsorption of released oil vapors and free oil droplets by the carbon will limit its capacity for other air-borne vaporous impurities, and shorten its service life.

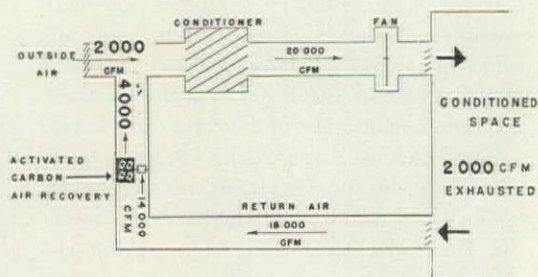
An example worked out by the Connor Corp. illustrates money savings possible in using their Air Recovery Equipment (see diagrams). Air conditioning requirement for the area chosen is assumed at 20,000 CFM, of which 14,000 is assumed recirculated and 6,000 outdoor ventilation air before installation of air recovery equipment, which cuts the volume of

air necessary to bring in from outdoors to 2,000 CFM. Two thousand CFM, it is estimated, calls for 6 tons of refrigeration—and would be a saving of 12 tons over the 6,000 CFM figure necessary without air recovery. Money savings in this situation (see cost chart) are estimated to be \$874.40 per year. Though possibilities for proportional savings do exist in most air conditioning systems, some systems are already sucking in the minimum amount of outside air necessary even with air recovery. Addition of the new equipment here would, if not saving money, make the recirculated air much cleaner and fresher.

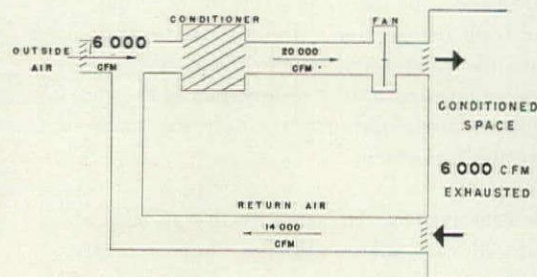
Activated carbon air recovery is specified in a majority of the passenger cars now being built for the class A railroads. The modern air conditioned train duplicates practically every occupancy environment encountered ordinarily, ranging from the sparsely filled bedroom car to the densely packed passenger coach, club lounge and tavern diner. While this example deals with restricted space, it nevertheless is a forceful illustration of how room, corridor, restaurant, cocktail lounge and banquet space atmospheres may be controlled and how unusual nuisance odors created during high occupancy periods may be prevented.

As an indication of the recognition of the unique ability of activated carbon to effectively remove odors—although not strictly in the air conditioning field—the U. S. Public Health Service has approved the recirculation, rather than exhaust, of toilet room air through activated carbon, on land, sea and air conveyances. More recently the Department of Housing and Buildings, City of New York, has also sanctioned the recirculation of toilet room air after purification by this filter medium.

That Refrigerator Smell. The report of the American Hotel Association on air recovery, prepared by the York Research Corporation of Connecticut, points out an important application of air recovery to member hotels in food refrigeration. The control of odors and maintenance of air quality in "reach-in" and "walk-in" refrigerators, the report points out, is very important to hotel management because it has a direct bearing on the freshness,



AIR RECOVERY EQUIPMENT used in the typical good-sized conditioning system above, cuts outside air requirement by odor filtering 4,000 cu. ft. per minute for recirculation.



SYSTEM WITHOUT air recovery equipment must suck in three times as much outside air, and spend energy to condition it, in order to meet the problem of diluting smell.

flavor and preservation of food. Stored meats, vegetables, fruit and dairy products give off flavor esters and decomposition gases which not only accumulate on the storage interiors but also have a tendency to exchange flavors to the detriment of palatability and sale. Odor accumulations on a refrigerator's exterior surfaces are also responsible for the characteristic and persistent musty "refrigerator smell" which can only partly be avoided by a rigid schedule of scrubbing and washing. The constant circulation of refrigerator air through activated carbon has been found to be an effective and efficient method for maintaining air purity in refrigerated storage spaces. Odoriferous substances are directly absorbed and their condensation on surfaces, or "pickup" by other stored foods is prevented. Self-contained recirculation units are available for this service and where air circulation blowers are employed, activated carbon units may easily be incorporated.

The economic importance of air recovery equipment is obvious. The utility of air conditioning is dependent upon two basic factors: cost of installation, and cost of operation. Recirculation of conditioned air can decrease both expense factors—the first by decreasing the amount of conditioning equipment needed, and the second, of course, by lessening the

COST COMPARISON between conditioning new outdoor air and recovering equivalent volume of recirculated air Based on Average Temperate Zone Conditions)

COST TO CONDITION 4,000 CFM OUTSIDE AIR PER ANNUM:			
Refrigeration Machinery (12 tons x \$300 per ton)	\$3,600.00		
Heating Equipment (400,000 B.t.u. x .002 B.t.u.)	800.00		
15% Interest and Amortization on	\$4,400.00	\$660.00	
Power (Average 6 tons (1/2 load) x 1 KW x 1200 Hrs. per season x .01 per KWH)		72.00	
Oil (Average 1.80 gals. per hr. x 3,000 hrs. per season x .07 per gal.)		378.00	
Total Cost per Annum			\$1,110.00
COST TO RECOVER 4,000 CFM RECIRCULATED AIR PER ANNUM:			
Dorex Air Recovery Equipment	\$504.00		
15% Interest and Amortization on	504.00	\$75.60	
Carbon Reactivation Cost (1 reactivation per year) (& labor & transportation)		\$160.00	
Total Cost per Annum			\$235.60
NET SAVINGS THROUGH AIR RECOVERY PER ANNUM			\$874.40

COMPARATIVE FINANCIAL ANALYSIS demonstrates the proportionate savings possible in use of air recovery equipment to eliminate smell from conditioned air.

number of cubic feet of air upon which energy must be expended. All air expelled from an air conditioning space carries with it heating or cooling energy which has been expended upon it. This energy can be saved by recirculating the conditioned air, so a system which reduces air loss to a minimum approaches the least costly and most utilitarian air conditioning system. Whenever stale, vitiated or otherwise contaminated conditioned air can be con-

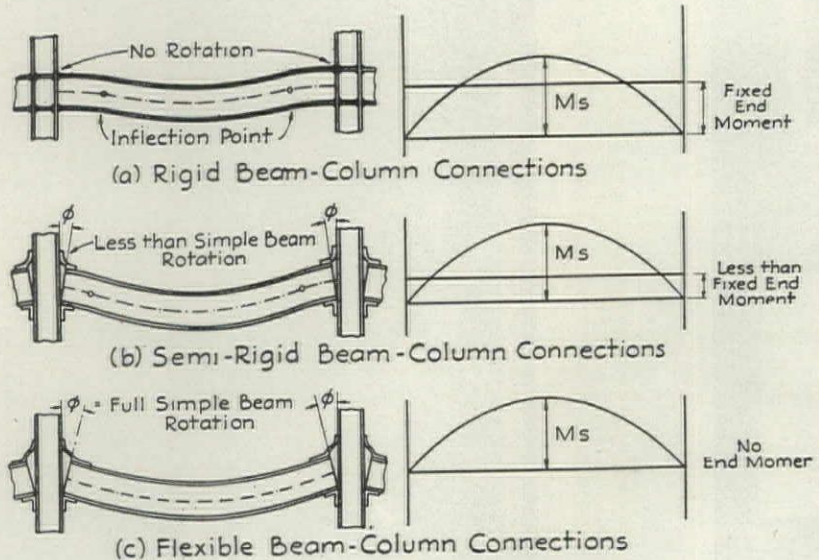
verted to its original freshness at a cost less than that required to replace it, failure to employ such conversion adds to the cost and operation of the conditioning plant. Development of such equipment as that used in air recovery is an evidence of the rescrutiny being given mechanical environmental advances of the past few decades, and their continuing improvement after the first glow of development and initial production.

SEMI-RIGID BEAM-TO-COLUMN CONNECTIONS in steel frames are subject of favorable AISC report

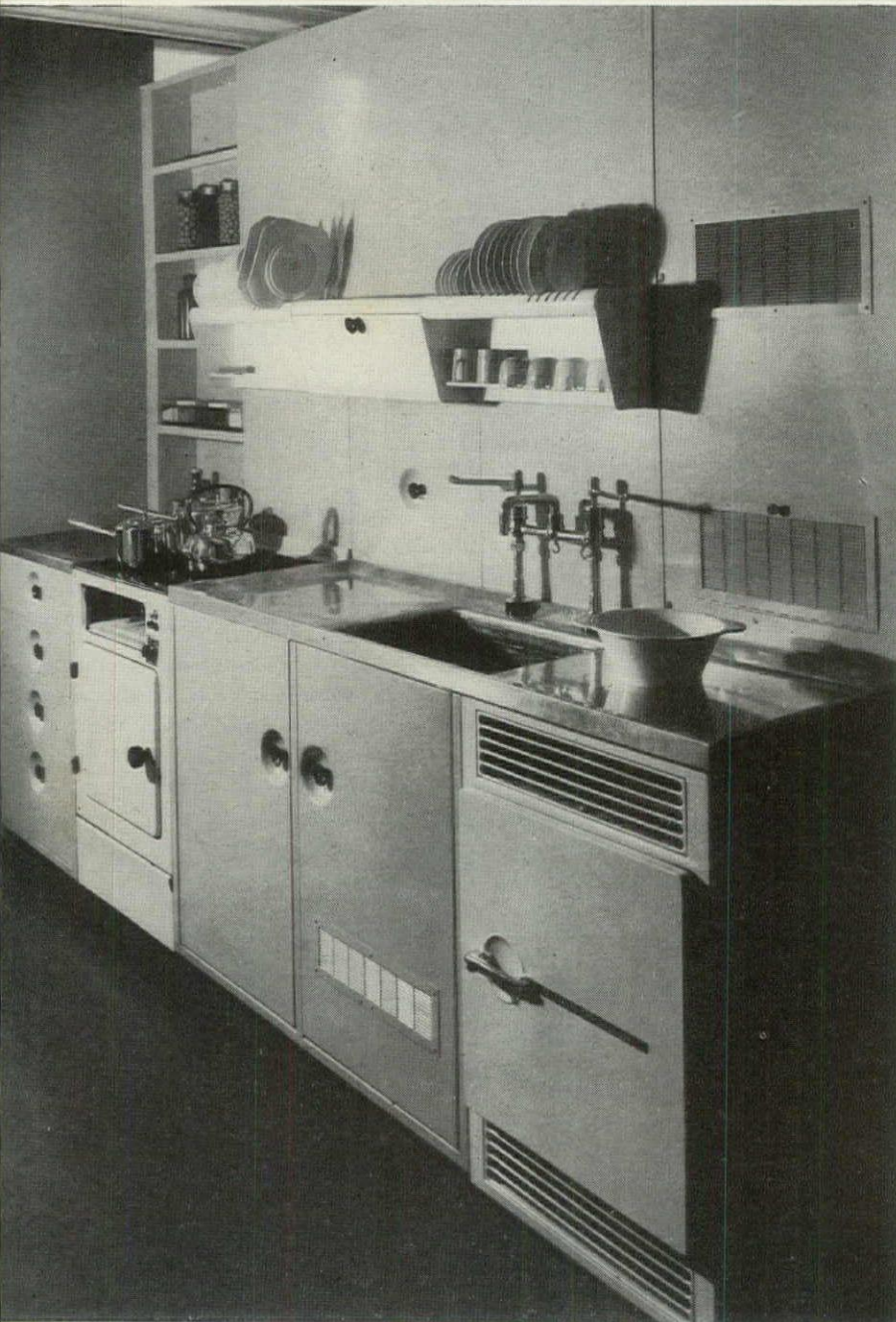
In steel structures, as in concrete, continuity connotes strength. One steel beam, carrying over several bays integral with the supporting columns, gives stronger support than a system of shorter beams set in each bay without end restraint. But use of one continuous steel beam in place of several is usually impractical because of complications in shipping sizes, in manufacturing, and in detailing. A newly published research report, however, demonstrates that the strength of continuity may be attained in steel construction through

use of semi-rigid beam-to-column connections with tension rivets or high strength bolts. "Progress Report Number 1, Riveted Semi-Rigid Beam-to-Column Building Connections" documents research by the American Institute of Steel Construction, which tested 47 riveted beam-to-column connections. Indications are that the AISC is ready to endorse such semi-rigid connections. This would permit the weight of beams thus connected to be reduced, as compared with beams designed under the usual practice, in which end supports are as-

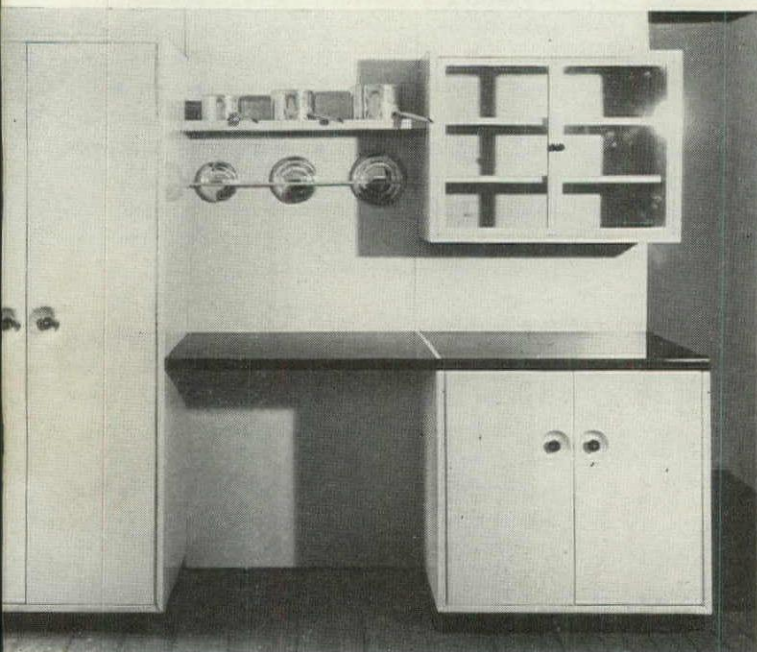
sumed to be without bending restraint. Experiments were carried out at Lehigh University by Robert A. Hechtman and Bruce G. Johnston. Basis for the lightening of steel beam sizes is the cutting of the design bending moment for the beams, possible since they are under end restraint. In the method of design proposed, no connections with more rigidity than 75 per cent are considered, so that the beam is still proportioned for positive moment, whether supporting a concentrated or uniformly distributed load. (With greater than 75 per cent rigidity at the connections, negative moment there might equal positive moment at mid-span). The semi-rigid connections do substantially reduce the positive bending moment which must be met; in actual design work, results of the tests have been assessed to derive reduced redesign coefficients for section moduli in varying conditions of loading with semi-restraint at the connections. In a foreword to the report, AISC Director of Engineering T. R. Higgins calls the new design procedure "one which can now be put into practice even though the experimental research to date has not developed a qualified semi-rigid connection for every size beam the designer may have occasion to use." A suggested supplement to AISC specifications for structural steel is included in the report, although not yet studied for final acceptance by the AISC committee on specifications.



PLASTIC SKIN ON ALUMINUM BODY is used in new British kitchen-bathroom units for light-weight, tough finish



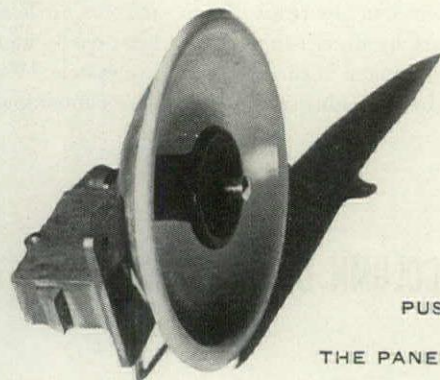
LARGER KITCHEN UNIT IS A FRAME FOR ALL STANDARD FACILITIES
POSSIBLE COMBINATION OF STOCK-STORAGE FACILITIES



Photos Sidney W. Newbury

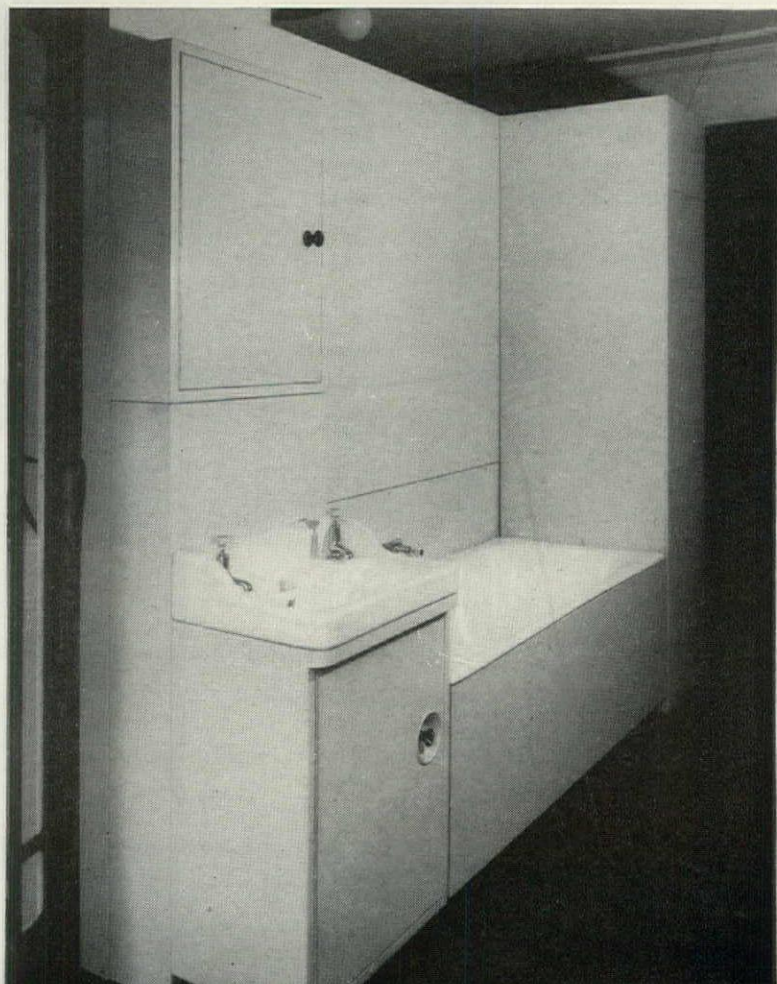
Aluminum alloy is the core-material in these new British "Alpla" prefab kitchen-bathroom combinations, overlaid with a tough finishing skin of plastic. Two sizes are manufactured, to be assembled back-to-back on either side of a hollow partition wall, for concentrated plumbing. Gaby Schreiber, British woman industrial designer, is responsible for the design, and International Plastics, Ltd. of London are the producers.

Larger unit is 9 ft. long, 1 ft. 9 in. longer than the smaller assembly. Difference in facilities is the work space beside the sink on the kitchen side, and the washbasin on the bathroom side of the larger unit. Kitchens are complete with stainless steel sink and drawer units, dishrack, and frames planned to receive stove and refrigerator. Other chests and drawer units are manufactured in the same materials.



PUSH RELEASE IS SUNK INTO
THE PANELS OF THE STOCK DOORS

OTHER SIDE OF KITCHEN UNIT HAS WASHBASIN AND BATHTUB





More than Beauty keeps Ro-Way Up Front!

Along with their good looks, every Ro-Way Door is backed up by expert engineering, fine materials and husky construction.

Check how easily they open and close. That's the result of carefully designed friction-reducing track, ball-bearing track rollers and power-metered springs.

Check the lumber used in Ro-Way Doors. First-class, kiln-dried stock, assembled by skilled craftsmen in Ro-Way's own plant.

Note, too, that Ro-Way hardware is extra rugged—built for more years of trouble-free service... Parkerized and painted *after* fabrication for extra protection against rust.

Add it all up and you'll see why it's more than beauty that keeps Ro-Way Doors up front.

Dependable Ro-Way sales and installation service is available nationwide. Consult your classified telephone directory, or write for distributor's name. See our catalog in Sweet's.

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

There's a RoWay for every Doorway!

AMAZING NEW RO-WAY DOOR REQUIRES
ONLY 2½ INCHES OF HEADROOM! Ro-Way's
latest achievement—the New Model 21, 4-section over-
head type door. Now in production. Write for details.



*Ro-Way Doors are also available for
commercial and industrial buildings.*

THE

LUSTRON HOME

REG. U.S. PAT. OFF.

Twenty Questions

The answers will interest architects, appraisers, bankers, insurance men, engineers, and city building officials—as well as the man who wants to own his own home.

1 What is the Lustron Home?

The Lustron Home is America's first truly volume-produced house. It is American engineering "know-how" applied to home building. It combines the strength and permanence of steel with the lasting beauty of porcelain in a home we are proud to call "A new standard for living."

2 How much does it cost?

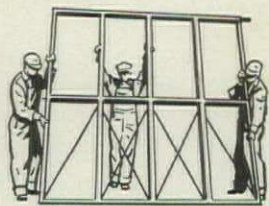
The average American who pays \$50 to \$60 a month rent can afford the Lustron Home.

3 What does the price include?

The price includes a home, ready to move into, complete with plumbing, wiring, and such utilities as bathroom fixtures, combination dishwasher-clotheswasher, hot water heater, kitchen cabinets and radiant panel heating system. Also included are such exclusive Lustron features as built-in recessed bookshelves; china cabinet with "pass through" counter; large mirrored dressing table with built-in drawers, cabinets, and closets; and ample overhead storage cabinets.

4 How long does it take to erect?

Approximately three to four days—after completing and curing the concrete slab to putting the key in the front door.



Wall section ready for installation

5 What about maintenance?

Practically nil. The Lustron Home never needs repainting, redecorating, reroofing. The only cleaning and maintenance materials required are soap, water, and a damp cloth.

6 How about insurance rates?

Because of the fire-resistant characteristics of the Lustron Home, insurance rates are extremely low. This is especially important in localities where big city fire departments are not available.

7 What about discoloring?

Absolutely none. Lustron's porcelain enameled steel panels are unaffected by sun, rain, salt water or air, or chemical fumes.

8 What kind of floors?

Floors are asphalt tile on concrete.

9 What about insulation?

The house is completely insulated with permanent fireproof insulating material.



Installing wall panels

10 What is the color choice?

Buyers can choose from a number of beautiful color combinations, exterior and interior, selected by the nation's leading design and color experts.

11 Is the Lustron Home union-made?

Yes. Lustron Corporation and the AF of L unions have worked out a contract covering the complete manufacture of the Lustron Home.

12 Who will sell the Lustron Home?

Lustron Homes will be sold by authorized builder-dealers located throughout the country. No sales to individuals will be made by the factory.

13 What does Lustron offer builder-dealers?

Basically, quick turnover. Lustron dealers work to closer margins on a bigger volume to more profits. Crews are in continuous operation without delays and layoffs. Procurement worries are ended. Waste and weather damage are eliminated. Costs are accurately controlled.

14 What does Lustron expect of dealers?

The ideal builder-dealer will combine in his background a knowledge of construction, real estate, home financing, and sales. The dealer's organization will be responsible for erection, sales, and arrangements for financing and servicing of all Lustron Homes in his territory.

15 How many houses can a dealer obtain?

Each builder-dealer will be allocated a number of homes based on the size and potential of his territory in relation to the total factory production. We expect to produce Lustron Homes at full factory capacity by the end of 1948, producing more than 40,000 in 1949.

16 What training is available for dealers?

The Lustron Training School has been established at the factory for all builder-dealers and their key personnel. Courses cover not only erection and maintenance but also site planning and development, financing, and sales training.

17 Will we advertise the Lustron Home?

Yes, extensively. In fact, advertising has already started in leading national magazines. Complete sales promotion materials are also available to dealers.

18 What about building codes and permits?

Lustron furnishes all necessary plans, drawings, specifications and forms, and will assist dealers in obtaining building permits in conformity with local regulations. Many of the most difficult codes have already been cleared.

19 What are future prospects for Lustron?

You have undoubtedly heard government estimates that a minimum of a million housing units will be required every year for the next fifteen years. The low-cost Lustron Home has a valuable place in meeting this need.

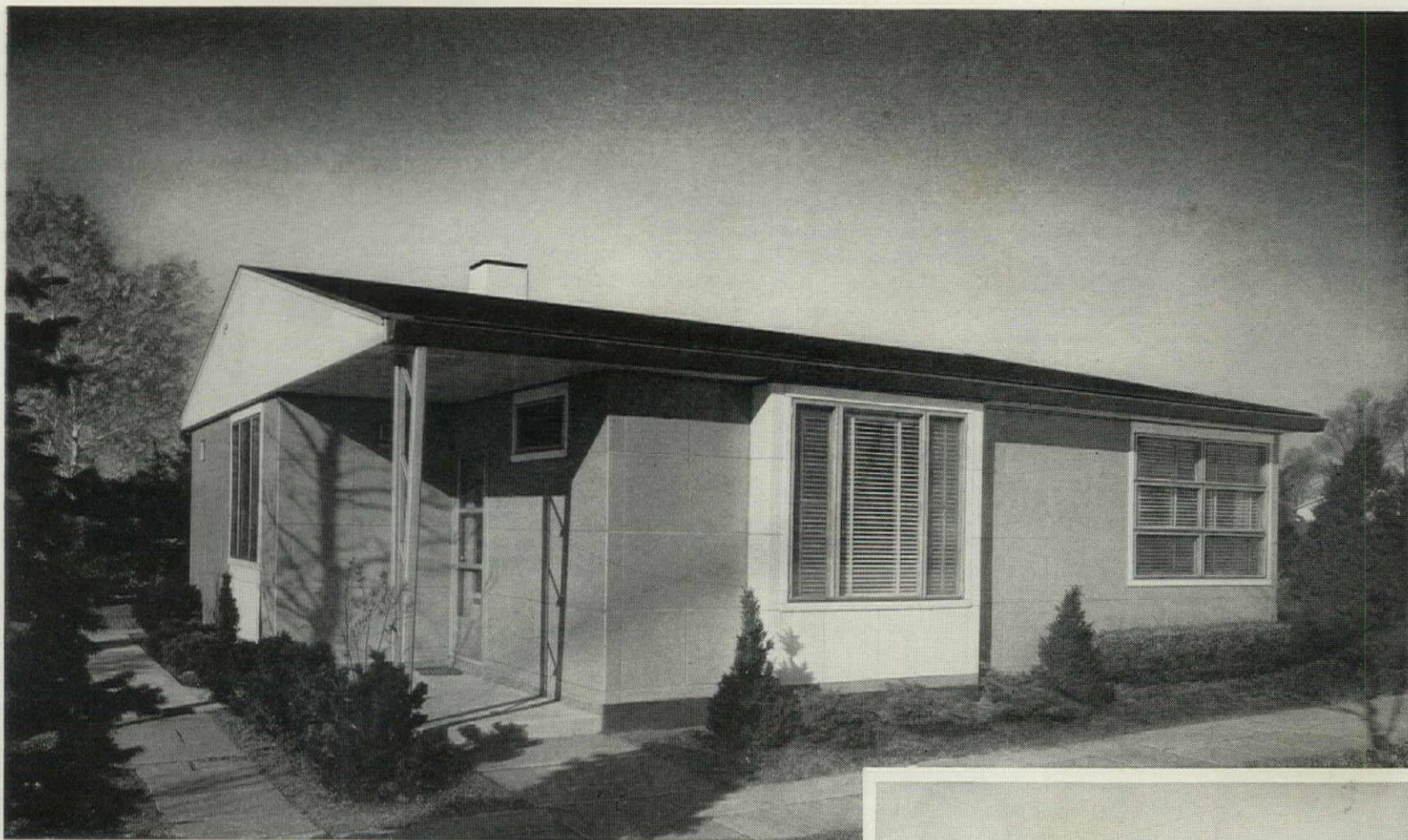
In addition, there are the thousands upon thousands of homes now being occupied because people have nowhere else to live—homes that should be replaced at the earliest possible opportunity. The rural market, too, is another big factor in the future plans of Lustron dealers.

20 What about the Lustron Corporation?

It is firmly established, soundly financed, and thoroughly staffed to supply its share of the housing need at the full capacity of its giant plant for many, many years.

We welcome the strength and support of sound builder-dealer organizations—and we expect our association to be mutually profitable.

about the Lustron Home



THE LUSTRON HOME—A NEW STANDARD FOR LIVING

Size—five spacious rooms, plus large utility room—total of more than 1,000 square feet.

Design—follows growing trend toward conservatively modern, ranch-style architecture. Choice of colors for exterior and interior, all in non-glossy, semi-matte finish porcelain enameled steel.

Permanence—fireproof, decay-proof, rustproof,

termite-proof, verminproof, ratproof. Sunlight, salt water, or chemical fumes cannot stain or fade finish.

Heating—most modern type of radiant panel heating from ceiling. Automatic heating unit in utility room. Eliminates air currents that carry dust and dirt through house. Proved in two years of severe Chicago winters. House is fully insulated.

© L. C.

The Lustron Dealer Franchise—a statement of policy

It is the policy of Lustron to enfranchise well-established construction organizations capable of demonstrating to Lustron their financial, construction, merchandising, and land development qualifications. Thousands of applications have been received and are being investigated. Future applications from organizations meeting the above qualifications will receive careful consideration.

LUSTRON CORPORATION, Sales Department, Box 2023K, Columbus 16, Ohio



LIVING ROOM of the Lustron Home—a better house than many people ever expected to buy, yet well within the means of anyone who pays \$50 to \$60 a month rent.

PREFABRICATED GLASS BLOCK PANELS for residences are attractive, economical, time saving.

Kastlux Precast Panels are reasonably priced, prefabricated glass block panels that are delivered to the job ready for installation, and are simply installed by nailing into place. According to the manufacturer, an average size Kastlux panel costs approximately a third less than a laid-in-place panel. In addition the precast unit provides uniform high quality workmanship, neat appearance, ready availability and easy installation. Kastlux panels are usable in houses finished with wood siding, stucco or brick veneer. They can be employed advantageously wherever the features of glass blocks—appearance, light, privacy, insulation—are desired, and can be supplied in various sizes and shapes with any standard block design. The new panels are made on specially designed precision jigs which position and hold the blocks firmly during the casting operation. Cast prone with all block faces in one plane, and mortar joints accurately aligned, they boast uniform light refractions and neat appearance. The panel's frame is designed with an angling groove at jambs, head and sill into which the mortar flows to make it an integral part of the assembly. This groove, according to the manufacturer, also functions as a keylock against weather penetration. In addition to manufacturing completed panels, T. Kirk Almroth Associates, developers of Kastlux, are franchising their system of panel fabrication.

Manufacturer: T. Kirk Almroth Associates, 14215 Oxnard St., Van Nuys, Calif.

ALUMINUM REFLECTIVE INSULATION seals out heat and moisture.

Alumiseal is a sheet aluminum insulation (not a foil of paper) that is recommended for use as an insulation and vapor barrier in refrigerated structures, storage warehouses, etc. Supplied in light, easy-to-handle coils, 16 in., 25 in. and 32 in. wide, the .006 in. thick alloy features high thermal efficiency, permanently reflecting 95 to 97 per cent of radiant heat. When applied to walls, ceilings and floors with heavy lead-faced vaporproof tapes sealing the joints, it forms a complete metal envelope which stops effectively both moisture and heat. Due to the fact that moisture cannot penetrate the solid aluminum sheet—and the specially developed tapes are reported to completely stop the passage of vapor—the manufacturer claims that Alumiseal is without equal as a vapor barrier. The material is applied in layers with the number depending upon the temperature involved. Each layer is mounted on wood spacers and with its adjoining dead air spaces is said to be equivalent to more than 1 in. of standard mass types of insulation. Complete Alumiseal walls are stated to be at least 25 per cent thinner than equivalent mass insulation materials and thus to permit the building of smaller structures or the use of more pay-space. Alumiseal acts as a fire barrier, requires no maintenance, is sanitary, rust and verminproof. Coils contain approximately 900 sq. ft., cost averages about 8½ cents a sq. ft.

Manufacturer: C. T. Hogan & Co., Inc., 383 Madison Ave., New York, N. Y.

CEILING TILES feature smooth, permanent finish, insulating qualities, easy installation.

Roxdale Ceiling Tiles are easily applied 12 x 12 in. tongue and grooved hardboard tiles, 5/8 in. thick, with an attractive,

permanent finish. This finish, obtained by spraying 200° F. paint, is reported to retain its shining appearance for years and to eliminate the need of any future repainting. It may be cleaned instantly with a damp cloth and is non-chipping or crazing. The back of the new tile, a high quality insulating material, provides efficient insulation against heat and cold. It also supplies a good base for cementing to the ceiling while the tongue and groove feature assures accurate and permanent interlocking of the tiles. For easy handling and storage, a package of 50 Roxdale units measures only 13 in. x 13 in. x 32 in. Two packages are reported to be sufficient to tile an average size ceiling. The new tiles come in four colors—light blue, peach, ivory and white and are usable in homes, offices, stores and factories. Retail price is approximately 42 cents per sq. ft.

Manufacturer: National Tileboard Corp., 1314 Blondell Ave., New York 61, N. Y.

MINERAL WOOL ACOUSTICAL TILE has high absorption qualities, blocks passage of heat.

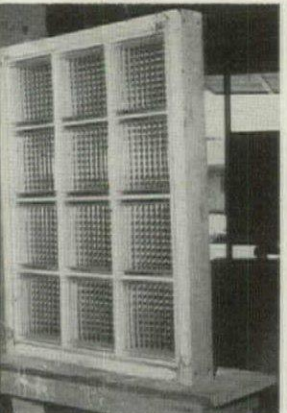
A new mineral wool acoustical tile with a pre-finished fissured surface, Travertone has a noise reduction coefficient of .65 and an absorbing efficiency as high as .79 for sounds originating at 1024 cycles. The lightweight, incombustible, low density material is also credited with blocking the passage of heat and providing excellent light reflection. Travertone is available in 12 x 12 in. and 6 x 12 in. tiles, 3/4 in. thick. It is supplied with a white factory-applied finish, beveled face edges and a paper back which insures a satisfactory base for adhesive application. Travertone is applied with cement and may be installed on any rigid, level surface. If desired, the manufacturer claims it can be painted without noticeable loss of sound efficiency.

Manufacturer: Armstrong Cork Co., Lancaster, Pa.

PLASTER-PAINT replaces plaster, prime coat and finish paints, adheres to smooth surfaces, porous materials.

The result of an exclusive method of compounding specially processed soybean oil and styrene with silica sand and pigment, San-Finish is a new plaster-paint product which both protects and decorates surfaces. A mixture with the consistency of a thick malted milk, it is applicable to both interior and exterior walls by brush or spray, with one heavy textured coat replacing the usual layers of plaster, prime coat and finish paints. According to the manufacturer, the extreme hardness of San-Finish, its enduring film flexibility and its abnormal adhesion are superior to both paint and plaster. When applied to the wall, the coating is said to form an exceptionally tough, durable, yet flexible surface of long life which is highly moisture resistant and washable. Under heat it will not blister, become soft or support combustion. Another important feature of San-Finish is that it can be applied to almost all surfaces. Used without a prime coat, controlled penetration is said to be the secret of its unusual ability to adhere to such porous materials as concrete and cinder block, insulation and wallboard,

(Continued on page 116)



home **PLUS...**

The G-E Way of Living!

Easy, electrical living is a must to your new prospects. Here's how you can include the G-E way of living—and get greater profit opportunities and prestige. Cost to the buyer—only \$4.80* extra a month—cost to the builder—nothing!

Home is shelter. Home is warmth. And home can be a want, too.

But in the house that features the General Electric way of living, men and women are never slaves to the home.

The All-Electric Kitchen and Laundry, like an army of less servants, take over the thousand and one tasks of homemaking. It includes the following appliances—G-E Automatic Dishwasher, Disposall†, Electric Range, Cabinets, Refrigerator, Automatic Clothes Washer.

The family really lives right in a G-E fully equipped home—enjoys the comfort, convenience, leisure and economy—that is the ideal of every home buyer!

People are learning to think of the General Electric way of living as a *basic part* of the home—included in the price—brought into the house from the ground up.

WHY GENERAL ELECTRIC?

Prospects are insisting on electric appliances, and are making plans for them in their new homes.

Which electric appliances? In a nationwide survey, 51% of the men and 53% of the women said they prefer General Electric Appliances!

**GENERAL ELECTRIC
HOME BUREAU
SUCCESS STORY
OF THE MONTH**

Baltimore home buyers switch to home with General Electric Kitchen. A. J. Watkins and Son sell six out of twelve G-E fully equipped homes before completion.

We'll be glad to tell you the whole story. And we'll show you how G-E Home Bureau can help you build better houses with the G-E way of living—and sell them faster!

Just drop a post card to the Home Bureau, General Electric Company, Appliance and Merchandise Dept., Bridgeport 2, Connecticut.

*When equipment is included in a long-term mortgage.

CAN THEY PAY?

People want the G-E way of living. They will buy it faster. Keep it longer. But will they pay *more* for it?

The answer—it costs so *little* more!

For an estimated average of \$4.80* or less extra a month, the home buyer can enjoy all the advantages of a G-E equipped home. The economies of owning these appliances are often enough to cover this extra slight monthly charge.

And to buy *even part* of this electric equipment on the installment plan would cost them far more per month—thus putting a strain on their home budgets.

So include the G-E way of living in the homes you build. See how appealing the "packaged mortgage" plan will be to your prospects.

ACT NOW

The G-E way of living has helped big and little builders all over the nation to make greater profits and build their reputations.

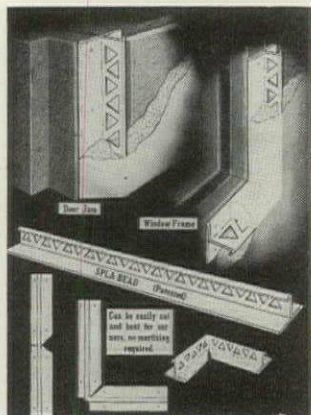
The G-E Home Bureau helps you to plan G-E fully equipped homes. And it follows through in helping you *sell*, too!

Read the typical Home Bureau story below. And act *today* to include the G-E way of living in your next project!

†General Electric's registered trade-mark for its food-waste disposal appliance.

GENERAL  ELECTRIC

THE APPLIANCES MOST WOMEN WANT MOST



brick and plywood. It is also said to adhere closely to polished surfaces including glass, cement, aluminum, hard board and tin. The new finish can be used to decorate rough plastered surfaces, cover brick, or in prefab and dry wall construction. Available in seven colors and white to which oil colors may be added to secure any desired shade, one gallon covers approximately 125 ft., retails at \$4.65.

Distributor: The Nall Corp., St. Charles, Ill.

PLASTER BEAD eliminates use of molding around doors and windows, cuts labor costs.

Spla-Bead is a new patented product which is reported to completely eliminate the use of molding around doors and windows, and all the work that this entails. It is further

reported to provide a neat, splay finish with savings in labor costs up to 75 per cent. The patented 28 gauge galvanized steel bead nails directly to the woodbuck and jamb, providing a secure bond and key for plaster around doors, windows and other wall openings. No counter sinking of nails, putting, sanding or lathing around the openings are necessary. And the bead can be quickly and easily cut and bent for corners; no mortising is required. Spla-Bead, according to the manufacturer, can be installed much faster than molding. Its initial cost is also reportedly much lower.

Manufacturer: Plasterbead Corp., 333 E. 2nd St., Los Angeles, Calif.

DAMP-PROOFING COMPOUND protects masonry surfaces below grade.

Hydrocide 700 is a new emulsified mastic compound for dampproofing exterior concrete and masonry surfaces below grade. An emulsion of mastic consistency containing specially refined asphalt reinforced with long-fibered asbestos, it is said to adhere with equal firmness to damp or dry surfaces and to produce an elastic, membrane-like coating that is resistant to penetration of moisture from the soil. According to the manufacturer, the new dampproofing compound which is specially designed for application to already moist surfaces not only saves time ordinarily required for the surface to dry but is equal in efficiency to a conventional 5-ply membrane system. Hydrocide 700 is supplied ready-for-use in 1 gal., 5 gal. and 1/2 drum and drum containers and is applied cold by trowel to 1/16 in. thickness. From four to five gals. cover 100 sq. ft.

Manufacturer: Building Products Division, L. Sonneborn Sons, Inc., 88 Lexington Ave., New York 16, N. Y.

KNOT SEALER prevents paint failure, allows use of common grade economy siding to reduce construction costs.

WP-578 Knot Sealer is a virtually clear synthetic resin liquid developed by the Western Pine Association for priming knots to prevent paint failure. When applied over knots before painting, it prevents discoloration on painted surfaces caused by leaching of resins through the paint, and makes sound tight-knotted lumber entirely suitable for many painted and enameled uses. As it allows the use of common grade economy sidings it helps reduce construction costs. According to the manufacturer, WP-578 has outperformed all tested sealers and methods. Exacting laboratory and field tests have indicated that good grades of exterior house paints will not discolor, check, crack, scale or peel, nor will "alligatoring" develop on treated areas during the usual span of years between repainting. The new product is formulated with Bakelite varnish, butyral resin and alcohol, is manufactured by more than 50 paint and varnish concerns. Formula and list of manufacturers can be obtained from the developer.

Developer: Western Pine Association, Yeon Bldg., Portland, Ore.

NEW WOOD PRODUCT with superior finishing surface introduced by Curtis Companies Inc.

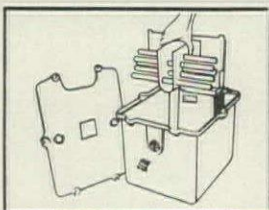
Curtis Companies Inc., has recently announced the development of a new woodwork product, Prespine, which will shortly be used in several of their products. Made from finely divided wood which is combined with a suitable binder and pressed into panels, Prespine has, according to company officials, a superior finishing surface which provides an excellent bond for paint. It will not

(Continued on page 120)

Q. What can you find in the New Wade Catalog that you can't find anywhere else?

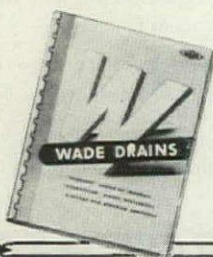


A. PLENTY! - for example: THE **HYDRAFILTER** FIRST and ONLY double-acting GREASE INTERCEPTOR



- TRAPS GREASE 2 WAYS** — by new hydraulic filtering plus conventional gravity separation
- EASIEST TO CLEAN** — has lightweight aluminum cover and quickly removable filter unit
- TRIPLE VENTED** — for installation in any situation — cannot siphon — meets all codes

Complete selection tables for a full range of HydraFilter sizes, plus dimensions, weights and prices, are just a few of the features found only in the New Wade Catalog. It's full of technical and practical information to help solve all sorts of drainage problems. If you have not yet received a copy, drop us a line today, telling us how many you would like.



WADE
MANUFACTURING COMPANY

82 N. STATE STREET ELGIN, ILLINOIS
Makers of Fine Drains and Plumbing Specialties Since 1865



Everybody's Pointing To Hotpoint



Today The Kitchen Is The Measure Of Value

**LET'S LOOK
AT THE
KITCHEN**

*30 Million People Know
Hotpoint Means the Finest
In Electric Kitchens*

TODAY, the kitchen is the yardstick of value among home builders and buyers. That's because the tremendous impact of powerful advertising has made Americans thoroughly kitchen conscious. In fact, the kitchen is now the most talked about room in the modern home!

Within the past three years more than 2,000,000 persons have written to Hotpoint about All-Electric Kitchens. Pioneer of the electric kitchen, Hotpoint is recognized as the leader in modern kitchen planning.

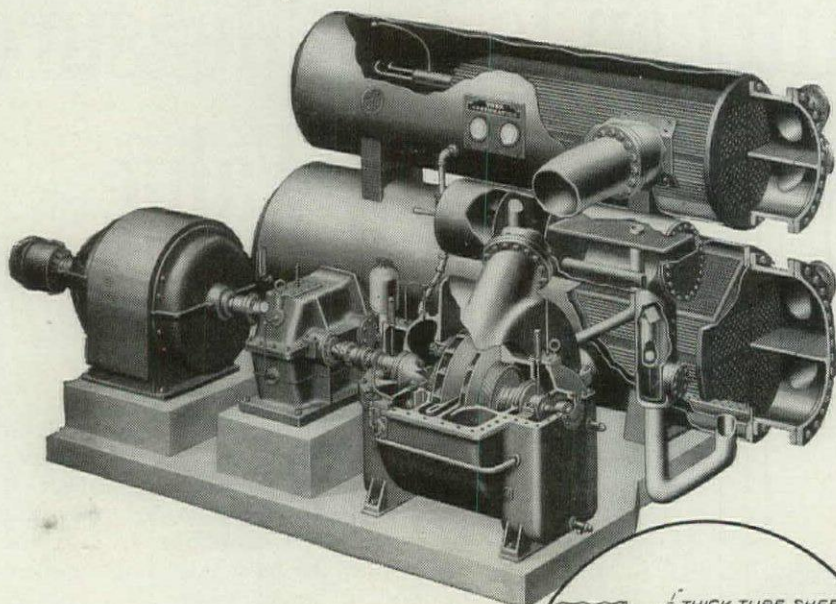


Alert architects and builders are finding good reason to invest enough extra in the kitchen to make it a real showplace. Also, they're learning that Hotpoint All-Electric Kitchens create confidence in the quality of the whole house and make today's building costs a little easier for prospective owners to take in their stride.

Your Hotpoint dealer is listed in the phone book. Hotpoint All-Electric Kitchens, Hotpoint Inc., 5600 W. Taylor, Chicago 44, Ill.
Copr. 1948, Hotpoint Inc., Chicago, Ill.

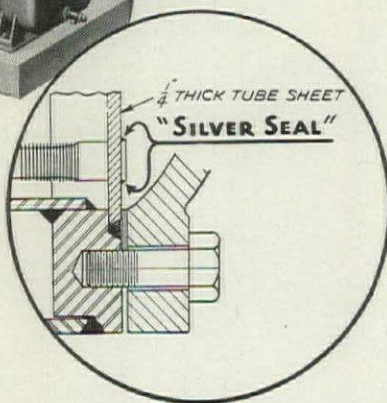
Hotpoint
HOTPOINT INC. A GENERAL ELECTRIC AFFILIATE

Weigh all the advantages



"SILVER SEAL" FOR SUPER SERVICE...

in the York Turbo Compressor System



In "Silver Seal" York presents another exclusive advantage of the Turbo Compressor System . . . a newer and better way of sealing the non-ferrous tubes and tube sheets in the condenser.

Tubes are belled slightly, then silver brazed to the tube sheets, rather than being rolled and expanded in the old way. The result is freedom from the distortional stresses set up by rolling and from resultant leaks.

In renewing tubes, "Silver Seal"

makes it possible to *cut out* any individual tube easily and quickly with a hole-saw cutter and leave a hole of the original diameter. Thus, the new tube is easily inserted and silver-brazed in the same manner as the original. There's no place here for hammer and chisel!

In fact, a study of the whole York Turbo-Compressor System will reveal efficiency, economy and service features not to be found elsewhere. May we send you detailed information? York Corporation, York, Pa.

YORK *Refrigeration and
Air Conditioning*

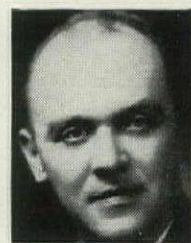


HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

York's Engineering Assistance backs up York's Outstanding Equipment

Experience and practical technical assistance unequalled elsewhere are available to you as a York customer . . . wherever you may be.

In the Central District, for example, Manager Floreth located in Chicago, assisted by fourteen York-trained sales engineers, is at the service of York customers in this district. The highly practical, up-to-the-minute assistance and advice of these gentlemen are available to you at all times, whether you are planning, purchasing, installing or operating refrigeration or air conditioning systems or equipment.



J. J. FLORETH
District Manager

Assisted by

G. W. Ashlock
W. E. Barnum
H. G. Chapin
L. J. DuBois
T. M. Hughey
E. N. Kerrigan
I. F. Lounsbury
R. E. Miller
S. M. Miner
C. G. Quermann
J. F. Raether
K. A. Roffmann
B. O. Schwendener
D. C. Warfield

Eye Openers!



▲ Sweeping expanse of *Polished Plate* glass, with fully transparent *Tuf-flex* doors, gives passersby a clear view of the store interior . . . provides a day-and-night selling display. Architect: L. Schoall Miller, Long Beach, Calif.

◀ Cheery light, streaming through huge windows in this restaurant, extends a hearty welcome to passing traffic. Architect: Ray L. Ignelzi, Chicago Heights, Ill.



... PLANNED FOR SELLING!

Whatever your client sells, you can give his store more selling power with a Visual Front.

A Visual Front uses glass to capitalize on the fact that buying usually starts with seeing. Attention is directed through the front to the store interior, its merchandise and its activity. That's why the Visual Front is sound—in principle and in performance.

The Visual Front is practical, too. Its large areas of glass mean lower maintenance—for glass doesn't need refinishing, keeps its smart, new appearance year after year. Write us for our colorful book of Visual Front ideas. Libbey-Owens-Ford Glass Company, 4488 Nicholas Bldg., Toledo 3, Ohio.

GLASS FOR VISUAL FRONTS

See your L-O-F Distributor

FOR TRANSPARENT AREAS—L-O-F Plate Glass, ground and polished for maximum freedom from distortion. To insulate glass areas, specify *Thermopane*®. Its panes are separated by sealed-in, dehydrated air. *Thermopane* is readily available. For doors and other areas that might be subject to impact, specify *Tuf-flex*® tempered plate glass.

FOR TRANSLUCENT AREAS—to bring in light and assure privacy, use Blue Ridge Patterned Glass for walls and partitions.

FOR SOLID AREAS—Colorful *Vitrolite*® glass facing keeps its luster, doesn't need refinishing and is unaffected by weather. Does not warp, swell or craze.

*®



LIBBEY • OWENS • FORD
a Great Name in **GLASS**

cause cracks or checks through paint or paint discoloration. There is no grain raising, and the edges offer an improved finishing surface. According to the manufacturer, Prespine is a highly stable product, uniform in structure. Tests show that it has the strength to take heavy impact blows and that it does not mar or scratch easily, splinter or chip at the edges. Prespine will be used in the production of Curtis doors and kitchen units and in other Curtis products, according to company officials, where tests have shown it to be advantageous. *Manufacturer:* Curtis Companies Inc., Clinton, Iowa.

PLASTIC SURFACED WALLPAPER LINE provides durable, decorative effects at moderate cost.

Tru-Grain wall coverings, featuring 21 reproductions of wood-grains and marble, are a new line of durable, plastic-surfaced

wallpapers which are said to provide decorative effects at moderate cost. The papers are printed with plastic inks and are covered with a layer of cellulose plastic. Stainproof, scuffproof, greaseproof, water resistant and sun fast, they can be cleaned with soap and water and are applied like ordinary wallpaper with wheat paste. In addition to their main function, to cover walls, Tru-Grain papers can be used for table tops, floor coverings, lamp shades etc. They are available in rolls, 31 in. wide by 5 yds., are priced at \$3.00 per roll.

Manufacturer: The Ullman Co., 319 McKibbin St., Brooklyn, N. Y.

NEW FLOOR COVERING DESIGNS introduced by Sloane Blabon.

Sloane Blabon Corp. has recently presented its fall line of 39 new and distinctive floor and wall covering patterns. The line includes seven new Resilient Enamel rugs, five Resilient Enamel floor coverings, three Marblitone linoleum designs, three inlaid linoleum patterns, 18 new Koroseal floor tiles in crystaltones, and three Resilient Enamel wall coverings. The heavyweight Resilient Enamel rugs are offered in 6 x 9 ft. to 9 x 15 ft. sizes. Heavyweight Resilient Enamel floor covering in straight line inlaid and Marblitone linoleum are available in 2 and 3 yd. widths. Koroseal tiles are 9 x 9 in. while Resilient Enamel wall covering is produced in 54 in. width.

Manufacturer: Sloane Blabon Corp., 295 Fifth Ave., New York, N. Y.

PLASTIC ASBESTOS FLOOR TILE withstands service, is usable above or below grade.

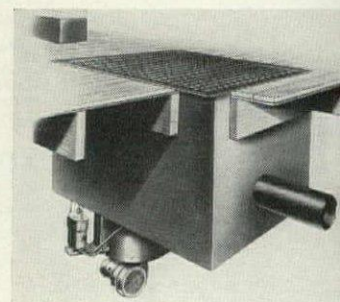
Permalite, Johns-Manville's plastic asbestos floor tile, is a new decorative flooring material for new construction or remodeling. Extremely flexible and unaffected by grease or oil, alkaline moisture or mild acid solutions, it conforms to uneven floor surfaces and can be laid over any type of base. It can be applied above or below grade, is resilient and comfortable underfoot yet resists indentation as well as fire and cigarette burns. Ease of maintenance is another feature. Permalite comes in 9 x 9 in. tiles in five marbelized colors—brown, black, gray, yellow and red. It is sold on an installed basis only, at a cost comparable with rubber tile, and is usable in offices, schools, hospitals, kitchens, restaurants and various types of light manufacturing areas.

Manufacturer: Johns-Manville Corp., 22 East 40th St., New York, N. Y.

IMPROVED FLOOR FURNACE features forced-draft.

The new Gillen Floor Furnace, a thermostatically regulated automatic oil burning floor furnace, incorporates a motor and blower attachment to furnish a steady, controlled draft regardless of adverse draft conditions. This forced-draft feature, according to the manufacturer, results in virtually perfect combustion and produces a clean high fire with drafts as low as .02 in. Oil flow is automatically controlled by a room thermostat but may be manually regulated by the unit's floor level control

(Continued on page 124)



Same bedroom with single hinged closet door and with parallel sliding doors. Direct access to either half of closet is possible as each sliding door opens to opposite side of door frame. Note added floor space available with sliding doors.



For more "Living" room USE VANISHING DOORS



Whether the job calls for tiny kitchenette apartments or a palatial mansion, there's no getting around one fact—hinged doors waste space! That is why more and more residential building plans specify vanishing doors for closets, wardrobes, connecting rooms, etc.

With vanishing doors, sliding from side to side, there's no interference with the location of furniture, lighting fixtures, pictures, rugs—nothing in the room gets "behind the door." Used for closets and wardrobes, they permit direct access to entire contents without fuss or bother.

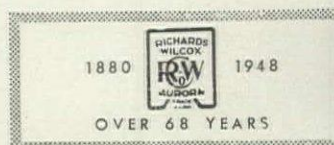
SPECIFY R-W VANISHING DOOR HANGERS AND WOOD-LINED TRACK

For smooth, silent, trouble-free operation, specify vanishing doors installed with Richards-Wilcox No. 719 Vanishing Door Hanger and Wood-Lined Steel Track. No oiling required . . . hanger wheel has Olite self-lubricating bearing, rolls on self-centering woodtrack lining without metal-to-metal contact.

FOR USE IN 2" x 4" STUDDED WALLS




Richards-Wilcox No. 719 Vanishing Door Hangers and Wood-Lined Steel Track are designed for use in 2" x 4" studded walls. This outstanding feature is made possible by the R-W engineered "Ordinary Wall" pocket.

For complete details—or free consultation without obligation—call or write the nearest Richards-Wilcox office.



Branches: New York, Chicago, Boston, Philadelphia, Cleveland, Cincinnati, Washington, D. C., Indianapolis, St. Louis, New Orleans, Des Moines, Minneapolis, Kansas City, Los Angeles, San Francisco, Omaha, Seattle, Detroit, Atlanta, Pittsburgh.

Specify Spencer

FOR  PERFORMANCE
FOR  ECONOMY
FOR  PROFIT

JOIN the happy group of Heating Experts and contractors who SPECIFY SPENCER. Every Spencer is engineered by Spencer in our own research and testing facilities. Engineered for performance — ease of installation and long life. This gives you more chance to earn and keep a profit. No trouble calls—no difficult installations.

There is a size and type Spencer Boiler to meet every heating requirement—from the famous Spencer lines of residential cast iron and steel heating boilers to the complete "A" line of commercial steel low pressure units. Get complete customer satisfaction—write today and you, too, will specify Spencer!



REG. U.S. PAT. OFF.
FULLY APPROVED

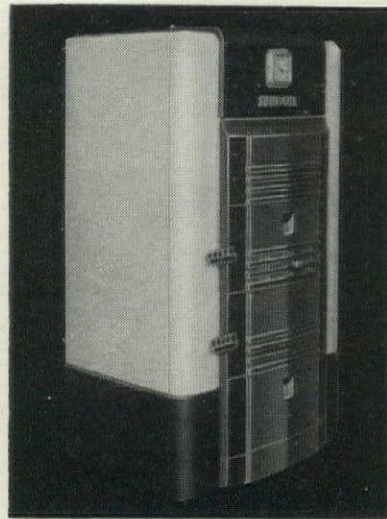
FULLY APPROVED
Built in accordance
with ASME Code
Insurance Inspected



IT'S ANOTHER **AVCO** PRODUCT!

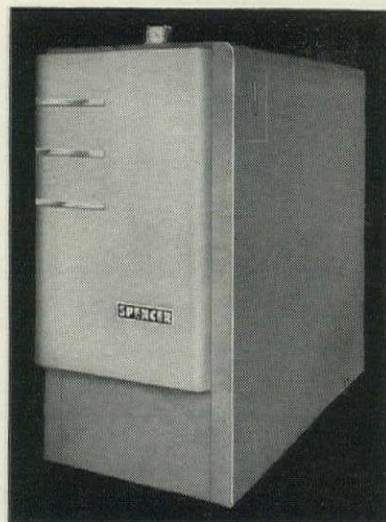
SPENCER HEATER

DIVISION — AVCO MANUFACTURING CORP., DEPT. AA-4, WILLIAMSPORT, PA.



THE NEW SPENCER
SERIES "21"

Designed to burn any type of fuel—easily and quickly converted. Year-round domestic service hot water. A sectional boiler designed with iron to iron air tight fit. Attractive jacket combined with modern design door assembly featuring glass observation ports.



FAMOUS SPENCER
SERIES "C"

Steel Heating Jacketed Boiler for homes and smaller commercial buildings. For mechanical or hand firing—easily and quickly converted. Features include easy accessibility for cleaning—precision ground water cooled flue and fire door frames. Available with year-round domestic hot water heating method.

A TIP TO YOU MR. HEATING CONTRACTOR ...

Remember those uneconomical, troublesome, oil fired jobs you serviced last winter? Why not render the home owner a real service and add to your own profits? Sell high efficiency low cost fuel burning Spencer Steel or Cast Iron Boilers. With oil costs at present levels, modern Spencer replacement boilers can easily pay for themselves through fuel cost savings alone.

ANOTHER
HOME

with



The sign
of the
times is...

"Certified Adequate Wiring"

PROOF ADEQUATE — another home-building project featuring Certified Adequate Wiring — the Paul E. Lapp development, Dayton, Ohio.

What It Means To You: Certified Adequate Wiring makes today's home buyers tomorrow's boosters. It helps you build houses that stay modern for years to come. It helps you sell houses easier and quicker because: (1) it overcomes today's buyer resistance; (2) it assures you of promotional support from your local electrical industry.

What It Means To The Home Buyer: Adequate Wiring makes even a moderate-cost house, or a re-modeled home, *modern*. It provides not only for today's electrical needs but for those of tomorrow—including such things as kitchen and laundry appliances which

can be covered by a "packaged mortgage."

What "Adequate Wiring" Means: An adequate electric service entrance; enough circuits, enough convenience outlets; permanent lights and switches.

Here's What You Can Do About It:

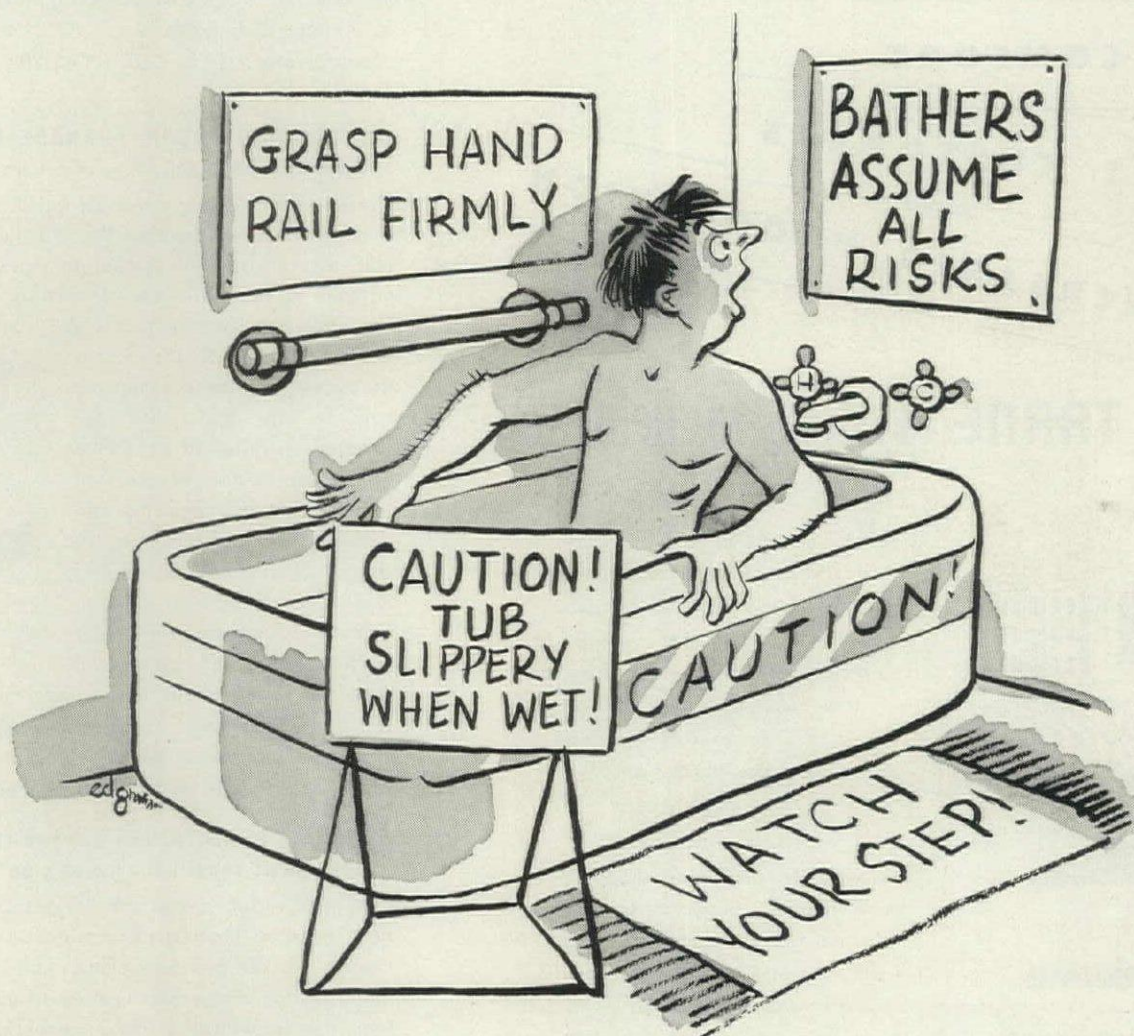
1. Use the services of your local Adequate Wiring Bureau in preparing complete wiring layout for every floor plan.
2. Install Adequate Wiring in accordance with this layout.
3. Obtain your "Proof Adequate"—a certificate to present with each deed.
4. If there is no Adequate Wiring Bureau in your area, *write us* for details of how to take advantage of "Adequate Wiring" as a sales feature.



**NATIONAL
adequate wiring
BUREAU**

CLIP AND MAIL TODAY for free information and material!
NATIONAL ADEQUATE WIRING BUREAU, Dept. AF-8
155 E. 44th Street, New York 17, N. Y.
Please send me, without charge, information on how to take advantage of Adequate Wiring as a sales feature.

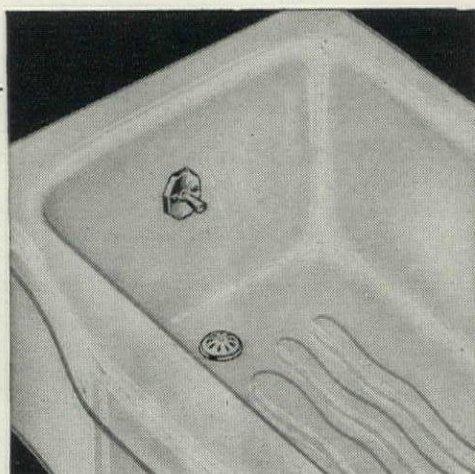
NAME.....
FIRM.....
STREET ADDRESS.....STATE.....
CITY.....



... obviously not a Briggs safety-bottom bathtub!

COPYRIGHT 1948, BRIGGS MANUFACTURING CO.

No mistaking a Briggs Beautyware bathtub—because there's nothing like it in the business. It's die-formed *steel*. It's an easy-to-lift 110 pounds. It's leakproof at tub-wall line (thanks to an integral lip flange). It's superior in quality: every tub furnished in stainproof (acid resistant) porcelain enamel at no extra cost. To say nothing of its famous Safety-Bottom—safety hand grip—side-rim seat . . . greater level-bottom area! No wonder Briggs Beautyware—with its pace-setting design and moderate cost—is the best-to-be-had in plumbing fixtures today! Write now for new catalog featuring Briggs plumbing fixtures and Briggs brass. Briggs Manufacturing Co., 3023H Miller Ave., Detroit 11, Mich.



BRIGGS *Beautyware*

You're looking at the greatest boon to bathers ever invented: Briggs' patented Safety-Bottom. It's safer for sit-down or shower bathing, for getting in and out.

Whether you are looking for

BETTER COMFORT

MORE CUSTOMERS

INCREASED PRODUCTION

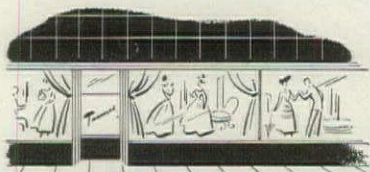
there is a TRANE system to help you



domestic.....

HEATING AND AIR CONDITIONING

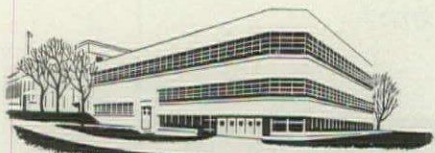
Stretching out instead of up, this comfortable new apartment group is built on a hill. The problem of heating apartments below the level of the boiler was solved with a Trane system. Trane Convactor-radiators give each room in each apartment individual heat control.



commercial.....

HEATING AND AIR CONDITIONING

This well designed new shopping center enables suburbanites to fill all their needs near home. Trane air conditioning in the stores, bowling alleys, and theater adds a comfort incentive that assures profitable year-round business for the center.



industrial.....

HEATING AND AIR CONDITIONING

When this tire manufacturer built a new office building, he chose a Trane system to give all-season comfort to the offices and the cafeteria. Trane Convactor-radiators provide an added touch of warmth and offset drafts at windows during the cold winter season.

There is a Trane System to solve every kind of heating and air conditioning problem efficiently, whether it be comfort or process—domestic, commercial, or industrial. Trane Systems are designed to fit your application by architect, engineer, or contractor. 200 Trane Sales Engineers offer their counsel. *Users' names on request.*

TRANE

MANUFACTURING ENGINEERS OF
HEATING and AIR CONDITIONING

THE TRANE COMPANY, LA CROSSE, WISCONSIN **systems**
ALSO, TRANE COMPANY OF CANADA, LTD., TORONTO

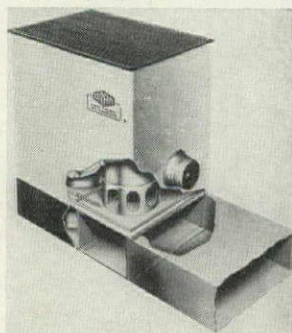
rod if necessary. A constant level oil control valve with an anti-flooding device combine to assure proper metering of the fuel to the burner and a safety limit control bulb prevents over-heating. U/L approved, the new Gillen unit delivers an approximate output of 52,500 b.t.u.'s, measures 48 in. high, 37 in. long, 25 in. wide.

Manufacturer: J. L. Gillen Co., 204 E. High St., Dowagiac, Mich.

OIL BURNING FLOOR FURNACE has auxiliary cold air return duct system.

Designed to circulate warm air uniformly through every room, the new Oran oil burning floor furnace features an auxiliary cold air return duct system to draw cold air from remote corners of the building. According to reports, the unit is the only furnace with such an auxiliary system and is so designed that both the return ducts and thermostatic controls can be included with the original installation or added later. The furnace is also said to offer greater heating efficiency through the use of Armco Aluminized steel and welded construction of the combustion chamber and heat exchanger. The commercial standard rating of the new furnace is 50,000 b.t.u. at 30 cc. per minute oil flow. Finished in baked enamel it requires a 24 1/4 x 36 1/4 in. rough floor opening.

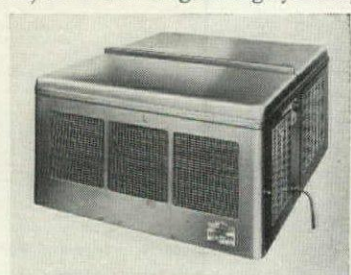
Manufacturer: Oran Co., 2232 S. Third St., Columbus, Ohio.



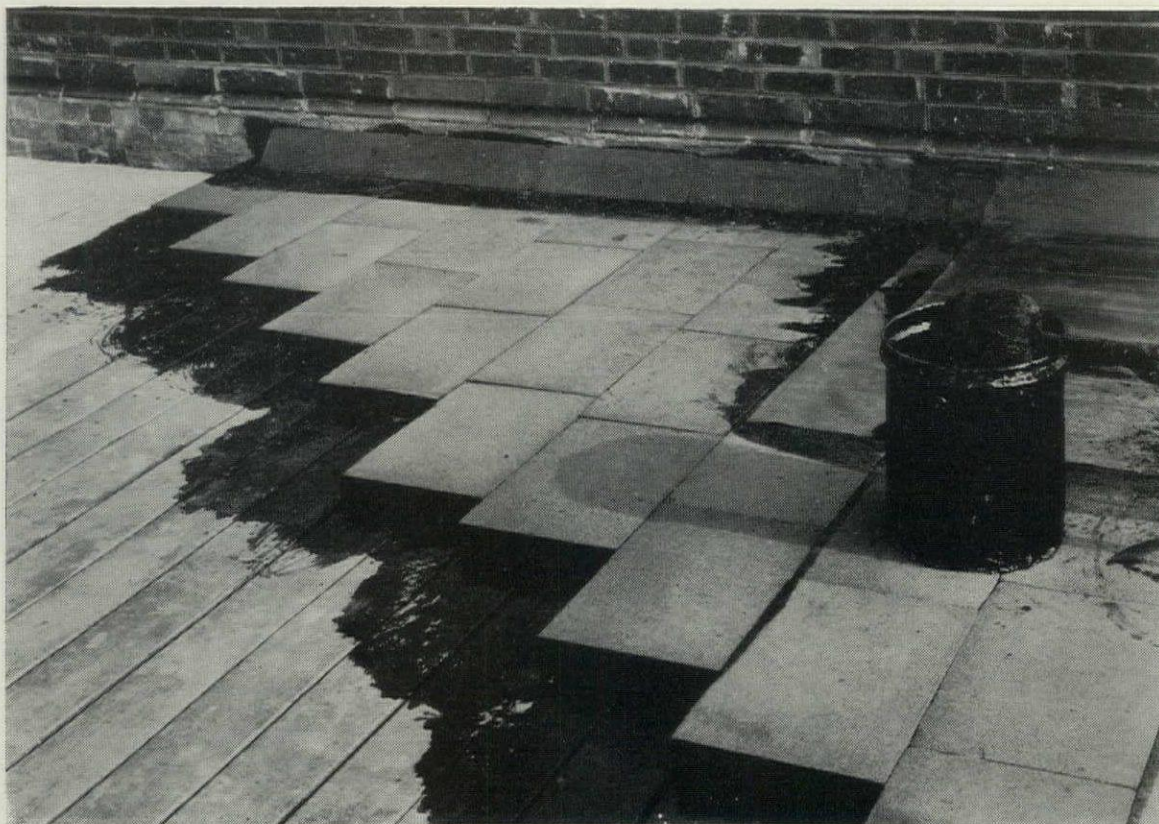
ROOM AIR CONDITIONER has two refrigerating systems, is capable of conditioning rooms up to 500 sq. ft.

Equipped with two separate refrigerating systems, Frigidaire's new window type room air conditioner permits selective cooling for the home or office. One system can be operated alone during temperate weather to cool a room, or both systems can be operated simultaneously on extremely hot days. According to the manufacturer, the dual refrigerating systems, operated by two hermetically-sealed, self-oiling "Meter-Miser" compressors, provide more than 3/4 of a ton refrigerating capacity. The unit filters, dehumidifies, cools and circulates air at the rate of 325 c.f.m. and is capable of conditioning rooms up to 500 sq. ft. in size. Fresh outside air for ventilation can be added at a rate up to 50 c.f.m. A four-position master switch controls the fan and cooling systems while an adjustable fresh air control governs the amount of outside air brought into the unit. Both the cooling and condensing fans are powered by a single 1/6 h.p. motor. Insulation, rubber mountings and the hermetically sealed compressors reduce operation noise to a minimum. According to the manufacturer no expensive plumbing alterations are necessary for installation, and operating economy is achieved due to the fact that the systems can be operated separately. The new unit is finished in bronze enamel, measures 28 1/4 in. wide, 32 3/8 in. deep and 14 1/4 in. high, operates on 230 v., 60/150 cycle, A.C.

Manufacturer: Frigidaire Div., General Motors Corp., Dayton 1, Ohio.

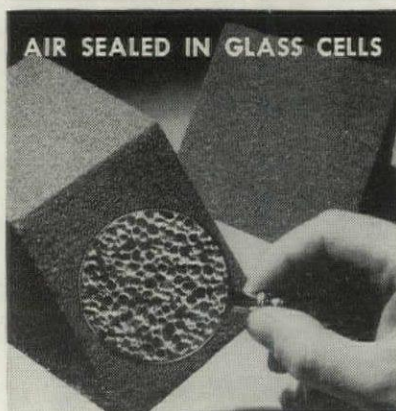


(Continued on page 128)



It's Waterproof!

That is one of the main reasons why PC Foamglas is the permanent insulation.



THE MAGNIFIED CROSS SECTION of PC Foamglas shows its cellular structure . . . glass bubbles solidified into big, strong, rigid blocks. In the millions of cells of glass-enclosed air lies the secret of its insulating value.

Water cannot get into or through PC Foamglas. Exhaustive immersion tests in the laboratory and long practical use in marine floats, rafts and buoys, have proved that.

Foamglas is made of true glass, in the form of millions of minute air-filled closed glass cells, solidified into strong, rigid blocks. Therein lies the secret of its insulating efficiency.

PC Foamglas is also fireproof, verminproof, fumeproof, and acidproof. It withstands humidity and is an effective vapor seal. When installed according to our specifications, for recommended applications, PC Foamglas retains its original insulating efficiency permanently.

Our current booklets describe and illustrate many applications in which PC Foamglas, on roofs, in walls and floors, is helping to maintain desired temperatures, to minimize condensation. Why not send in the convenient coupon today? We shall be glad to forward free copies of the booklets you select. Pittsburgh Corning Corporation also makes PC Glass Blocks.



FOAMGLAS INSULATION

FOR ADDITIONAL INFORMATION SEE OUR INSERTS IN SWEET'S CATALOGS

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

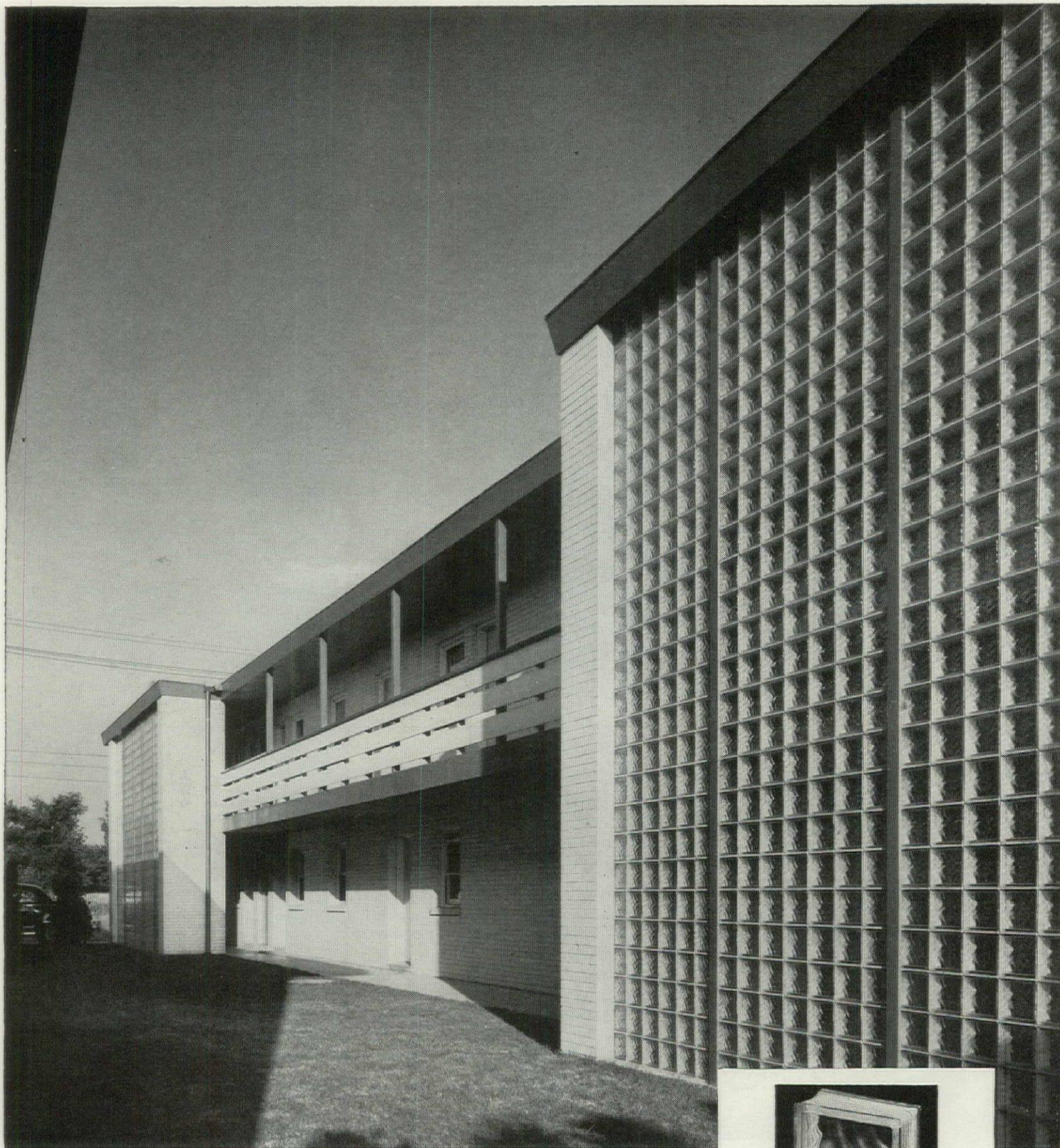
Pittsburgh Corning Corporation
Room 492-8, 632 Duquesne Way
Please send me without obligation, your **FREE** booklets
on the use of PC Foamglas Insulation for:

Roofs _____ Walls _____ Floors _____

Name _____

Address _____

City _____ State _____

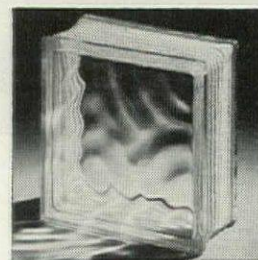


E. L. ANDERSON COMPANY, CHICAGO, DESIGNERS AND BUILDERS

Secret of the hidden stairs: Twin screens of Insulux Glass Block rise in plane surfaces from ground to roof, concealing the otherwise unsightly outside stairways of these new Chicago apartments.

Privacy is assured without a sacrifice of daylight.

American Structural Products Company is a wholly owned subsidiary of the Owens-Illinois Glass Company. It has taken over the manufacture and sale of Insulux Glass Block and other Owens-Illinois structural products. For information, address Dept. E-18, P.O. Box 1035, Toledo 1, Ohio.



INSULUX

GLASS BLOCK

AMERICAN STRUCTURAL
PRODUCTS COMPANY

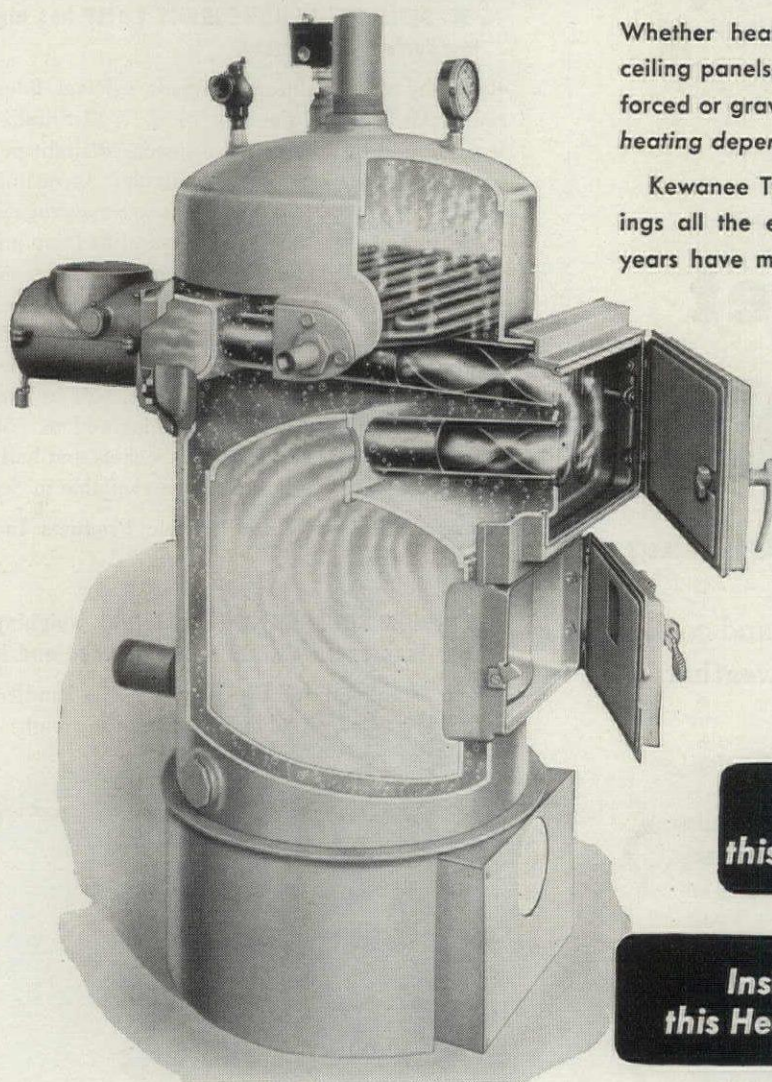
Subsidiary of
OWENS-ILLINOIS GLASS COMPANY

KEWANEE

☆ REG. U. S. PAT. OFF.

**Cuts Heating Costs
in Homes and
Small Buildings**

**ROUND
"R"
STEEL BOILER**



Whether heating with conventional radiators; wall, floor or ceiling panels; or radiant baseboard heat . . . by steam, vapor, forced or gravity hot water . . . with oil, gas or coal . . . efficient heating depends primarily on the boiler.

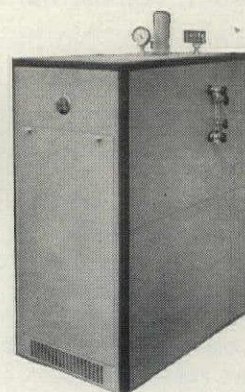
Kewanee Type "R" now brings into homes and small buildings all the extra efficiency and dependability which for 80 years have made the larger Kewanee Boilers outstanding for the bigger heating jobs.

An ideal team-mate for any good burner or stoker Type "R" is also highly efficient with hand fired coal. AND a switch from one fuel to another . . . or from mechanical to hand firing . . . can be made quickly and inexpensively without any change in the boiler proper.

**Sizes to heat 275 to 900
Square Feet Steam Radiation.**

**Outside . . .
this "Smartline" Jacket**

**Inside . . .
this Heart of Steel**



Reg. U. S. Pat. Off.
MEMBER

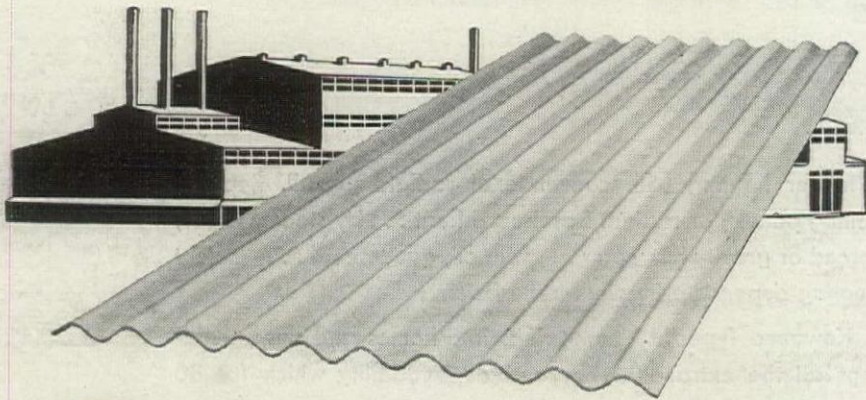
KEWANEE BOILER CORPORATION
KEWANEE, ILLINOIS

Branches in 60 Cities—Eastern District Office: 40 West 40th Street, New York City 18

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

**OVER
75 YEARS
BOILERMAKERS**

Planning a Chemical Plant Oil Refinery Paper Mill? ... or an addition



You can now get ASBESTONE

Asbestos-Cement Corrugated Roofing & Siding

—the lifetime roofing and siding that's fireproof and corrosion-proof. Asbestone can't be damaged by weather, rats, or termites. No painting. No upkeep.

Here are a few of the many prominent users:

LONE STAR CEMENT CORP.
CALIFORNIA OIL CO.
CHAMPION PAPER and FIBRE CO.
ETHYL CORPORATION
FREEPORT SULPHUR CO.
NEW ORLEANS PUBLIC SERVICE
MOBILE PAPER MILL CO.
CROSBY CHEMICALS, INC.
STANDARD OIL OF N. J.
UNIVERSAL ATLAS CEMENT CO.

Why we can assure you early delivery

We are concentrating on production of this single industrial product. Stocks are now ample to make some immediate shipments. Free Engineering Service, available on request, shows how Asbestone can be adapted to your needs.

ASBESTONE CORPORATION

5300 TCHOUPITOUHAS STREET NEW ORLEANS 15, LA.

Specialists in Asbestos-Cement Building
Products for over 25 Years

LOUVERED LIGHTING SYSTEM gives spacious effect, aids selling.

When used in commercial buildings, General Lighting's new modular Allouver ceiling[®] is said not only to give the effect of natural daylight lighting but also to enlarge the scope of possible marketing ideas. The ceiling is made up of standard, modular louvered sections, 18 x 48 in., with either 3 in. or 1½ in. cubes. These sections are simply suspended by a hinged catch mechanism on telescoping rods which allow single sections to be unhinged or removed without disturbing the others. By replacing a standard louvered section with artwork on a translucent panel the manufacturer suggests that the ceiling can be used as a selling aid, indicating the locations of wares in the store. By slightly sloping the ceiling to the rear, the designer can affect an impression of depth. The modular louvered sections are made of aluminum for easy handling and can be sprayed and baked to match any specific color.

Manufacturer: General Lighting Co., 32 Union Square, New York 3, N. Y.

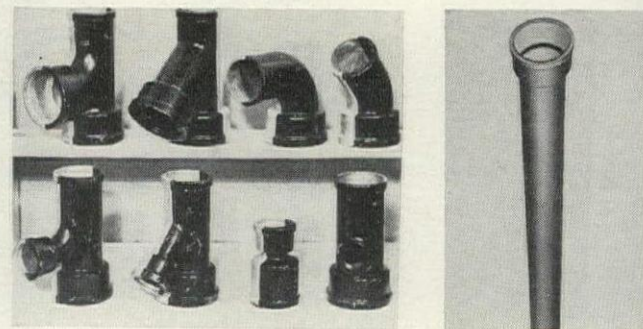
75 W. SLIMLINE FLUORESCENT LAMP has high efficiency, low surface brightness.

Rated by the producer the most efficient fluorescent lamp ever manufactured, the new 75 w. T 12 Slimline fluorescent lamp is said to provide more lumens of light per dollar than any other fluorescent lamp available. According to Sylvania Electric Products, Inc., it exceeds by an average of 600 lumens the output of their familiar T 8 Slimline lamp and in addition provides long life and better maintenance characteristics. It is also said to have a lower surface brightness than other fluorescent lamps which results in less glare and more seeing comfort. The new instant-start, 75 w. Slimline, measuring 96 in. long and 1½ in. in diameter, will be available in the recently introduced Warmtone color and in 3,500° standard white. Price will be around \$3. Sockets and ballasts designed for operation of the lamp will be available in September.

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

ALUMINUM SOIL PIPE AND FITTINGS, weighing 75 per cent less than cast iron, are easily handled and installed.

Gasco Aluminum Soil Pipe, a new easily handled pipe for use in above-ground plumbing installations, weighs only a fourth



as much as cast iron pipe. In addition, it has greater impact strength than cast iron pipe and is interchangeable with extra heavy cast iron pipe and fittings. A 5 ft. length of 4 in. Gasco aluminum single hub soil pipe weighs only 13 lbs. as compared with 65 lbs. for the same size cast iron unit. This weight-saving advantage permits easier, safe handling by the plumber and aids (Continued on page 132)

NOW — lower priced than ever before!



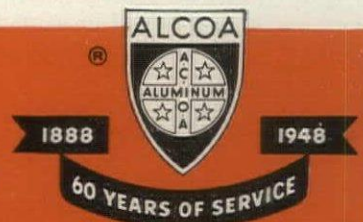
ALCOA ECONOMY CASTINGS FOR SPANDRELS

CALL TODAY
get price and design data

Alcoa Economy Castings can be produced promptly. For complete information on prices and design specifications, ask for the booklet, Alcoa Economy Castings. Call your nearby Alcoa Sales Office or write ALUMINUM COMPANY OF AMERICA, 1866 Gulf Building, Pittsburgh 19, Pennsylvania.

Now you can improve appearance and *reduce construction costs* by using high-quality Alcoa cast spandrels and wall panels. By co-ordinating design specifications and production facilities to permit maximum economy, Alcoa now can offer cast aluminum spandrels and wall panels at lower prices than ever before. Add to the advantage of low price, the economies of aluminum's light weight, corrosion resistance and easier handling and you'll see how Alcoa Economy Castings can help you solve the problems of construction time and costs.

ALCOA **FIRST IN**
ALUMINUM



For more and better production . . .



Color Dynamics . . .

Scientific use of energy in color will increase efficiency and enhance appearances of the structures you plan and build!

EVERY architect, builder and contractor should be familiar with Pittsburgh's science of COLOR DYNAMICS.

Its principles are based upon physical and mental reactions of human beings to color.

Knowing this new method of utilizing *energy in color*, architects can specify confidently color arrangements that increase efficiency as well as enhance appearance. When they specify Pittsburgh Paints they recommend the best in paint protection. Being made with "*Vitolized Oils*" they are more easily applied, stay *live*, tough, elastic—and last indefinitely.

By the scientific selection of color, architectural features can be subdued or emphasized at wish. Rooms can be made to

seem more spacious, halls wider and brighter, ceilings higher or lower.

But more important than this—use of COLOR DYNAMICS has demonstrated in scores of industrial plants that workers' eye fatigue is reduced, absenteeism is cut down, safety is increased, quality and quantity of production are bettered.

In schools, it stimulates and refreshes pupils and teachers alike. In hospitals, it speeds convalescence and increases efficiency of medical staffs.

How all these things are achieved is fascinatingly told in our book, COLOR DYNAMICS. Send for your free copy—today! Write Pittsburgh Plate Glass Company, Paint Division, AF-88, Pittsburgh 22, Pennsylvania.



PITTSBURGH PAINTS

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

heating and cooling
for year-round comfort—
both from a
single system



There's no winter lay-off for Carrier Conduit Weathermaster air conditioning . . . no planning a separate, costly heating system for the cold months. With this modern, flexible air conditioning, any multi-room building can have economical comfort in every room any season *with a single system*.

Both cooling and heating are furnished by the same compact individual room unit located under the window. That's space and money saved. The room units have no moving parts to need service and replace-

ment. That means quiet operation, low maintenance costs.

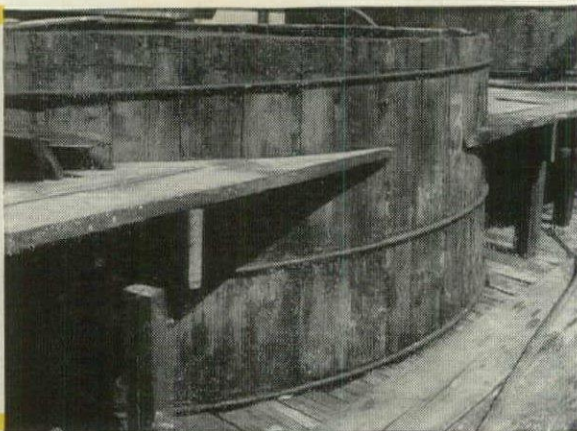
Individual room control lets tenant or guest choose the temperature he wants at the twist of a simple valve. Since there is no interroom recirculation, there's no transfer of noise or odors. Space saved by small-diameter conduit gives the owner more rentable area. For buildings up to five stories, there's the Carrier Duct-type Weathermaster system. This, too, provides room-by-room temperature control and year-round heating and cooling.

Carrier systems are designed and built with the same unrivaled skill that created the air conditioning industry. They're bringing dependable air conditioning to the world's best-known hotels, office buildings, hospitals, apartments, stores, factories and steamships. Carrier's experienced engineers for years have worked closely with architects and consulting engineers to bring the utmost in air conditioning comfort to each individual installation. Carrier Corporation, Syracuse, New York.



AIR CONDITIONING • REFRIGERATION • INDUSTRIAL HEATING

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Use Pentachlorophenol-treated lumber and add years to the life of your wood construction!

Wood treated with Pentachlorophenol, the modern wood preservative, far outlasts the life of untreated wood, giving thorough protection against termites and decay. Furthermore, construction and maintenance men prefer working with Pentachlorophenol-treated wood because it's clean and easy to handle.

Build the modern way and effect savings in lower maintenance and replacement costs—use Pentachlorophenol-treated lumber!

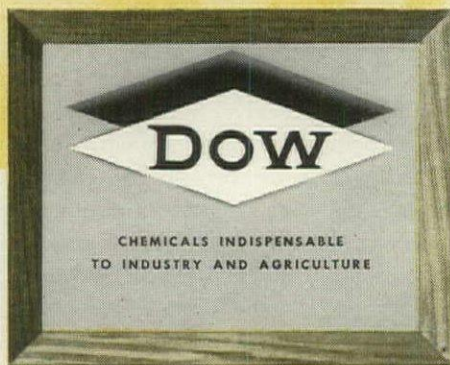
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BUILDING REPORTER

prefabrication; several joints can be handled by one man. It also, of course, provides a 75 per cent weight-saving in the completed plumbing system. Another feature of Gasco pipe, which is reportedly not nearly so brittle as cast iron pipe, is that it will not break in handling or shipping. The new pipe units are completely interchangeable with extra heavy cast iron pipe and fittings, and can be calked with lead and oakum, although the use of lower-priced molten sulphur is recommended. Gasco aluminum soil pipe and fittings are coated inside and out with a special acid-alkaline-resistant coating, and are rust and scaleproof. Both 2 in. and 4 in. single and double hub pipe and a full line of 2 in. and 4 in. fittings are available.

Manufacturer: General Aluminum Supply Corp., 235 Rialto Bldg., Kansas City, Mo.

ELECTRIC RANGE features push-button cooking.

A completely new automatic electric range which boasts 40 departures from earlier models, Hotpoint's new RC-11 is credited with five important advantages: simplicity and ease of operation, faster operation, new accuracy in "cooking by color," greater cooking convenience and improved appearance.

Probably the newest refinement featured by the range is push-button control. A series of transparent push-buttons which register in red, yellow, violet, green and blue to identify individual heat settings, also act as switches for both the four surface units and the oven. These color-identified push-buttons are located on the tilted backsplash in clear reach and view above utensils. Other new developments incorporated in the range include: round oven-interior corners with heating unit sealed in the walls, automatic reset oven timer and four surface units with one adjustable for deep-well cooking.



Manufacturer: Hotpoint Inc., 5600 W. Taylor St., Chicago, Ill.

GAS RANGE includes device to guard against children's turning on gas accidentally.

The Grand Range, this year's winner of the Lewis & Conger Safety Award, features a unique safety device—a simple key to guard against children's turning on the gas when mothers are out of the kitchen. Operated like an ignition key, the Safe-Tee-Kee turns on and cuts off the flow of gas to all burners. For cooking, it is merely placed in the keyhole on the dash and turned to on position. When it is removed and placed out of reach of children the burners cannot be lighted accidentally. Pilot lights, however, remain burning whether the key is in place or removed. In addition to the safety device the new range features a large bake oven a "charcol-ator" broiler, divided cook-top and two storage drawers. Finished in white porcelain it measures 42 in. high, 36 in. to cook-top, 40 in. wide, 26 $\frac{3}{4}$ in. deep.

Manufacturer: Grand Home Appliance Co., 2323 E. 67th St., Cleveland, Ohio.

(Technical Literature, page 138)



Beauty on a Budget

WITH
**CURTIS
WOODWORK**



Here is a splendid example of the type of doorway often seen on Pennsylvania Colonial homes. It is suitable for houses of any structural material. Design C-1733.



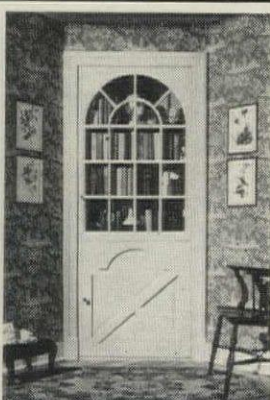
With its interesting lattice, this Curtis entrance is especially suited to the small home. Note the sheltering protective hood. Design C-1767.

● Good taste—enduring beauty—need not bear a high price tag, when you choose Curtis Woodwork for the houses you plan and build. Curtis Woodwork provides distinction and livability even when the building budget is strictly limited—and Curtis standards of quality assure lasting value for the owner. Examples on this page—chosen from among the wide range of Curtis designs—will prove the case.

When in New York, visit the Curtis Woodwork Display at Architects' Samples Corporation, 101 Park Ave.



Built-in furniture of good design adds permanent charm and value to any house. This simple, yet charming, Curtis cabinet—design C-6526—is made for corner use also.



"Utility made beautiful" is a fitting description for this Curtis cabinet for books, chinaware or collections. Easily installed in old or new homes. Design C-6503.



A late eighteenth century mantel—adapted from one in the old Lee House at Marblehead, Mass. Note the unusual shape of the fascia board. Fits any traditional style architecture. Design C-6063.



There's a "homey" air about this well-proportioned mantel—a new design by Curtis. Nearly all Curtis mantels are supplied with adjustable architrave—an aid in planning. Design C-6040.

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AF-8W Curtis Building, Clinton, Iowa

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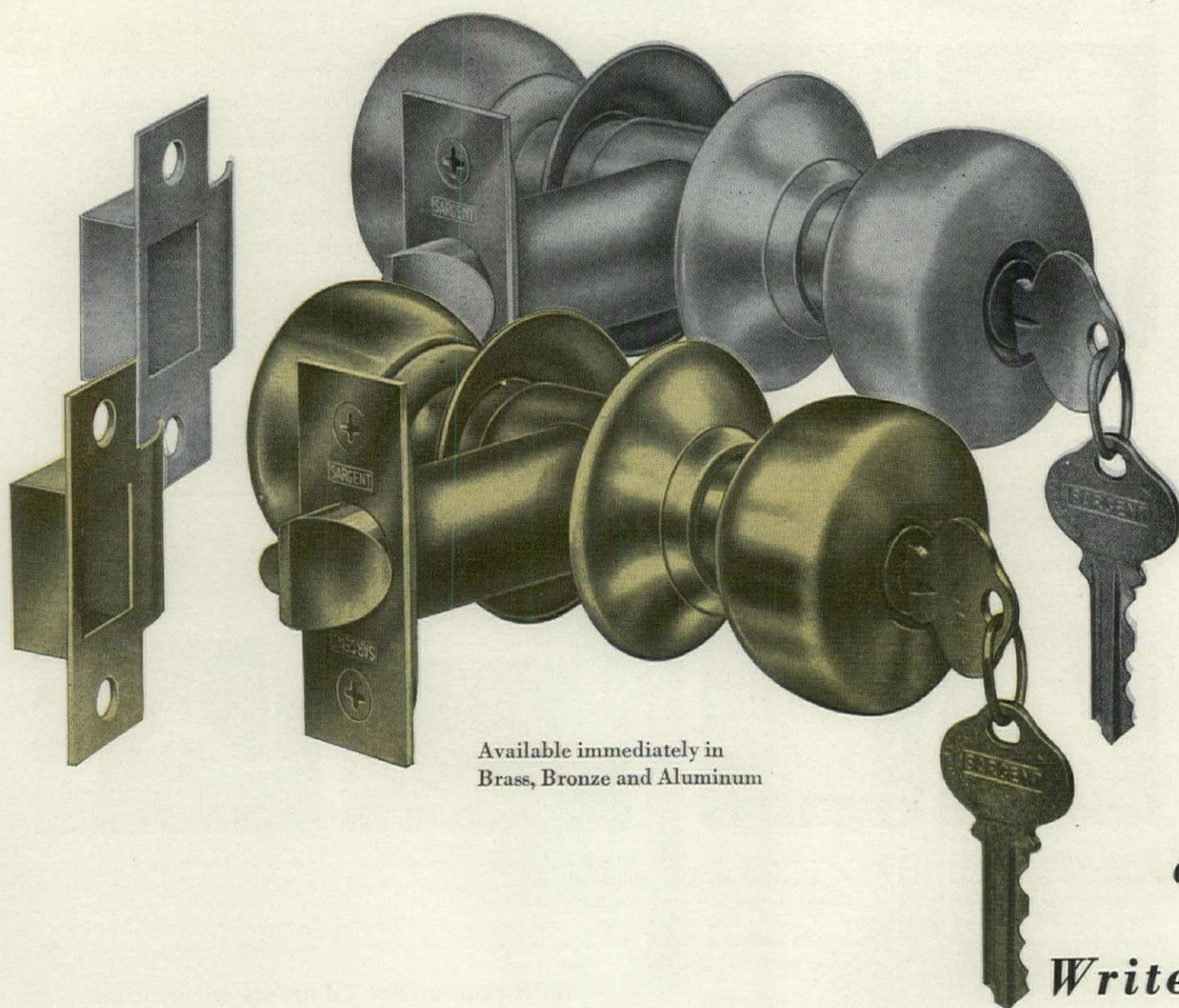
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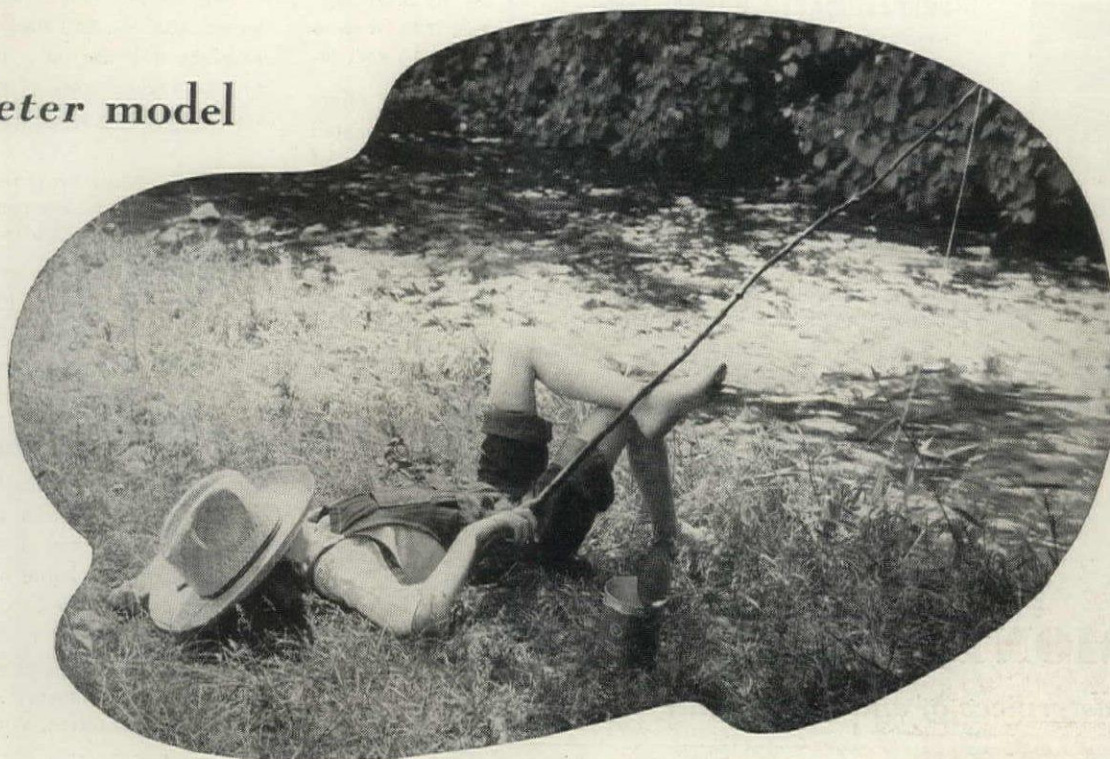
Whether to enhance a fine painting with quiet flattery or to infuse a subtle aura of modernity into your newest interior, we believe Kencork deserves your most earnest consideration. Those architects who know Kencork consider it supreme among interior building materials for its aesthetic values as well as its practical advantages.

You will admire the leafy tans and golden browns on walls and floors—the exquisite, subtle patterns—perfect backgrounds for modern furniture and fabrics. Cork is also well known as a truly practical building medium. And Kencork is *all cork*—with all of cork's unique properties—baked into square and rectangular tiles of tans and browns. As a natural insulator against heat and cold, as a quiet, shock absorbing floor covering, Kencork is building an

ever widening reputation among architects throughout the nation.

To many architects and builders the word Kencork is almost a synonym for luxury. Yet, often, interested customers are pleasantly surprised to learn how moderate in price a luxury like Kencork can be. See your flooring dealer for full details—or ask us for a descriptive color folder. David E. Kennedy, Inc., 69 Second Ave., Brooklyn 15, N. Y.—350 Fifth Ave., New York 1, N. Y.—Ring Building, 1200 18th St. N. W., Washington 6, D. C.—1211 N. B. C. Building, Cleveland 14, Ohio—Bona Allen Building, Atlanta 3, Ga.—Merchandise Mart, 222 West North Bank Drive, Chicago 54, Ill.—Kansas City Merchandise Mart Inc., 2201-5 Grand Ave., Kansas City 2, Mo.—Western Merchandise Mart, 1355 Market St., San Francisco 3, Calif.

this *quieter* model

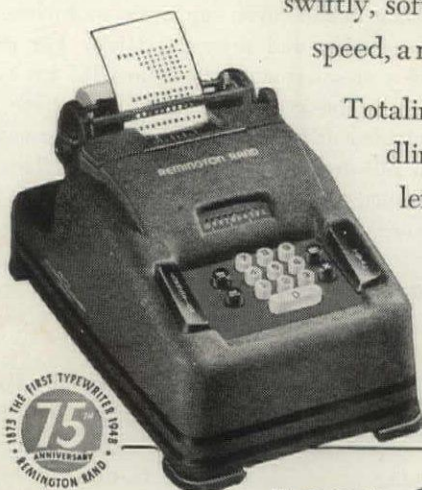


is fast in action!

You'll relax... and ease through *more* work with the quieter "93" electric adding machine. You'll enjoy cushioned power... almost makes you think your office is by the side of a rippling stream. Tension is lessened, even when the cry is "Rush, rush!"

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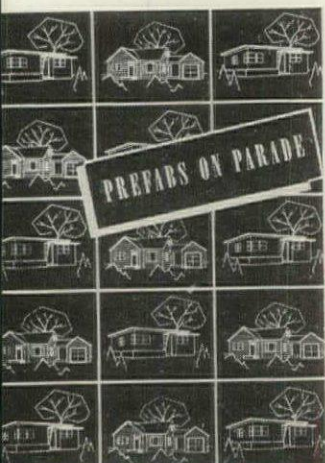
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TECHNICAL LITERATURE



PREFABRICATED HOMES. *Prefabs On Parade*, by O. W. McKennee and the staff of The Housing Institute, Inc. The Housing Institute, Inc., 527 Fifth Ave., New York. 110 pp. 8½ x 11 in.

A handy book on prefabrication, *Prefabs On Parade* offers pictures, plans and descriptions of typical prefabricated houses on the market today, plus a comprehensive list of prefabricators and prefabricating systems. After an introduction to prefabrication which discusses among other things dry wall and stressed skin construction, the degree of prefabrication, standard equipment and financing the prefab, the book features photographs and floor plans of typical homes offered by 57 prefabricators. These illustrations are divided into three sections: progress photographs showing stages in assembling a prefabricated house, photographs showing two types of prefabrication, and pictures, plans and specifications

of typical prefabs. The book also includes illustrations of house interiors, and suggestions on subdivision planning, how to place a house on a plot, house orientation with respect to sun, various uses of the same prefabricated components, types of heating systems and utility cores.

LUMBER. *White Fir of the Western Pine Region, Its Properties, Uses and Grades.* Western Pine Association, Yeon Bldg., Portland 4, Ore. 56 pp. 8½ x 11 in.

An addition to the series of publications covering Ponderosa Pine, Sugar Pine and Idaho White Pine, this new book on White Fir lists in detail the properties and grades of the species and its uses in the general construction and industrial fields. The text describing each grade is accompanied by a full page picture of typical pieces. The sections devoted to properties and uses of White Fir are illustrated with photographs showing applications in residences, commercial buildings, etc. The booklet also includes facts on the merits of White Fir, a listing of standard manufactured sizes and an alphabetical catalogue of uses for White Fir together with recommended grades.

WOOD. *Proceedings of the Forest Products Research Society, Vol. 1.* Forest Products Research Society, P. O. Box 2010, University Station, Madison, Wis. 340 pp. 10½ x 7½ in. Price \$6.00.

Volume I of the *Proceedings of the Forest Products Research Society* incorporates the papers, with discussion, presented at the first national meeting of the Society in Chicago in October-November 1947. General subjects of the papers include: chemical utilization of wood and integrated logging engineering aspects of wood use, preservation and seasoning. Also contained in the book is such information as record of attendance at the meeting, monthly bulletins of the Society May 1947 through October 1947, Articles of Association and Bylaws, style standards, alphabetical and geographical directories of membership and other features.

METAL TRIMS. *Chromedge Metal Trims.* Catalog No. 148. The B & T Metals Co., 425 W. Town St., Columbus, Ohio. 64 pp. 8½ x 11½ in.

A really complete catalogue of Chromedge metal trims, this manual shows more than 650 shapes and sizes of trim. In addition it contains scores of detailed drawings giving installation instructions and suggestions for practical, decorative applications. The complete Chromedge line is presented in eight basic groups according to use: nosings, edgings and binders, corners and coves, cap trims, wall trims, insert trims, color recess trims and price tag trims. For convenience a visual index or selector chart features 165 key types, divided into the eight basic groups. Each key shape is identified by trim number and indexed with the catalogue page number on which full details, size variations and related shapes are found. A numerical index for the benefit of users familiar with the Chromedge numbering system is also included.

HEATING EQUIPMENT. *Are You Planning To Build, To Remodel, To Improve?* Anthracite Institute, 101 Park Ave., New York. 9 pp. 7 11/16 x 10 in.

Are You Planning To Build, To Remodel, To Improve is designed to acquaint current and prospective home owners with the advantages of modern anthracite heating equipment. The opening page lists the nine features of anthracite coal as a fuel. Following pages describe various types of equipment available: improved (Continued on page 140)

VERMONT MARBLE . . .

Masterpiece of enduring dignity and beauty



United States Post Office, Court House and Custom House, Albany, N. Y.—Eureka Danby marble exterior. Gander, Gander & Gander, Architects, Albany, N. Y. Electus D. Litchfield, consulting architect.



McGregor Mausoleum, Wichita Falls, Texas—Imperial Danby marble. William Henry Deacy, Architect.

From the scenes of his earlier years of accomplishment a man may go to his final resting place always sheltered and dignified by marble of enduring beauty.

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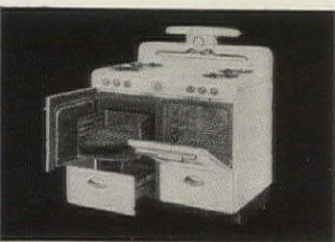
GREATEST *Magic Chef*
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standard hand-fired heaters, anthracite stokers and the new anthratube together with such supplementary equipment as hot water tank heaters, space heaters and cooking stoves.

UNIT VENTILATOR. The Herman Nelson Unit Ventilator, Bulletin 2853. The Herman Nelson Corp., Moline, Ill. 16 pp. 8½ x 11 in.

This beautifully illustrated, semi-technical brochure presents the advantages, design, construction and operation of the Herman Nelson Unit Ventilator for classroom ventilation. Described as the only unit ventilator which permits a maintenance of uniform temperatures at all times through gradual throttling of the steam supply, the opening section briefly describes its operation. The functions of its two main components—the heating assembly and the fan and motor assembly

are then discussed in detail. Colored diagrams illustrate how the heating element's pressure equalizing unit plus condensate cooling surface achieves better control of room temperatures. The integral design of the cabinet which permits the unit ventilator to be used either alone or as a section of a group including utility cabinets and convectors, and the eight available ventilator models are also illustrated and described. Closing sections briefly outline nine construction features of the unit ventilator, and note other Herman Nelson products.

LIGHTING. Pittsburgh Permaflexor Fluorescent Lighting Equipment. Catalog 48-F. Pittsburgh Reflector Co., 403 Olive Bldg., Pittsburgh, Pa. 52 pp. 8¾ x 11½.

Catalog 48-F contains technical and engineering data on Permaflexor fluorescent luminaires, troffers and strips, plus the company's newly developed incandescent downlights for use in conjunction with fluorescent lighting. Opening, the manual offers an informative section titled "Planned Lighting: What It Is and How To Achieve It" and features a table of generally accepted levels of illumination for various types of interior installations. Each fixture is then treated separately with data including descriptions and uses, mounting information, outstanding features, specifications, "coefficient of utilization tables" and "jiffy illumination tables." Both of these tables give a quick comparison of the various fluorescent units described and are a convenient source of estimating the types and numbers of units needed to achieve a desired level of illumination. The research, design, manufacture and inspection incorporated in the production of Permaflexor products are also discussed.

REQUESTS FOR INFORMATION

JOHN E. DODGE, architect, Stonington, Conn., requests data on materials and equipment used in residential work.

GREENWALD & MIROT, architects, 127 N. Dearborn St., Chicago, Ill., requests literature on materials and equipment used in industrial and commercial work.

LOW COST HOUSING RESEARCH, College of Engineering, Louisiana State University, Baton Rouge 3, La., requests data and samples of building materials, equipment, furnishings and appliances for houses.

DANIEL M. ROBBINS & ASSOCIATES, architects, Kilpatrick Bldg., 15th & Farnam, Omaha, Neb., requests information on building materials, equipment and methods of construction, also on swimming pools.

ANTONIO J. VILAR, architect & engineer, Avenida Alem 222, Buenos Aires, Argentina, desires information and catalogues covering prefabricated hangars and quonset houses, control towers and equipment, lighting, heating, sewage.

H. A. WIJEWARDENA, architectural student, Vijitha Mame, Kumbewa, Ceylon, requests literature on building materials, construction and sanitation.

REQUESTS FOR LITERATURE

HARRY SIMS BENT, architect, 1240 South Marengo St., Pasadena, Calif.

JAMES B. BLITCH, architectural student, 1032 State St., New Orleans, La.

THOMAS S. COLE, architectural student, 2059 McKinley Ave., Lakewood 7, Ohio.

FRANK F. EHRENTAL, architect, De Young Bldg., San Francisco, Calif.

LAWRENCE R. GOOD, draftsman, 524 N. 23rd St., Omaha, Neb.

(Continued on page 14)

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NEVER NEEDS PAINTING!

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Lighten the heart of your lighting system

STYLE, as well as efficiency, pays off in lighting panels, as these two examples of progressive Bulldog engineering are proving to architects every day.

Utility plus good looks

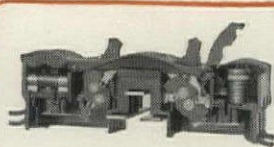
Bulldog *Superba* Panelboards are designed for installations where fine appearance is as necessary as good performance.

Standard Superba features fuse doors interlocked with switch handles to provide extra safety. All fuses are "dead" before they become accessible.

Modified Superba has all the advantages of *Standard*, except for the safety interlocked fuse doors. Intended for installation where normal service will be performed by an *electrician*.

Both panelboards have the exclusive OMNI-bus feature, which permits easy balancing of loads. Heavy-duty toggle switches, with quick make-and-break action, minimize danger from arcing and burning.

Cutaway view of standard **SUPERBA** phenolic unit, featuring OMNI-bus bars, rugged toggle switches—all adding to the appearance and utility of this lighting panel line.



Ruggedness first

Bulldog *Rocker Type* Panelboards are designed for use where heavy-duty performance comes first. Good appearance, while secondary, is not overlooked. *Rocker Type* Panelboards are trim . . . "efficient-looking."

Bulldog *Rocker Type* has branch circuit units of molded material . . . arc-resisting, noncarbonizing, and nontracking.

Breakage of switch handles is at a minimum in rugged *Rocker Type* Panelboards. Quick make-and-break action, with smooth-working, knife-edge bearings requiring no lubrication, insures ease of operation.

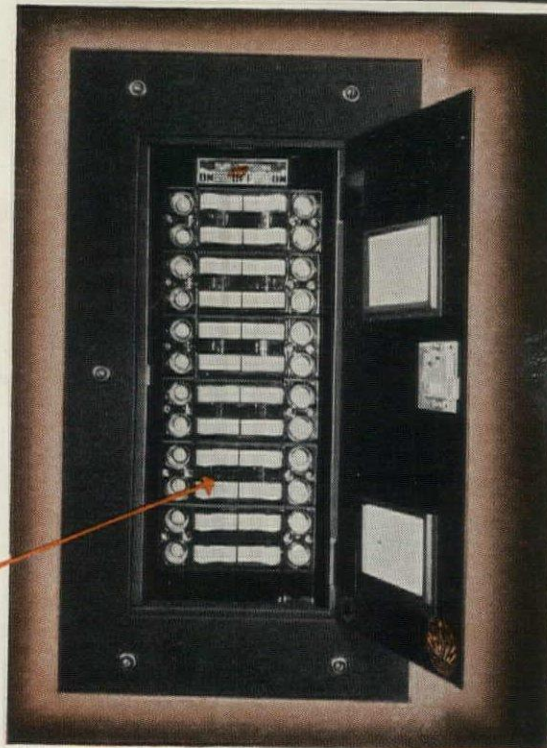
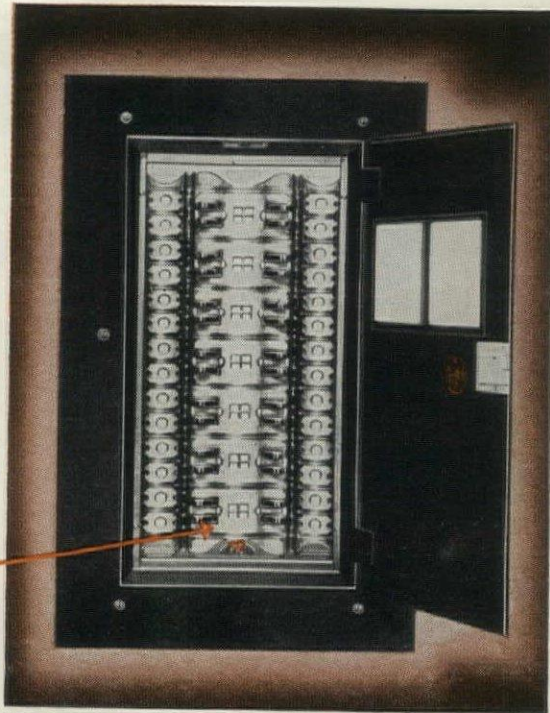
When your lighting set-up calls for a panelboard that must "take it," specify *Bulldog Rocker Type*.

For full technical information on Bulldog **SUPERBA** or **ROCKER TYPE** Panelboards, call a Bulldog Field Engineer. There's one nearby who will be glad to answer your questions. Have him show you a Bulldog installation in your own neighborhood.

Close-up of **ROCKER TYPE** molded unit, designed for durability, maximum dielectric strength, and heat resistance...plus a simplified switch mechanism with durable rocker handles.



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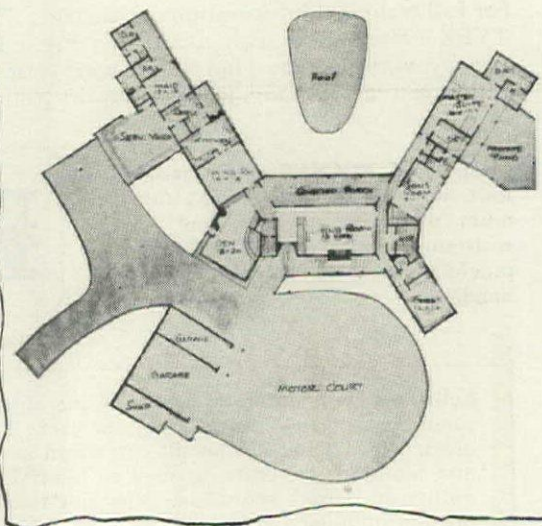
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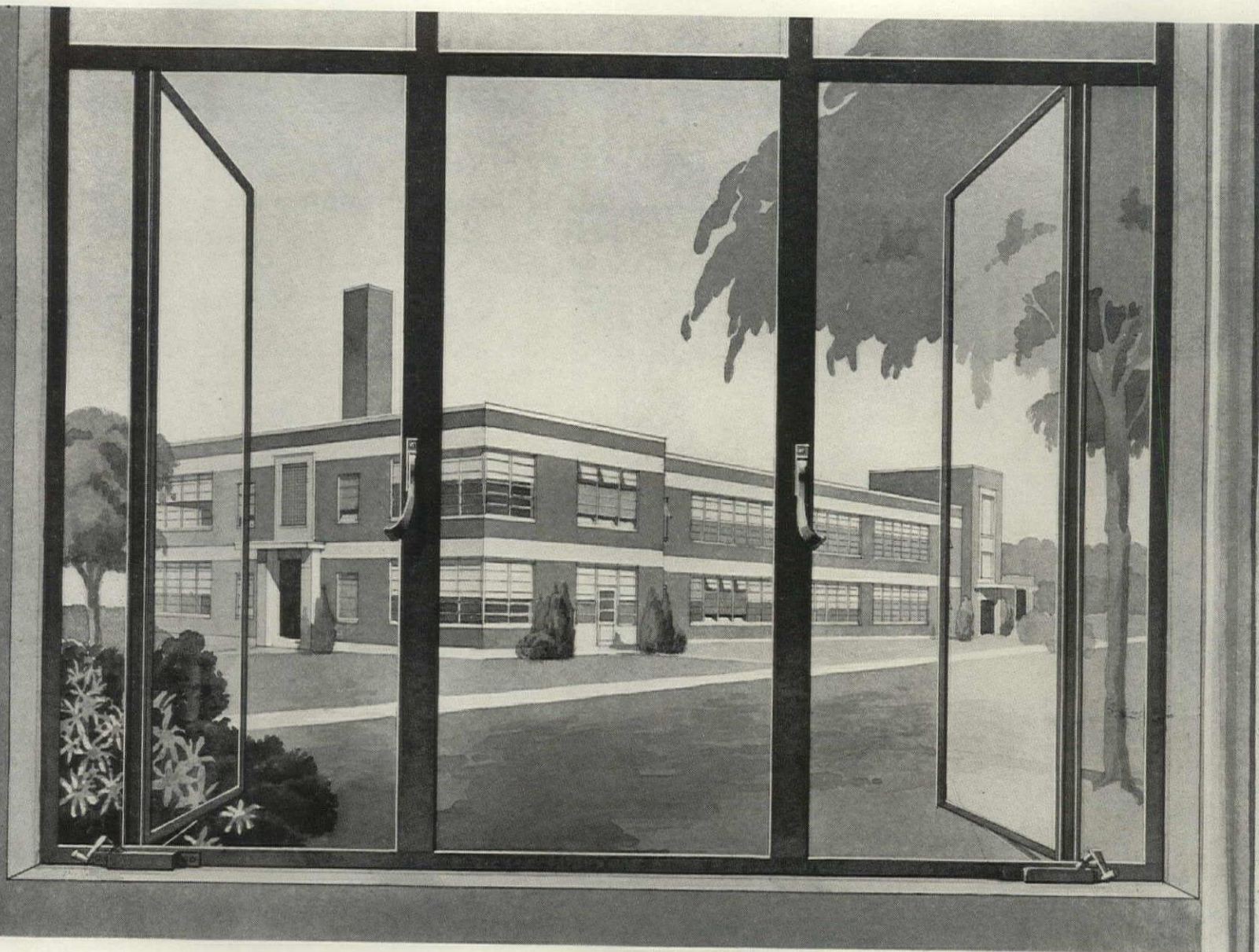
THE GATEWAY TO THE BUILDING MARKET

Cliff May, Architect

There was a change of address for TIME subscription #30-81699-06-18-0606 recently, when Dr. and Mrs. R. G. Frey moved into this new ranch home in Red Bluff, California.



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George Harris Richardson Elementary School, Washington, D. C. Architect: M. A. Coe, Municipal Architect, District of Columbia. Builder: J. D. Hedin Construction Co., Washington, D. C. Viewed through Lupton Casement Window. School windows are Lupton Architectural Projected-Type.

See what modern metal windows can mean in school building. Bright, cheerful classrooms with large window areas . . . abundant, non-glare daylighting with clear, effortless vision in every part of the room . . . all of these advantages are available with Lupton Windows. Lupton Metal Windows provide controlled, natural ventilation. Beautifully designed operating hardware adds the modern look to classroom interiors. Economy, a vital feature of large scale building, is effected by the long life of Lupton Metal Windows. Bronze wire screens with neat, narrow metal frames can be furnished with open-in or open-out ventilators. There is a Lupton Metal Window for every type of building. Write for our catalog or see it in Sweet's.

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The wonderful thing about the Hanson family was the way they faced the future with confidence. That confidence was all due to Mama. "If anything goes wrong," she'd say, "there's always my Bank Account to pull us through."

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And to make it simpler still, your government offers you two fine plans for their purchase: (1) The Payroll Savings Plan at your firm. (2) For those not on a payroll, the Bond-A-Month Plan at your bank.

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REQUESTS FOR LITERATURE

BEN L. ROSE ASSOCIATES, designers-builders-store interiors, 1674 Broadway, New York 19, N. Y.

SALKIN & SON, builders-contractors, 1761 So. Carmelina Ave., Los Angeles 25, Calif.

G. SANTOCONO, designing-decorating, 1734 Mission St., San Francisco 3, Calif.

NAT SCHAFLER, builder, Hillsdale, N. Y.

HORST SCHLINGMANN, architectural student, Froebelstra 27, Bielefeld, British Zone, Germany.

MICHAEL D. SCHWARTZ, architect, 1133 Broadway, New York, N. Y.

WAYNE F. SESSIONS, architectural student, University Station, Gainesville, Fla.

IRVING D. SHAPIRO, architectural student, 935 Gill Court, Albany 6, Calif.

DEREK C. SINCLAIR, architectural student, 9 Cavendish Ave., East borne, Sussex, England.

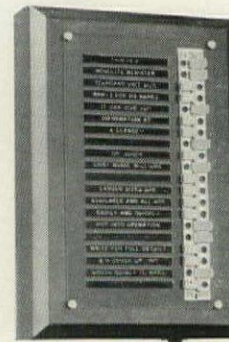
ROBERT R. SMITH, architectural student, 5211 Schollmeyer Ave., St. Louis, Mo.

JOHN SING TANG, architect, Arizona Title Building, Phoenix, Ariz.

CHARLES A. TERRY, designer, 1584 Five Points Rd., Albuquerque, New Mexico.

KEN TRUMBLE & ASSOCIATES, designers, 335 Buffalo Ave., Niagara Falls, N. Y.

YOUNG ENGINEERING Co., civil engineers, 446 East Warren St., Detroit 1, Mich.



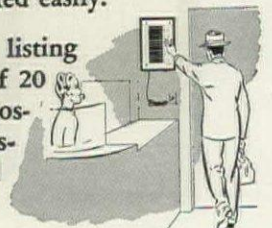
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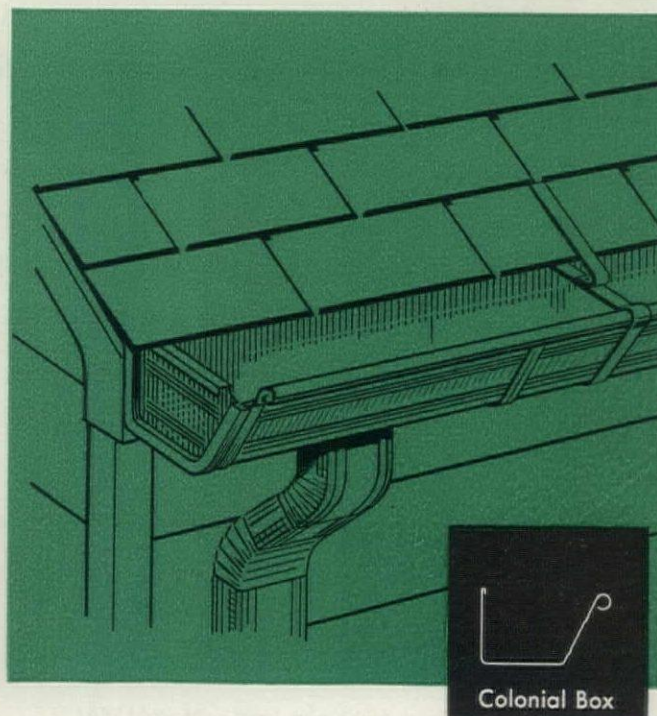
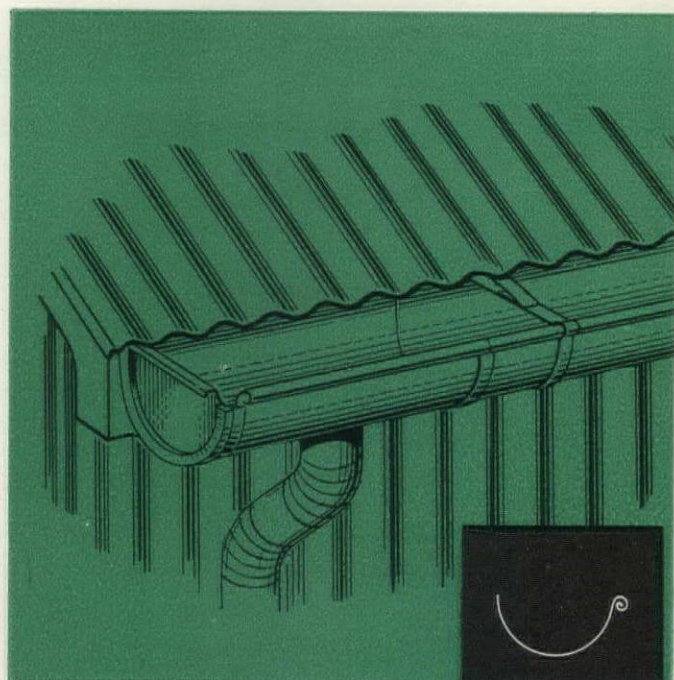
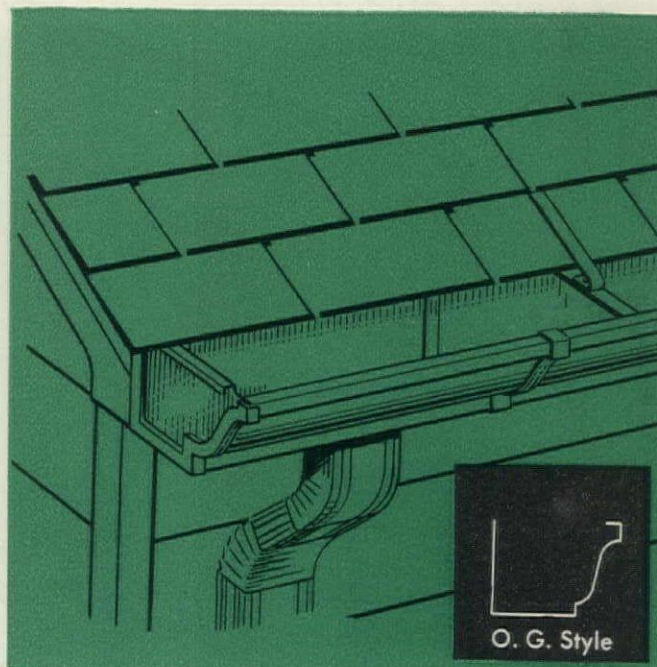


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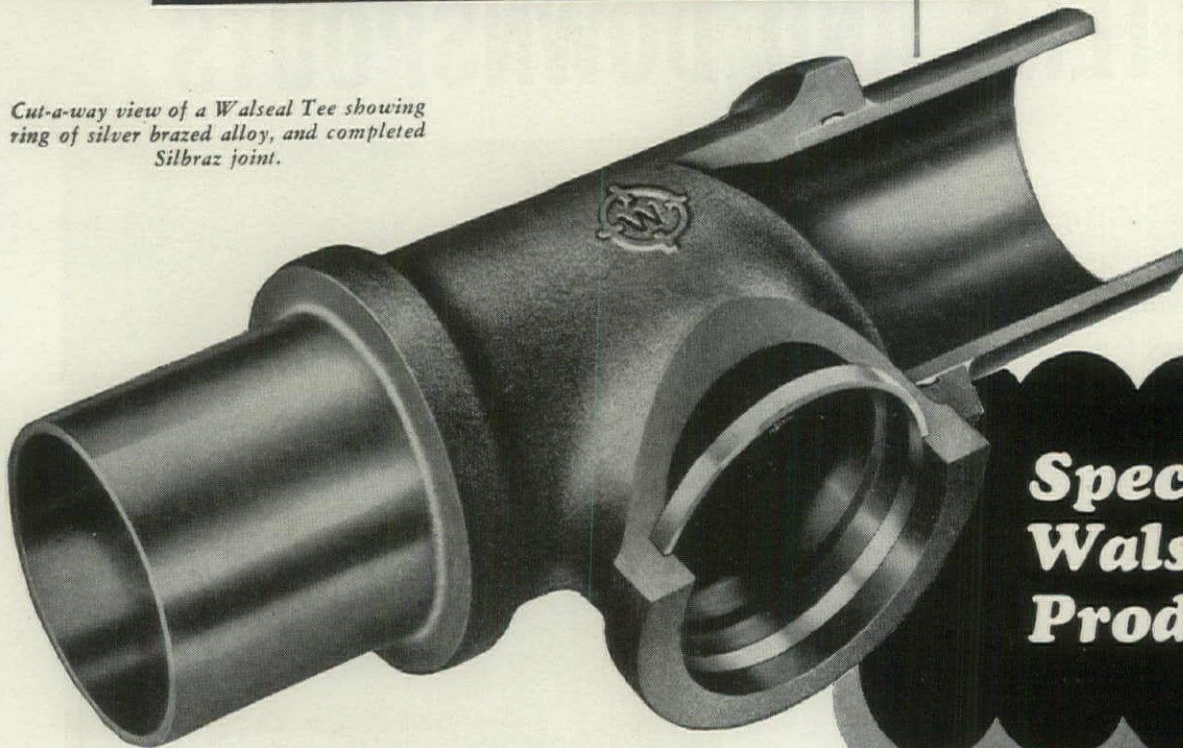
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2

Cost-conscious builders have found that it is often advisable to use me in place of lead-covered cable for installations in raceways in wet locations. They find that I am easy to install and can use smaller conduit. I really have two names. What are they?



2

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3

When you step into a smart, modern store, you don't see me, but the fluorescent lighting will need less maintenance, and will stay on the job longer than ever if I'm there. You'll find me in ceiling and showcase fixtures, protecting them from the effects of heat and moisture. My name is a famous synonym for "heat beater." What is it?



3

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4

I am coated inside and out. It's difficult to hurt me with even the toughest treatment. My color is white when I fight atmospheric corrosion, black when I fight chemical action. Many types of boxes and fittings have been designed to go with me perfectly. My name is so well known that it should be easy to identify.



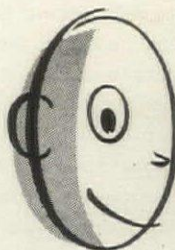
4

If you've ever specified conduit, you've probably guessed that these names are G-E White and G-E Black rigid conduit. They are bywords for top quality wherever conduit is used. The rest of the General Electric line of raceways includes boxes, hangers, fittings, "flex," and EMT—all made to work to the best advantage with one another.



5

I have thousands of parts, of many sizes, types, and capacities. I am readily available in any quantity—all from a single source. My parent has the best-known name in electricity. Know what it is?



5

The answer should be easy—General Electric's full line of wiring materials. Whatever you need—wire, cable, raceways, wiring devices, fluorescent accessories, of every variety—your best single source of supply for dependable quality is always General Electric. We'll be glad to give you full information on any products in this full line. Just write to Section K9-84, General Electric Company, Bridgeport 2, Connecticut.

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* TRADE-MARK REG. U.S. PAT. OFF.

ELIEL SAARINEN. By Albert Christ-Janer. The University of Chicago Press. Chicago, Ill. Illus. \$15.

In this country, the biography of a living architect must inevitably be compared with the saga of Frank Lloyd Wright, for few men (at least among his colleagues) have provided the eager biographer with so dashing a tale. This history of Eliel Saarinen's life and works will certainly not challenge Wright's jealously-guarded position as enfant terrible of the architectural world. But even with the knowledge that for sheer drama FLW cannot be touched, the reader is sadly let-down by Christ-Janer's story of Saarinen.

After all, the eminent Finnish architect has published two books of his own, *The City* and *Search for Form* which brilliantly outline his philosophy of architecture and planning.

Wide World Photo



Therefore, it seems logical that author Janer should stick to the environment and influences responsible for the net product. This he does, but in a very superficial way. Unfortunately he does not succeed in animating his subject. Though a quiet, retiring man, one senses in Saarinen *pere* tremendous strength of character. At 65, he has more energy than his grandchildren. He is witty and wry, perpetually full of little jokes. But none of these small points of personality so important to a successful portrait are put across in his biography. It is a pity because, despite his innate modesty and simple love of work, Saarinen is as much of an individualist and as vital a human being as the great Wright father. While he neither rests on his laurels nor relies on caprice to make a point or headline he is by no means bland. Janer's academicism and piety seem, unfortunately, to have smothered his hero's character. The book is divided in two parts, the first dealing with Saarinen's life in

Finland, the second with his later years in this country. It is copiously illustrated with plans and photographs and faithfully records the major events of a lifetime. However, since it never attempts to analyze moves or decisions, it sinks to the level of a mere summary. One gathers, however, that in comparison to Sullivan and Wright, Saarinen's battle has been pretty much of a cinch. But here again one cannot be sure whether the road was a superhighway or whether the author merely lacked the insight to evaluate a given situation or sense a crisis—intellectual or emotional. Immediately prior to World War II Saarinen was accused, perhaps unfairly, of Fascist sympathies. Christ-Janer who obviously reveres and loves him, muffed a wonderful opportunity to sweep away this cloud once and for all. The reader quite justly expects an honest examination of such points in a decent biography. But he won't find it in this one. For instance, an intelligent discussion of Saarinen's strong feeling for regionalism would have been highly interesting. Another disappointment is the absence of comparison and criticism of his work. Since Saarinen is a man who can stand a critical view, it is an injustice to him and to the importance of his accomplishments to withhold it. Naturally, the

development of Cranbrook Academy plays an important role in the second part of the book. Yet it is not clearly defined as the living community that it is today. With the possible exception of Taliesin West, there is no more idyllic center for arts and crafts in America, no place where work comes more naturally or where the group spirit is stronger. But like the chief character, the community lacks personality through Janer's eyes. Painful as it is to admit, this is a pretty bad biography. Also regrettable is the fact that it is a limited and expensive edition. Its worth lies mainly in profuse illustration, both photographs and drawings, since Saarinen's early work is little known in this country. It is to be hoped that someone else will undertake his life story at a later date and do a job less reverent, but more alive. At least some play should be given to that wonderful, ridiculous white beret. M.S.

THE PERSONALITY OF A HOUSE. By Emily Post. Funk & Wagnalls Co., New York. 485 pp. Illus. 9 1/4 x 6 1/4. \$5.

It seemed that with the publication of her first book, *Etiquette*, Emily Post had done about as much to set the world straight as any mortal could. However, several years of rumination appear to have convinced her that the radiant charm and resolute manners of her followers are not generally reflected in their houses. What she would like to see would be a third-class decorator in every nest. Her proposals and solutions to various structural conditions and decorating problems are so unimaginative, foolishly pat and rigidly bourgeois as to evoke a distinct smell of dry rot. The book, unhappily, is dedicated to "the memory of the architects of my family." If any of them had ideas they were certainly pretty stingy about handing them out, even to relatives. Witness Mrs. Post's garbled architectural handling of "The Most Lovely Window Detail:"

"An important point to note is that an over-wide window is a great beautification and should be long enough to reach beyond both tables at the end of the sofa so that the two lamps on the tables stand against the glass . . . When the window is wide enough to permit the tables to stand in front of it, lamps of glass with translucent shades would be especially beautiful." If that isn't entering a suburban house through the Madison Ave. entrance!

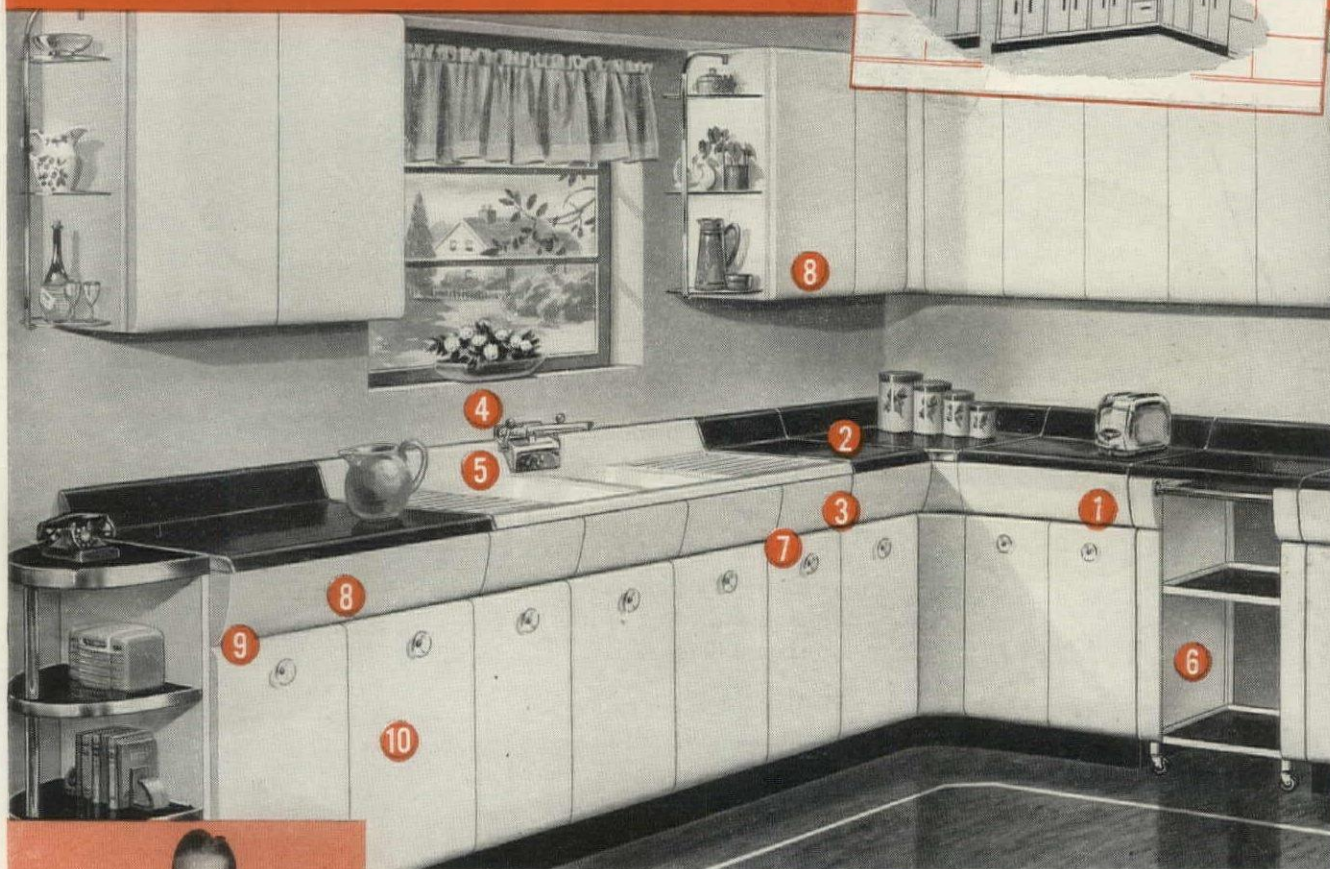
In nearly 500 pages Mrs. Post has a few well chosen words for the contemporary: "It is important to point out the 'selling points' of the Modernistic House—both those with which it is easy to agree (and why) and those with which it is not (and why)."

"Until a short while ago, The House of Today was seemingly going to be modernistic. But now it is quite certain that extremely radical ideas are losing their appeal, and that while many new ideas are welcomed, they are accepted only in part by most of our leading architects, who in greater and greater measure are returning to the Classic Principles." It would seem that the author has been taking the wrong patient's pulse but, thank you, Mrs. Post, for your analysis of vital current trends, of deep concern to us all.

Unfortunately, such uninformed prating is not mere eye-wash. For years Emily Post has ruled with an inflexible and well-manicured hand the social conventions of this country's upper class. Her following is enormous and pre-established. And it is precisely this group which is in a position to build and remodel today. The author apparently lacks the intelligence to see that the sure-fire conventions of the formal invitation or chronological use of spoons cannot be honestly applied to house design and that she is therefore deliberately bamboozling the public. This business of taste cannot be

(Continued on page 152)

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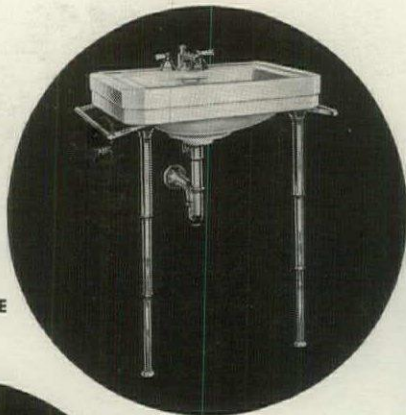
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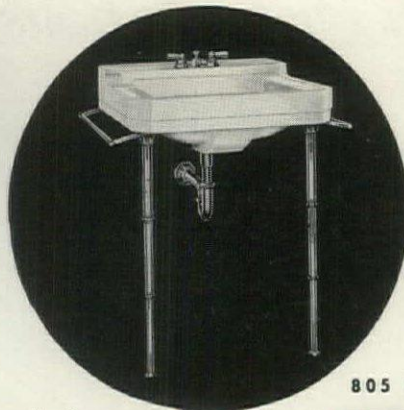
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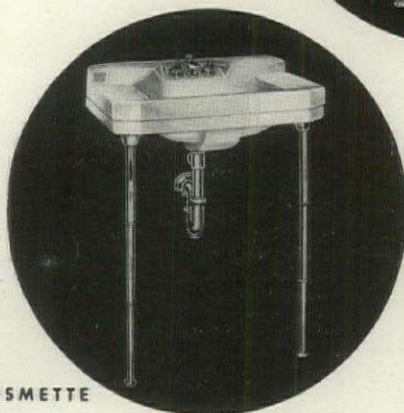
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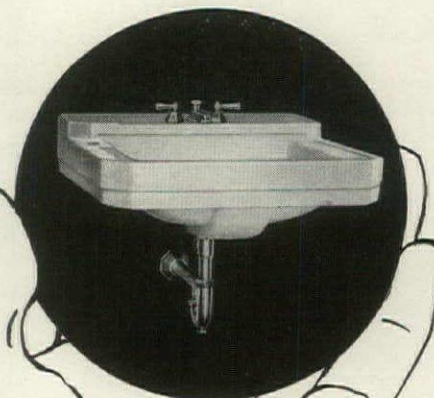
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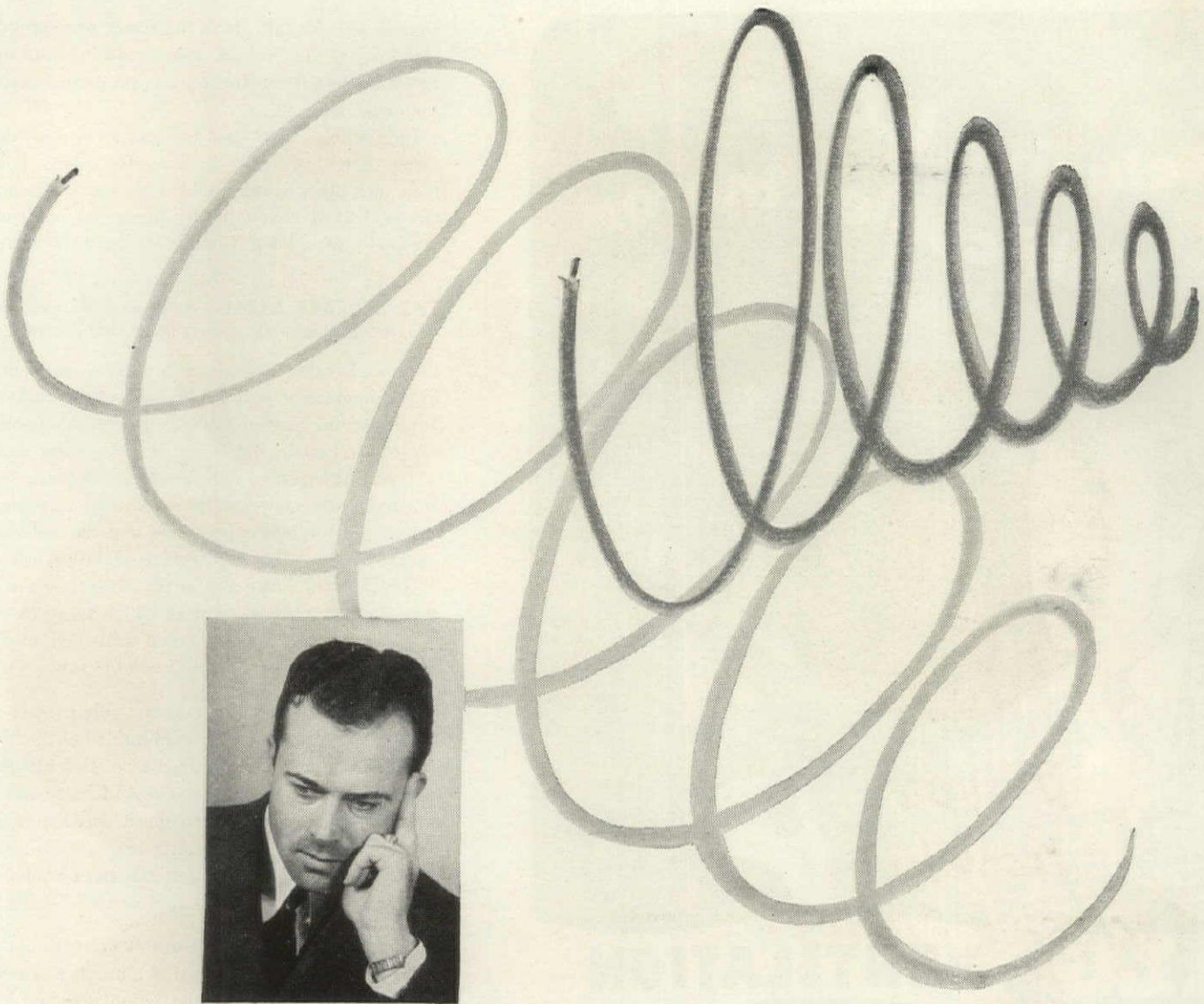
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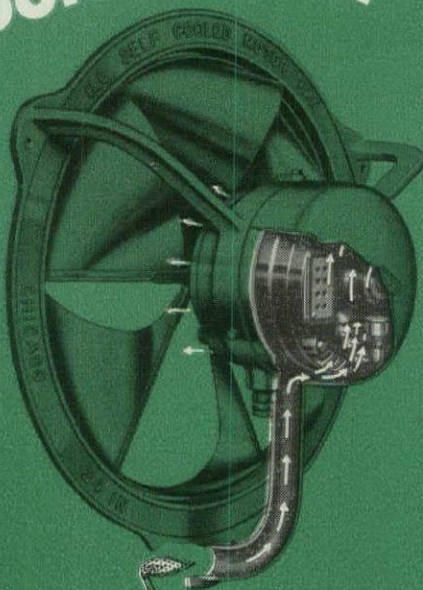


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canned like Muzak. It is the result of environment and culture upon the individual. It is something built up from within, based on sensitivity and reason, no mere frosting slapped on a sponge cake.

Indubitably, Mrs. Post will get away with this educational farce. It will probably be a terrific seller. It *could* do more than any other single volume to break down public acceptance of good contemporary design so laboriously won. So, for God's sake, keep it out of the hands of your clients. M.S.

THE REGENCY STYLE. By Donald Pilcher. B. T. Batsford, Ltd., 122 East 55th St., New York 22. 113 pp. Illus. 8¾ x 6. \$4.50.

Perhaps because it deals with a comparatively recent period in architecture or perhaps because of the author's affectionate yet discerning handling of his subject, this book appears to be one of the best in Batsford's current series on English architecture. Americans, who associate Regency with the sterile and too costly suburban house, will be surprised at the diversity of the English expressions and the influences that quite openly made up the architecture of the period. It was the era of *The Man of Taste* and at the same time the infancy of the machine age. The manner in which these two opposing elements resolved themselves and managed to survive on the same island makes a highly readable tale.

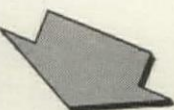
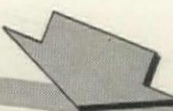
City planning is given comparatively extensive treatment as it should be since, during the first third of the Nineteenth Century, landscape design enjoyed a position almost equal to that of architecture, and planning one of its rosiest periods. Perhaps the Regency's greatest merit was the rapprochement it brought about between country and city living as typified by the charming town houses of the period. The most famous example of this conception is, of course, Nash's Regents Park.

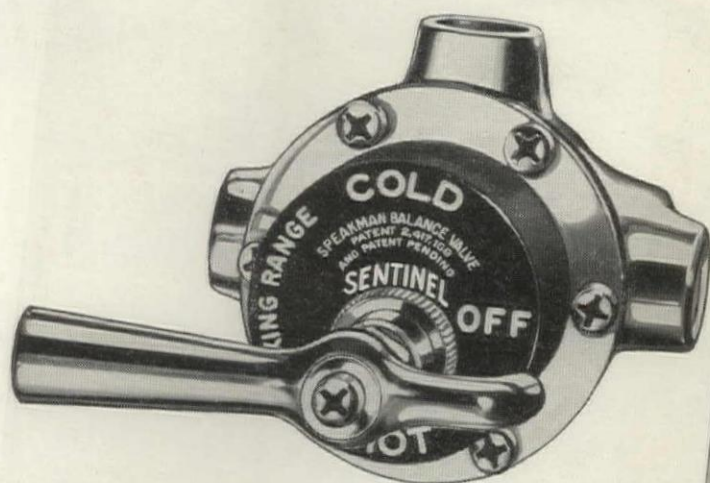
While a book on period architecture is not exactly news Mr. Pilcher succeeds in casting a number of new lights on an often scoffed-at style without going overboard for love of it. The absence of retrospective hallucinations is definitely refreshing. About as much sentimentalism as the author allows himself is in his summation of the Regency architect when he says: "To pillage motives from all available sources may be the sign of a lack of individual imagination. To do so successfully is certainly the test of a designer's sensibility, and as such Regency architects considered it. To catalogue characteristic 'features' and to explore 'sources of inspiration' for their decorative forms . . . is irrelevant in a style whose individuality shows through its ornamentation to the extent that the Regency's does. Their perorations on taste should not be allowed to blind us to the fact that this is the way in which Regency architects would have liked us to consider their designs and it may rest as final justification of them that we are able to recognize this intention." M.S.

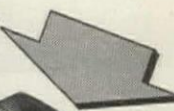
THE VERTICAL MAN, A study in Primitive Indian Sculpture. By W. G. Archer. The Macmillan Co., 60 Fifth Ave., New York. 114 pp. Illus. 8¾ x 5¾. \$4.50.

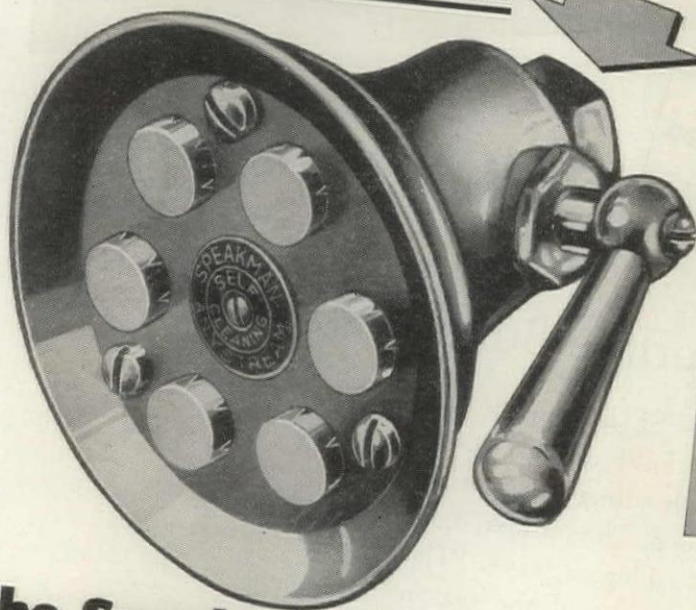
Once you learn to slide gently over the indecipherable words in this little book (and they add up to about a third of the text) you come upon a fascinating glimpse of primitive India and the sculpture of one of her western provinces, the latter studied both for its formal value and its relation to the social, religious and economic customs of the time. The author is not a musty scholar delving into an erudite subject of little

(Continued on page 156)

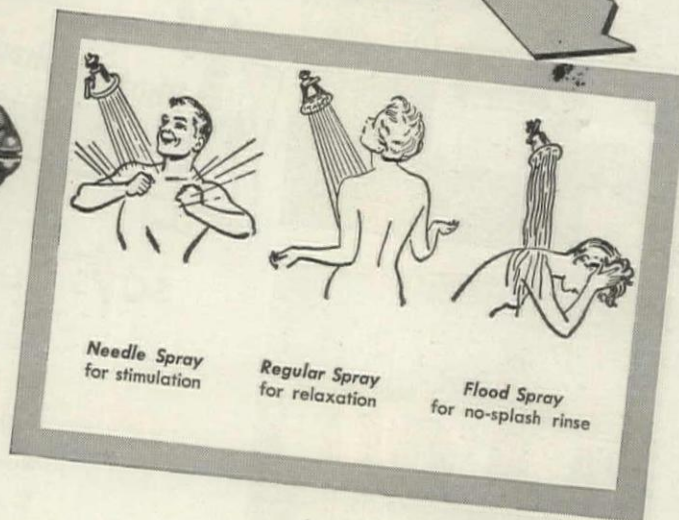
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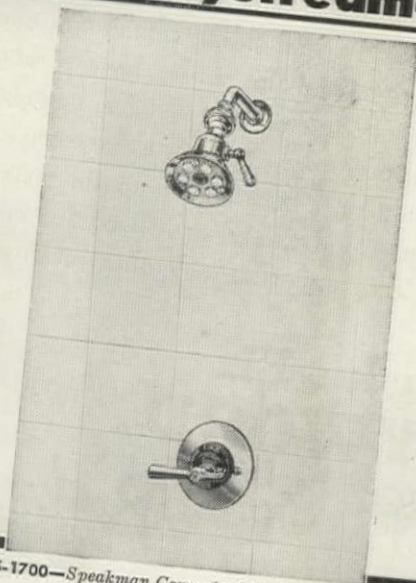
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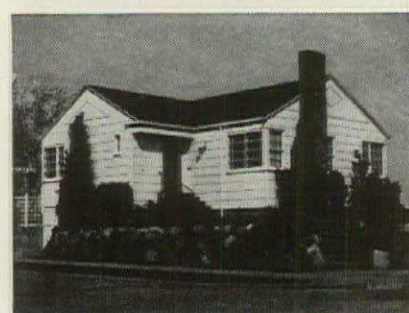
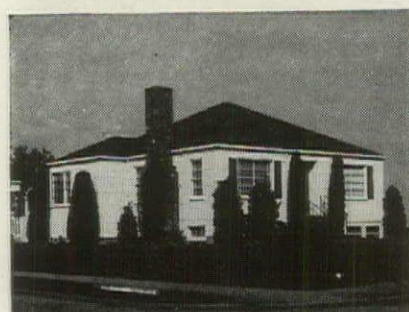
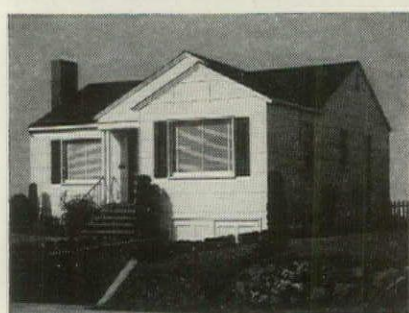
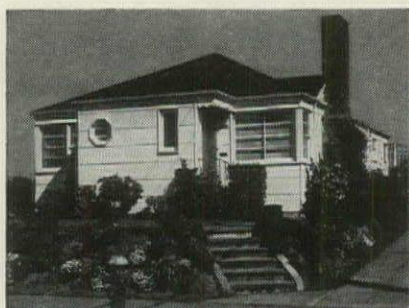
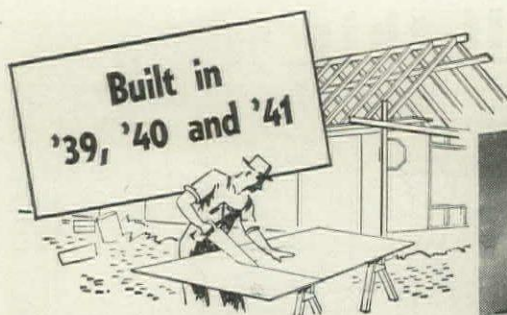
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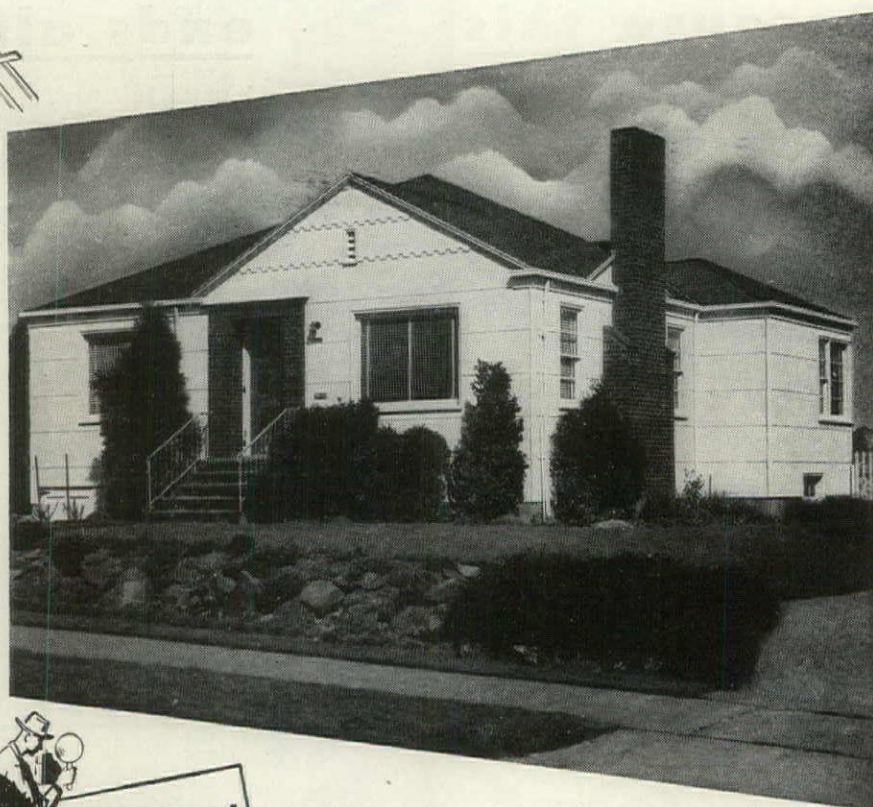
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Check these Features

of the most logical nail for plasterboard application

- 1 Aluminum Nails will not produce unsightly, red-brown rust to bleed and streak surfaces. No brown spots can bleed through plaster. Aluminum nails will not harm or discolor the surfaces on which they are applied.
- 2 Nichols Aluminum Plasterboard Nails are etched all over from tip to head. This special treatment provides an excellent surface on the nail head for greater scratch coat adhesion.
- 3 Tests prove that because of the etched surfaces of Nichols Aluminum Nails, their holding power has been substantially increased. They are made of a special aluminum alloy—Federal Specification QQ-A-325, are easy to handle and easy to drive.
- 4 New, tight wax impregnated shipping cartons, a Nichols innovation in nail packaging, keeps nails fresh and clean until ready for use. They are as sanitary and clean as any other plasterboard nail ever made.

THE GREATEST NAIL IMPROVEMENT OF THE CENTURY

Pioneered by NICHOLS, hundreds of millions of NICHOLS ALUMINUM PLASTERBOARD NAILS have been used with outstanding success in the application of sheet rock, rock lath and other gypsum boards in buildings of every description from coast to coast. Many are also used in the application of wallboards and other building boards.

Craftsmen everywhere acclaim NICHOLS ALUMINUM NAILS. They drive well! Most important, no protective coating is required that can be knocked off by hammer blows.

Because of their many advantages, they are economical. There are almost three times as many aluminum nails per pound as there are steel nails of the same size. A 50 lb. package of aluminum nails contains almost 50% more nails than a 100 lb. keg of the same size steel nails. NICHOLS ALUMINUM PLASTERBOARD NAILS are packed in a new type, wax impregnated, clearly labeled carton. They are available for immediate delivery in 1 1/4" and 1 1/2" sizes — packed in 50 lb. cartons.

IMPORTANT: ALUMINUM PLASTERBOARD NAILS SHOULD NEVER BE USED FOR APPLYING STEEL LATH.

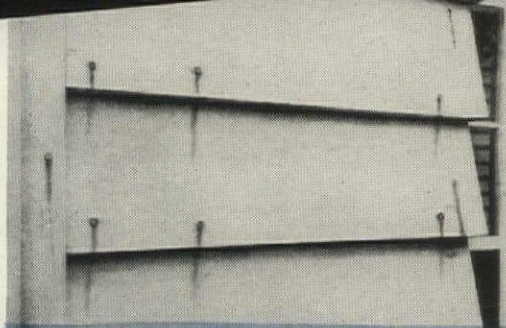
NICHOLS NEVER-STAIN ALUMINUM SIDING NAILS

The most economical kind of nails to use when applying either wood or asbestos siding are NICHOLS Never-Stain ALUMINUM SIDING NAILS.

Once applied you can depend that they will remain in place because of their etched treatment from tip to head, that provides greater holding power. Gone forever are complaints because of rust streaked newly painted surfaces. *Aluminum will not and cannot produce unsightly brown rust to mar any paint surface.*

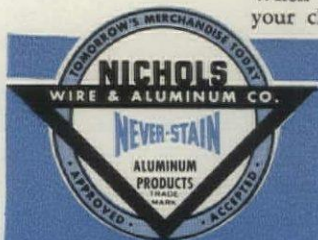
Nichols Aluminum Siding Nails are made of a special hard aluminum—Federal Specification QQ-A-325, and are fully heat treated and cold worked. They are *easy to drive* and are always clean looking.

Note the rust streaks on the paint of the siding in the photo at right, caused by ordinary nails in less than eighteen months time. This can never happen when aluminum nails are used.



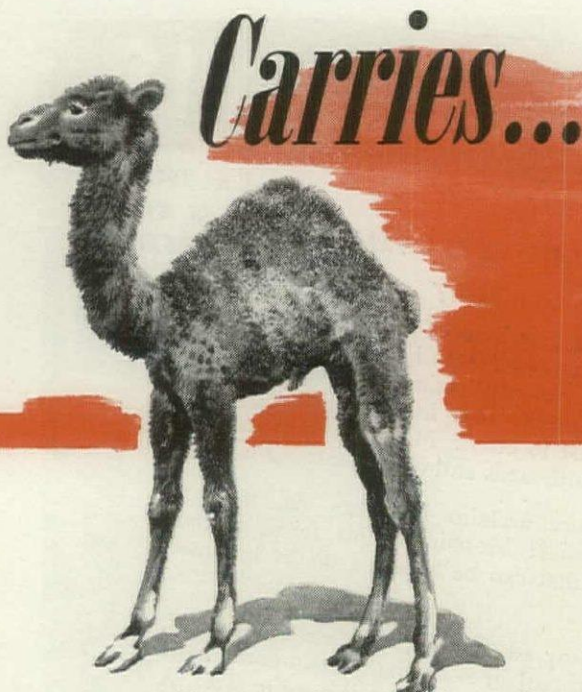
A \$10 added investment in Nichols "Never-Stain" Aluminum Wood Siding Nails on this five room house would have saved a \$200 re-paint job.

Generous stocks of Nichols Never-Stain Aluminum Plasterboard and Aluminum Wood Siding Nails are carried in warehouses at San Francisco, Calif., Seattle, Wash., and South Deerfield, Mass., as well as in jobbers' stocks throughout the eastern, central and southern states. Address all inquiries and orders to home office in Davenport, Iowa. When you specify and use NICHOLS "Never-Stain" ALUMINUM NAILS, you give your clients the best nails obtainable.



NICHOLS WIRE and ALUMINUM CO.

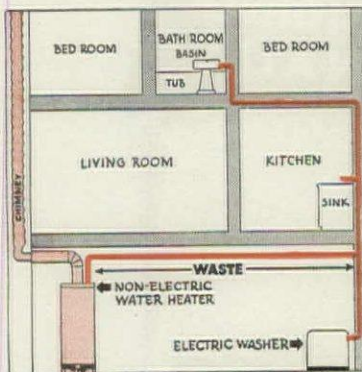
MAIN OFFICE AND FACTORY: DAYENPORT, IOWA
Warehouses: Mason City, Iowa • Battle Creek, Mich.



Carries... a lot of water!

And here's a fact about *hot* water that carries a lot of weight. Home buyers prefer automatic Electric Water Heaters! To have them completely satisfied with the homes you build—both now and in years to come—install the kind of water heating equipment your customers want.

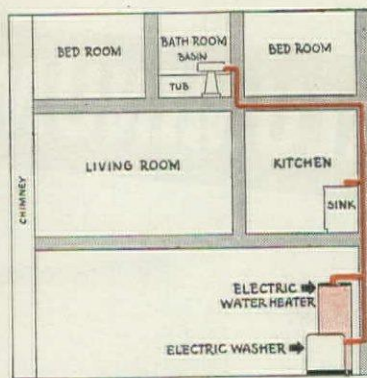
How to reduce construction costs and add customer features...



NON-ELECTRIC INSTALLATION

Construction costs can be reduced with Electric Water Heaters because there's no flue or vent, so installation can be made anywhere—in a closet, in the kitchen, in the bathroom, in the utility room. Hot water lines can be short, cutting piping cost.

Customers like Electric Water Heaters



ELECTRIC INSTALLATION

because they are: (1) **AUTOMATIC** (continuous hot water, no attention); (2) **CLEAN** (smokeless, sootless); (3) **DEPENDABLE AND TROUBLE-FREE** (as electric light); (4) **ECONOMICAL** (fully insulated storage, short hot water lines); (5) **SAFE** (all electric, dependable temperature control); (6) **FLEXIBLE** (can be installed anywhere, even in living quarters; no flue or vent).

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

B & F • BRYANT • FOWLER • FRIGIDAIRE • GENERAL ELECTRIC • HOTPOINT • HOTSTREAM • JUD WHITEHEAD • KELVINATOR • MERTLAND • MONARCH • NORGE • PEMCO • REX • RHEEM • SELECTRIC • SEPCO • SMITHWAY • SUNBEAU • THERMOGRAY • THERMO-WATT • TOASTMASTER • UNIVERSAL • WESIX • WESTINGHOUSE

IT'S EASY TO INSTALL an electric WATER HEATER!
... in a house wired for an Electric Range!

interest except to his own colleagues. His purpose in writing the book was to examine the parallel between primitive Indian, Negro and Celtic sculpture. In view of the widespread preoccupation with primitive sculpture in general which was so stimulated by the Museum of Modern Art's exhibition and book, *Art of the South Seas* (FORUM, May '46) this new document should enjoy considerable popularity. For such a foreign subject it is remarkably easily handled and full of new, colorful legends. This reviewer's favorite is a ballad on "The Control of Tigers." M.S.

FURNITURE

HANDCRAFTS IN A MACHINE AGE

Mechanization may have taken command of the world, but handcrafts have retained at least a minor position in the ranks of household objects. Hand-produced furniture, pottery and textiles are still a sizable industry and many mass-produced pieces rely on a combination of machine and hand methods. Perhaps even more important, hand construction is still the experimental laboratory from which machine-made products are developed.

One such laboratory that manufacturers as well as designers should watch is the School for American Craftsmen, part of the Liberal Arts College of Alfred University, Alfred, N. Y. Here students are taught the structural qualities of materials by actual experimentation in hand construction. Such practical knowledge and skill is essential for first-rank designing whether destined for machine or craft production. The first display of this school's student work is now on exhibit at the America House in New York City and will remain through September 10. It consists of a room mock-up, called "A

The New York Times

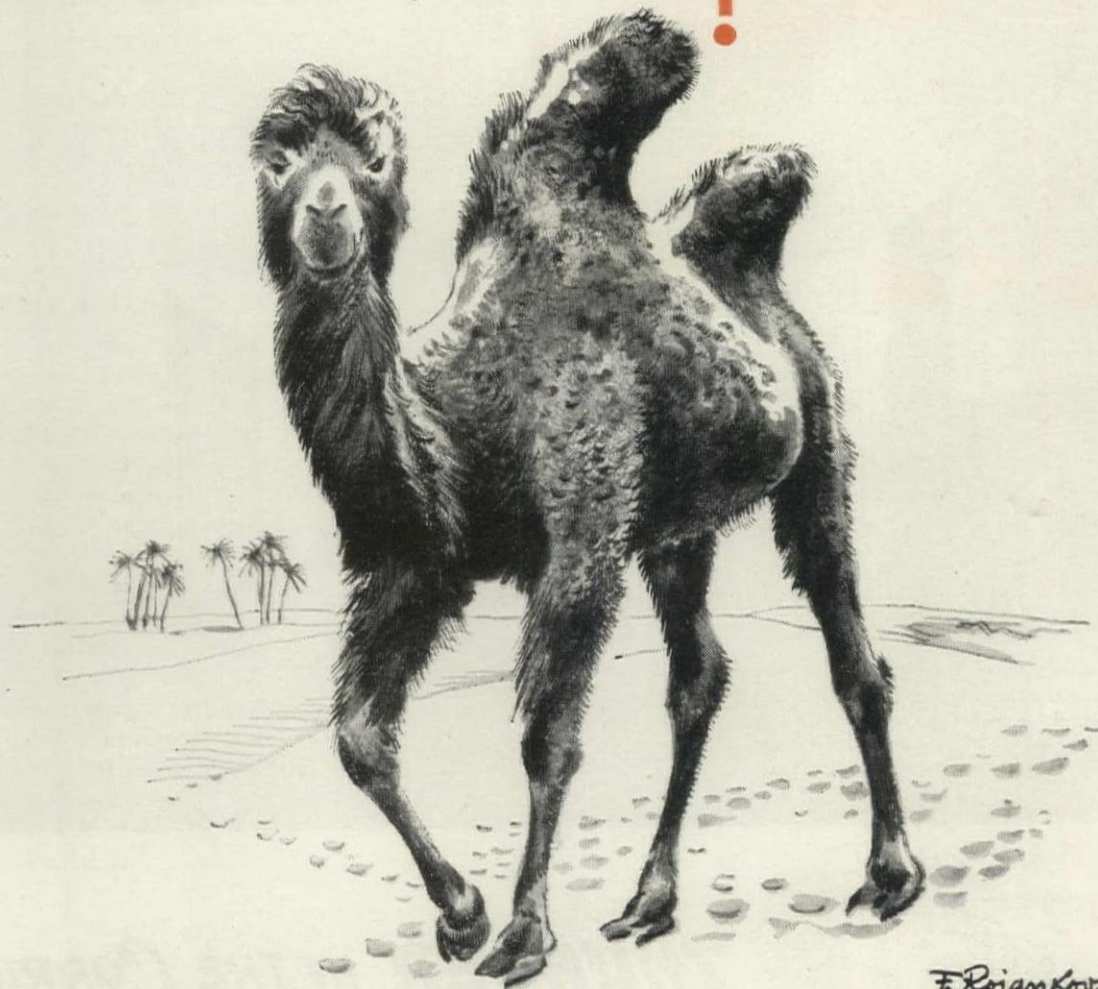


Unit for Living," furnished entirely with handcraft objects—furniture, pottery, textiles, metal work, etc., most of which are for sale or can be ordered in handmade duplicate.

The furniture is simple, handsome and soundly constructed. It is particularly interesting to note, however, that it defies

(Continued on page 160)

Why get a hump on Your back?



To Rojankovsky



WHY burden yourself with complaints from home buyers? To keep them happy, you watch changing demand. Today the trend is to Electric Ranges. Another million American families switched to Electric Cooking last year. Conservative estimates indicate that this year at least a million more Electric Ranges will be installed.

This is a definite trend that cannot be ignored. Progressive builders recognize this trend. Electricity is a "must" in any house, and it's simple and economical to include wiring for an Electric Range leading to a range outlet in the kitchen at the time of construction. This is assurance that the houses you build are not only modern today, but will stay modern for years to come!

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

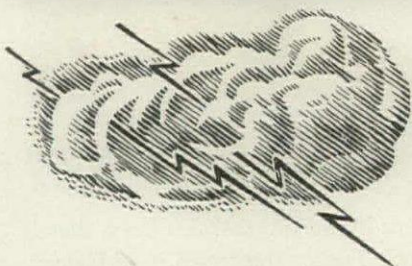
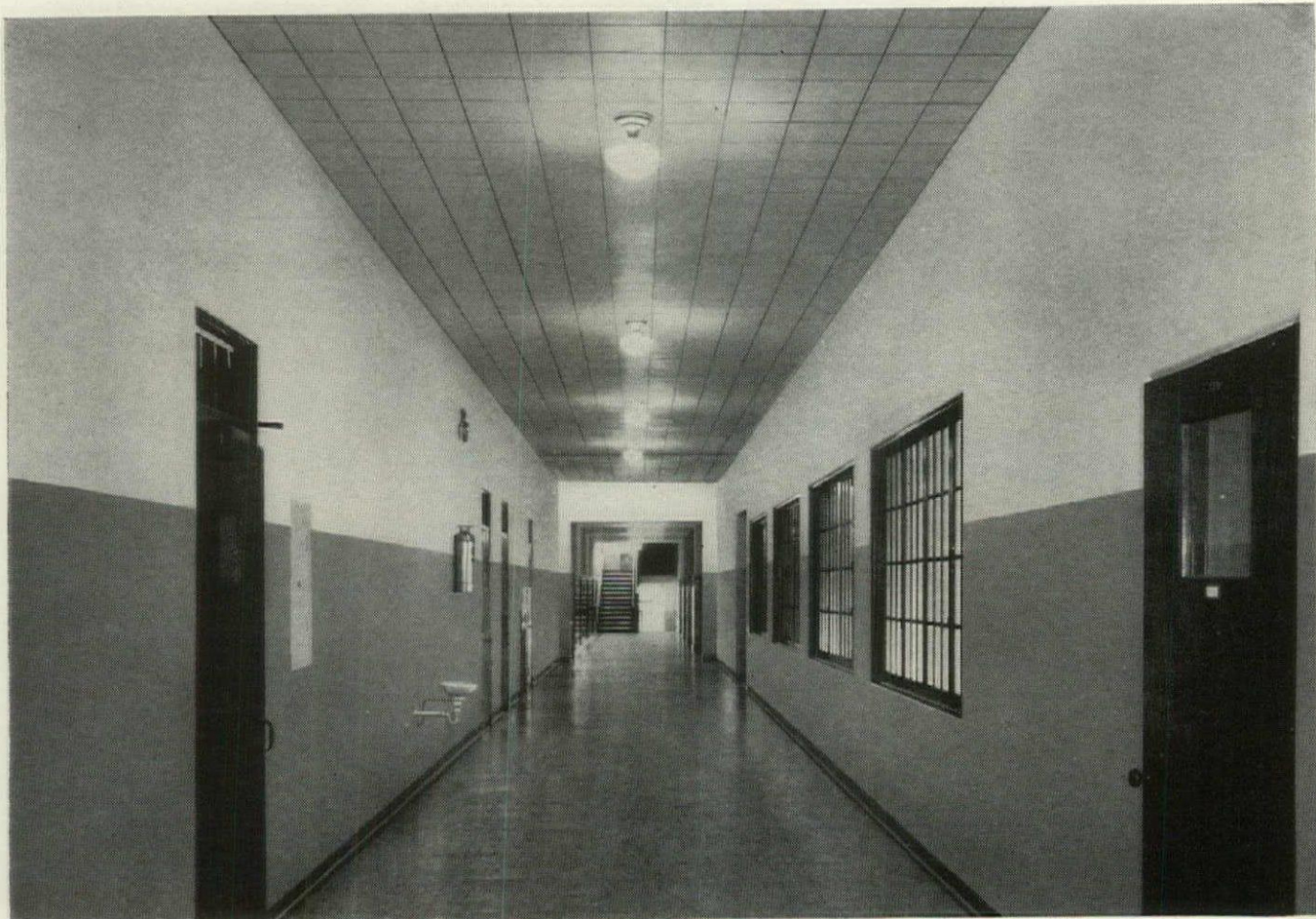
A-B STOVES • ADMIRAL • CROSLY • ESTATE HEATROLA • FRIGIDAIRE • GENERAL ELECTRIC • GIBSON • HOTPOINT
KELVINATOR • LEDO • MONARCH • NORGE • QUALITY • UNIVERSAL • WESTINGHOUSE

Follow
the trend...

WIRE YOUR HOUSES FOR ELECTRIC RANGES

Another 1,000,000 American families switched to Electric Cooking last year

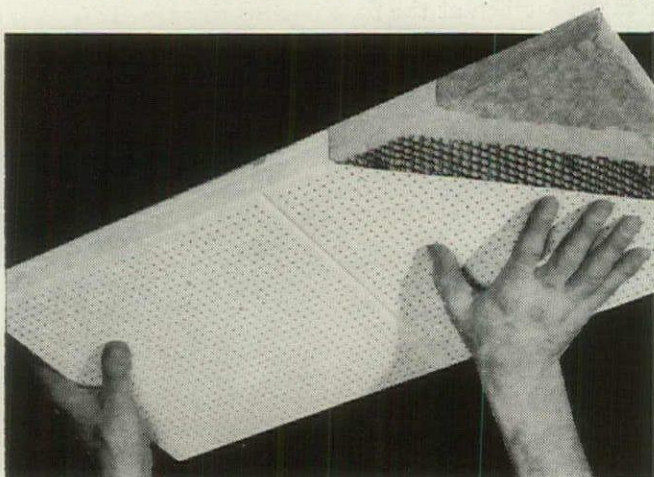




THUNDER IN THE CORRIDORS?

A HOSPITAL corridor can be a booming echo chamber! Ordinary footsteps sound like thunder-claps. It's a trying condition disturbing to both patients and staff. But it can be easily remedied:

You can stifle corridor noise with Gold Bond Acoustimetal. It's designed to insure maximum noise reduction—and to give high light reflection. And it's *Fireproof*



Gold Bond Acoustimetal—The Fireproof, washable acoustical tile for exacting sound control.

to fit new building code specifications.

Best of all, maintenance is cut to an all time low! Each tile is an access panel, for quick repairs to wiring, piping, and air ducts. The 12" x 24" perforated pans snap into patented T-bars, and these T-bars can be mounted any distance from the ceiling which may be required to provide space for pipes, cables, and ducts. They are as adaptable to remodeling as to new building.

What's more, Acoustimetal can be washed repeatedly and even repainted without loss of sound absorption. Write now for the new Acoustimetal folder for complete details.

**You'll build or
remodel better with
Gold Bond**

NATIONAL GYPSUM COMPANY • BUFFALO 2, N. Y.

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

Lesson for Today—



—as taught by the
Brunswick Township
School Board

J&L STEEL

Right: Tightening the rigid bridging between the Junior Beams in the new Brunswick Township, Ohio, High School. *Below:* Architect's rendering of the new school, now under construction.



Contractor handles and places J&L Junior Beams without aid of mechanical hoist



The lesson that many school boards, contractors and architects are learning today, is that *steel and concrete floor construction with J&L Junior Beams saves time and money.* These beams cost less to buy, cost less to erect, yet for many types of "light" structures, they offer all the advantages of heavier structural members.

There are good, sound reasons for the trend to J&L Steel Junior Beams in

schools, apartments, residences and other light occupancy buildings.

Mr. H. Joseph Nitchman, of Berea, O., Architectural Engineer for the new Brunswick Township school, specified them because: "Compared with heavier structurals, Junior Beams are well designed for this type of structure—also well designed for use with metal lath and paper-backed mesh."

Mr. C. E. Karn, of Unit-Way Homes, Inc., Berea, O., the contractor for this school, stated: "These beams require no special handling equipment. Four men without any equipment at all, raised the Junior Beams to the second floor and placed them properly. This is an important point on many jobs."

The Brunswick Township School Board likes J&L Junior Beam floor construction, because it is fire-proof, helps hold down construction and maintenance costs, and minimizes insurance rates.

School Boards! Architects! Contractors!

Check these advantages of J&L Steel Junior Beam Floors: Economical—Fire-proof—Rigid—Shrink-proof—Termite-proof—Easy to install—Low maintenance—Permanent.

J&L Junior Beams are available now through leading steel warehouses including J&L Service Warehouses at Chicago, Cincinnati, Detroit, Memphis, New Orleans, New York and Pittsburgh. Let us send you descriptive literature and engineering data. The coupon below is for your convenience.

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401 Jones & Laughlin Building
Pittsburgh 30, Penna.

Please send me complete data on J&L Junior Beams and Junior Beam Floors.

Name

Address

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JONES & LAUGHLIN STEEL CORPORATION

America's Only Producer of Steel Junior Beams

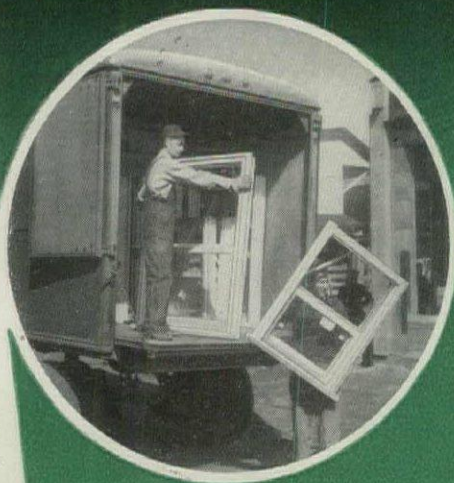
REVIEWS

R.O.W.

REMOVABLE WINDOW

A Complete Unit Delivered to Job

R.O.W. Removable Wood Window Units are delivered to your construction job as pre-fit, weatherstripped units. This helps you keep costs of labor-on-the-job at a minimum... Your R.O.W. Windows are made by a nearby manufacturer (there are 41 in the United States), assuring you of prompt and convenient deliveries with the least possible freight expense.



Quick, Simple Installation

Installation of an R.O.W. Window is merely a matter of inserting the frame in the rough opening and securing it in place. No fussing with counterweights; R.O.W.'s patented "spring cushion" holds window securely in any position, permits easy opening and closing. Leading building material dealers everywhere sell R.O.W. Removable Window Units. R.O.W. Sales Company, Royal Oak, Michigan.



Removable

Opens easily

Weatherstripped



style classification as either modern or traditional. There are no trademarks and no clichés. A glass-fronted buffet and cabinet (see cut preceding page) is suggestive of the early American breakfront; and yet it is not in any sense a copy. It is simply a logical solution to the problem of storage for dining equipment. Particularly ingenious is the provision of a slot in its cabinet section for storing the dining table when not in use (one folding leg does the trick). A piece such as this would fit into a Colonial, period or modern interior with equal harmony. Perhaps a time-worn but important moral should be pointed here: that the striving to make objects look either "traditional" or "modern" often invites self-consciousness and superficiality of design. The range of contemporary furniture (and the Alfred University pieces are certainly that) should not be restricted to the kidney-shaped table and the still-legged chair—E.B.

MACHINE-AND-HAND-MADE FURNITURE

The New York showroom of Jens Risom, Inc. has recently added several new items to a line already well-known among



architects, decorators and designers. Risom's furniture is an excellent example of designing to fit the method of production—in this case, machine-plus-craft manufacture. It is definitely a luxury line and as such takes advantage of skilled upholsterers and finishers to provide the fine detail which the machine has not yet learned to supply. A new chest of drawers



(see cut) is mounted on the same type of base (with removable legs) as an already familiar cabinet. This retails at \$219 in walnut, mahogany or oak. A handsome chair (see cut) should appeal to both traditional and modern-minded sitters. In muslin, it retails at \$57; a matching side chair at \$49.50. Currently available is a new catalogue listing all stock items with their prices.—E.B.

CH* keeps them comfortable

YES, * CONVECTION HEATING WITH TUTTLE & BAILEY STANDARDIZED COPPER CONVECTORS ... selected as the right combination for the 1500-unit Bellevue Apartments at Fairfax, Virginia to meet the demands of efficiency and appearance.

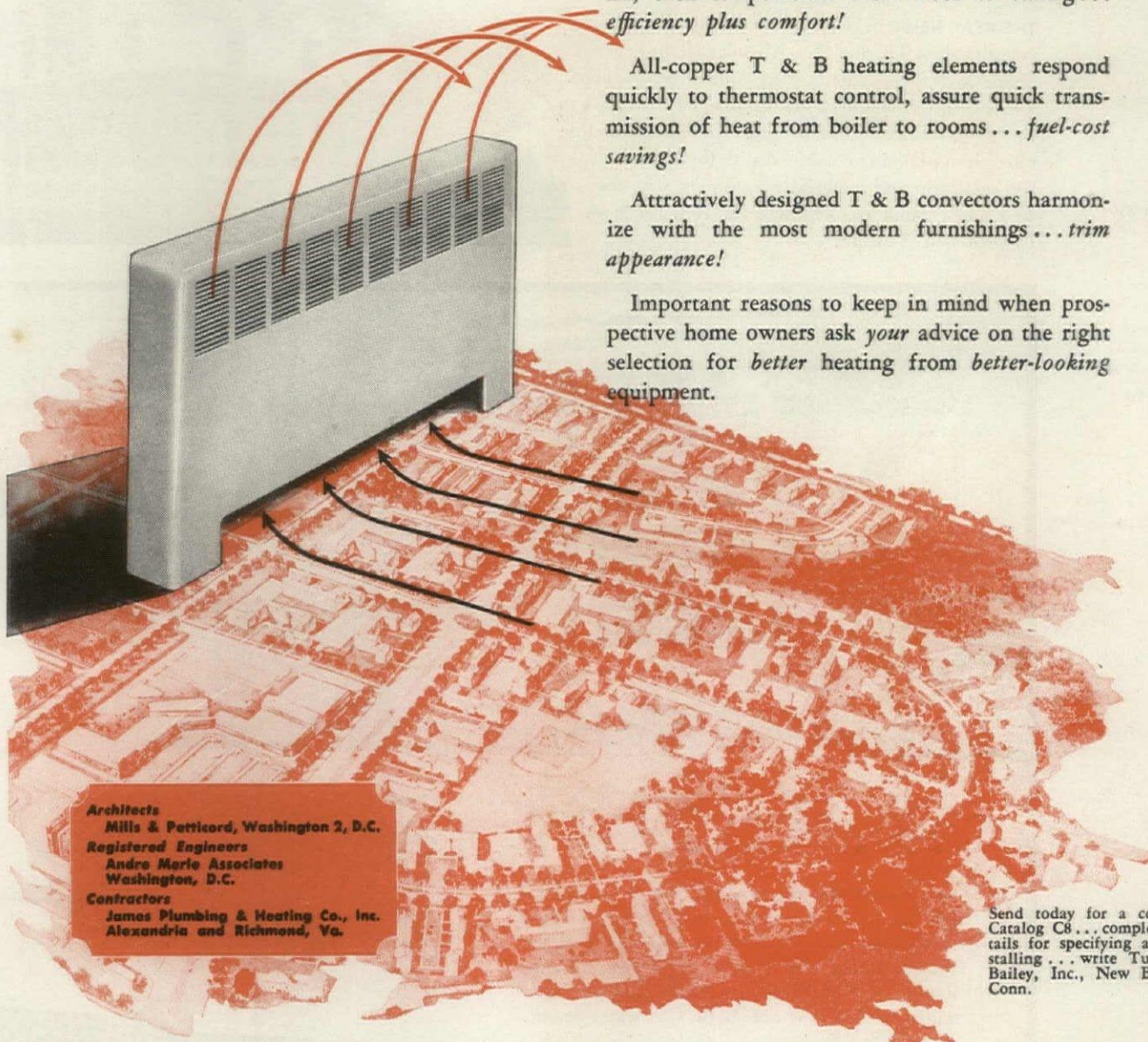
The reasons why are simple

Convection heating — as provided by Tuttle & Bailey — means constant, gentle circulation of room air, even temperatures from floor to ceiling... *efficiency plus comfort!*

All-copper T & B heating elements respond quickly to thermostat control, assure quick transmission of heat from boiler to rooms... *fuel-cost savings!*

Attractively designed T & B convectors harmonize with the most modern furnishings... *trim appearance!*

Important reasons to keep in mind when prospective home owners ask *your* advice on the right selection for *better* heating from *better-looking* equipment.



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Mills & Petticord, Washington 2, D.C.
Registered Engineers
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Washington, D.C.
Contractors
James Plumbing & Heating Co., Inc.
Alexandria and Richmond, Va.

Send today for a copy of Catalog C8... complete details for specifying and installing... write Tuttle & Bailey, Inc., New Britain, Conn.

ASK YOUR JOBBER TODAY

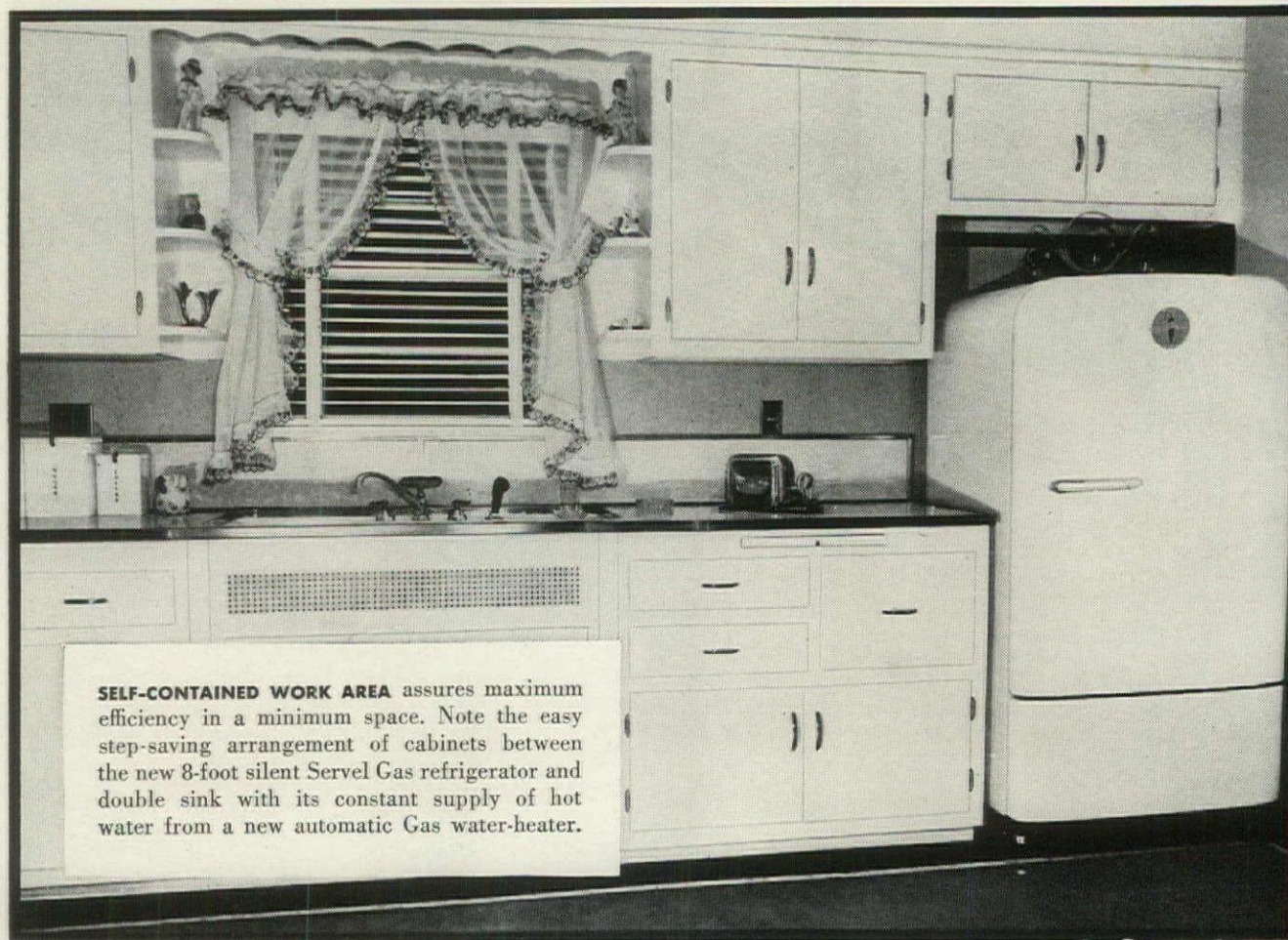
TUTTLE & BAILEY

Standardized COPPER CONVECTORS

Wherever there's news in building

"NEW FREEDOM"

THE REAL NEWS in this Walcott English type house — completed for Mr. and Mrs. Nicholas DeBiase of Teaneck, N. J. — is its faultless quality throughout. Every detail, from the two-to-one bonded stonework to the breezeway and patio in back, is the finest example of modern planning combined with topflight workmanship and materials. Naturally, with the best construction *outside*, there's a "New Freedom Gas Kitchen"* *inside!*



SELF-CONTAINED WORK AREA assures maximum efficiency in a minimum space. Note the easy step-saving arrangement of cabinets between the new 8-foot silent Servel Gas refrigerator and double sink with its constant supply of hot water from a new automatic Gas water-heater.

*Cert. Mark, Amer. Gas Assoc.

Here's why an authorized
"New Freedom Gas Kitchen"
is such a unanimous success

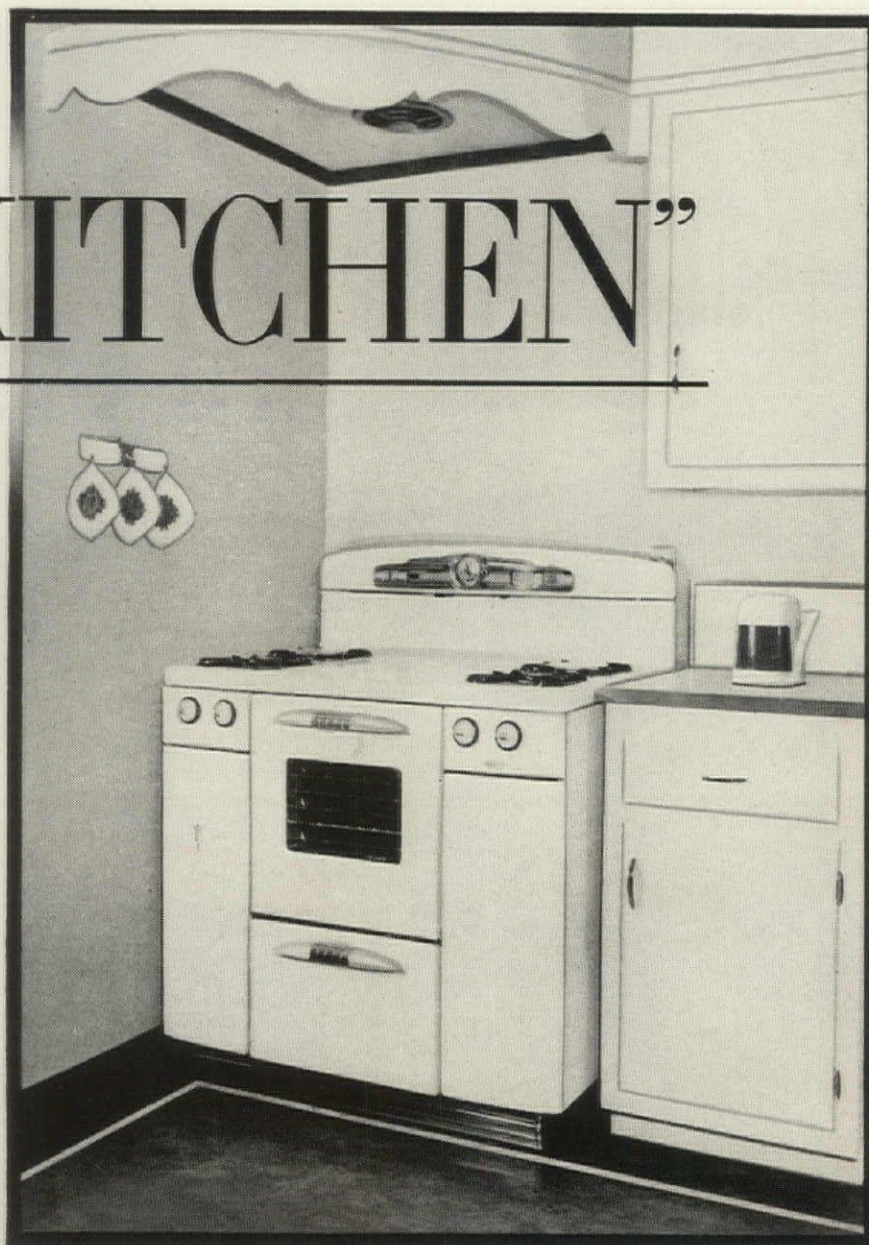
BANKERS say:
"Financing is easier
... because there's
less long-term risk
involved in a house
with a complete 'New
Freedom Gas Kitchen'!"

ARCHITECTS say:
"There's more chance for
individual design with the
new streamlined Gas
appliances. They are in-
expensive and easy to inst.
in any kitchen layout."

here's a GAS KITCHEN"

GREATEST NEWS in this "New Freedom Gas Kitchen" is this double-duty cooking unit. Not only features a deluxe automatic gas range built to "CP" standards but a built-in ventilating system concealed behind the decorative scalloped valance. (Reminder: Modern kitchen ventilation is most effective with Gas. No other cooking method provides the right air-currents to capture and carry away unwanted odors and greasy vapors at their source.)

Here's how easy
it is to meet the
requirements for
the kitchen that
wins the sale"

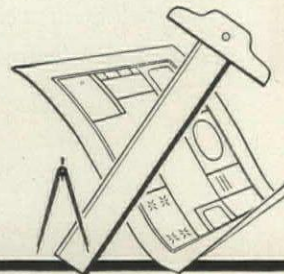
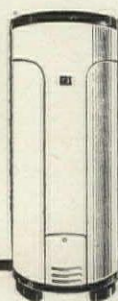
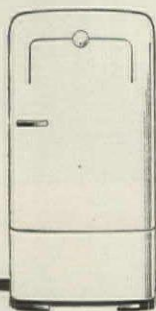


1. SPECIFY: America's finest, most efficient cooking appliance... an automatic Gas range built to "CP" standards.

2. SPECIFY: America's most practical automatic refrigerator... a new Servel Gas refrigerator with no moving parts in the freezing system to wear out.

3. SPECIFY: America's only fast recovery hot water system... an automatic Gas water-heater in the right size for all needs.

4. SPECIFY: America's most modern kitchen planning... the background you would naturally select for the world's most modern appliances run by Gas!



BUILDERS say: Selling is a cinch when a house is ready equipped with the modern automatic Gas appliances buyers want."

BUYERS say: "Deciding on which house we want is simple once we've seen one with a 'New Freedom Gas Kitchen.' We know it's the best for our money now... and that we'll get the most for our money if we have to re-sell later."

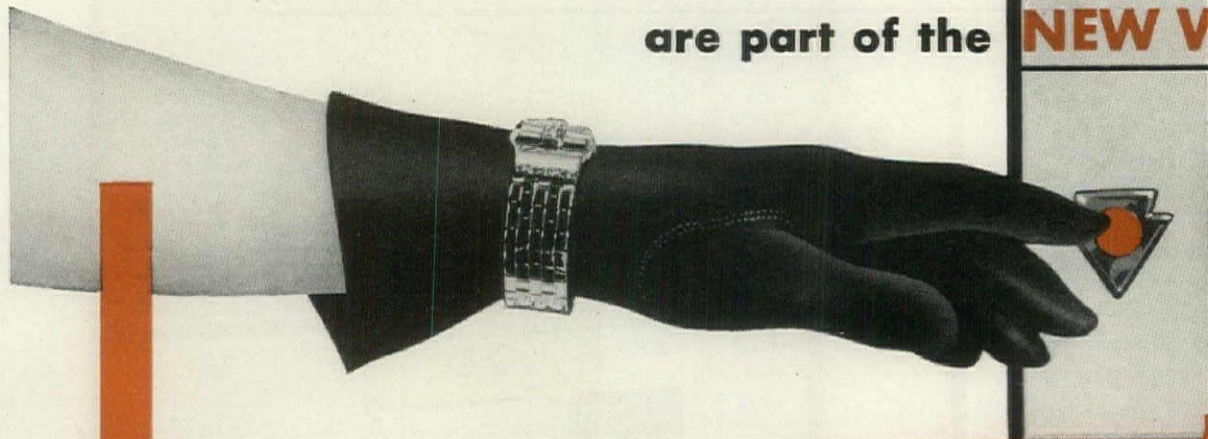


Free! For new promotional material tied in with nation-wide publicity program... see your local Gas company or write direct to:

AMERICAN GAS ASSOCIATION
420 LEXINGTON AVE., NEW YORK 17, N. Y.

electronic **'TOUCH BUTTONS'**

are part of the **NEW WAY**



The instant your finger contacts an OTIS electronic 'touch button' a directional arrow lights up. The light shows that your call has been registered. As the elevator approaches your floor the overhead lantern also lights up. Both lights stay on until your call is answered. It's all controlled electronically.



AS ALWAYS, OTIS LEADS THE WAY . . . THIS TIME WITH

of commercial living

The world's first Electronic Signal Control Elevators are now in operation in New York's *first* postwar skyscraper, the Universal Pictures Building at 445 Park Avenue.

OTIS engineers, who were working on electronics before World War II have applied the magic of modern electronics to improve Signal Control operation. As a result, you can now summon an elevator by simply *touching* a plastic arrow in the landing fixture.

OTIS Electronic 'touch buttons' and overhead lanterns are attractively modern. They blend admirably with modern interiors, as pictured at the right. And their electronic 'touch' operation dramatizes the advanced design of the installation.

OTIS Electronic Signal Control is applicable to all elevators. But for the immediate present, it will be confined to elevators that travel at speeds of 500 feet per minute or more.

Otis Elevator Company. Offices in all principal cities.



ELECTRONIC SIGNAL CONTROL
ELEVATORS

THE MAGIC OF MODERN ELECTRONICS



SPECIFICATION AND BUYING INDEX

The advertising pages of FORUM are the recognized market place for those engaged in building. A house or any building could be built completely of products advertised in THE FORUM. While it is not possible to certify building products, it is possible to open these pages only to those manufacturers whose reputation merits confidence. This THE FORUM does.

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colored

SIDEWALKS

Something new and dramatic in color engineering—
to heighten the beauty of any facade. Colorundum for
new integrally colored sidewalks is made in
five colors. Horn A. E. Dispersed Black is used for
darkening new concrete sidewalks to black or
any shade of grey. Both products simple to use.
Write for the newest information.

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and
store
design**



A.C. HORN COMPANY, INC.

manufacturers of materials for building and construction

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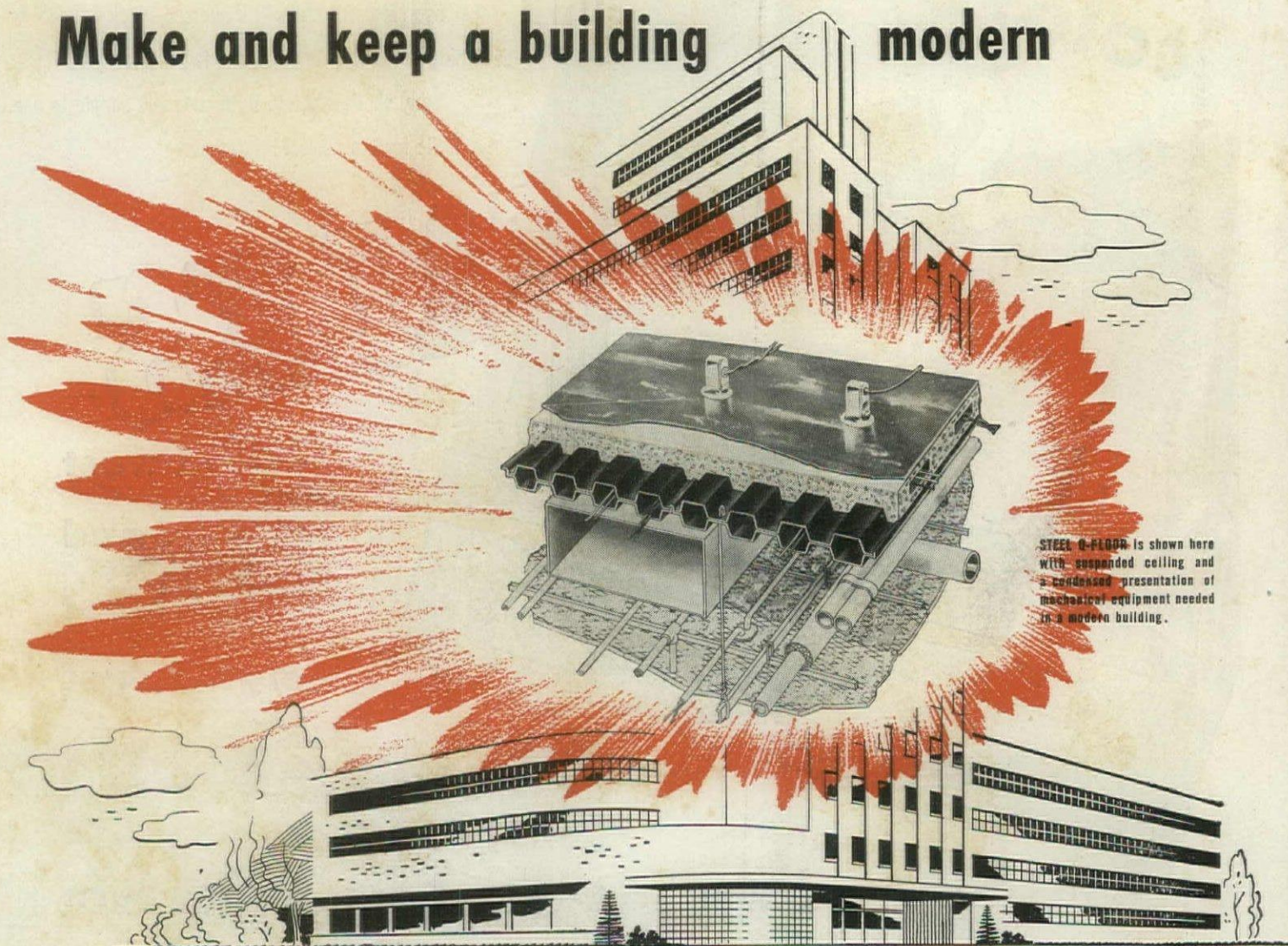
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FACILITIES . . not FACADES

Make and keep a building modern



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

The success of a building depends upon how well it meets modern needs and how many decades it can continue to stay modern.

Look at the cross section of this modern floor. The steel channels are **Q-Floor**. This subfloor is right in line so far as cost goes. It costs less than the carpet to cover it. But consider what it does for your building.

First: **Q-Floor** cuts construction time 20 to 30% because it comes pre-cut. Two men can lay 32 sq. ft. in 30 seconds. Construction is dry, noncombustible, clean. **Q-Floor** becomes a platform for all other trades as soon as laid. Therefore, all work moves faster. This time saved results in construction money saved and also in earlier revenue.

Second: **Q-Floor** makes possible an electrical outlet on any six-inch area of the entire exposed floor. The channels are crossed over by raceways carrying wires for every conceivable electrical service. An outlet, anywhere, at any time, takes literally only a few

minutes. An electrician drills a small hole, without trenches or fuss, installs the fitting.

This permits you to locate outlets and partitions *after* tenants move in. Such *permanent flexibility* of floor layouts enables a building to keep *permanently modern*—in its facilities.

You can see **Q-Floor** Fittings at any General Electric construction materials distributor's. For data on the suspended ceiling (no pre-set inserts needed); on its light weight (less than forty pounds per sq. ft. including ceiling); on the four-hour fire rating; on the availability of steel (remember—you must allow time for demolition and excavation, so the steel *will* be ready) call a Robertson representative or write:

H. H. ROBERTSON COMPANY

2403 Farmers Bank Building, Pittsburgh 22, Pennsylvania

Offices in 50 Principal Cities



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—because
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Plumbing Fixtures
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For almost half a century, we have concentrated all of our energies . . . our research, our designing talent, our manufacturing skill . . . on plumbing fixtures exclusively. During these years Eljer has developed, introduced and pioneered many of the fundamental improvements now used in the manufacture, design and styling of plumbing fixtures. The simplicity of Eljer's Renewable Brass Fittings is another engineering achievement.

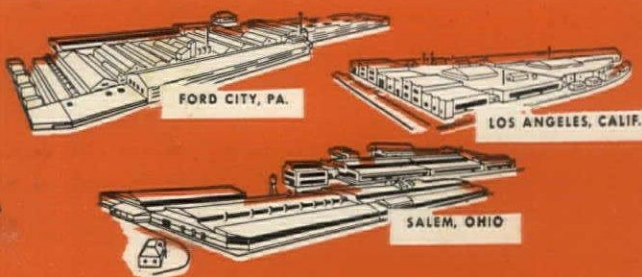
These are the *kind* of fixtures and fittings it pays plumbers and plumbing supply houses to sell . . . the kind architects and builders specify and recommend with fullest confidence.

You get active support from Eljer management and Eljer salesmen . . . experienced territory managers, alert to keeping you informed of the latest trade trends. Specification service is freely available. Effective advertising and sales promotion aggressively supports your efforts. Eljer policies are so gratifyingly popular, because they are geared to ease your sales problems.

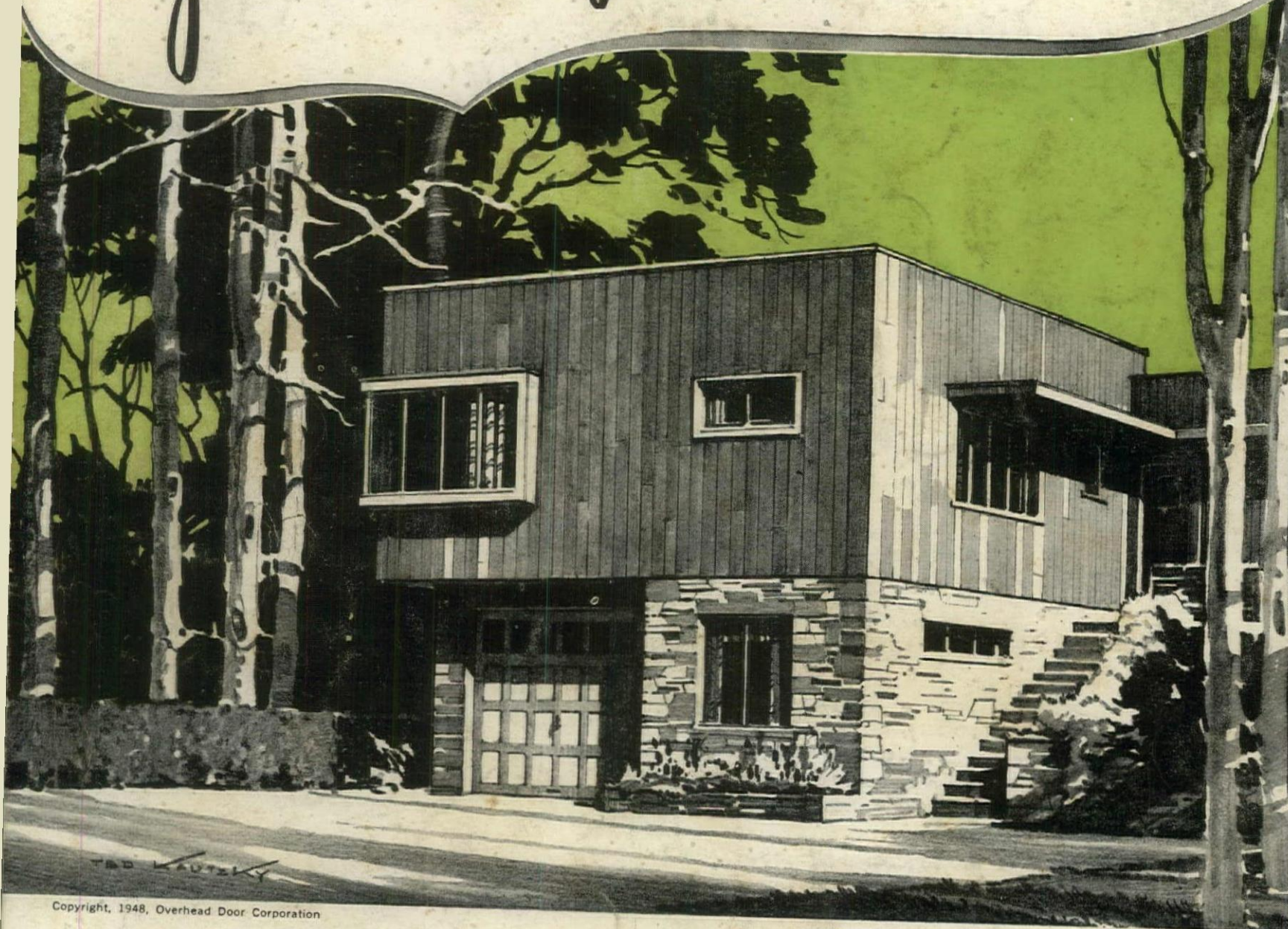
And why does this pay *us*? For the simple reason that all of the above has brought a great and ever-increasing volume of orders . . . one of the primary reasons for the growth, success and prosperity of our business.

ELJER CO., FORD CITY, PA.

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uninterrupted service. Every "OVERHEAD DOOR" is constructed from rigorously tested materials to meet exact requirements. As a result, durability and ease of operation year in and year out, in any climate, are assured. Any "OVERHEAD DOOR" may be manually or electrically operated.

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