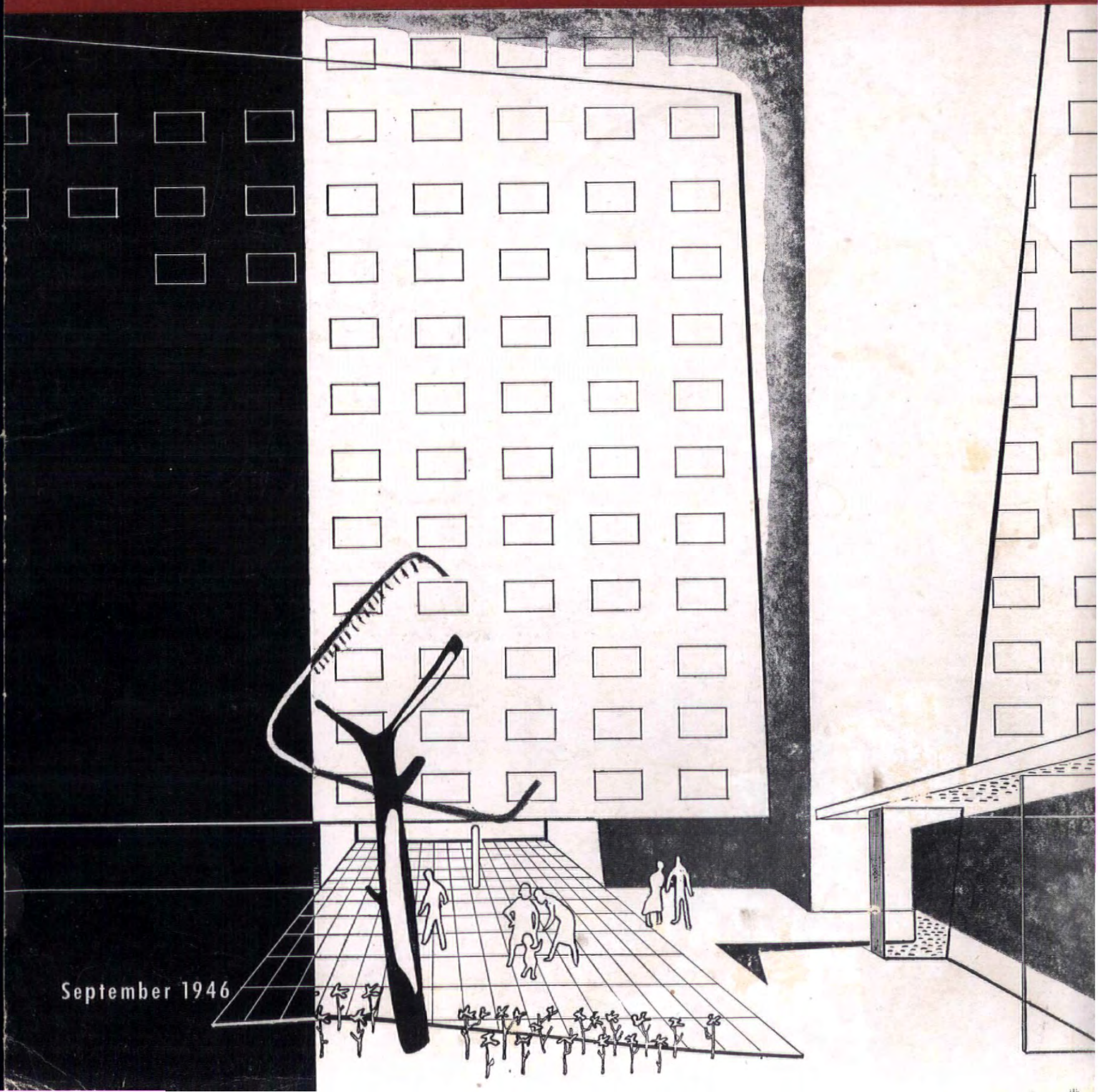


The Architectural

FORUM

Magazine of Building



September 1946



It's what's INSIDE that Counts!

LOVELY to look at, that cake. But how good it tastes depends on what went into the *recipe*.

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The Architectural

FORUM

MAGAZINE OF BUILDING

SEPTEMBER 1946



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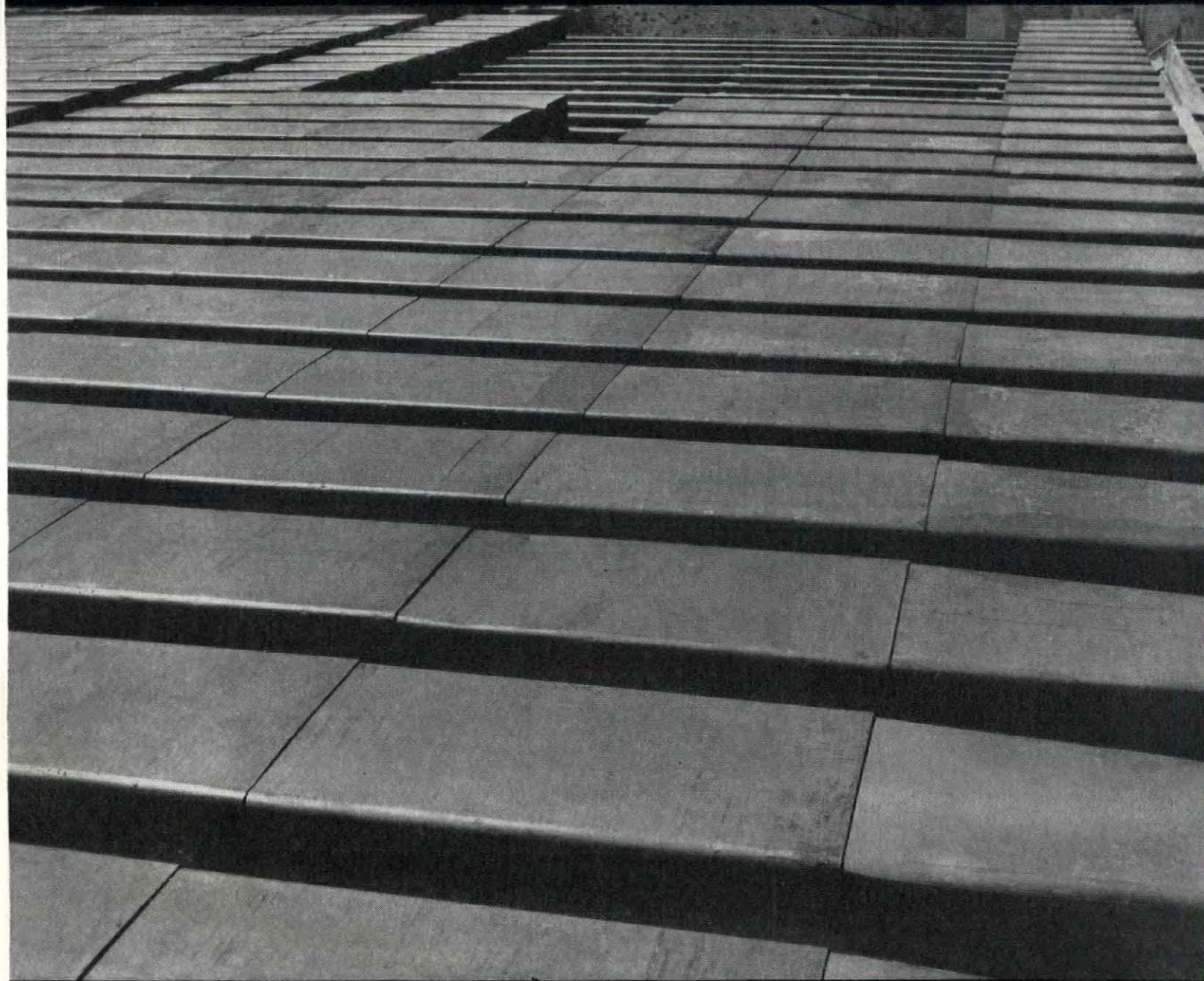
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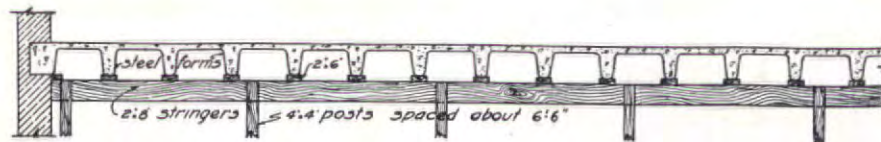
Cover by Frank Weise

CECO

First in Steelform



In construction products **CECO ENGINEERING**



Service...

Meyer Steelform construction is economical for store and office buildings, residences, apartments, hotels, schools, hospitals, garages and manufacturing buildings—in fact, all structures with lighter loads and longer spans.

A nation-wide independent survey indicates that architects, contractors and engineers prefer concrete joist construction two-to-one for the following reasons:

1. Lower cost construction
2. Speeds up building
3. Provides rigid, strong, permanent, sound-proof buildings
4. Assures fire-resistive construction

ASK YOUR CECO SERVICE HEADQUARTERS FOR COMPLETE TECHNICAL DATA, OR WRITE CECO'S GENERAL OFFICES . . .

It is universally recognized that concrete joist construction has definite natural advantages. It eliminates much of the concrete below the neutral axis which is both ineffective and largely wasted due to the weakness of concrete in tension. The amount of concrete used is held to the minimum necessary for any given span or live load. Naturally, this saving of dead load has its economical effect on all parts of the structure.

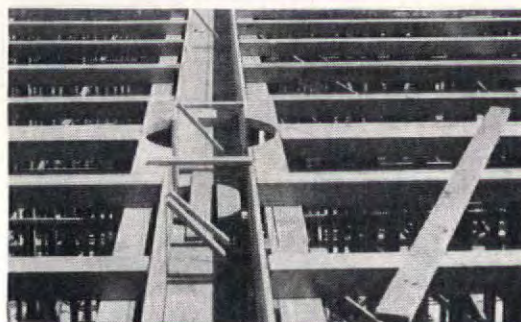
Meyer Steelform construction is the most economical of all methods of forming concrete joists because the joists and thin slab between them are formed with cores of *removable* steelforms supported on a skeleton centering. Once the concrete has set, the steelforms are removed and re-used many times, thus permitting a nominal rental charge for each use. Meyer Steelforms are handled on a rental basis only, leased to contractors and owners for specific jobs.

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Ceco Engineers in 23 Offices are always ready to help you in the preparation of designs and estimates. They can help you cut costs and save time. Feel free to call on Ceco for service on your jobs. The above drawing illustrates one type of open wood centering recommended by Ceco.



Simple open-wood centering makes Meyer Steelform construction economical and fast. The centering may be re-used from floor to floor. This eliminates extra lumber and saves time.



Here is a Ceco job illustrating precision formed joists. Note the constant width and accurate alignment from one end of the building to the other. Ceco workmen know how to eliminate concrete leakage and insure proper execution of the structural design.

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METAL WINDOWS AND DOORS • METAL FRAME SCREENS • METAL WEATHERSTRIPS
STEEL JOISTS • STEEL ROOF DECK • METAL LATH AND ACCESSORIES • REINFORCING STEEL • HIGHWAY PRODUCTS • CORRUGATED ROOFING AND ACCESSORIES

makes the big difference



Full-wall construction gives beauty and permanence to this attractive interior.

"With Upson Full-Wall Panels We Build Better Homes...Walls that are Beautiful, Permanent, Crackproof" . . .

NATIONAL HOMES CORPORATION, LAFAYETTE, IND.



● Here is the word of a company that knows—and builds good houses.

THE NATIONAL HOMES CORPORATION in a few short years has developed into one of America's important producers of pre-fabricated homes.

NATIONAL HOMES is thoroughly alert to modern trends. Pioneers in new and better construction methods and materials, this Company builds homes smartly styled—thoroughly livable and planned to last.

In thousands of attractive homes built by NATIONAL HOMES CORPORATION, Upson full-wall Panels have been used for wall linings.

These sturdy panels provide a rich and beautiful surface free from ugly joints or cracks. A surface easy to paint—easy to keep clean!

Upson Panels are not yet in full supply . . . but use them when you can. Remember, products of proven worth are hardest to get. It will pay you to wait for Upson Quality Panels.



*Upson Products are Easily Identified
by the Famous Blue-Center.*

THE UPSON COMPANY

LOCKPORT, NEW YORK

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BUILDING MONTH. To the list of shortages for building, last month added another casualty—national patience was being crimped even harder than the supply of nails or plywood. As veterans' meetings took on a bristling belligerence, organized building and real estate men lost their tempers in angry unanimity; small builders, tired of bluepenciling plans, shelved them. Vexed but frank was prefabricator F. Vaux Wilson, who told newspaper ad-readers, "Today there is no magic by which we can build a \$2,750 house to sell at less than \$7,500. And at \$7,500, we know it is not a good value."

Appeal and invective centered on Housing Administrator Wyatt who reported with small comfort that only 153,000 permanent dwellings had been completed so far this year. Yet never as a nation had people in the U. S. intended to build so much—record building permits; or borrowed so much for home financing—record mortgage totals.

At month's end Wyatt contemplated new steps to dike the flow of critical materials into non-residential construction. Ready to go, were: 1) reduction of non-housing construction by \$10 million a week, a cut of almost 20% in present authorizations; 2) boost in set-asides of critical materials to 75%; 3) set asides to HH and other priority buyers of 75% of all softwood lumber imports; 4) edict that 93 percent of all cast-iron soil pipe made be produced in sizes for residential uses. Reinforcing Wyatt's attack, the CPA categorically ruled out stockpiling of building materials for future construction and CPAdministrator Small handed control over all non-residential construction, except industrial, to the NHA.

Last month the Expediter also moved to strengthen his program in the following ways:

- ▶ He extended to 60 days the waiting period during which houses built under the emergency housing program must be held for sale to veterans, so preventing "snatch-sales" to non-vets.

- ▶ He lengthened his list of priority housing materials from 30 to 80 items; granted super-exclusive rating for surplus war property to the FPHA and Veterans' Administration.

- ▶ He joined with Reconversion Director Steelman to call a 56-day construction halt on all but top-essential public works.

- ▶ He established the detail machinery for granting guaranteed markets to prefabricators. Anticipated soon was the first complete guarantee contract, to be made to a manufacturer of steel-fabricated houses.

- ▶ He took steps to stimulate rental housing. With revived Title VI groomed for action, Wyatt prepared a campaign that would include persuasions ranging from a rental housing "kit" of sparkplug information for builders, to generous relaxing of standards for smaller rental units and more liberal treatment accorded mortgages under \$200,000.

Now that Congress had filed out of the dusty chambers in which it had dozed and fulminated over the desperate problems of postwar U.S., Wyatt's strategy had shifted from Pennsylvania Ave. to Main St. An unfamiliar hush settled near the great, grooved dome of the Capitol, where Congress had lately argued over a score of measures affecting Building. When it quit in August, its record on such legislation

was mixed. It had taken its time about passing the Veteran's Emergency Housing Bill, but finally granted the Patman measure a subsidy fund of \$400 million; it passed an enfeebled price control bill; it approved Federal aid, (up to \$500 million) for airports; it authorized \$75 million annually for five years for hospital buildings and improvements. The Congress rejected the reorganization proposal to consolidate all housing in one agency and put the Wagner-Ellender-Taft bill into the cold locker, at least until Congress reconvenes.

OPA's half-come-back was the knottiest problem confronting Building as well as the whole economy last month. Spiraling inflation seemed a nearly foregone conclusion unless a competitive industrial system could create its own controls. Big factor in the immediate upsurge of materials prices will be the boosting of retailer markup to March '46 percentages, as allowed under the new law. Before the month was over, OPA had already granted price increases of five to ten percent on scarce items like stock mill-work and enamel cast-iron fixtures. Such increases were certain to be followed by others when the prices of basic commodities such as iron and steel begin to mount. Many fear a third rise as the zooming cost of living causes workers to demand wage increases.

WYATT'S TALLY

Housing Boss counts holes-in-the-ground, roofs overhead.

Wyatt's second monthly report was headlined: "Half a Million Homes: Two-fifths of 1946 Starts Goal Reached in First Six Months." The wise at once noted the word "Starts", read down further where the Expediter observed that the nation could boast of only 225,000 homes completed from January to June. As the report explained still further on, 72,000 of these "completions" were temporary public-financed housing, conversions, and trailers, leaving just 153,000 units as the accomplishment of the permanent house-building industry.

Wyatt admitted that the going was tough. "Starts", in a period of stringent materials shortage, had little more meaning than holes-in-the-ground. Trailer-dwellings were certainly not to be classified with permanent, site-connected homes. Even the stripped figure of 153,000 permanent homes could be deflated a bit—it included work started last year, but not completed until after January 1.



NEW PLACARD in red-white-and-blue, tags approved home construction, held 60 days for sale to veterans. Welding mallet, right, Wilson Wyatt; at left, Commissioner Raymond Foley, and veterans representatives, Leonce Legendere, American Legion; Jack Hardy, American Veterans of World War II; Wesley Pearce, VFW, and William L. Batt, Jr., AVC.

Another gimmick lay in the high muster of rental housing. A large proportion of these units, Wyatt pointed out, are temporary re-use dwellings, thrown up on college campuses by the FPHA. By January or February, all of these will be in place. Privately-built rental housing, just beginning to inch forward, will then have to haul a large share of the housing program.

Still hewing to the goal of 1,200,000 starts by the end of the year, Wyatt conceded one miss: prefabrication, expected to furnish 250,000 units this year had succeeded in eking out about 12,000 factory-built houses. Revising the goal down to 100,000, Wyatt admitted: "All indications are that mass production of factory-built homes cannot be expected until 1947. Time required for development work and necessary tooling-up for new designs make it unlikely that quantity production from new sources will be achieved as early as had been hoped originally."

HOUSING SCORE

1946 GOAL—1,200,000 UNITS



UNITS STARTED THROUGH JUNE—496,000



UNITS COMPLETED—225,000



Each Symbol—100,000 Units

CONVENTIONALLY-BUILT HOUSES

PERMANENT PREFABS

TEMPORARY HOUSES, (CONVERSIONS AND TRAILERS)

* Goal revised to 100,000 units

MATERIALS COUNT

The reality of housebuilding is brick, lumber, plumbing . . .

Materials, the solid stuff of which houses are made, were the truest measure of the Veterans' Housing program's progress last month. Brick was better: more than 457 million clay bricks were produced in July, an increase of 17 per cent over the previous postwar peak in June of 391 million. U. S. Gypsum and National Gypsum, producers of 90 per cent of the East Coast's supply of gypsum products, announced that their plants were now approaching capacity production—in June they had been shut down because oreboats from Nova Scotia had still been under lease to the government. Lumber was up another rung—CPA was emboldened to revise its estimate of 1946 production from 30 to 32 billion feet. Asphalt roofing set an all-time record and even clay sewer pipe, structural insulation board and cedar shingles, all still mighty short, hit post-war highs in June.

It was too early to gauge the effect of the newly-instituted premium payments program, big gun in Wyatt's campaign for lowered costs, freer flow of materials. But at present rates of production, it was clear, materials set a crimping barrier before fulfillment of the housing goal. Hardwood flooring, for instance, had actually dropped by 30 per cent between May and June; according to Department of Commerce calculations, present production speed would achieve about 1,200 million board feet this year, less than half of the estimated consumption for 1946.

Housebuilding, at month's end, was very much like an army compelled to the pace of its slowest foot-slogger: for lack of a sink-fitting or another small part, many a house would linger empty. Lag between construction start and completion has increased to six months in an average 63 cities surveyed by the Department of Labor.

With a little comfort to Building, the government also noted last month that general production had pierced above all preceding postwar levels, and in many cases past prewar peaks. Gas ranges, for one, had reached an output of 141,000. 16,000 more than prewar top production.

The shortest, not the most plentiful essential item, however, was arbiter of the vital tally of completed houses. In Seattle, builders reported typically: 2,300 privately built homes stalled at various stages of incompleteness; 400 government-built units likewise bogged along the way, for want of "maybe a faucet".

W-E-T BILL EXIT

Housing measures may be revived by 80th Congress.

A curiously lively corpse was the Wagner-Ellender-Taft General Housing Bill, officially buried by the 79th Congress last month. Advocates of this gigantic blueprint for the building of 10 million homes over the next ten years, exhorted each other to push for a special session of Congress, failing that, for the bill's passage when Congress reconvenes in four months. Veteran spokesmen like Franklin Roosevelt, Jr. stressed the argument that the bill is an essential phase of the veterans' emergency housing program, supplementing the HH priority system with housing built for middle and lower-income families.

The W-E-T bill's intransigent opponents however, were equally ready for battle. Their effectiveness had been demonstrated by the bill's long death-agony in the House, after bipartisan support in the Senate gave it easy passage there on April 15. Wyatt pointed a finger at the well-organized real estate and construction lobbies and charged the Congress with collaborative "parliamentary filibustering" and "shameful tactics". Vowed he: popular retribution would meet the guilty Congressmen at the polls.

BUILDING MONEY

ANTI-TRUST PROBE

Trouble for Building's Big Money.

Last month, after weeks of hints and hesitation, the Department of Justice charged 39 of the country's most powerful building lenders with conspiracy to suppress competition in the making of mortgage loans and in operating real estate in the New York City area.

The accused insurance companies and banks were the brawny giants of lending; together they had made 60 per cent of new first mortgages placed upon New York real estate in 1945, something like \$135 million worth of loans. Included in the charge were the Prudential, Aetna, Mutual Insurance Companies, the powerful Savings Bank Trust Co., savings and commercial banks like the Bowery Savings Bank, the Chase National Bank, and others, all members of a clearing-house called the Mortgage Conference of New York.

Holding hands through the Mortgage Conference, had resulted, the Justice Department charged, in (1) collusive agreements to swap information on the mortgage suitability of real estate; (2) fixing of

interest rates and adoption of uniform policies designed to keep up rents; (3) concerted lock-out of financing from areas where such investment would lessen income from real estate owned by member firms, (4) use of credit control to exclude racial or minority groups from particular areas.

Forewarning of the Justice Department's move had been heard ever since June, when Attorney General Tom Clark announced that the Anti-Trust Division had launched a nation-wide investigation of restrictive practices affecting the construction industry, (FORUM, July, '46). In July, a special Federal Grand Jury met to indict the firms on criminal charges, recessed without making any determination, while Elliott Bell, New York State Superintendent of Banks, warned that criminal indictment might "adversely affect" public confidence in the institutions. Last month's action took the milder form of a civil suit and at month's end, the accused companies were reported ready to ask for a "consent decree", by which they would renounce the complained-of practices, avoid unfavorable trial publicity.

Observers wondered however, just how much the Justice Department was accomplishing for Building. Suggested some: antitrust action may dissuade organizations from adopting such handy devices as standard lease forms and appraisal policies, perhaps even justify similar suits against central appraisal bureaus, successfully used by savings and loan associations in New Orleans and Milwaukee.

Others who took the Justice Department drama less seriously, charged that Clark's men were only out to put a proper fear of police authority into the hearts of Building Money's barons.

CHEAP MONEY FOR FARMERS

New Agency will back 2½ per cent loans.

Farmers were August's favorite children. Not only did record grain crops fill the farmer's cup to overflowing last month, (see Market, page 20), but Congress added a double-rich topping of loan insurance at the seductive rate of 2½ percent.

The complex Farmer's Home Administration Act, passed with almost no debate in the session's closing days, empowers a new Farmer's Home Corporation to insure up to \$100 million worth of mortgages for the purchase of farms. The program will parallel FHA's services to urban home borrowers with these important differences: farmers obtain 90 percent, instead of merely 80 percent coverage; farmers will get this backing at the phenomenally low rate of 2½ percent whereas FHA's rate is 4½ percent.

Eligibility for the new farm loan insurance will be extended to farm tenants and to veterans as well as to farm owners, and loans may cover farm houses and buildings as well as land.

CONTRACTORS INTO BUILDERS

A New York and a Philadelphia firm enter homebuilding.

Last month, M. Shapiro and Sons, well known as general contractors for theatrical and industrial construction, announced that it would be its own client in house-building to the tune of a \$40 million investment.

Gray-haired, sagacious Jack Shapiro, head of the firm for 35 years, explained: "It occurs to us that if there is to be lots of large-scale work done in building low-cost homes, it is not going to be done by the people who formerly built housing—the real estate speculators. The speculator, although he is called a 'builder', is really a salesman—he hasn't the resources and the organization to build in a big way today. He has to come to fellows like us."

'Fellows like us', however, were loth to split the slim profits of low-cost homebuilding. "We figure", said Shapiro, "that we can just make it worth while if we take out both the builder and contractor margins for our own. There is really no room in the home market today for two separate takes."

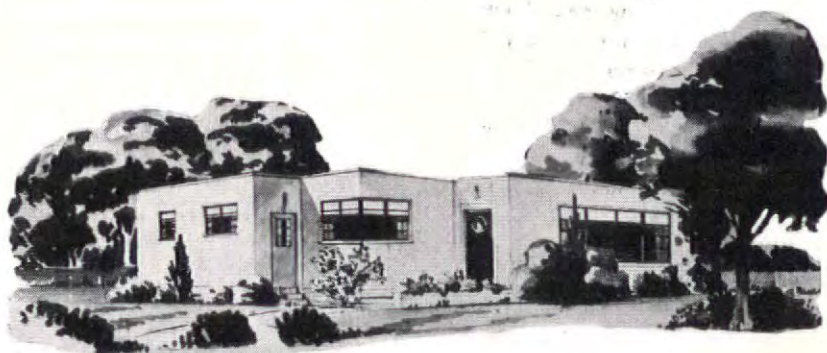
Shapiro, who built theaters in the 20's and institutional and government buildings in the 30's, got into housing during the war, when he erected some 7,000 permanent dwelling units for FPHA in a score of communities from Detroit to Baltimore. The new program puts him among the most active builders in the East. Projects under way include: two New York apartment

houses, (109 units); detached frame dwellings in New Britain, Conn., (350 units); one-family brick houses in Harrisburg, Pa. and Perth Amboy, N. J. (600 units), and upcoming plans for the construction of 1,000 units in Philadelphia, 1,700 in Newport News, Va.

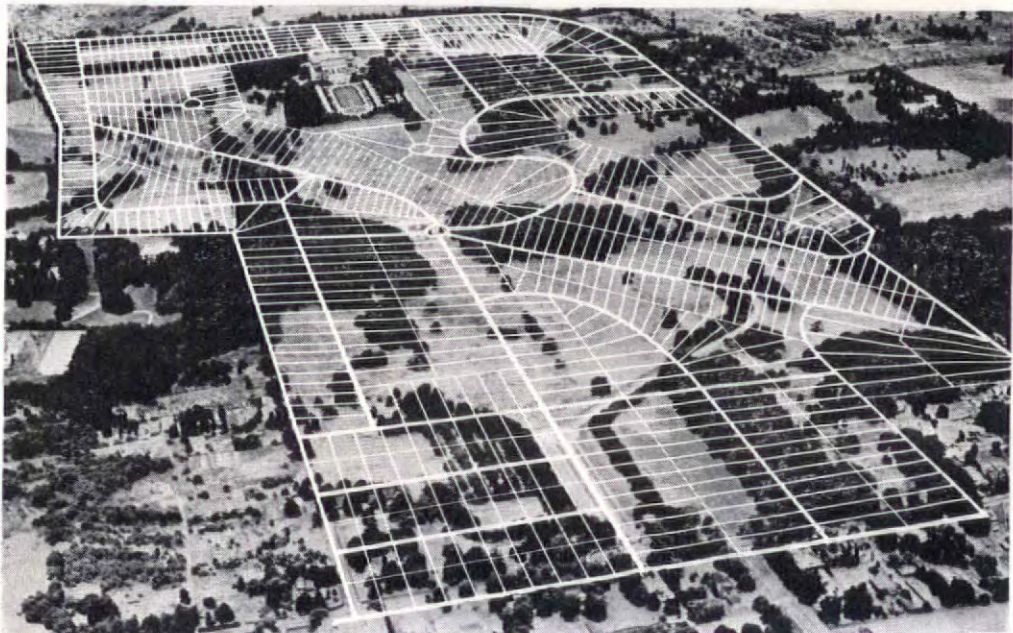
Similar inspiration came last month to Mathew M. McCloskey, Philadelphia contractor-builder, whose revolutionary system of concrete construction was recently revealed to the building industry, (FORUM, July '46). McCloskey announced that he would build a \$10 million development of 2- and 3-bedroom homes on the site of Philadelphia's 265-acre Stotesbury estate. McCloskey will set 1,000 modest one-story houses of precast vacuum concrete upon the tapestry landscaping of the famous tract, long a local showplace. Prices, to veterans, will range from \$8,800 to \$9,800.

Prominent in the construction of public buildings for 30 years, the Philadelphia builder announced that he now intends to plant mass-produced concrete houses all along the Eastern seaboard. Pending projects are a 1,800 unit project in Frankford, Philadelphia suburb; a sizable development in New Brunswick, N. J.

Like Shapiro in New York, builder McCloskey was ready to capitalize on a long career of working for others. Said he: "We are going into the home building business on a mass production basis as a strictly business proposition. At the same time we feel that we will be performing a public service by providing at a rapid rate, good, attractive low cost housing. We hope to set the pace in home building . . ."



MC CLOSKEY HOUSES are site-fabricated of large structural concrete panels. Panels are formed in "negative" concrete molds, vacuum-dried within an hour, raised to position by next morning. "Whitemarsh Village", (site-plan, below), is first large McCloskey home-development. Project will surround historic Whitemarsh Hall, Stotesbury mansion, (center rear).



PARKING JAM

U. S. cities build and dig garages

as traffic chokes a thousand busy streets.

Like a hundred motorists leaning fretfully on their wheels, U. S. cities stared into a growing traffic-jam last month. Civic discussion was dense with exhaust fumes and impatience. Suddenly, from a scooter-sized wartime annoyance, urban congestion had again become a road-block. Dead ahead, stood the long-feared, little-solved, over-talked question of parking.

Probably the most dramatic news was the resolution of three major cities—Detroit, Philadelphia, and Boston—to carve underground parking garages beneath their downtown streets. At least three other cities—Los Angeles, Washington and Portland—also contemplated going underground with their traffic problem. And Hartford, Conn. proposes, above ground, what will be the largest parking structure ever erected—a 3,500 car plaza, connected with the business district by electric train service.

New York in a Jam. In biggest U. S. city, New York, the parking problem bulked alarmingly. Midtown Manhattan statistics: traffic had increased by 58 per cent since the start of the year; incoming cars totalled 800,000 a day—40,000 more than the official figure for 1940; parking space had shrunk by a frightening 31 per cent. As defeat of the Moses zoning amendment, (see page 14), smashed the city's only embargo on future congestion, Mayor O'Dwyer insisted that 10,000 new parking spaces were desperately needed in the city's cluttered midsection. The Mayor probed the dank corridors of the subway system for possible garage room; was told it would cost about \$2 million to convert a pedestrian mezzanine under the Avenue of the Americas into a parking station. At month's end, New York's conclusion was another cross-roads stall: the survey-loving planning commission got \$80,000 to finance a new study of the city's parking dilemma, fifty-fourth such examination in the last 35 years.

National Crossroads. New York's headaches seemed bigger than those of other communities, but every town and city in the nation was worrying hard last month. Typical report came from Seattle, where the Municipal League burst into distressed prose: "Downtown property owners, retail stores, theaters and other establishments are now in the position of the Mississippi River bottom farmer standing kneedeep in a flood and watching the waters carry away his land wealth. Thousands of automobiles cruising around downtown blocks, backing in and out . . . constitute a menace to the very prosperity of the city . . ."

Having taken time out during the war,

the traffic problem was back with new tires and a full gas tank. Another year would see five million more cars than had been on the roads in 1945. Another year, experts thought, would see as much as a 50 per cent cut in downtown parking space—booming building activity was already grabbing off the more conveniently-located vacant sites, razing uneconomic garages.

Other over-all facts:

- ▶ Over 90 per cent of American travel is again being done by automotive vehicles.
- ▶ Three out of every four cars and trucks on rural roads either start from or stop in a downtown city street.
- ▶ 30 per cent of the traffic on business streets during shopping hours is composed of motorists looking for a place to park.
- ▶ 15 per cent of all recent motor accidents have involved parked cars.

Get off the street. In 1926, the Harvard Bureau of Traffic Research surveyed the traffic of 17 major cities; found that one and a half million automobiles were engaged in a daily scramble for 232,000 places to park. The bureau observed: "The streets can never be made to handle the traffic without adequate offstreet storage". After 20 years, though some 430 cities have called parking meters into service to regularize the excessive competition for curb space, the injunction still holds. Parked cars must be gotten out of downtown streets—either by siphoning traffic off at suburban stations where motorists can transfer to busses or streetcars, or by providing off street parking in congested areas.

Action. Past failure to provide anything like adequate downtown parking facilities has been due to two chief trip-ups: (1) high land costs, which make private parking ventures unprofitable; (2) legal restrictions which hold back municipal sponsorship of garage facilities. Real action has been taken against these barriers for the first time, this year.

- ▶ Philadelphia plans a double-decked parking area under Rayburn Plaza, to accommodate 905 cars, cost \$2,000,000, be self-liquidating from parking fees; intends a complete no-parking ban on central district.
- ▶ Detroit will approve revenue bonds for a garage under Washington Blvd., to cost \$2,800,000; plans provision of shuttle bus service from satellite parking lots.
- ▶ Boston will build a 3,500 garage under the Common, to be paid for by private funds under amended State law; city will borrow \$5,000,000 to construct off-street parking.

(Continued on page 10)



CUSTOMER PARKING is an important part of modern merchandizing. Sears Roebuck's Los Angeles store, above, provides distinguished example, accommodates 475 cars on top floors and roof.

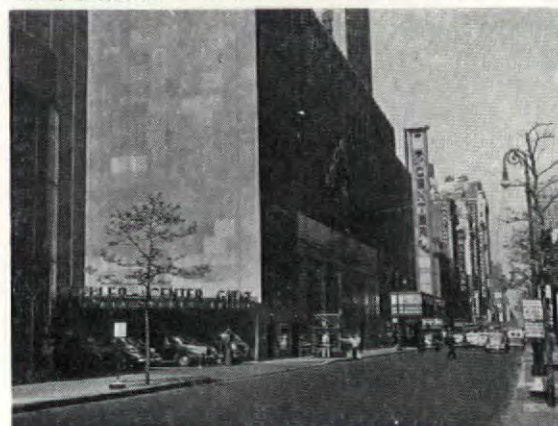


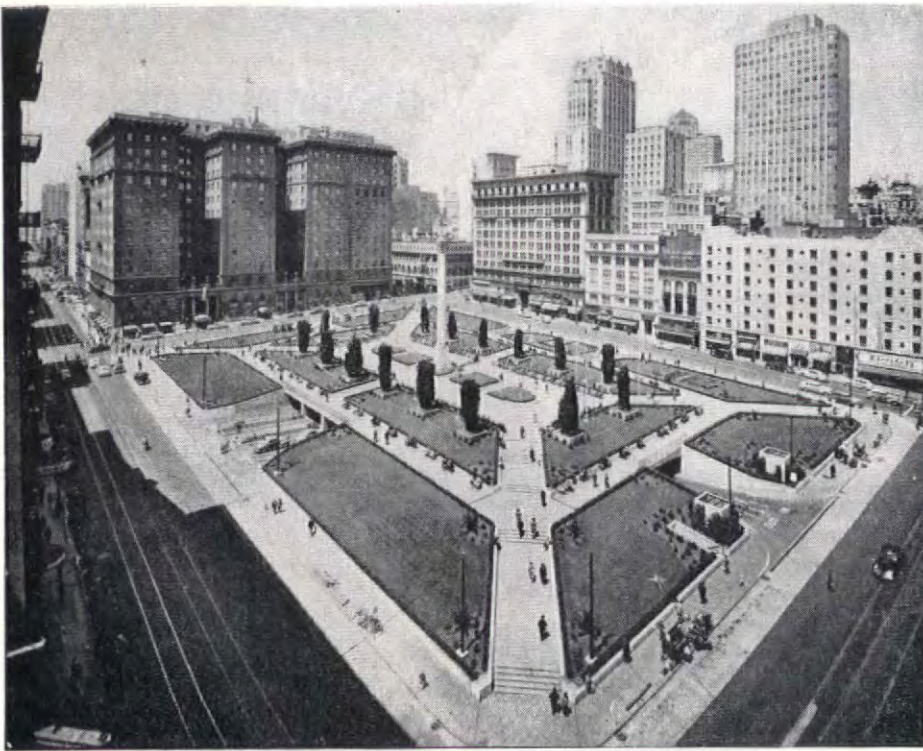
OPEN-WALL, MULTI-DECK garages are inexpensive to build, easy to maintain, are finding growing favor with department stores like Kaufmann's, Pittsburgh, which built building above.



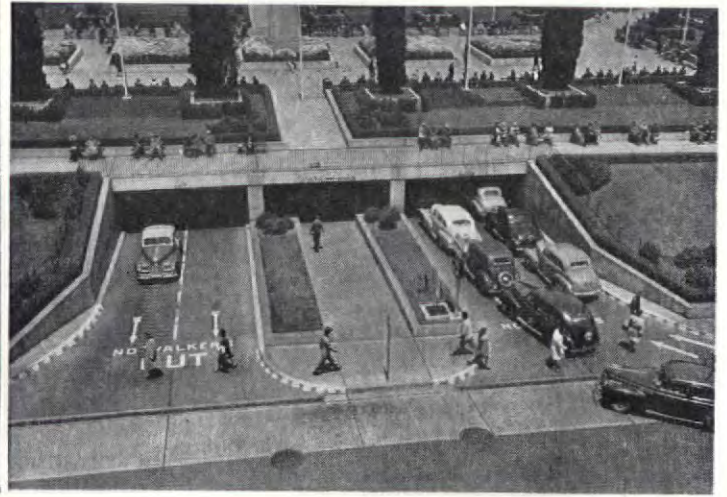
SKYSCRAPER MECHANICAL garages are costly to build and maintain; pay off where demand is round-the-clock. Kent Garage, above, prospers in New York's busy Grand Central area.

OFF-STREET parking garage of New York's Rockefeller Center is most successful example of large building-parking combination, keeps cross street free of parked cars, (below).

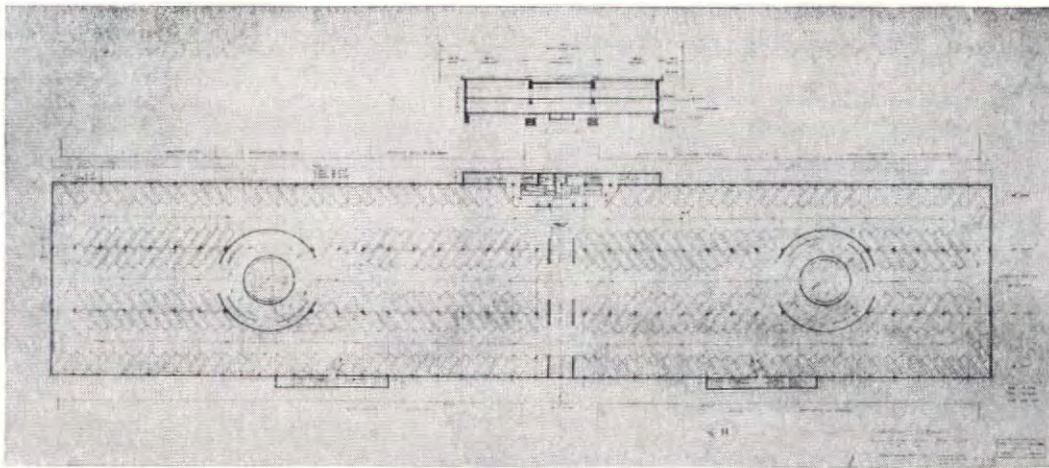




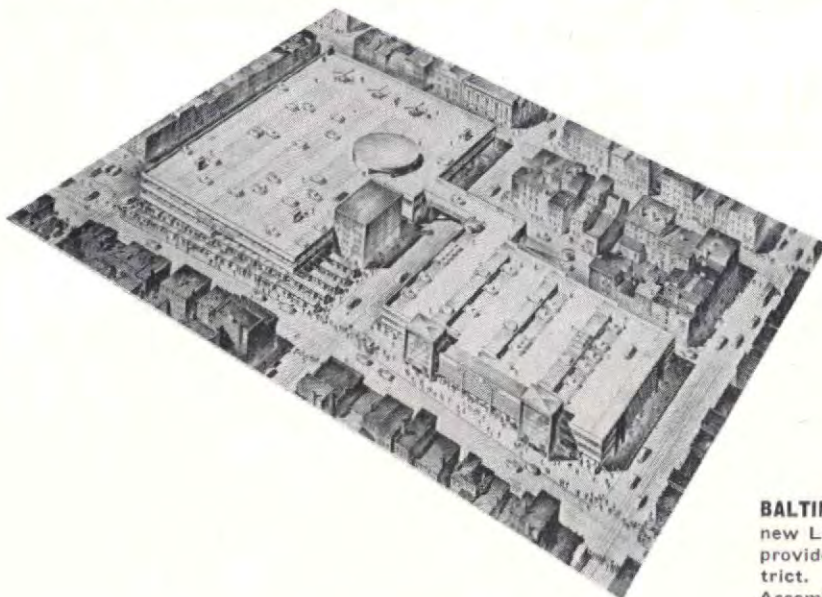
UNDERGROUND garage beneath San Francisco's Union Square, has four floors connected by ramps and is equal to a four-story building built in a hole 50 feet deep. Completed in 1942, Union Square is model for most proposed underground parking projects. Carved under a century-old park in the heart of the city, the structure has altered the landscaped area only slightly.



Photos by Yale Joel, Jon Brenneis



DETROIT will build a two-level 740-car structure under main-stem Washington Boulevard. Architects Derrick and Gamber plan circular ramps in each block area to provide entrance and exit at separated grades to both floors. Garage will be built, owned and operated by the City Department of Public Works. Preliminary plan, above, shows self-parking arrangement of cars on floor area; sketch, right, drum-like ramp-entrances.



BALTIMORE will tie parking space for 800 cars into its new Lexington Market. Connected roof and ground areas provide open-air parking in city's crowded downtown district. Project was legalized by Maryland General Assembly.

► Elsewhere: In Cincinnati, O., business interests have united to support customer-parking facilities for shoppers; in Kalamazoo, Mich., maintenance has been established for lots and garages, through the assessment of the benefited area; Massachusetts, Pennsylvania and Missouri have pushed through laws giving their cities the power to secure land, construct and rent garages.

Underground. Current favorite in big-city traffic talk, is the underground garage. Prototype: the justly famous 1,700-car garage beneath San Francisco's Union Square. Costing \$1,500,000, designed by architect Timothy Pflueger, the project has convinced other cities of its financial and legal feasibility, as well as its engineering soundness. Union Square Garage required

potential trade from a population now up to 2½ million. Last month construction was started on a new garage under another San Francisco square, bids invited for the construction of four more, to bring the total of the city's underground capacity to 8,000 cars.

Multi-storied garage buildings like underground parking chambers, were high on last month's list of desperate remedies. Nearly every major city was already familiar with ramp and elevator garages, operated as individual enterprises, as service departments of large stores or as integral parts of a few large buildings. Examples: the privately operated Kent garage, in New York; the Hecht store in Washington, (and Kaufmann's, in Pittsburgh, The Boston Store, in Milwaukee; O'Neil's, in Akron); Rockefeller Center, in New York, and the Girard Center building, in Philadelphia. Few private investors now saw attractive openings in garage maintenance—but a score of new department store and other buildings were being planned to include car storage facilities—R. H. Macy & Co. announced that it intends to park shoppers' cars atop the roofs of branch stores to be built in suburban Long Island, and Sears Roebuck, providing a ramp-approached roof-area on its newest, Los Angeles, store, will incorporate parking space in all future store plans. In Baltimore, dowdy old Lexington Market, city wholesale food center, will be replaced by a new building with roof parking for 800 cars. City garage buildings were also projected—in Hartford, Conn., where City Engineer Ross drafted plans for a massive car plaza at the junction of two interconnecting national highways, and in New York, where the Triborough Bridge Authority decided to erect an eight-story parking building near the Battery.

Theory. Above all, last month was claxon-loud with the voices of contending theorists. There were those who opposed all concentrated garaging on the theory that it would only attract still more motorists to the center of town; those who urged that every "traffic-maker"—theater, large store, apartment house, office building, etc., take off-street care of the traffic it created; the weary philosophers who hoped to persuade suburbanites to leave their cars uptown. Said many a partisan of one or another remedy—city traffic is precisely what cities thrive on; drain its corpuscle traffic life-blood from a commercial community and you kill it.

One observation was being made without contention: it all needn't have been so bad. Looking back at the third of a century in which cities had known the motor car, the traffic doctors pointed out the obvious—if streets and city plans had been tailored to the enlarging needs of a motor age; if buildings had been erected with understanding of a growing parking demand, the crisis need not have struck. As usual, hindsight was keener than foresight—and as useful as headlights at noon.

DESIGN

AERONAUTICS IN OPERA

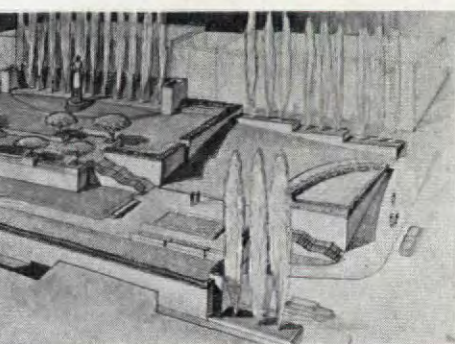
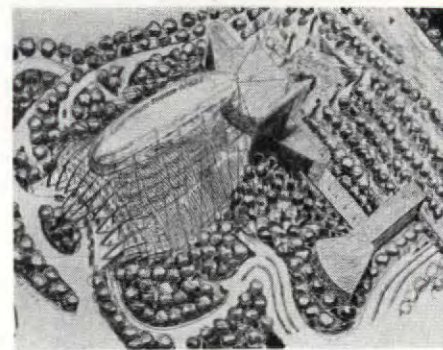
Cincinnati proposes new amphitheater with jet-propelled balloon as roof.

Last month as the Silver Jubilee Summer Opera season ended in Cincinnati's Zoological Gardens, patrons were told of the plans of Architect William H. Tuntke who had designed a new Opera Pavilion worthy of circus superlatives.

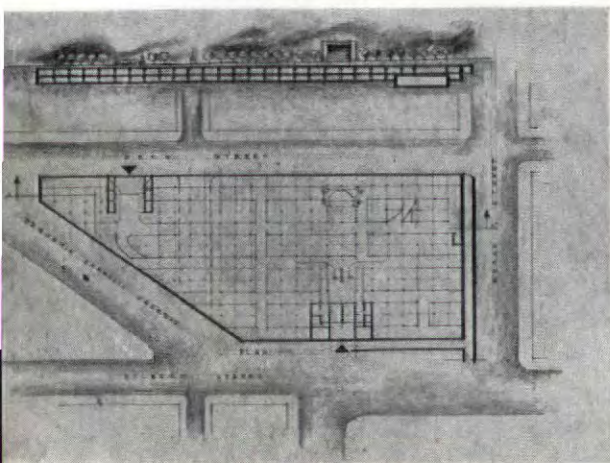
A weird and wonderful proposal tackled the ancient truth that open-air theatricals are frequently plagued by rain. Protection will come from spun glass curtains, dropped along nylon ropes from the jet-propelled gondola of a clear plastic helium balloon. Outdoor air-conditioning will be provided by a moving stream of air at each of the 4500 seats in the natural amphitheater. Besides serving as the structure of the floating roof, the plastic balloon will direct spotlights on the stage and carry a huge lighted sign for advertising purposes. When not needed over the amphitheater, it will jet propel itself to its alternate position over the parking area.

Other parts of the project will make use of up-to-the-minute developments in design materials and equipment. The 60-ft. high stage building will contain a 40-ft. revolving stage, sectioned and equipped with elevators. To eliminate the nuisance of automobile headlights during the shows, parking areas will be screened by trees and hedges, and the lanes will be marked with phosphorescent paint to eliminate the need for overhead lighting. One parking area will be located under the seating area. Electric eyes at the entrance gates will count automobiles as they arrive and give the ushers an advance notice of the number of seats required by each party. A radar screen of the "house" will present a continuous picture of vacant seats for the benefit of ushers and cashiers, who will thus be continuously posted on the number of last-minute ticket sales they may make.

"Walkie-talkie" radio communication will permit the conductor, director, scenic designer and stage manager to converse with each other anywhere at any time. If all these non-operatic attractions fail to fill the "house," the audience will never know it, for portable hedges hung on trolleys will quickly reduce the amphitheater's size, giving the effect of a full house.



CITY PARKS provide the most suitable sites for sub-surface garage buildings. Relatively free of utility lines, uncomplicated by problems of land rights, are traffic-moated downtown areas like St. Mary's Square in San Francisco, where the city will build the first of five new structures modelled after the Union Square garage. Sketch by architects Blanchard and Maher, (above), shows ramp approaches to a four-level parking area. Garage will have night and day patronage from adjacent business and amusement districts.



UNDER REYBURN PLAZA, fronting its massive City Hall, Philadelphia contemplates a two-level garage with a capacity of 905 cars. In addition to parking decks, Reyburn Plaza plans, (above), call for lobbies, offices and rest rooms. Also being talked of in Philadelphia is similar undermining of a mall north of historic Independence Square.

amendment of the city charter, was financed by neighboring property owners and an RFC loan, will revert to the city in 25 years. Last year, it earned a net profit of \$72,000, and parked an average of 75,000 cars a month. Yet today—just four years since the completion of the garage, center-city San Francisco is again beginning to lose

MENGEL MODULE BY MORRIS SANDERS is flexible, well-made, easy to assemble

Last month the largest U. S. producer of hardwood containers—Mengel, of Louisville—wheeled into the New York furniture market with a unit case-form system designed by architect Morris Sanders. Good-looking, shrewdly contrived, Mengel "Module" got star billing in the big stores.

Module's big splash was not due alone to the bone-dry condition of regular "piece" furniture supply. Mengel via Sanders had come up with a silk-purse version of a familiar idea, the manufacture of sectional components, their assembly by the buyer.

Sanders' basic units—doors, cases, spacers, tops, drawers, hardware, are interchangeable, handsome, well-proportioned, finely made. Based on a modulus of six inches, any of the units can be used horizontally or vertically, assembled in compression or tension, cantilevered, hung, composed into detached pieces or semi-built-in assemblies. Pieces are mitre-jointed, stable and precise in dimension, made of resin-bonded mahogany finished to a warm-cinnamon-color. Drawers are lined with curved, dust-sloughing plywood.

Most original feature is the Module connector—a simple die-cast bolt easily inserted or removed from the precision-drilled holes. By means of the rigid connector, Sanders overcame two chief drawbacks of previous sectional systems: gaping between pieces, due to floor irregularities; limitation to arrangements of vertical "stacking".

CITIES

BX TO BURN

Milwaukee gets over-dose of metal cable, calls for FBI.

Like many another U. S. city which tries to revise its building code, Milwaukee is encountering pressure from local and national groups whose interests are at stake. Thus, although state regulations authorize the use of unarmored cable, a recent code decision maintained that Milwaukee's houses must continue to be equipped with more costly, more laborious BX installations.

Shortly after the decision was announced, Milwaukee was rewarded with shipments of BX conduit from every direction. With local home building lagging sadly, Milwaukee began to wonder what it was going to do with its overabundance of armored cable. Said *The Journal*, "The electrical union and the contractors work together to keep Milwaukee from using up-to-date, safe, efficient wiring methods for housing. In order to keep costs up and make more work, they have persuaded the common council to continue a 20 year ban against nonmetallic flexible sheathed cable. . . . Come on, FBI."

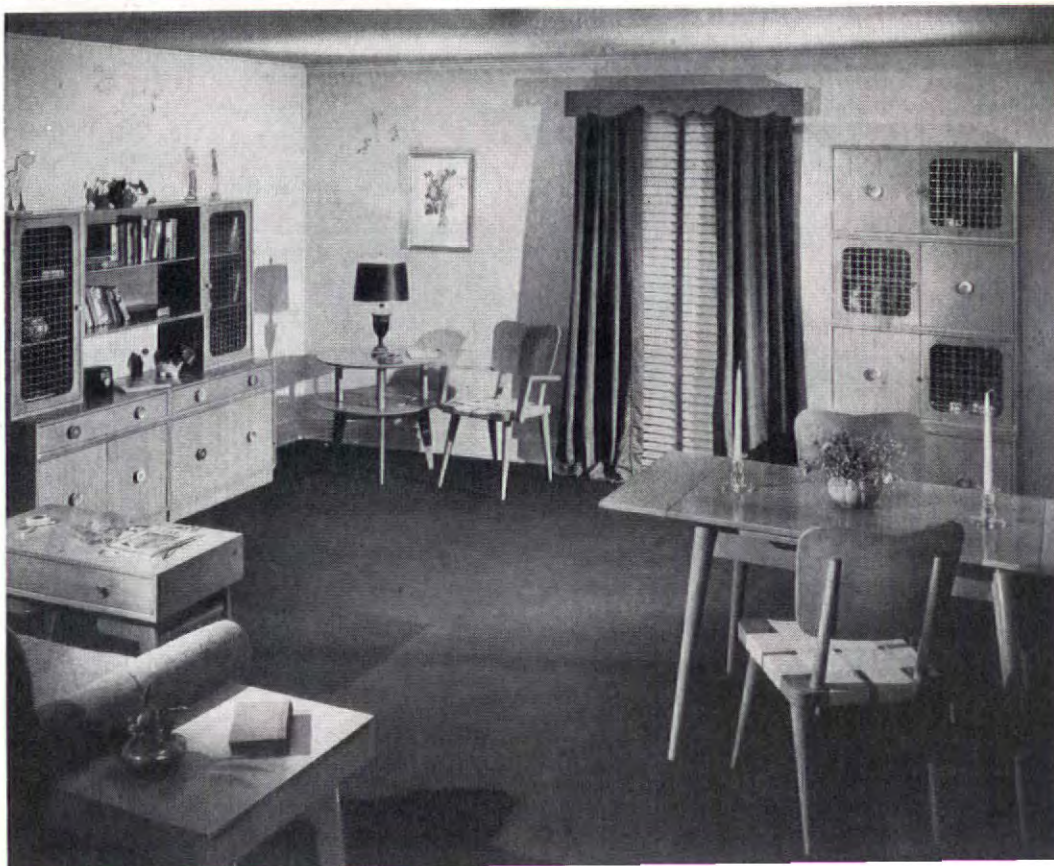


MODULE CONNECTOR, a standardized bolt-and-screw casting, may be used to join units. Bolting points are factory-drilled $\frac{3}{4}$ inch holes, blocked with plastic pegs when not in use.



DRAWER, patented by Mengel under the name "Permaslide", has rounded lining of molded plywood. Drawer-runners are removable, and hardware trim can be easily switched.

FURNITURE COMPONENTS consist of four basic cases, and shelves, drawers, doors, bases, bracers and tops, which can be composed into small and large assemblies. Mengel also offers matching beds, chairs and occasional pieces to furnish every room in the house.



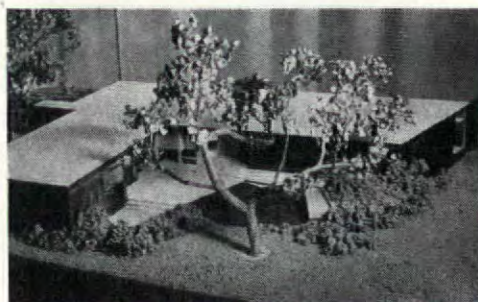


COMPLETED LAST MONTH is Case Study House No. 11, designed by architect J. R. Davidson. Smallest of Arts and Architecture-sponsored plans, No. 11 is a four-room, one-story house scaled to veteran requirements. Built on radiant-heated concrete slab, it is walled with beige-finished stucco and room-high plate-glass.

MAGAZINE BUILDER: "Arts and Architecture" builds first of 16-Case-Study houses.

Two years ago the lively West-coast magazine *Arts and Architecture* commissioned nine leading architects to draw up plans for a group of houses that would serve as text-pieces in the argument for modern design. Each architect was given a problem—eg., "Mr. and Mrs. Omega, both professional people with mutual business interests, the family consisting of one teenage daughter away at school and a mother-in-law who is an occasional welcome guest". Among participating architects was J. R. Davidson, who filled two assignments, the smaller of which, was built last month on a site purchased by the magazine. Published in detail in recent issues of *Arts and Architecture*, are Case Study plans by Sumner Spaulding, Richard Neutra, William Wurster, Theodore Bernardi, Charles Eames, Whitney Smith and Eero Saarinen, all of which will be built in the Los Angeles area, furnished and displayed by the magazine. Inaugurator of the program is A. & A.'s Editor John Entenza.

Wurster and Bernardi



Richard J. Neutra



Whitney R. Smith

J. R. Davidson



WASHINGTON REDEVELOPMENT

New law may erase capital slums.

White of robe but dirty of ankle, is Washington. Under her limestone dignity, the capitol hides the nation's most notorious alley-slums. As it packed for home, last month, Congress tossed Washington a long overdue scrub brush—\$20 million to clean and clear her blighted districts.

Experts called the measure half-adequate. Aimed at giving priority to private industry, it hedged and fettered public construction for all but the lowest fifth of Washington's population. Sequence of hurdles: (1) the National Capital Park and Planning Commission will recommend what areas should be cleared and what kind of new development should take place; (2) the District Commissioners will approve or disapprove the recommendations after public hearings; (3) the new District of Columbia Redevelopment Land Agency will be empowered to acquire the land and offer it for sale to private bidders (4) if there are no adequate private bids for the assignment, the National Capital Housing Authority may then purchase the land for the construction of low-rent public housing, to be confined to the lowest 20% of the population in income scale.

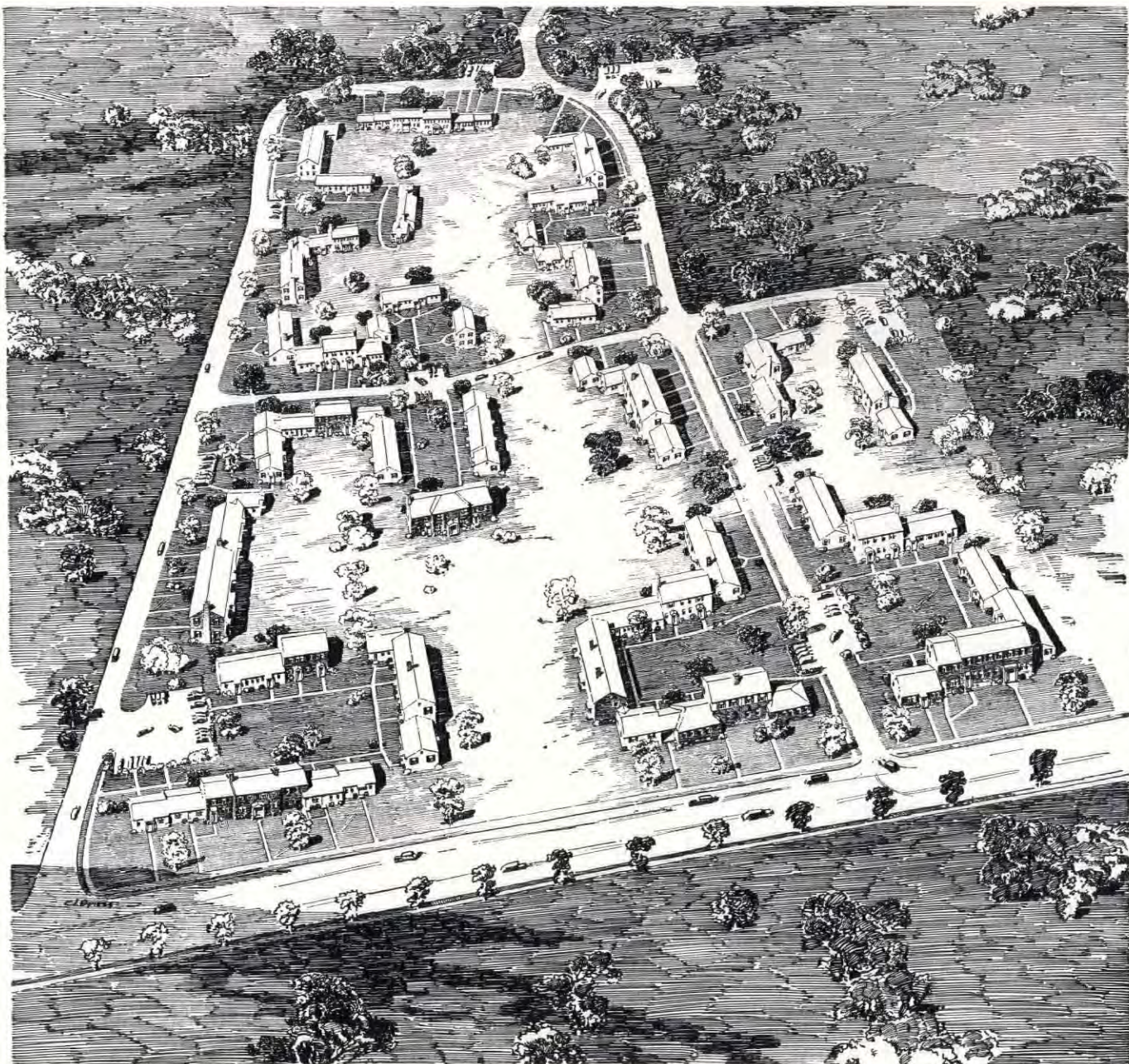
Aside from the difficulty of determining what constitutes the lowest 20% sector of the population in terms of net income, the law excluded public construction for families in slightly higher brackets, for whom private building is still unlikely. Washington's Citizens Council for Community Planning noted that a large group of low-income families are left in a no-man's land just beneath the lowest cost private capital can achieve.

Washingtonians were hardly shocked at receiving what the *Post* called "half a loaf" from Congress. Slum clearance has been one of the District's perennial problems, ever since 1934 when Congress passed a law requiring the wiping out of all sub-standard alley dwellings. Deadline for the cleanup had been July 1, 1944, extended annually through '47, as it became obvious that no slums could be cleared unless new housing was provided for the slum-dwellers.

The Washington Board of Trade, meanwhile, conclude that the District might expect a population of 950,000 by 1955. It would never, calculated the Board, "get back to normal". The district, the Board advised, should prepare to build a minimum of 49,000 units before 1950.

Post-war eras have, in the past, spelt some sort of development, good or bad, for Washington, ever since 1800, when 126 persons, all that were needed to carry on the Government, moved down from Philadelphia to the "Federal City". The close of the Spanish-American War brought revival of the almost-forgotten plan of Pierre L'Enfant which still pierces the city with its radial pattern; in the 1920s, the huge Federal triangle development was started.

(Continued on page 14)



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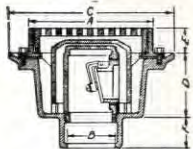
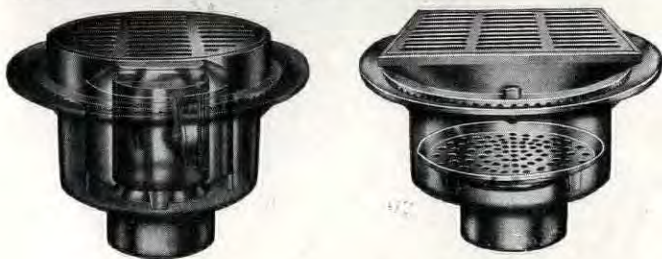


FROM A CENTURY OF BUILDERS

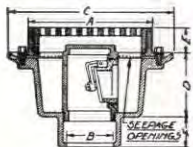
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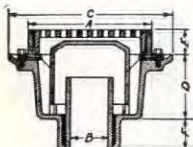
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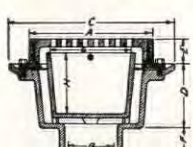
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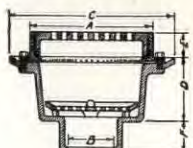
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NEW YORK SET-BACK

Moses zoning amendment meets final
defeat in courts.

New York's hard-knuckled Robert Moses took a drubbing from his opponents last month. In swift succession, the Construction Coordinator met defeat on his scheme for running mammoth Idlewild Airport; was rapped on his parking and bus terminal theories; saw the courts knock out his reformist zoning amendment. As an extra sideswipe, Congress approved a bill to make a national shrine of 138-year-old Fort Clinton, already stripped for razing by the Great Demolisher.

Many deplored the Coordinator's defeat on the zoning issue, however. For all its obvious inadequacies, the amendment was considered the biggest forward step New York had taken since passage of the city's original zoning regulations in 1916. The defeated provision, levelled in a no-opinion decision by the State Court of Appeals, had attacked the twin problems of building congestion and parking. Under it, no new buildings could have been erected in central Manhattan to cover more than 65 per cent of an interior lot, or 80 per cent of a corner lot. Fuller land use would have been permitted, however, to buildings providing off-street parking and loading facilities. Either alternative would have ruled out such a project as the Empire State Building, (population, 15,000 persons), which provides not a single interior parking-space.

The court's decision was the final word in a two-year-old controversy between Moses and embattled property owners headed by Robert W. Dowling. Organized owners of Manhattan's "retail B" area property had fought—and finally won out—against the curtailing of precious ground-floor store space. Worst penalty, many thought, would have been paid by the modest builder on small-sized lots, who could ill afford either to lose a third of his building area or to insert costly basement parking.



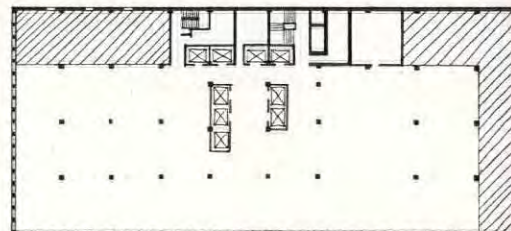
Unaffected by the judicial slap-down were the height and set-back reforms embodied in the amendment, but mid-city property spokesmen were more than satisfied. The original law would have pared, said they, more than a third of its investment value from the unequalled commercial nugget of central Manhattan, a district with realty worth close to \$4 billion.

The final judgment sent pencils flying in scores of architects' offices where hundreds of plans might be revised back to pre-amendment lenity. One notable exception: the 33-story Esso Building now being built alongside Rockefeller Center. Architects Carson and Lundin, explained: "Our design is in harmony with the policy pursued when the previous Center buildings were planned to avoid congestion and provide maximum light and air . . ."

Other builders had been ready for the switchback with alternate sets of plans and the Department of Housing and Buildings reported a deluge of amended permit applications. Architects Kahn and Jacob had cannily designed the 21-story Tishman building, now in foundation stages, for conversion to 100 per cent coverage by the simple insertion of extra steel tiers, (see cut). The revision made for a gain of 175,000 feet of rental space above the first floor and for a substantial addition to basement storage capacity through the elimination of the required off-street garage. Owner Tishman calculated that the difference came to about \$375,000 in annual rentals.

At month's end, a few builders were still undecided between the alternatives presented by the Appeals Court's decision. Among big jobs hanging fire was the 19-story, \$4,000,000 Crowell-Collier building. In dudgeon, Leonard Schultze, head of the designing firm, exclaimed: "If we could have developed plans without regard to Moses' coverage restrictions, it would have been possible to get the same square footage of space and at the same time reduce the building by four stories."

(Continued on page 16)



TISHMAN BUILDING FLOOR PLAN, above, shows space gained, (shaded area), when Moses zoning amendment buckled. Foresighted architects Kahn and Jacob planned to tie on extra tiers for floor extension.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—9 in. common brick, furred, lathed and plastered inside.

PAINTING: Exterior walls—Bondex, Reardon Co.

CONSTRUCTION OUTLINE

FOUNDATION: Walls and cellar floor—concrete.

PAINTING: Exterior walls—Bondex, Reardon Co.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls, brick veneer, insulating board, paper, rock wool.

PAINTING: Exterior Walls, Bondex, Reardon Co.

CONSTRUCTION OUTLINE

EXTERIOR SURFACE: Brick Veneer.

EXTERIOR PAINT: Brick—2 coats Bondex.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—4 in. brick.

PAINTING: Exterior walls—Bondex, Reardon Co.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—used brick, 1 x 2 in. furring, insulation lath and plaster.

PAINTING: Exterior—Bondex, waterproof paint, Reardon Co.

CONSTRUCTION OUTLINE

FOUNDATION: Walls — continuous reinforced concrete.

STRUCTURE: Exterior walls—stucco over 16 gauge galvanized wire mesh, 15 lb. asphalt saturated felt, 18 gauge wire over 2 x 4 studs, 16 in. o. c.; inside—3 coats plaster on keyhole lath over 1 in. mesh 20 gauge galvanized wire.

ROOF: Light-weight interlocking shingle tile, Gladstone & Co.

Ceilings—Celotex Corp. Weather-hamberlin Metal Weather Strip Co.

Sash—Fenestron steel, Lee Miller & double strength, quality A, American Glass Co. Glass block—Pittsburgh Corning

ian blinds—Steel-Flex, Venetian Blind Development Co.

PAINTING: Exterior—Bondex, Reardon Co.

ELECTRICAL INSTALLATION: Wiring system—BX. Switches—Hemco, Bryant Electric Co. Kitchen fan—Westwind, West Window Corp.

BATHROOM EQUIPMENT: All fixtures Briggs Beautyware, Briggs Mfg. Co. Accessories and cabinet—Hallenscheid & McDonald.

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PREFABRICATION

PREFAB OPINION

Canada meeting airs gripes of established manufacturers.

Whose foot would fit Wyatt's glass slipper? Prefabricators, who tried on the Expediter's program for size last month, learned of a royal future for producers of metal and concrete houses. The prefab made of non-critical materials, rather than of lumber, was highly favored in the government's plans. Wyatt offered: priority assistance, financing boosts, and first dip into his newly-detailed guaranteed markets plan, (see Washington, page 6).

Established prefabbers complained that Wyatt was favoring the Cinderellas of the industry with romantic but impractical encouragement. The better-heeled members of the Prefabricated Home Manufacturers' Institute let their views be known at their annual summer session held in Hamilton, Ontario, early last month. Charged they: subsidization of untried and nonconventional factory-houses may scotch the long-term market for a quality prefabricated product. Observed Austin Drewry, Gunnison representative: "It seems to me that this guaranteed market program will merely create another situation similar to that which existed during the war when our industry did not have the incentive to work out its own distribution methods. I feel that it is unfortunate to have people who have no financial stake in the industry tinkering with our destiny."

Choosing his words carefully before an audience of old friends, James L. Pease, director of NHA's Prefabrication Branch, said placatingly, "the industrialized house, whatever it is, will come through the established prefabricators who keep abreast of new developments and continue to make better and more complete houses."

In Washington, Wyatt, despite his cordiality towards the plastic-steel-aluminum-concrete prefab, maintained that lumber

and plywood houses would furnish the bulk of the factory product this year. Divvying up his lowered goal of 100,000 units in 1946, he assigned a lion's share to the producers of wood houses—85,000 to be built "before the producers of metal and concrete houses get their developments underway".

CO-OP PREFAB

Atlanta veterans combine to build.

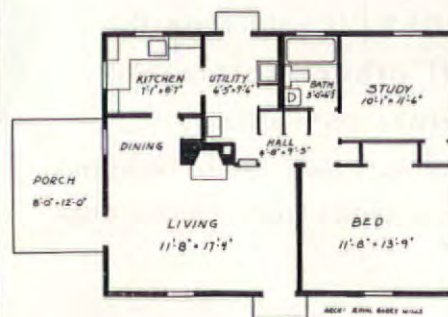
Conventional in product but unconventional in production organization is U. S. Homes, Inc., which last month was turning out a modest three-units-a-day from its assembly line in a corner of the huge Bell Aircraft plant in Marietta, Ga.

U. S. Homes' house is a five-room clapboard dwelling designed by architect Royal Barry Wills. Price, with garage: \$6,500. Unlike other manufacturers of factory Cape Cods, however, U.S. Homes is probably the country's only example of a cooperative prefab firm. Ownership belongs to 200 veteran-stockholders, each of whom has invested \$1,000, jointly borrowed in addition \$1,750 apiece under the G. I. Bill, to finance the venture. All U. S. Homes workers, moreover, are share-holding veterans.

U. S. Homes was born last fall in the minds of two young ex-army officers, Charles Francis Stone and Clarence James

(Continued on page 20)

Gabriel Benzar



U. S. HOMES PREFAB, designed by Cape Cod maestro Royal Barry Wills, has four rooms, utility room and porch, is manufactured in transportable sections, (right). Men responsible for U. S. Homes' start are, above, Charles E. Stone, left, James C. Bishop, right.

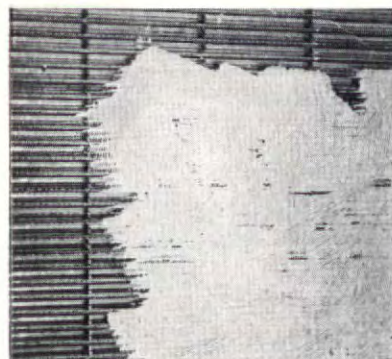




— you provide the advantages of



fire-safety . . . permanence . . . lasting beauty



• Above: The scratch coat is forced through Milcor Metal Lath so that it is keyed on both sides of the steel reinforcing.

• Below: Note how the back surface of plaster on Milcor Metal Lath becomes permanently "clamped" to the steel.



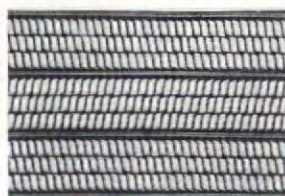
ON the drafting board, Milcor Metal Lath gives you unlimited freedom to develop structural forms and shapes.

On the job site, Milcor Metal Lath provides maximum rigidity with light weight. The whole wall and ceiling is held together in one fire-resistant monolithic slab, free from cracking, warping, and shrinking tendencies.

Although not plentiful today, metal lath is more easily obtained than substitutes which do not have the fire-safety, permanence, or vermin-resis-



Milcor Netmesh Metal Lath



Milcor Specialmesh Metal Lath

tance of steel . . . and which have never equalled metal lath as a satisfactory plaster base.

Steel-reinforced plaster faithfully expresses your conception of form and color tone. The entire plastered surface remains at practically the same temperature, thus avoiding condensation and resultant plaster blemishes such as lath streaks. The plaster stays new-looking longer, a credit to your reputation.

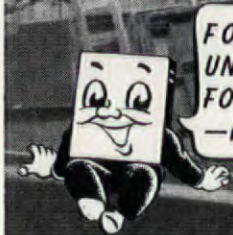
Consult the Milcor catalog in Sweet's. Or write today for the Milcor Manual.

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UNI-FORM Panels mean better building for all 3*



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FOR 1/2 THE COST
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Specifies and gets
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uniform thickness.



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Gets lower building
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UNI-FORM Foundation Panels are a complete, ready-to-use system of panel forms which are faster to erect, easier to strip and require alignment on one side only.

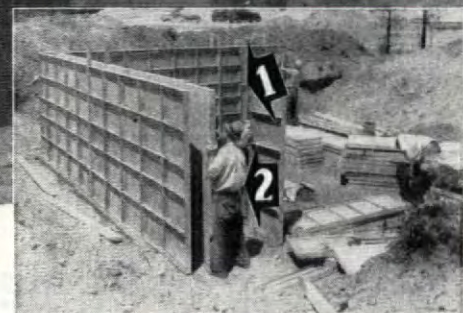
The UNI-FORM Tie locks panels into a tight, rigid, accurately spaced assembly which prevents grout seepage and the need for extra finishing. Smooth, straight foundations—no fins—no irregular surfaces and no varying wall thickness are assured.

Material cost of the System is less than 3¢ per square foot of form area, based on from 75-100 re-uses of plywood facing. The welded all-steel frames are virtually indestructible.

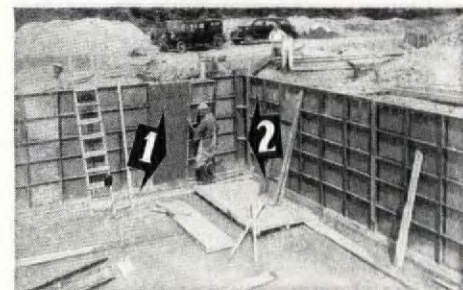
Forming cost is less than 6¢ per square foot of form area†—this includes erection, stripping, cleaning, oiling and moving to the next site. *No other method is so economical.*

UNI-FORM Panels are furnished in 2'0" x 6'0", 2'0" x 7'0" and 2'0" x 8'0" sizes. Ties are available to handle any standard or special wall thickness.

†Actual job cost studies.



1. Prefabricated fillers provide faster erection.
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1. Clean surfaces—no fin. Stripping is quickly, easily done by one man.
2. Simplified method of forming inside corners.



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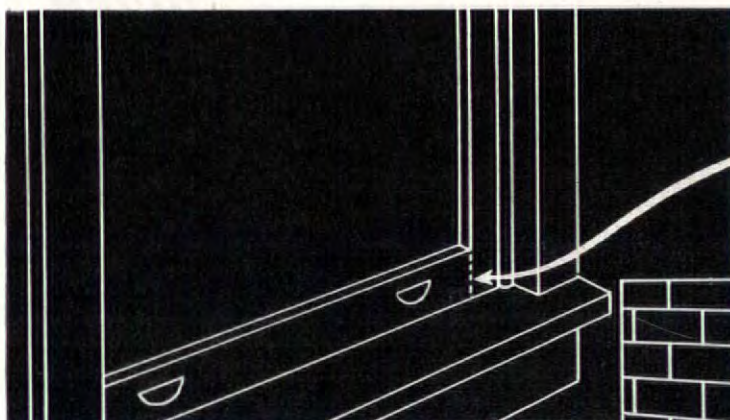
to prefabrication in the field of house-building, and prominent among the materials which are making this possible are new, completely durable resin glues.

Ideally suited, in both conventional

and prefabricated construction, to the mass production of such house parts as doors, window sashes, door sills and frames, and the gluing of wall covering materials to studs and framing is the new Cascophen resorcinol-resin glue.

Cascophen assures you of a completely durable, waterproof bond which has been laboratory- and field-proved to resist moist or dry heat, mold, fungus, or solvents—a bond so durable that it cannot be destroyed without first destroying the wood fiber.

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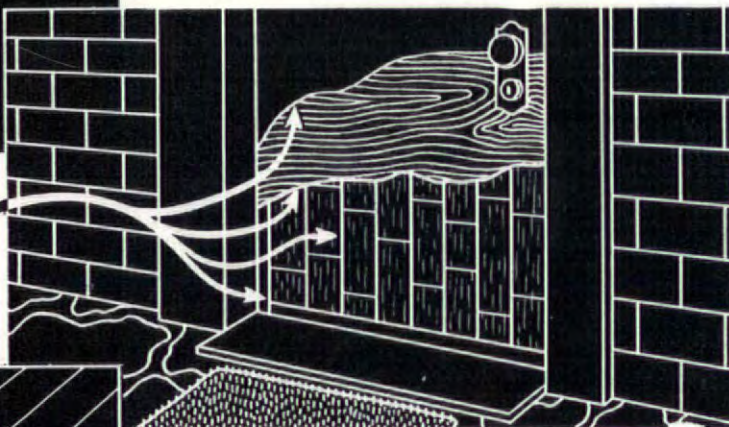


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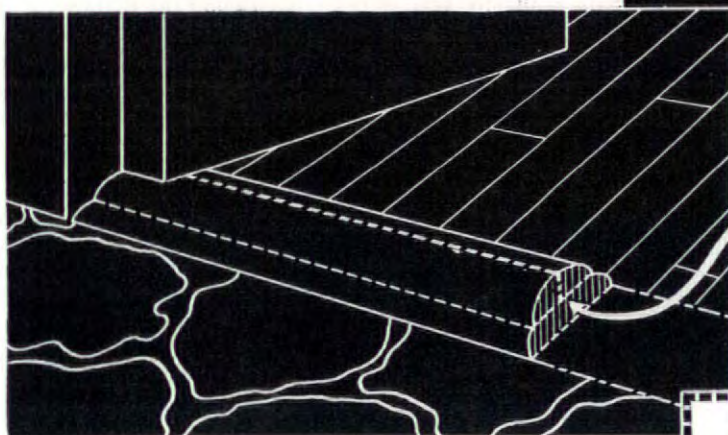
2.

Exterior doors are subject to the severest of conditions. Cascophen assures you of a high quality glued joint completely unaffected by mold, fungus, cold, heat, or moisture.



3.

Exterior door sills and trim made of thin or narrow pieces glued with Cascophen will outlast the building.



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Bishop. Announcing the plan in Atlanta newspapers they invited other vets to join them in a company in which all the employees and stockholders—and first customers—would be veterans. With \$275,000 in capital thus derived from 100 shareholders, U. S. Homes got a lease on 80,000 square feet of space in a surplus airplane plant in Marietta, machinery and equipment from the RFC.

Last month U. S. Homes sold additional shares on the same basis to another hundred veterans, increasing its capital to \$575,000. Like the first hundred, it is expected that the second batch of coop-owners will work in the plant, boost production to ten houses a day by late fall, draw salary and V. A. on-the-job training pay adjusted to absorb all profits. Bishop and Stone, like other company members, invested only \$2,750 in the enterprise; company programs are mapped at weekly in-the-shop meetings; only paid employee is the janitor.

MARKET

HOME ON THE FARM

Making most money in years, farmers are eager to build.

Farm income has kited to the highest level in a quarter century. Once Building's most timid customers, farm families, with pockets-full of funds, now are eager for new barns, silos, fences—and homes.

Last month Government forecasters said that farmers might spend nearly \$780 million for new building and repair before the year was up. Such an outlay cannot be matched in the ledgers of any year since 1920 and will be \$200 million more than similar expenditures in 1945. Department of Agriculture dopesters put the farmers down for close to a billion annual construction dollars over the next five years.

American farmers have never been better fixed. At the end of 1944 they had already accumulated nearly \$17 billions in bank deposits, U. S. Savings Bonds, cash and other financial assets, while their debts were little more than half their savings. Coasting into the second half of 1946 the picture looked even rosier. As prices loosed, farm income lifted, and the market value of farm property took a heady rise.

During the 1919-1933 building cycle, farmers were deeply in debt, having gone beyond their means to buy high priced land during World War I. Whatever new money came in was ploughed back into machinery or fertilizer. As the farm market sank during the next decade they were unable to build because of pinching in-

(Continued on page 24)



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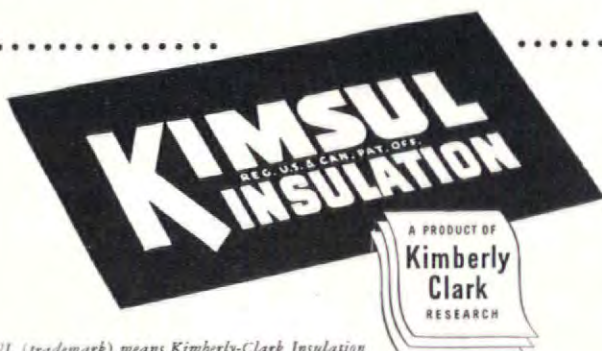


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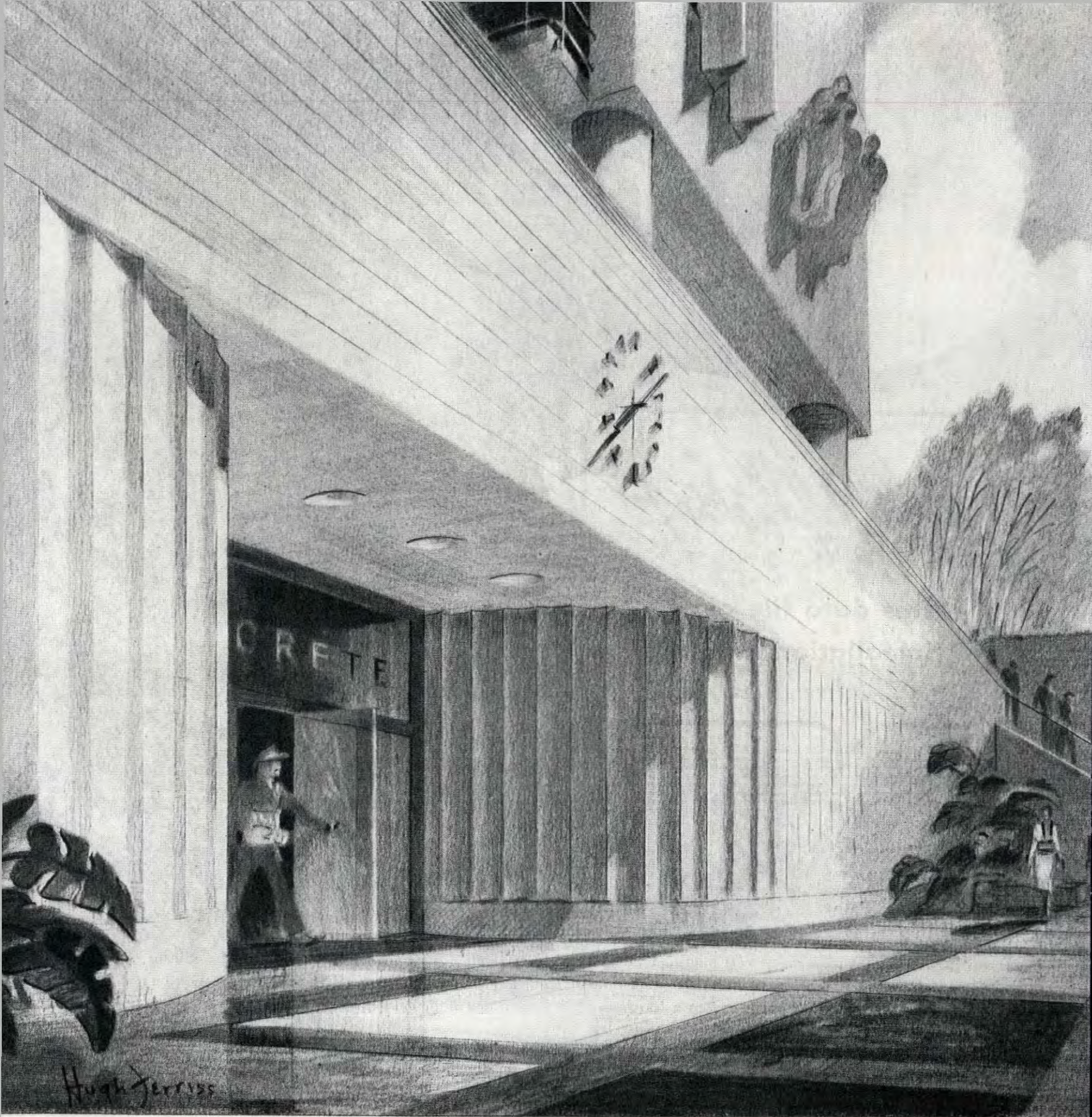
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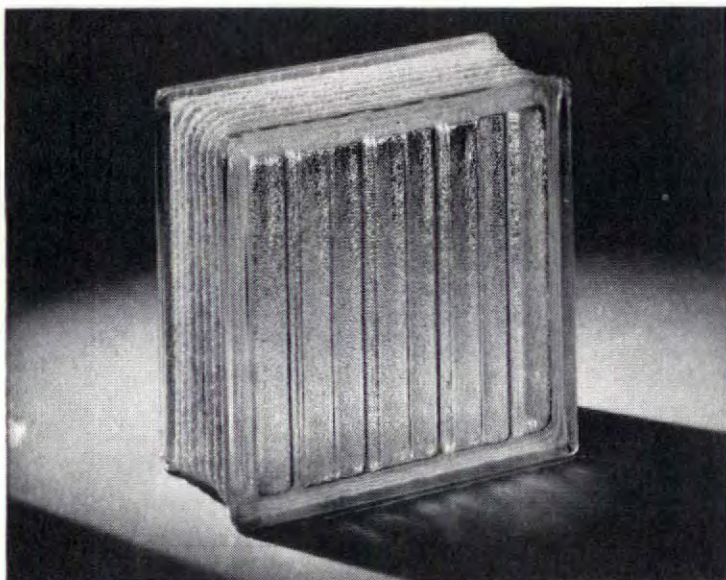
OWENS - ILLINOIS

INSULUX

GLASS BLOCK

A curved wall of Insulux Glass Block transmits diffused daylight in abundance to the product development model shop in Benjamin Electric Mfg. Company's splendid new laboratory at Des Plaines, Illinois. The free-hand abstract pattern of 12" and 6" square Insulux Blocks was developed by Philip Will, Jr. to relieve monotony of the treatment. Building design by Perkins, Wheeler & Will, Chicago architects and engineers, who are well known as school building specialists.

Pattern for new thoughts on light



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Architects interested in the unique advantages of this modern building material will find technical data, specifications and installation details in the "Glass" section of Sweet's Architectural Catalog, or write Dept. C-21, Owens-Illinois Glass Company, Insulux Products Division, Toledo 1, Ohio.



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many colorful metal moulding ideas for adding gleaming beauty to kitchens, bathrooms, playrooms, stairs, and commercial interiors... Chromtrim Metal Mouldings follow the modern trend in architectural design.

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comes. Like everyone else, the farmer let his building dreams go out the window during the war. Now he was ready: *Country Gentlemen* found that 16.6 per cent of farm families queried in a selective survey intended to build new homes immediately; 71.5 per cent expected to make major repairs. *Successful Farming* studied the same question and came up with the news that household equipment purchases alone may go to \$400,000,000 for several years. According to the Rural Electrification Administration, 5,298,000 farms will have been electrified in the next five years.

Housing need has long been as pressing on the farm as in the better-publicized urban areas. Interlaced through the country's corn and wheat and cotton belts, through the green truck, cattle and dairy counties, is America's "rural slum." Nearly half the country's 6,500,000 farm families live in dispersed houses listed by the Census as "beyond repair." More than one-third of New York farm houses were built before the Civil War; 51 per cent of the homes of Kentucky farmers are valued at under \$500.

But despite the farmer's bumper income, robust balance sheet and building back-log, rural America holds no self-rising, ready-mixed construction boom. Outstanding reasons:

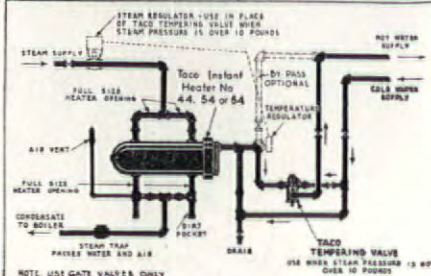
- ▶ Rural housing is still a personal and family affair, untouched by professional building organizations. The farmer is frequently his own architect and builder.
- ▶ Income worries drag the heels of the farm builder. Even a farmer who is stacking profits on today's food crops (just ahead, are the greatest corn and wheat harvests in history), must give a thought to agriculture's fickle nature—and the cyclic slapdown that may rob a farmer of home and job together.
- ▶ Materials supplies, painfully short in the well-organized urban market, still all but by-pass the rural lumber yard and hardware shop.

One section of the building industry promised to vault over some of these barriers. Prefabrication, offering an all-in-one-kit house, might solve the problem of rural materials distribution, simplify the question of erection. Land cost and acquisition, a sore point with urban prefab customers, was no problem on the farm.

Traditionally, the American farmer has put his house at the tail-end of his priority list; thriftily ranked first his expenditure for land and tools. Last month, atop the crest of a wave of prosperity, he probably saw things differently. Miss Myrtle Weldon, State Home Demonstration Leader of Kentucky, had talked to hundreds of farm families during and after the war. She reported:

(Continued on page 28)

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Industrial Processes
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Factories**

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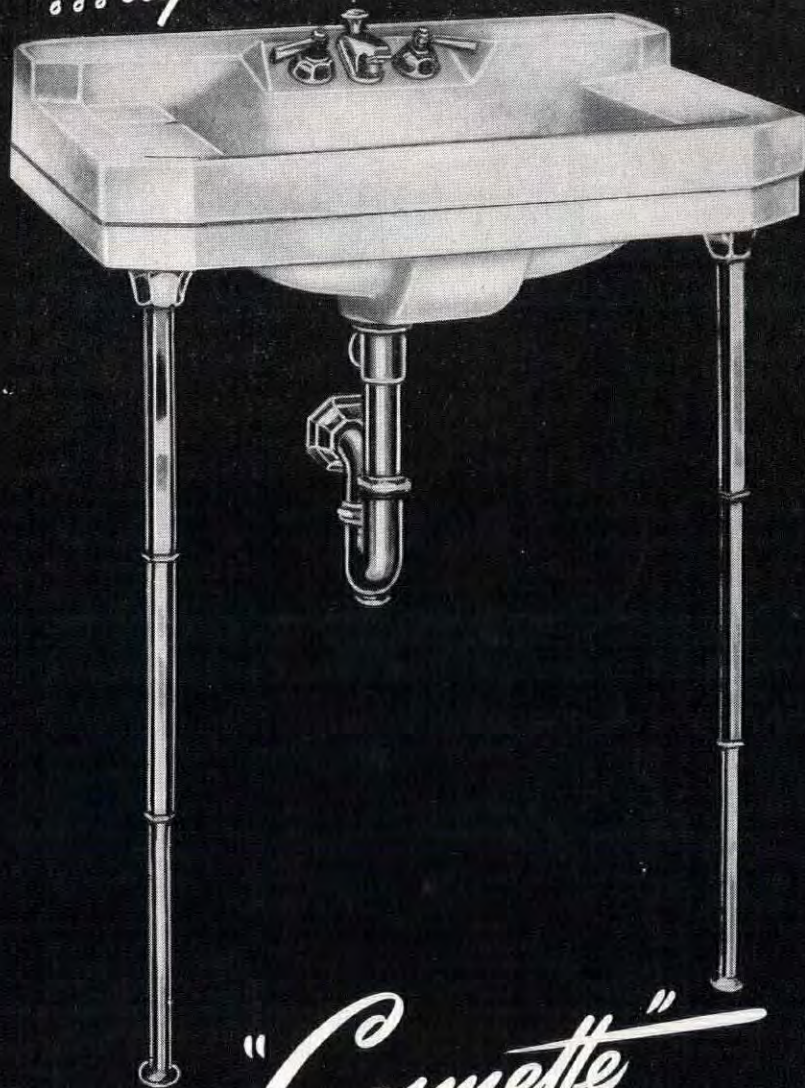
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- Dry shelf space for toilet articles.
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You can specify the new Universal gas range with pride and confidence—for in looks, performance and dependability it's the tops!

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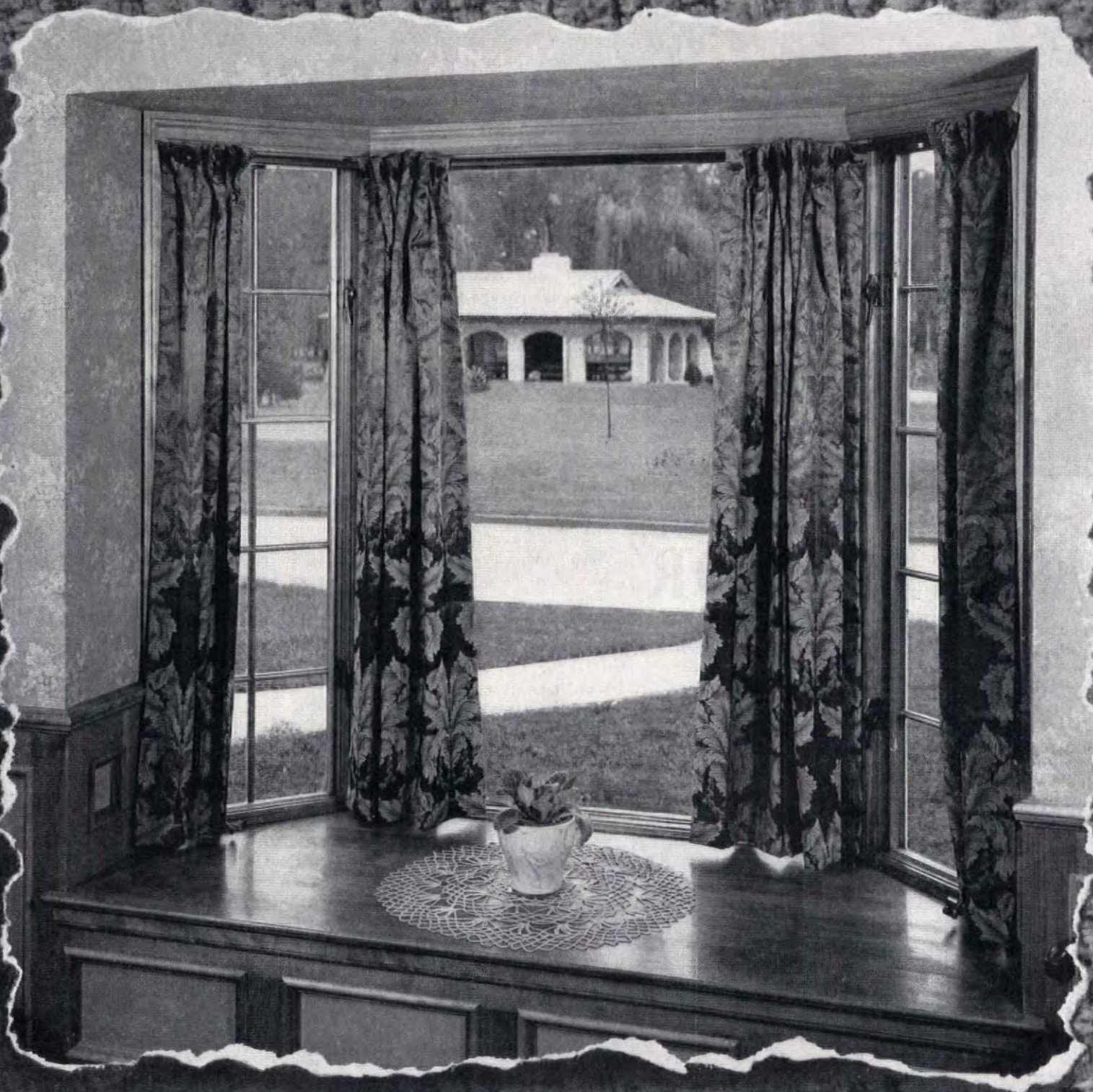
UNIVERSAL

The Preferred Gas Range



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Architect Frank Pichler specified Andersen Wood Casement Window Units arranged in an angle bay for this home in Columbus, Ohio. The

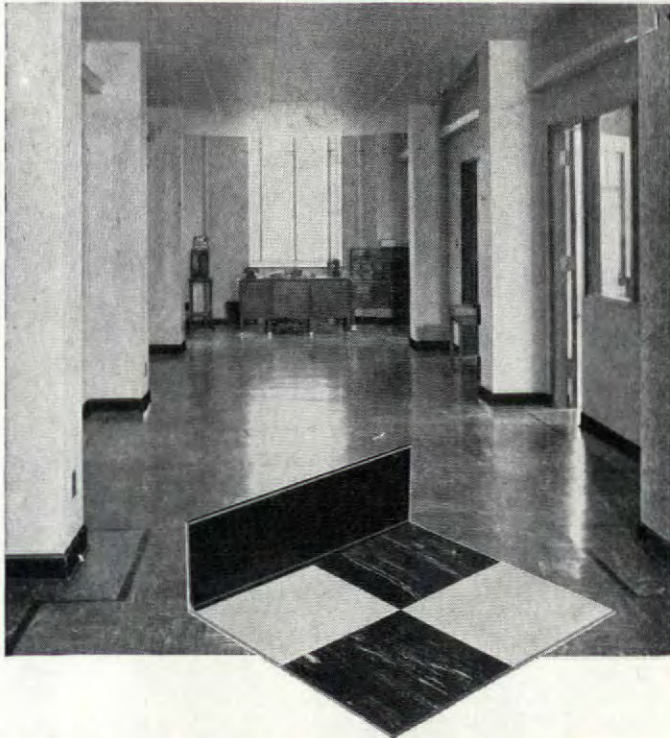
sash in the center is fixed, while the two casements on each side swing out to catch cooling breezes.

This is just one of the countless WINDOWALLS made by combining stock size Andersen Complete Wood Window Units. For additional information, consult Sweet's Catalog, or write Bayport.

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The perfect partner for Wrightflor is the flexible rubber compression base, Wright-On-Top.* Extremely durable, economical and smart-looking, this wall base is compressed to the floor . . . keeps out dirt, water and insects . . . stays snug despite floor shrinkage. Unparalleled for practicality, Wright-On-Top is easily cleaned . . . keeps its new appearance, never needs refinishing. Unmatched for versatility, Wright-On-Top looks well with floors and walls of every type . . . it's the modern finish for the modern building.

Write us for further facts, prices and specifications on Wrightflor and Wright-On-Top Compression Base.

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"They have heard on the radio about this and that which will be available and they have the magazines with the alluring pictures of remodelled homes, and I think most of them have gone over the deep end on housing and furnishing. They are thinking about how they are going to spend this nest egg they are putting away and I think a good bit of it will go into housing . . . That impression comes from all over—from the Big Sandy to the Bluegrass."

PEOPLE

RESTLESS HEADS

The job-change fever hits Washington.

On the choppy sea of last month's events, Captain of the Ship Wyatt was finding it difficult to keep a calm and able crew. Congress' unwillingness to give the NHA a permanent rating and the foundering of the W-E-T bill may have shaken some stalwart hearts. A few already returned to private berths, among them, Deputy Expediter Rear Admiral Kirby Smith, back at his vice-presidency of the Raymond Concrete Pile Co., and Lyman Moore, Assistant NHA Administrator, away to Portland, Me., where he will serve as City Manager.

To the post of FPHA Commissioner, vacated earlier by Philip Klutznick, the President designated Dillon S. Myer, director of the War Relocation Authority, (wartime agency for the transfer of Japanese-Americans from the West Coast). At Senator Taft's last minute insistence, the home-ward hustling Senate deferred its approval until the next session of Congress, leaving Myer with a "recess appointment". Observers noted that both Myer and Taft are Ohioans. Myer, a career public servant for 31 years, is new to the housing picture; most of his former State and Federal jobs have been in agriculture.



MYER

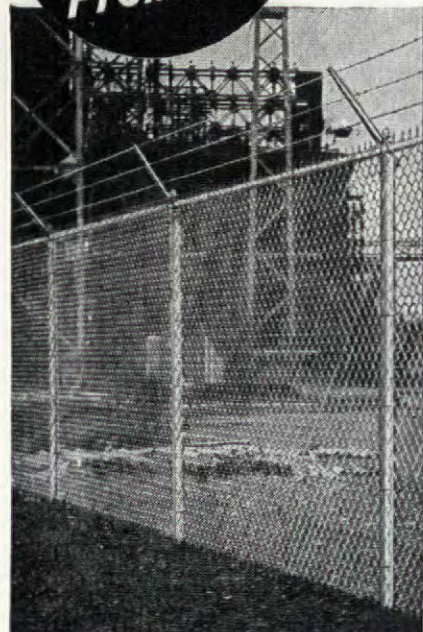
An assignment of still undetermined dimensions went to NHA Counsel Leon Keyserling. Appointed to the three-man Council of Economic Advisers, Keyserling will map the wide-ranging strategy of the Full Employment Act, a piece of legislation he helped draft. Keyserling, who was USHA deputy Administrator



KEYSERLING

(Continued on page 32)

If Fence
is one of
Your
Problems



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HELPFUL BOOK
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ALUMINUM
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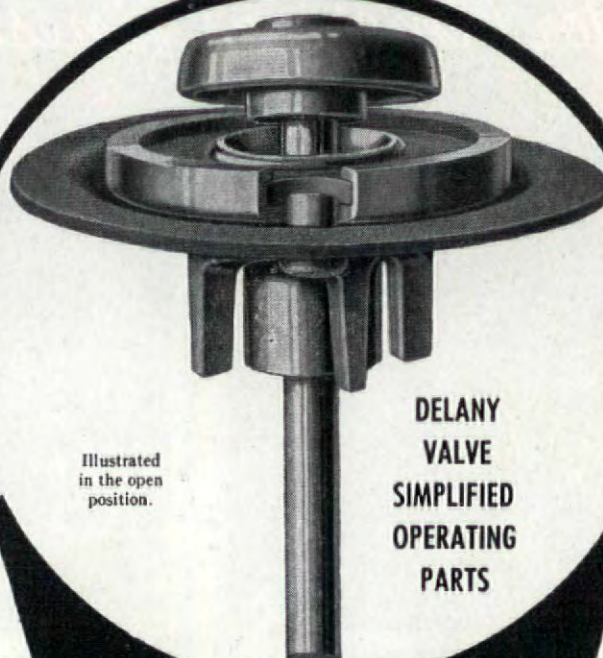
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SIMPLICITY

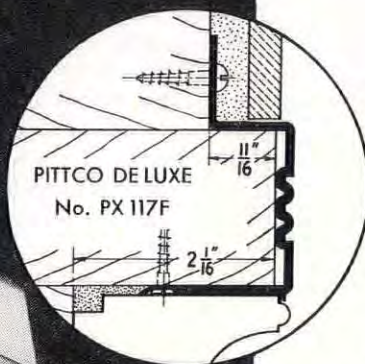
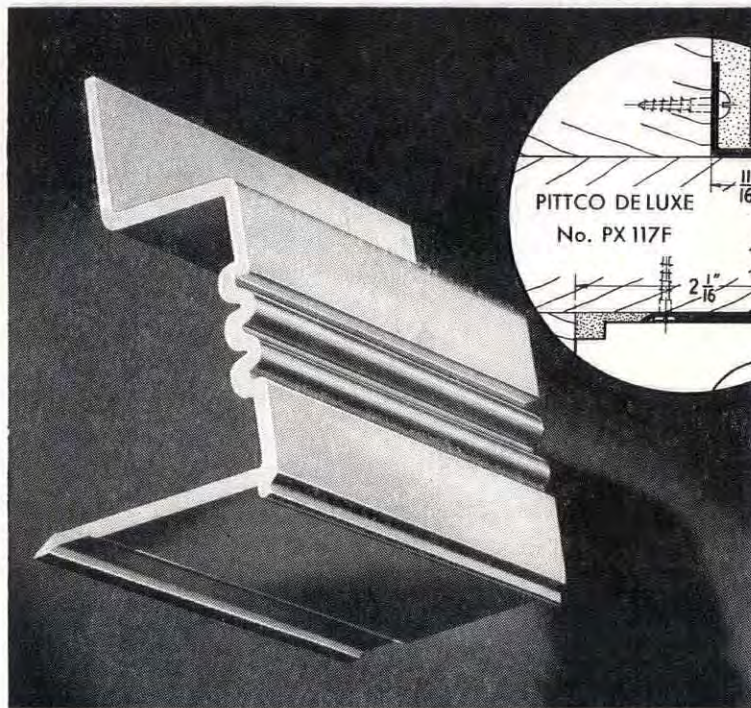
We have achieved
this end.

SIMPLICITY
begets
LOW-COST
UPKEEP

•
SEND FOR
BOOKLET
"E"

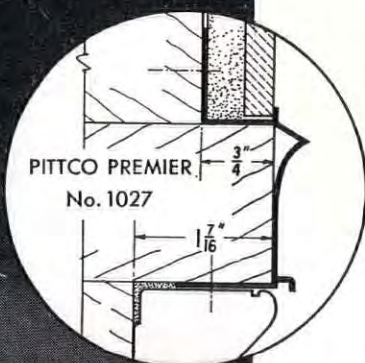
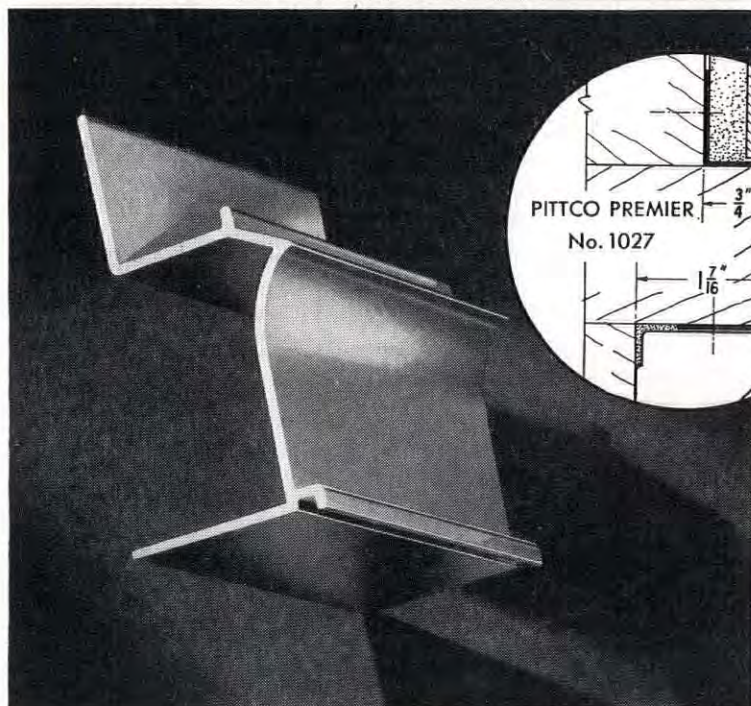
SINCE 1879
Coyne & Delany Co.
BROOKLYN N.Y.

Two lines of PITTCO METAL with the same rich finish



PITTCO **DE LUXE**

Pittco DeLuxe Store Front Metal has a satin-smooth finish, rich in tone and gloss, which has delighted both architects and store owners. They like it because it harmonizes perfectly with any material or color combination. And the Pittco De Luxe line also has rugged, sturdy strength and clear, sharp profiles assured by its extruded method of manufacture. Imaginative styling and the wide variety of bars, mouldings and sash in the De Luxe line permit the architect many effective combinations. For symmetry, strength and perfect finish, Pittco De Luxe is the ideal choice for impressive, distinctive store fronts of high quality.



PITTCO **PREMIER**

Pittco Premier, although lighter in weight and more moderately priced than Pittco De Luxe, has the same rich, smooth finish. And into the Premier line, too, has gone the same careful planning which has made the De Luxe line so popular. All Premier members were styled at one time so that perfect harmony would be inherent in the line... each Premier unit complementing the beauty of other pieces used with it. Pittco Premier construction can be set quickly and easily... a simple outside procedure that effects a substantial savings in setting time. In Pittco Premier architects will find a lightweight, economical metal with which to create pleasing, appealing store fronts.

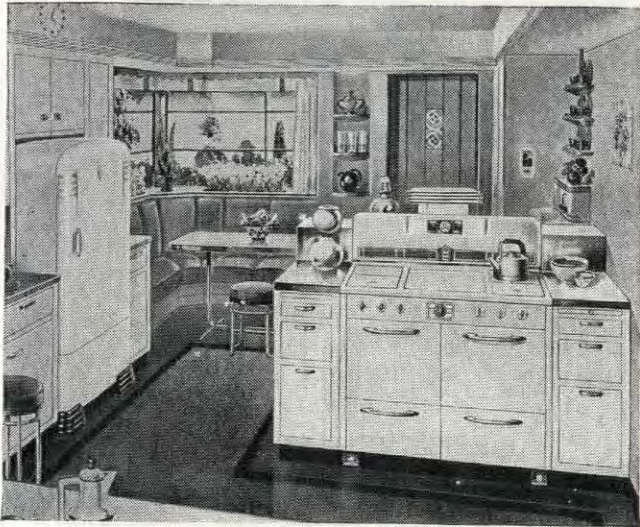
PITTCO STORE FRONT METAL



"PITTSBURGH" stands for Quality Glass and Paint

PITTSBURGH PLATE GLASS COMPANY

Building in the Country?



**YOUR CLIENTS CAN HAVE
A KITCHEN LIKE THIS...**

WITH

"PYROFAX" GAS SERVICE

• Specify "Pyrofax" gas, the overwhelming favorite, for every home you plan or build beyond the mains. No service interruptions — better cooking — automatic water heating — silent Servel refrigeration are some of the advantages of this modern gas service. A New Freedom "Pyrofax" gas kitchen, with the famous Magic Chef gas range, is sure to bring client satisfaction.

PYROFAX

TRADE-MARK

SUPERIOR GAS SERVICE FOR 25 YEARS



**COOKING • WATER HEATING
REFRIGERATION • ROOM HEATING
BEYOND THE GAS MAINS**



MAIL THIS COUPON NOW!

"PYROFAX" Gas Division, Dept. A2,
Carbide and Carbon Chemicals Corporation,
30 E. 42nd St., New York 17, N. Y.

Please send me all the facts on "Pyrofax" Gas and
Information Sheets on installation.

Name _____

Firm _____

Street _____

City _____ State _____

for five years, has long espoused construction as the key to industrial stability. His \$10,000 prize-winning essay, in the Pabst Post-War Employment contest two years ago, became a prototype for the Full Employment bill. In it, Keyserling espoused Building's candidacy for the role of "compensatory spending", a way to plane down the bumps in the business cycle.

A South Carolinian who studied law at Harvard and post-graduate economics at Columbia, Keyserling spent the mid-Thirties on Capital Hill as an assistant to Sen. Wagner and put his hand to such controversial measures as the National Housing Act, the Social Security Act, the National Labor Relations Act, the National Industrial Recovery Act. Latest legislation to display Keyserlingo, is the W-E-T bill, one of the most fiercely argued of the recent session.

ARCHITECTS FOR ECUADOR

Two young Americans design prize-winning capitol building.

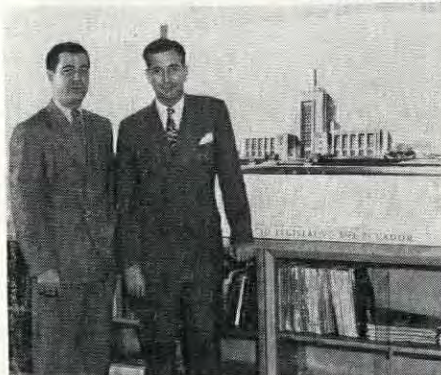
Winners last month in an international competition for the design of Ecuador's new capitol building, were two young Americans, Charles DuBose and Richard Burbank. The proposed building—a palace to house Ecuador's legislature—will be built of native andesite, located in the center of bustling Quito.

DuBose, 38, is a graduate of Georgia Tech who studied at the University of Pennsylvania, and at Fontainebleau, France; Burbank, 35, went to Yale. Their winning design, a massive symmetrical structure, will cost 15 million sucres, (about \$1,200,000), have wings flanking a central tower.

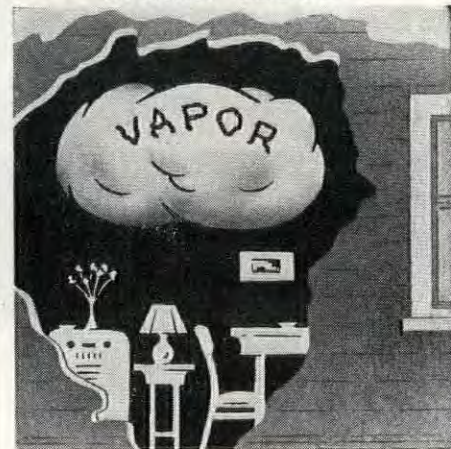
A stiff preliminary competition, which involved many hundreds of submissions, preceded the final run-off award. For their best-liked design the Americans got 50,000 sucres, (\$3,600).

BURBANK, DUBOSE

Ralph Tornberg



PROTECT INSULATION AGAINST THIS INDOOR "STORM CLOUD"



**PREVENT "IN-WALL"
CONDENSATION**



**WITH BIRD
NEPONSET
BLACK VAPOR
BARRIER**

Insulation alone is not enough. Your buildings need the extra protection of a *separate* vapor barrier to lick the "in-wall" condensation which impairs insulation efficiency, hastens paint peeling, structure rot. Get 3-way protection from these evils with Bird Neponset Black Vapor Barrier. Applied on the warm side of insulation, Neponset Black protects against "in-wall" moisture condensation, structure decay and outside paint peeling. Gives lifetime service at amazingly low cost — only about \$20 to protect a \$10,000 building! Be sure your buildings have this 3-way protection — specify Bird Neponset Black Vapor Barrier. Consult Sweet's Architectural Catalog 9b-2. Write Bird & Son, inc., Dept. 169, East Walpole, Mass. for sample.

Specifications: Roll width: 36"; length: 500 ft.; approximate wgt.: 50 lbs. Asphalt Saturated. Coated both sides with glossy asphalt surface. Meets Federal Specifications UU-P-536 Grade B.



BIRD & SON, inc.
EAST WALPOLE, MASS.
NEW YORK • SHREVEPORT, LA. • CHICAGO

SERVING THROUGH SCIENCE
WITH A MATERIAL THAT'S

AT HOME IN EVERY BAR

SPILLED drinks and food don't leave their mark on the surface of "U. S." Plastic Naugahyde—the new upholstery which isn't even affected by the oils of body perspiration. Plastic Naugahyde is easily cleaned with plain soap and water—a fact that makes it a favorite with Hotel, Bar and Restaurant operators.

When you're working with Naugahyde's beautiful colors and grains, you'll know your work will endure. Rough treatment, heavy edge wear and scuffing ruinous to many materials, in no way mar your Naugahyde covered creation.

Plastic Naugahyde is easy to tailor, to look at, to sell—Naugahyde merits an important place in every decorating scheme.



The Colonnade Room of the Edgewater Beach Hotel, Chicago is upholstered in "U. S." Plastic Naugahyde.

"U.S." PLASTIC
Naugahyde



UNITED STATES RUBBER COMPANY

COATED FABRICS DIVISION • MISHAWAKA, INDIANA

What's 50 BILLION FOOTSTEPS To Kentile?

When wear-resistance is a major factor—in your choice of flooring—look to Kentile! It takes *gruelling punishment* without losing good looks or showing wear. (Kentile has already taken 14 years of steady pounding along the 20 miles of corridor in Rockefeller Center and it's good for many years more.) Kentile *deadens footsteps*—cushions jabbing, clicking heels. And for high styling and smartness, it's the *handsomest, most versatile* flooring you can find. Kentile is laid piece by piece—in individual squares—which makes replacement and floor plan alterations *economical and easy*. Kentile *comes clean* with simple mopping of soap and water. Kentile's *colors stay true*, because they run through to the back. Get the whole Kentile story in the booklet offered below. Read these additional facts:

STAINPROOF—waxed at the factory, Kentile shrugs off stains, dirt, scum. (And a special grease-proof Kentile fits in wherever needed.)

MOISTUREPROOF—That's Kentile . . . even on basement concrete, in direct contact with earth.

VERSATILE—Your color scheme—your own floor-design ideas are worked out perfectly with Kentile.

SPEEDY TO INSTALL . . . Authorized contractors all over the U. S. are trained to do a fast laying job—without interfering with "business as usual".



THE WHOLE STORY!

Kentile offers 15 different advantages—all told in the new, full-color catalogue showing all the colors, some of the numberless patterns and plus full-color pictures of Kentile in use. Send for your copy—no obligation.

DAVID E. KENNEDY, Inc.
80 Second Avenue, Brooklyn 15, N. Y.
208 Bona Allen Bldg., Atlanta 3, Ga.
200 Ulloa Street, San Francisco 16, Calif.
30 N. Michigan Ave., Chicago 2, Illinois
452 Statler Bldg., Boston 16, Mass.
614 Olympia Road, Pittsburgh 11, Pa.
1211 National Broadcasting Co. Bldg., Cleveland 14, Ohio

KENTILE
Asphalt Tile
Trade Mark Reg.



TRANE ENGINEERS WANTED TO TEST HEATING IN SUMMER—

SO...

They Built a Refrigerator Around a Living Room

... ANOTHER EXAMPLE OF THE INGENUITY OF THE MEN WHO CREATE *Weather Magic*

So that they could make actual comfort tests of new heating developments even on the hottest summer day, Trane Engineers literally put a living room into a refrigerator.

Constructed of concrete blocks and lined with highly effective foam glass insulation, this refrigerator is so large that a regulation sized living room, cushioned on rubber, fits into it perfectly. This room may be exposed to whatever weather the tests require—by Trane Weather Magic, of course.

With this refrigerator, Trane Engineers can determine exactly how a heating unit will perform under every conceivable condition of temperature, humidity, and even sound.

This "room in a refrigerator" is another example of the thoroughness of Trane Engineers who

carry out a constant program of research in the development and refinement of Trane Products and Systems.

All Trane Products are designed and built together for service together. The architect and engineer will find that there is a complete Trane System for almost every conceivable application in heating, cooling and air conditioning.

More than 200 Trane Field Engineers in principal cities all over the country co-operate with architects, engineers, and contractors in the application of Trane Weather Magic. National advertising is advising customers to seek counsel and Trane information from architect, engineer, and contractor.

The efficiency and flexibility of Trane Heating Coils make them ideally suited for every comfort and process application. One of a wide variety of types and sizes of Trane Heating Coils, the Type E coil shown can be used with low or high pressure steam or with hot water, and it can be used for cooling with chilled water.

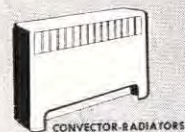
Used in conjunction with these coils, or in countless other air moving applications, Trane Centrifugal Fans are supplied in three types and a complete range of capacities. The fan shown is of the backward-curved non-overloading type. The Trane Fan line also includes forward-curved and utility fans.

TWO OF THE SECRETS OF *Weather Magic*
SUCCESS... TRANE HEATING COILS AND FANS

TRANE TYPE E HEATING COIL

TRANE BACKWARD CURVED
CENTRIFUGAL FAN

THE **TRANE** COMPANY
The House of Weather Magic
LA CROSSE • WISCONSIN
TRANE COMPANY OF CANADA, LTD., TORONTO
MANUFACTURING ENGINEERS OF HEATING AND AIR CONDITIONING EQUIP.



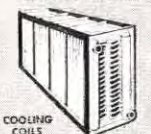
CONVECTOR-RADIATORS



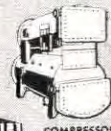
UNIT HEATERS



CLIMATE CHANGERS



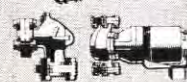
COOLING COILS



COMPRESSORS



HEATING COILS



HOT WATER PRODUCTS



STEAM HEATING SPECIALTIES



CENTRIFUGAL FANS



SELF-CONTAINED AIR CONDITIONERS



EVAPORATIVE CONDENSERS

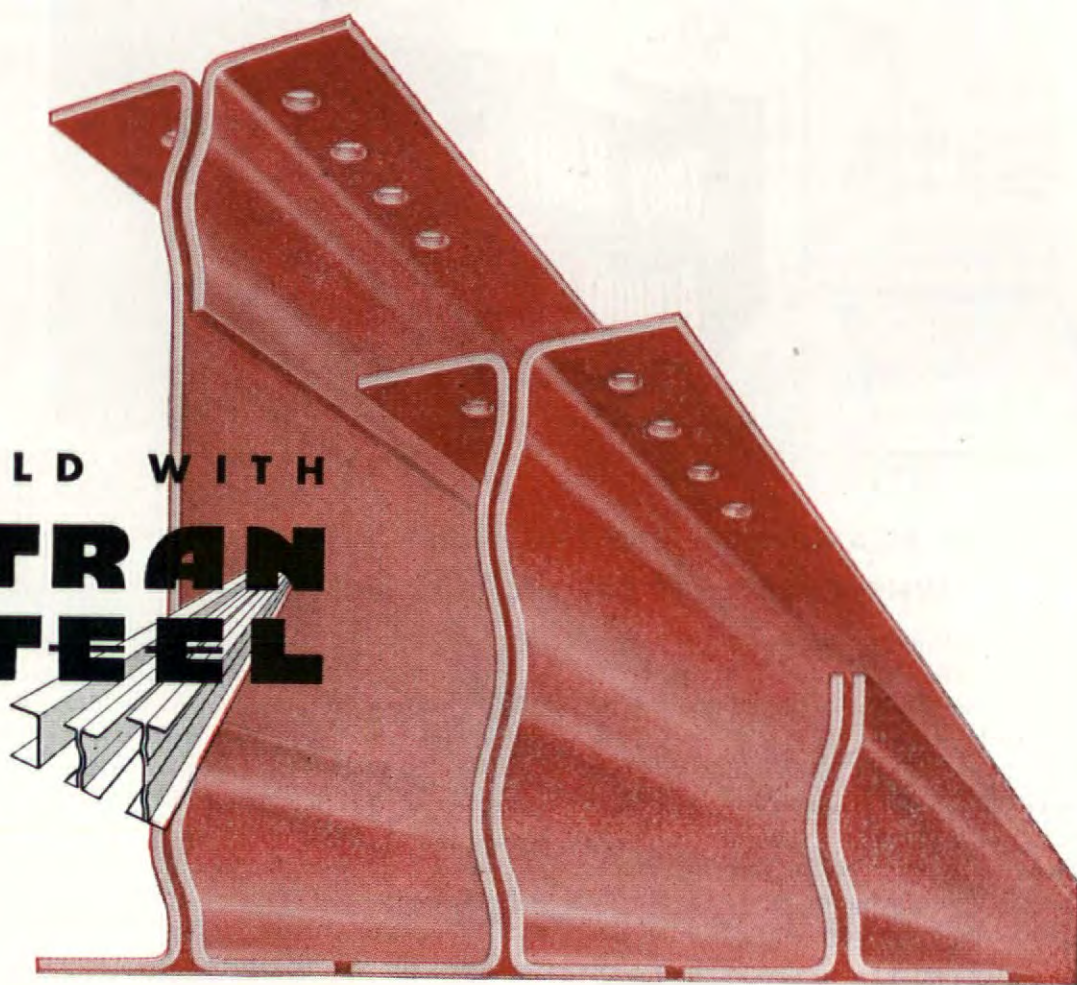


SHELL AND TUBE HEAT EXCHANGERS



UNIT VENTILATORS

BUILD WITH **STRAN STEEL**



THE LIGHTWEIGHT STEEL FRAMING THAT GOES UP FAST

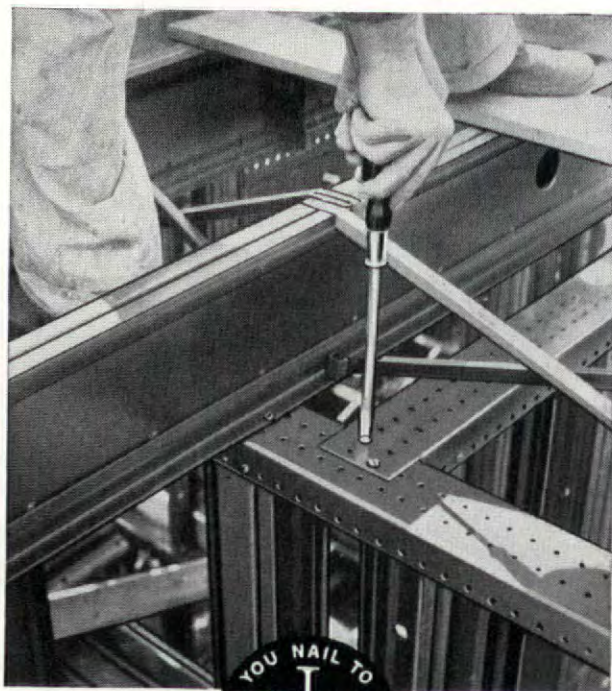
Stran-Steel's fast, efficient erection method appeals to both architects and builders. Studs, joists and channel plates are laid out on the ground and joined with self-threading screws to form a section of convenient handling size; then the whole is raised and secured in place. Other building materials are later attached directly to the frame with hammer and nails. No special tools or equipment is required.

Stran-Steel provides a fire-safe, rigid, long-lasting frame that assures low maintenance costs. It is a material of precision and uniform quality, free from such variations as are caused by growth, seasoning or "greenness." The patented *nauling groove* grips nails more securely than wood does.

Get the full story of this economical, *fast-erecting* framing system. See Sweet's File, Architectural, Sweet's File for Builders, or the January issue of Building Supply News.

GREAT LAKES STEEL CORPORATION

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



Beautiful New Effects in Wallpapers



First Completely New Wallpapers in 5 Years!

**Over 160 Gorgeous United Wallpaper Patterns
Now on Display by Leading Stores, Decorators**

EXCITING NEW BEAUTY:
Now—have the rooms of your dream. Make each room sparkle with originality and colorful charm you've never seen in wallpapers before. These new United patterns are simply "out of this world" for advanced styling and rich color effects!

GUARANTEED WASHABLE, FADEPROOF!
Every one of these new United patterns is guaranteed washable with soap and water... guaranteed fadeproof... also guaranteed style-tested and wall-tested by experts. Yes, guaranteed high quality in every price range!

PRICE-MARKED FOR YOUR PROTECTION!
No matter what you plan to spend, you'll find your "dream patterns" in this book... with the selling price established by the manufacturer clearly marked on the back of each sheet.

In this Book ONLY!

No other wallpaper book has these exclusive patterns. So be sure to visit us seeing this latest collection of new United designs. Your wallpaper store or department, or your decorator, will be glad to show you this book.

P.S.—Make your selection early and avoid disappointment.

UNITED WALLPAPER
New STYLE ALBUM
World's Leading Designer and Largest Manufacturer
MERCANTILE MARL, CHICAGO

You'll soon see this color page in leading national magazines. To you it brings special good news! For it means that *highly styled wallpaper* is available now both for fine homes and for volume housing—as well as for commercial buildings of all types. These gorgeous new patterns include a wide choice of florals, stripes, weaves, and tones... many in new effects never before seen. See them in the *United Wallpaper Style Album* now at wallpaper stores everywhere.



← **LOOK FOR THIS SIGNATURE**

UNITED WALLPAPER
INC.
World's Leading Designers and Largest Manufacturers
Merchandise Mart, Chicago 54, Illinois

• The United Wallpaper signature is your guarantee of the world's finest quality wallpapers, designed by the world's leading wallpaper artists. For your convenience, every pattern is price-marked on the back... guaranteed washable... guaranteed fade-proof, style-tested and wall-tested.
Remember, too, among wall-coverings only wallpaper combines design, color, originality, practicality and long life.

ARCHITECTS:

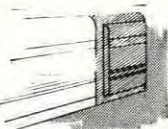
here's how to s-t-r-e-t-c-h the small home
with this new method of *Radiant Heating*



BURNHAM
BASE-RAY
RADIANT BASEBOARD

CONCEALED VALVES

This neat metal enclosure shaped like the heating unit itself, is attached to each end of BASE-RAY, thus completely concealing all valves and controls.



MOLDINGS

To provide an even more realistic baseboard appearance, wood moldings are added at top and bottom of "Standard" BASE-RAY and at top only of "Hy-Power" units. These are standard wood moldings.



This Booklet gives complete data as well as diagrams on BASE-RAY—covering dimensions, ratings and installation procedures.

Wall space entirely free and unobstructed—yet you get plenty of even, clean *radiant heat*! Think what this means to the small-home owner in terms of beauty, comfort and convenience that this additional space makes possible.

This heating miracle is accomplished by means of BASE-RAY* Radiant Baseboards—a hollow, cast-iron unit which replaces the usual wooden baseboards on outside walls...can be painted any color desired...and permits unhampered arrangement of furniture and draperies.

BASE-RAY is available in two styles—the "Standard" ($1\frac{3}{4}$ " thick and 7" high) and the "Hy-Power" model (2" thick and 7" high). Used with hot water, 2 pipe steam or vapor, BASE-RAY provides a room-long source of heat with a floor-to-ceiling temperature differential of less than 3° .

And remember, no structural changes are necessary in installing BASE-RAY Radiant Heating. For further information on BASE-RAY, send coupon for booklet shown at left.

*Reg. U. S. Pat. Off.

Burnham Boiler Corporation
Irvington, New York DEPT. AF 96
Please send me copy of "Ratings and Installation Guide on BASE-RAY Radiant Baseboards."
Name
Address
City State

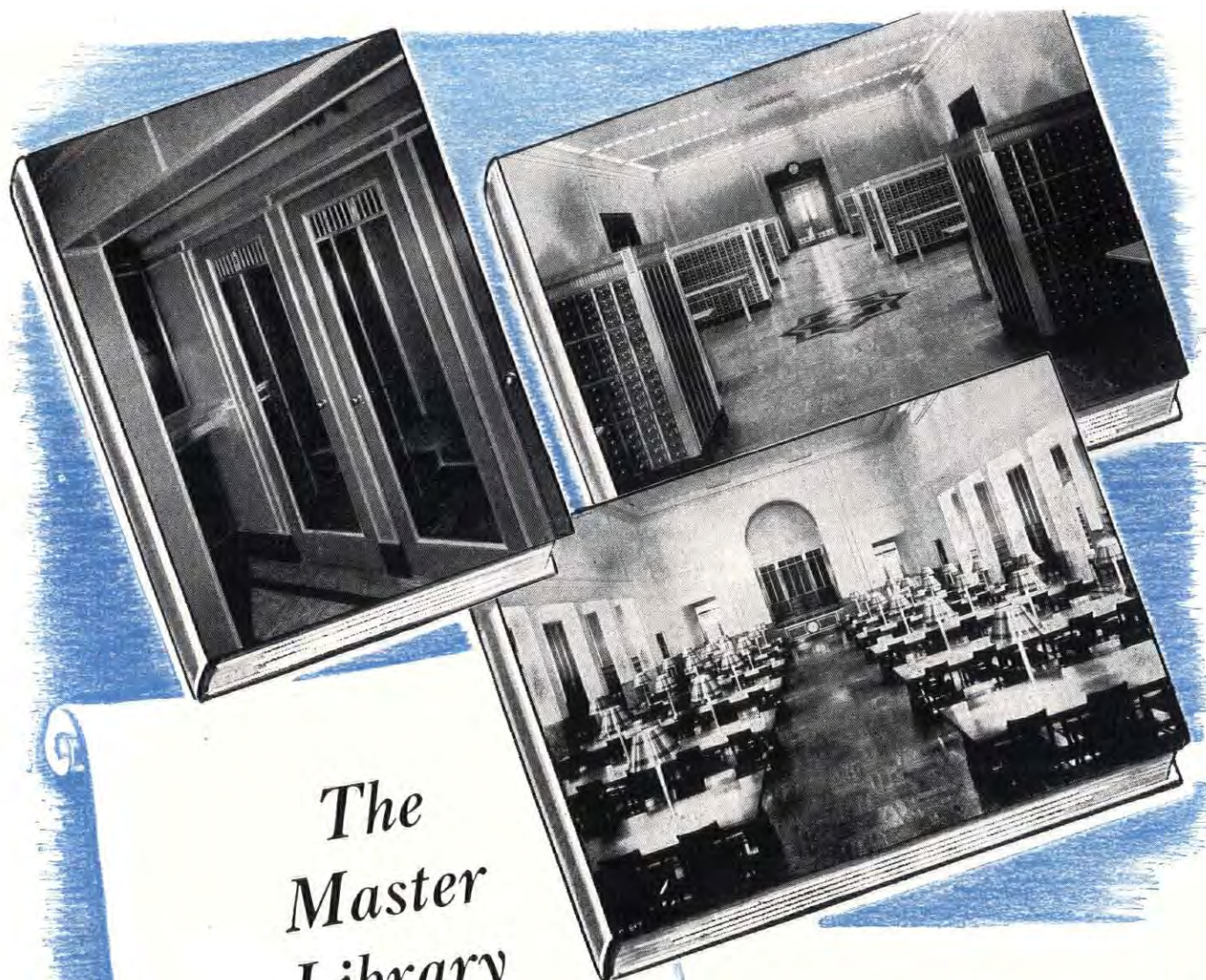
Burnham Boiler Corporation

IRVINGTON, N. Y., Dept. AF 96

Export Department

50 CHURCH ST., NEW YORK 7, N. Y.





*The
Master
Library
uses the
Master
Decorative
Material*

STARTED with \$5,000 and 1,000 volumes in 1802 the library of Congress now spends \$2,000,000 annually, owns 8,000,000 books and major documents, and in 1938 completed a beautifully functional nine million dollar annex designed by Pierson and Wilson.

The Library of Congress is truly a master library for it set the catalogue system style for *all* libraries in the United States, it records *all* copyrights, and has set the pace in library science and, *now*, in library architecture and decoration.

The Formica laminated plastic used in catalog and reading rooms, and as table tops is the material which is setting the pace for all functional buildings. It meets the difficult requirement of being the most beautiful and the most practical and the most flexible and adaptable.



THE FORMICA INSULATION COMPANY, 4620 SPRING GROVE AVENUE, CINCINNATI 32, OHIO

Readers in the Jury Box . . . Client Loeb's Retort . . . Docks Walloped . . . A Letter from England . . . Highways before Housing?

READER RATINGS

Forum:

Re your presentation of the Western Airlines office in Los Angeles (FORUM, May '46), it is very interesting to know that several of the principles which we have developed and advocated for several years are included in this design. It shows that those who study the problem logically, usually arrive at much the same conclusion. The principles I refer to are:

1. To eliminate exterior advertising and open up the whole interior as a display for selling air travel.
2. The theory that maps and murals have been done to death in previous airlines' offices we thoroughly agree with.
3. Handling baggage is another problem which we agree with, and the idea of carts wheeled directly to the limousine and carried directly to the airport is one we have used for some time in Miami.

The Western Airlines office is certainly a very beautiful one but our only feeling is that it is almost too elaborate and costly.

PHELPS BARNUM

New York, N. Y.

Forum:

Let me congratulate you on the July issue of Architectural FORUM. It was a timely issue well done. Keep on stressing the need for neighborhood, community and city planning. This phase has been too lightly passed over by the profession, and you can do a real service by throwing it up to them. Architects must realize that no matter how good they may think their buildings to be, if they are poorly related to the overall urban development plan they cannot be good architecture in the true sense of the word.

CHARLES GRANGER

Austin, Texas

Forum:

Many thanks to you for your splendid July issue, "Today's House." Your exhaustive manual of suggestions was indeed helpful and it did this builder's heart good to see someone finally get down to fundamentals to show us *how* we can go about building 2,700,000 homes in today's chaotic market. My faith in FORUM's practicality had begun to waiver slightly what with your flights into the rare atmosphere of Yankee Shangri-La's and Swedish fountain makers. Please don't misunderstand.

Builders do not live by bricks alone and your profiles have been a real treat. Unfortunately, though, they don't help a single veteran out of a Quonset hut into a decent home.

Congratulations again on your excellent July reference number.

KENNETH SLOAN

Minneapolis, Minn.

Forum:

Several years ago, FORUM published an interesting Design issue covering a multitude of subjects from houses to streamlined accordions. With the miracle of production shown in the past five or six years there must be countless inspirational designs that would be of tremendous interest to the layman, as well as the architect, if FORUM would again compile such an issue.

Though many of us eagerly anticipate our first television set, our next car (if we live so long!), our pressure cookers, dish washers, deep freezers, etc., we have no comparative design nor cost basis with which to temper our eagerness. Advertising pages have a certain intriguing value but are limited in reflecting the glowing promises of one manufacturer. If FORUM would give an objective, over-all summation of what may be a reality in our "house of tomorrow" it would provide a workable solution to many planning hours.

The contemplation of what the owner puts into his streamlined kitchen may call for more heart-to-heart discussion than does the kitchen itself. Personally, if Building doesn't get off the fence soon, I'll be content with atomic heat in a piano box!

JOHN GORDON

New York, N. Y.

One of the FORUM's most popular issues (Oct. '40), the theme of the Design Decade will be updated when more significant peacetime products have made their debut.—Ed.

MR. LOEB REPLIES

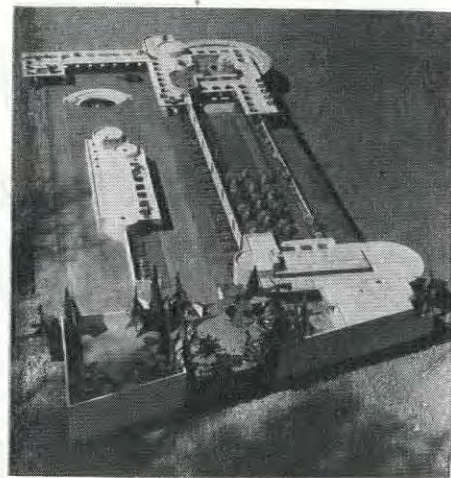
Forum:

I myself felt like protester Clark (FORUM, Aug. '46) when I read some of the FORUM text and I would feel like protester Reed (FORUM, Aug. '46) if I thought my new home when built would approximate the model.

I have visited Egypt and I think the fact that the massive piles of stone are still a headline attraction is significant. It is indeed too bad Mr. Fuller either never saw Karnak or, if he did, seemingly learned nothing from it. Remember Mr. Wright's early houses, labelled freak when built, are conservative and copied today.

Reader Reed is misled by the FORUM. The house is decidedly not laid out for group entertainment. The outdoor living space is in the walled garden not on the roof. Windows as we know them are on the way out, and some years hence servants (if any are left) will refuse to live or work in quarters that include them. The workers in the windowless Johnson Wax Factory seem more happy and satisfied than those in most factories.

Money won't buy even a modest shack or two—only material and men who can put up a house. If reader Wolff thinks the students who built the model should quit school and lay bricks (if they could), and if he feels the materials used would supply a figurative percentage of a house, I might agree with him. As it is, building the house itself might furnish work and wages a few years from now when unemployment rather than shortages rule and if the hopeful builder isn't broke by then.



Model Shangri-La

From my point of view the model (which I never saw under construction or completed until after the exhibit opened), is not the house I hope to be able to build. That house, I think, gives me what I wanted in a manner unachievable by any other architect. The site is a hilltop without trees. The scheme provides shade and windbreak and viewframe. Construction price was a factor, but there was no need for a bread and water house. Fine works of art in every sphere have their place, and benefit the creator, the maker, and the user or viewer alike. They should inspire everyone to seek better things and raise general standards. Engineering problems leading to physical comfort (such as the frameless glass doors) have been given consideration, and com-

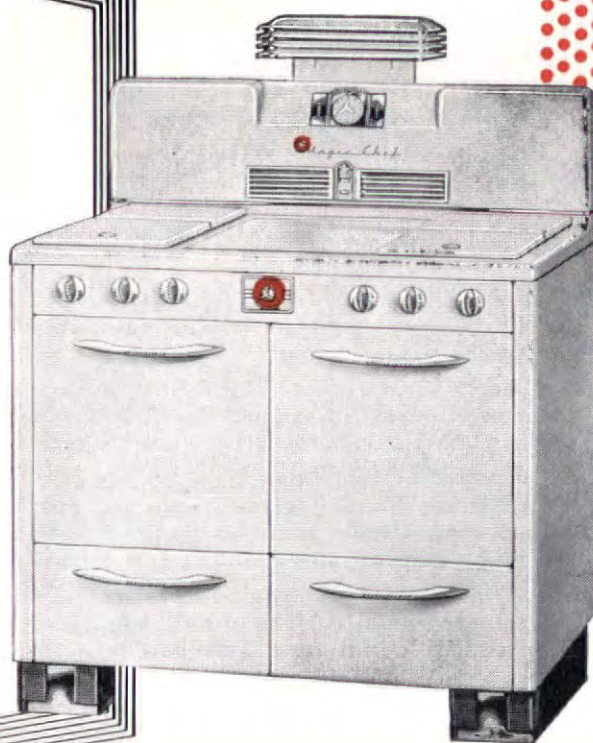
(Continued on page 42)

Mr. Architect, Do You Know Why

*More Women Cook on
Magic Chef
Than on any Other Range*

★ National (impartial) surveys prove the overwhelming popularity of Magic Chef. This nationwide consumer acceptance can be attributed to the fact that Magic Chef has consistently been first to introduce to housewives the very latest developments in cooking conveniences. What this means to you, Mr. Architect, is that you can design any kitchen around any Magic Chef model and be assured that your client is getting the best.

AMERICAN STOVE COMPANY
4301 Perkins Ave. • Cleveland 3, Ohio
New York • Atlanta • Philadelphia • Chicago
Cleveland • St. Louis • Los Angeles



THE GAS RANGE WITH THE FAMOUS RED WHEEL

THERE ARE 48 DISTINCT ADVANTAGES WITH *Magic Chef*



The smaller the room
the more a Picture Window
does for it!

Are higher costs and material shortages limiting you to smaller rooms?

Then consider this: The feeling of confinement in a small room is largely the result of visual barriers . . . restrictions on the eyes' natural desire to roam.

A Picture Window gives a feeling of spaciousness to a small room—adds the beauty, the ever-changing color and activity of the outdoors.

It doesn't require a lake or mountain view. Even a small lot will have some garden space

—will enable you to bring in every season's appeal of lawn and flowers to make indoor living more enjoyable.

Today, the Picture Window is as practical as it is popular. No longer need heating problems result from using large glass areas. Glaze them with *Thermopane**, the L·O·F multiple-pane insulating unit. Here's transparency combined with insulation—a team of benefits that is of real value to designers, builders and owners of homes large and small.

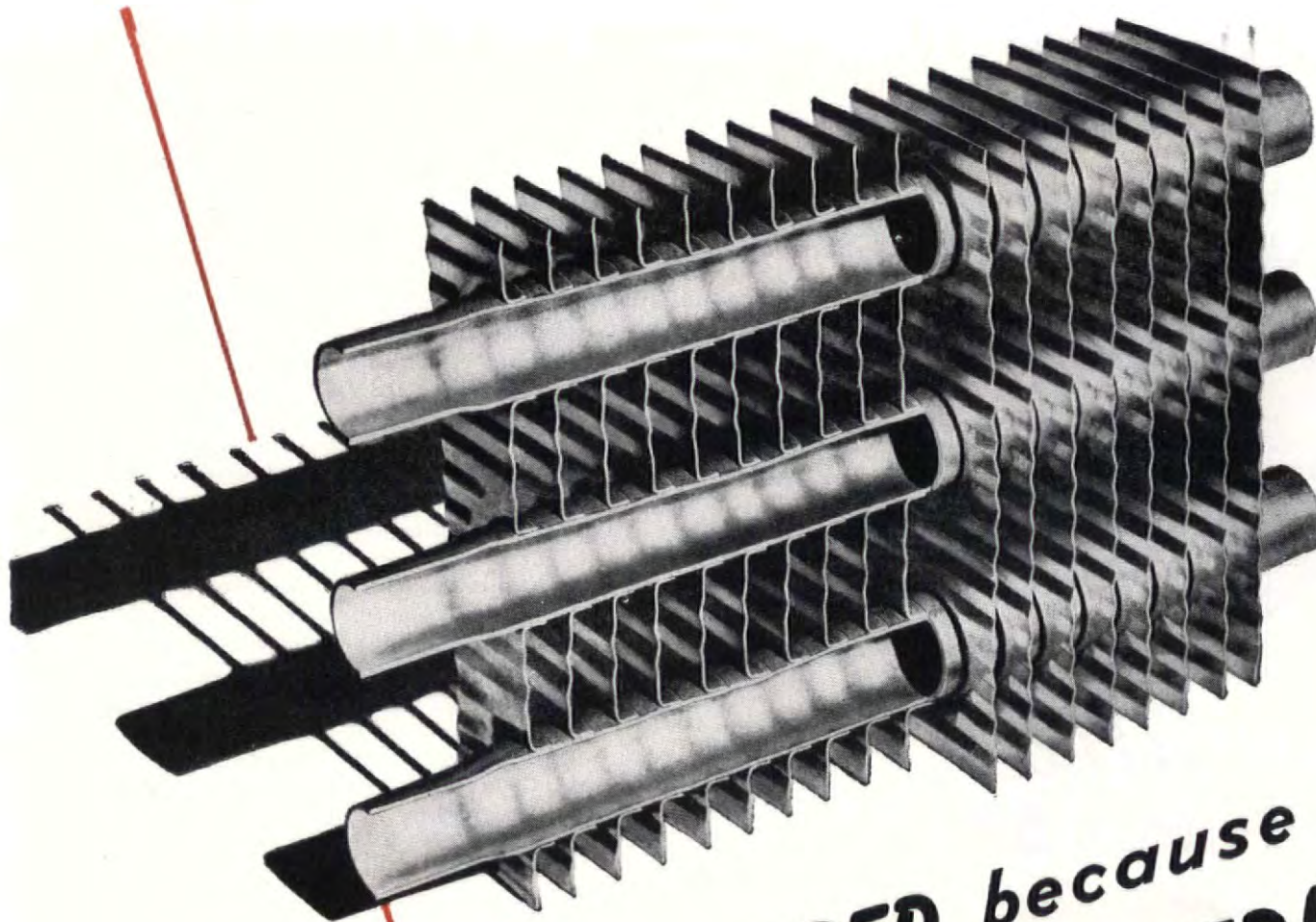
Get the facts on *Thermopane* before breaking ground for your next house. Send for our book that includes sizes, thicknesses, types of glass and other pertinent data. Don Graf Technical Sheets also will be sent to architects requesting them. Libbey·Owens·Ford Glass Company, 1696 Nicholas Building, Toledo 3, Ohio.

*Reg. U. S. Pat. Off.

WHEREVER VISION IS IMPORTANT
USE L·O·F *Polished Plate* GLASS



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



**RIPPLE
FINS**

**PREFERRED because
they're PROVED!**

Proved by performance on the job—preferred because of performance—that's the reputation McQuay Ripple Fin coils have earned. And the exclusive construction features of these coils have established outstanding service records even under the most rigid conditions. Study these advantages. They explain the reasons for the superior performance of Ripple Fin coils.

- Higher flexible strength with less air friction and cleaner operation.
- Hydraulic expansion of all tubes into fins having wide collars provides permanent mechanical bond and greater area of contact.
- Greater heat transfer surface.
- Copper tube benders have strongest construction because of inherent flexibility to compensate for unequal contraction and expansion.

McQuay coils are available in a wide variety of styles, and sizes, both standard and special coils for steam, hot water, cold water, brine, direct expansion and other applications. For complete information about Ripple Fin coils write McQuay, Inc., 1609 Broadway Street Northeast, Minneapolis 13, Minn. Representatives in all principal cities.



McQuay INC.

... AIR CONDITIONING
EQUIPMENT ESPECIALLY
DESIGNED FOR INDUSTRY



I wanted DEPENDABILITY

GRAND RAPIDS
Invisible
SASH BALANCE

*gave
me*

*Dependable
Performance*

The Grand Rapids Invisible has many features of superiority, as has been conclusively proved in thousands of war time and peace time installations. Among these are ease of installation, actual invisibility, and dependable, efficient operation in all climates and under varying conditions. The same balance for upper and lower sash make them interchangeable and 10 sizes meet 95% of all residential requirements. Complete illustrated instructions are on every carton.

SEND FOR SASH BALANCE CATALOG

which contains complete information on sash balance sizes, directions for installing, etc. All fully illustrated.



GRAND RAPIDS SASH PULLEYS

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

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promises reached which I think correctly weigh physical against emotional ones. The finished house should be the proof in this case as in the past.

The model follows the basic plans, of course, but inevitably the artist so strong in Mr. Wright, has been led to view it in its scale and decorate it accordingly. Much of this embellishment can be frankly recognized as not intended for reproduction in full scale in the final structure.

Young architects should be able to find guidance here, as in all of Mr. Wright's works, if they have the ability to grasp principles rather than to simply copy details. The world has not always steadily progressed, and if some students are stimulated to look back at some of the masterpieces of the past the whole model project of the Museum of Modern Art will be more than worthwhile. They might learn the lesson of cutting the chains of tradition, and creating what to them seems appropriate without regard to whether some portions were equally appropriate generations ago and others have never been tried. They might learn to experiment, and give their own thoughts free reign with no thought of what conventional scoffers might say. Mr. Wright's independence of thought is something rare, and to be envied, and has succeeded both as a personal policy and in making the world a better place in which to live.

G. M. LOEB

New York, N. Y.

Forum:

The mere mention of Frank Lloyd Wright never fails to quicken my pulse perceptibly. And so it was when I read in the June FORUM under "House in Connecticut": "Frank Lloyd Wright transforms a barren hilltop into a Yankee Shangri-La" (nothing picayune about Him). My pulse now at double-time suddenly broke into a hop-skip-and-jump as I continued to read . . . " . . . Creating a site (I thought only God could create a site . . .) for Gerald Loeb's future residence where none existed before . . ." Does the gorgeous array of buxom columns and egocentric bedrooms which graces six unnumbered FORUM pages represent only a *site* for a "future" residence? Or does residence here refer to the (future) state of baccalaureate bliss for which the "House in Connecticut" is designed? And another question. Does Frank L. Wright's genius merely consist of creating sites and/or residences "where none existed before?" Surely that is something which most architects accomplish with relative ease.

The FORUM in love is no more rational than love itself.

Also not a little disturbing was the equivocal and wholly aesthetic evaluation

of the portly columns so obviously designed to withstand atomic impact. Wright, the audacious experimenter is determined to emerge the victor again. Should the spring-like Guggenheim Museum bounce too high under atomic prodding surely the "House in Connecticut" with its many roots will coolly weather the atomic holocaust and emerge (with the Time Capsule) sole monument to our departed civilization.

Finally, allow me to take issue with your assertion that "house and site are actually one." If the integration were indeed so complete, the hilltop in Connecticut would remain barren, while the House in Connecticut would nestle comfortably in its bosom, its columns cut out of the living rock (with an incidental saving to Mr. Loeb). The Egyptians would have done it so—it would have been the logical solution—but not the functional one which Wright here offers—a three-dimensional hoax designed "for entertainment on an impressive scale."

NIETS NIBUR, II

New York, N. Y.

SOCK AT SHIPPING

Forum:

When will this transportation-conscious world turn its attention to streamlining docking facilities? With refurbished railroad stations and glamorous new airports breaking out like a nation-wide case of poison ivy, it seems strange that the shipping companies should apparently remain satisfied to offer the public nothing but a few fancy-pants renderings of dream boats promised for God knows when.

Is anything more deserving of fresh, cheerful surroundings than that recreational phenomenon, the sailing party? And it's here again, God bless it. Could anything be more drab, filthy or depressing than the average steamship pier, or the average waterfront, for that matter? Docks should be played up as a focal point of civic interest since they are as important in establishing a first impression as any other type of transportation terminal and it seems safe to assume that for a few years, at least, people will cling to such obsolete means of travel as the water.

Some years ago the New York Port Authority got around to modernizing some of its docks. This program consisted principally of installing yellow brick facades facing the street, and ugly facades at that. The docks themselves remained as smelly and gloomy as ever, though a few rated concrete instead of planking.

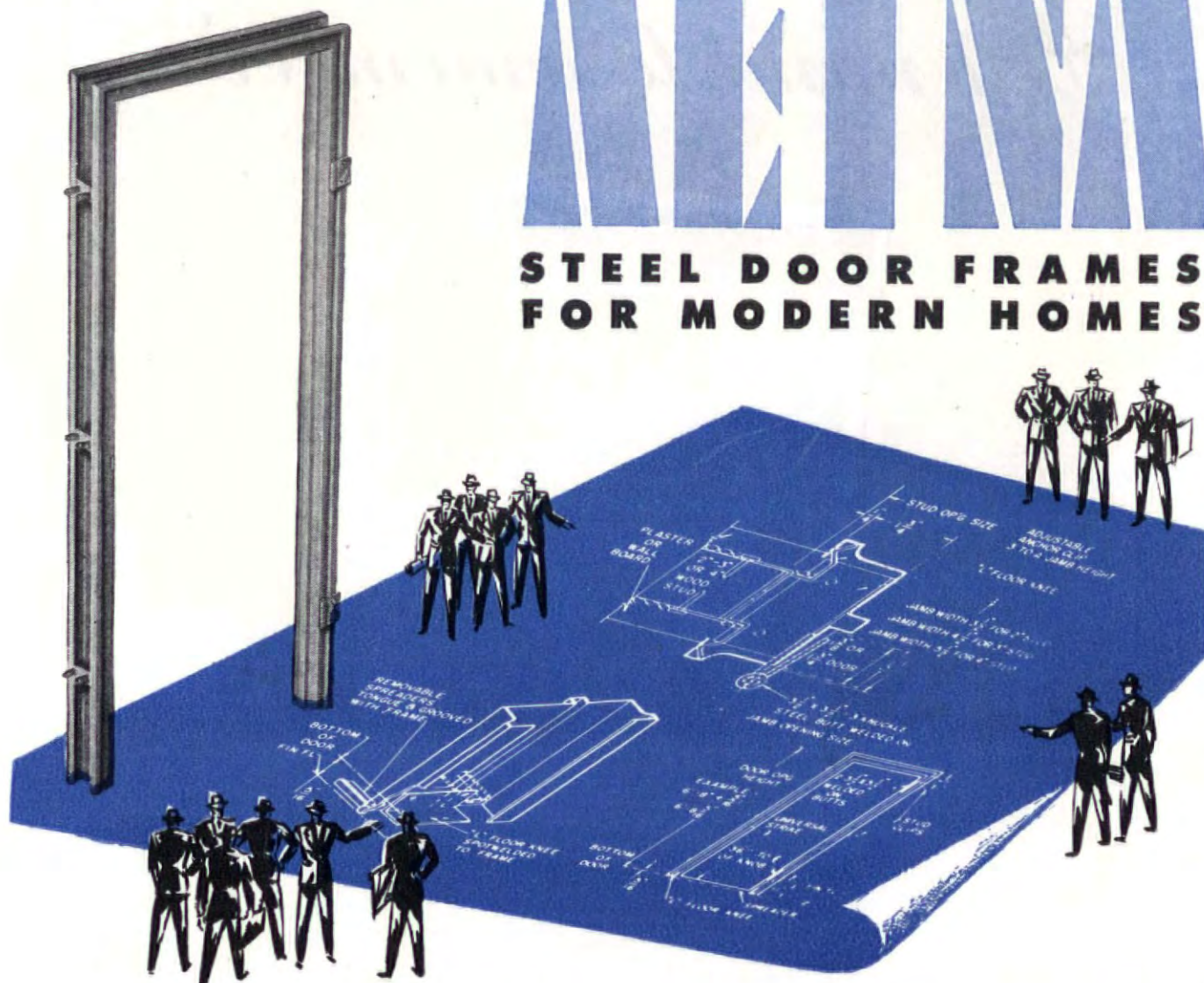
Why shouldn't our docks be as open and dramatic as, say, the Washington airport? If the second, or passenger, level boasted great expanses of glass overlooking the

(Continued on page 46)

INCREASING DEMAND FOR...



STEEL DOOR FRAMES FOR MODERN HOMES



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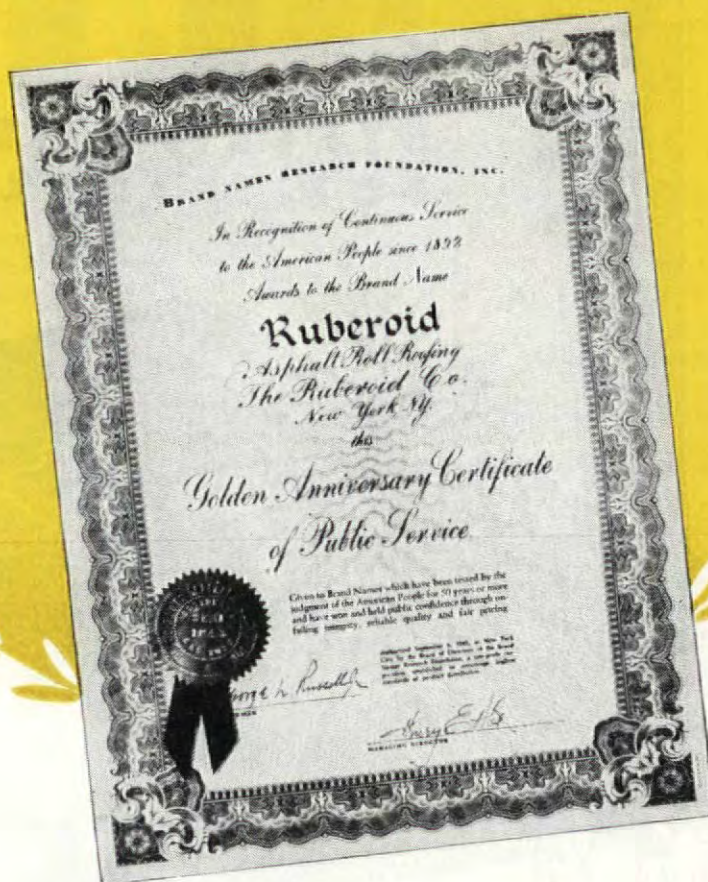
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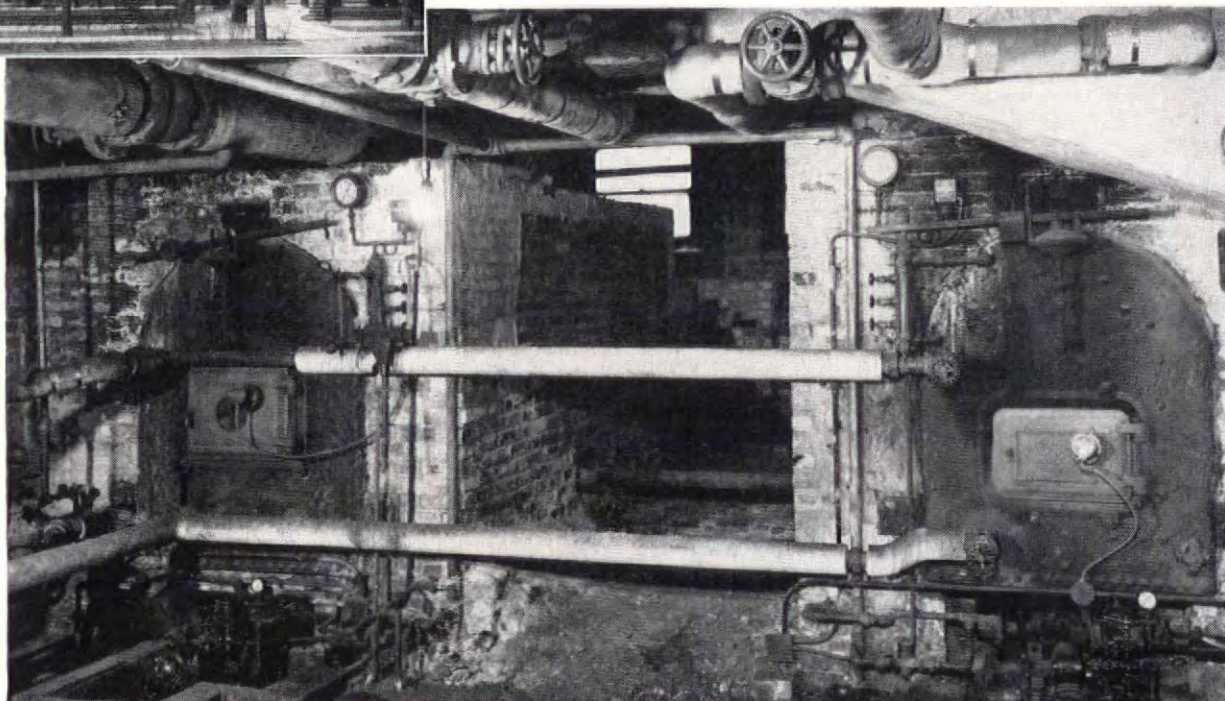


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NATIONAL DOOR MANUFACTURERS' ASSOCIATION

McCORMICK BUILDING • CHICAGO, ILLINOIS



water and ships could be seen at great distance arriving and departing, then we would have something.

Most city waterfronts in this country are in a disgraceful state of disrepair. Notable among them are those of New York and San Francisco. Yet shipping is essential to any seaport. If the shipping companies want to deal exclusively in cargo, their present course will get them their wish in no time. But if they want to hang on to passenger travel they will have to compete with the comfort and pleasure offered by the airlines and railroads.

Of course, the answer may be that I am just uninformed, but there are millions of others like me. If the pier of tomorrow is on the designer's board, how about a little publicity?

EDWARD WHITING

New York, N. Y.

STOCKHOLM REVISITED

Forum:

The article on appreciation of Carl Milles in your June issue interested me immensely.

The newspapers have never given his work more than a small paragraph. So I am surprised to read that "fine books and innumerable magazine articles have been inspired by his work." Where and what are they?

It may be true that America has kept him young, but has it not also kept him "comfortably off," and made him feel like becoming an American at the age of 70?

This is the most enlightening brief biography of an artist I have ever seen. One can read it many times before exhausting the information it contains.

Although I am not a subscriber and seldom see the FORUM, it was to me very delightful to read this particular article, and see reproductions of those works of art I have seen in Stockholm. It has added to my vacation pleasure and hereafter I shall look for similar articles in future FORUM issues.

R.B.K.

Washington, D. C.

Forum:

With the arrival of the July FORUM, I am reminded of my intention to tell you that *everything* in June's FORUM gave me much pleasure.

The article "Neptune with a Chisel" carried me "home" and though I am loath to make comparisons, the presence here in Mississippi of (bilbonic) Theodore Bilbo warrants it. How much better America would be could we have fewer Bilbos and a greater number of (unliked by Bilbo) "foreigners." I consider it a great privilege

to know the Milleses, the Saarinenes, the Sepeshys—and Detroit is especially fortunate to have also the Knudsens, the Dreystadts, the Reichholds.

Continued success to you!

H. BROOCK

Pascagoula, Mississippi

THE SPECULATOR ABROAD

Forum:

I have just received my first two numbers of the FORUM and thought you might be interested in my impressions and comments.

First, let me congratulate you on the general format and contents of the main body of the magazine, but, as an Englishman, I find the maze of advertisements a rather annoying thing. It is most annoying to be in the middle of an interesting letter and have to turn over about six pages to find the rest, and quite possibly go right past it the first time. I realize that this happens, or seems to, in most American magazines but there seems to be little excuse to the uninformed. Perhaps your home readers have evolved a technique for overcoming this difficulty. If so, what is it, please?

While it may be taking a rather jaundiced view, it comes as meager comfort to read from your correspondents that in the States you seem to have the same trouble with speculative builders as we have over here. To wit; design and construction of houses (as a general rule) are about 20 years behind the times. Our Local Authority housing is very little better, and with less excuse, since they usually employ architects. Yet the best postwar house designs are by private enterprise, i.e., the British Iron and Steel Federation houses designed by Frederick Gibberd.

Comments on Frank Lloyd Wright's latest. I should say that this house is by far his most unusual. I cannot imagine any architect in England producing anything half so unusual, and, as for any client accepting such a scheme, it is entirely beyond my (English) comprehension. Are circular bedrooms really functional? Man usually sleeps stretched straight out and it makes for rather awkward corners where no one can possibly dust. I admit that he is one of the three or four greatest architects of the present day but that seems no excuse for dust traps! Or perhaps there is no dust in Connecticut. I would not know.

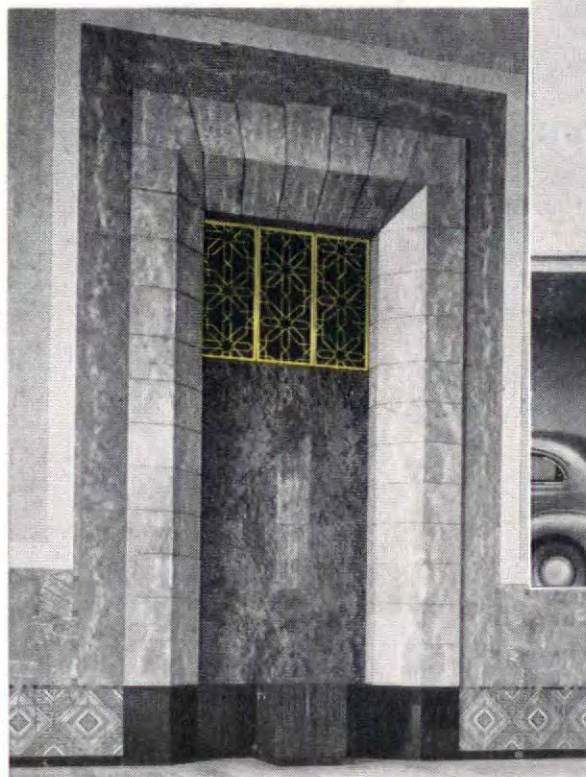
ALEC R. BOOTHROYD

Nottingham, England

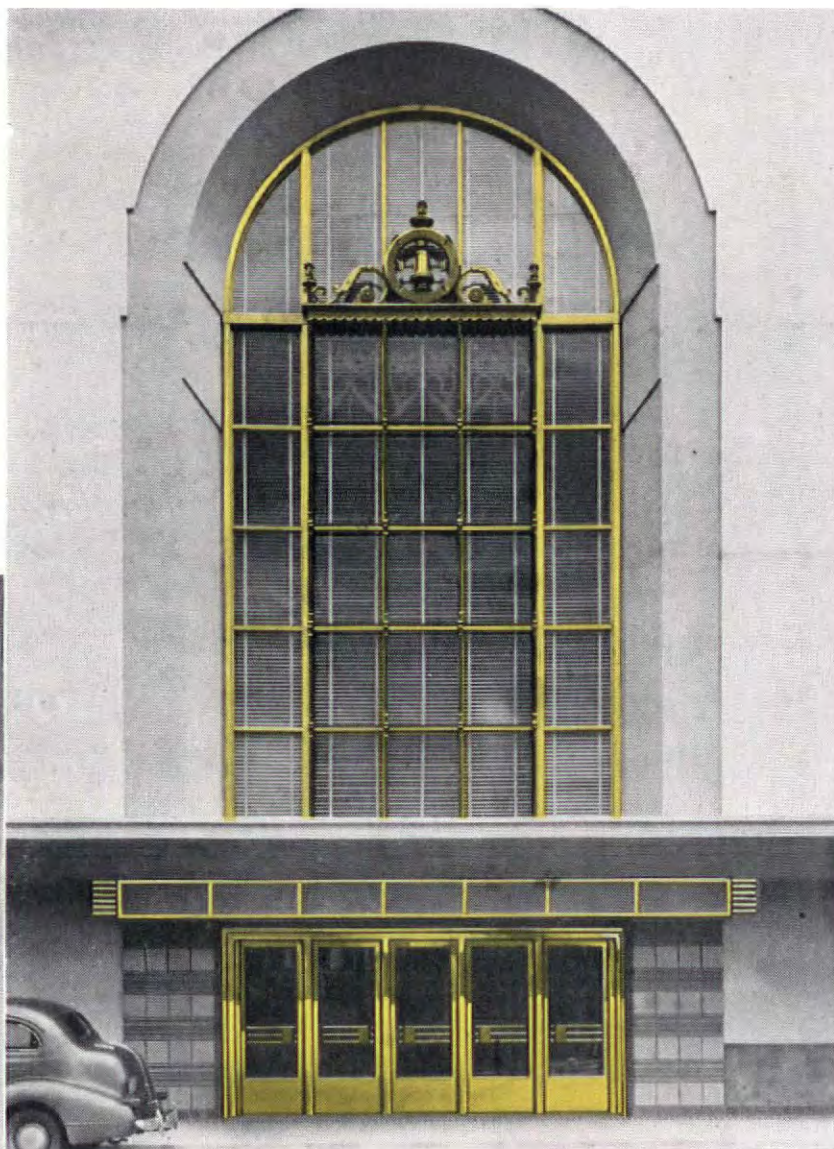
THE HIGHWAY'S HOMELESS

Forum:

At a recent meeting of the Board of Estimate of the City of New York bids
(Continued on page 50)



Anaconda Architectural Bronze fabricated by Herzog Iron Works, Inc., St. Paul, Minn. installed in main entrance and window (upper photo) and as ventilating grille (lower photo). Entrance shown is one of three, each requiring about 3,000 lb. of Anaconda Extruded Shapes and special Ingots for castings of matching color.



Los Angeles Terminal adds Beauty with BRONZE

BOTH EXTERIOR and interior architectural treatment of the Union Terminal at Los Angeles take full advantage of the warm dignity of bronze.

Stately windows and entrance doors are executed in this lustrous, durable metal . . . while inside of the main building bronze has been used extensively for ventilating grilles, chandeliers, name and sign plates, clock figures and all glass moulding.

Anaconda Architectural Bronze in all wrought forms has for many years been the choice of architects for ornamental work of every description. Readily adaptable to design and easy to maintain, its matchless color and beauty lastingly enhance the appearance of countless fine buildings from coast to coast.

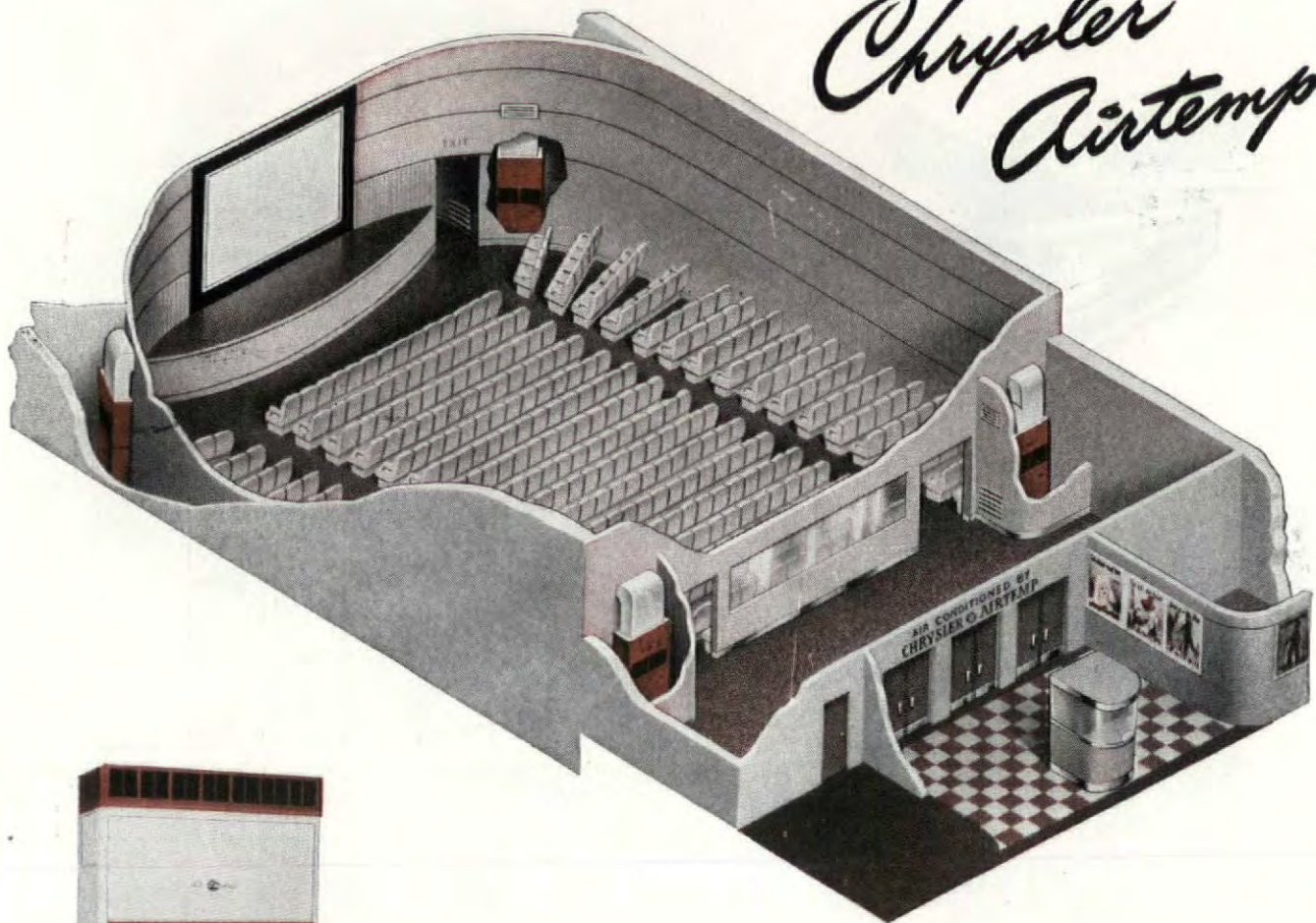


Anaconda
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Architects will find this simplified form of automatic air conditioning so compact and flexible that it will fit perfectly into even the most unusual plans. And theater owners will find that Chrysler Airtemp "Packaged" Air Conditioners quickly pay their way by increasing summer audiences.

Backed by Chrysler Corporation, these "Packages" of cool comfort are reasonable in price and give trouble-free operation at an amazingly low cost. All are equipped with the famous Chrysler Airtemp Sealed Radial Compressor for economical operation, long life and finer performance.

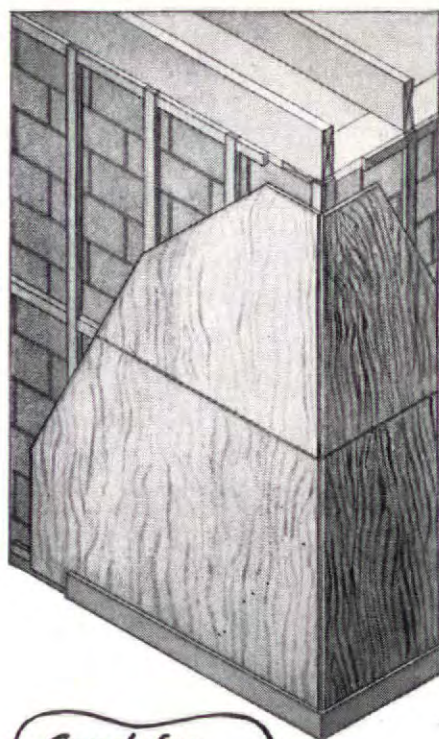
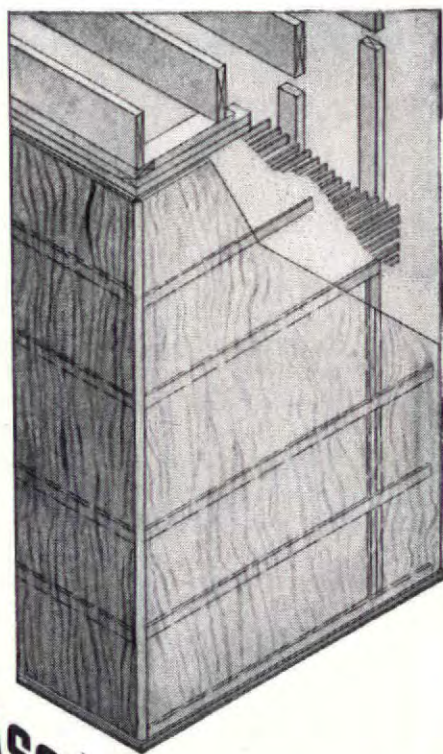
For specifications, architects are invited to write Airtemp Division of Chrysler Corporation, Dayton 1, Ohio; in Canada—Therm-O-Rite Products, Ltd., Toronto, Ont.

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HOW TO PANEL MASONRY AND PLASTER WALLS

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Walls of plaster, cement blocks, or poured concrete can be made to take on new warmth and charm . . . when paneled with Weldwood Plywood.

In applying Weldwood panels to plaster or masonry, furring sticks should first be set up on 16-inch centers. On plaster walls, the furring is applied horizontally across the studs and is secured with 8d box nails. (See illustration at top.)

For masonry walls, vertically placed furring is recommended. The strips should be fastened with steel cut nails driven into pre-drilled holes.

The above suggestions are just a few of the many which you will find in the new WELDWOOD APPLICATION MANUAL. This booklet contains a fund of valuable, up-to-the-minute ideas for using Weldwood Plywood. It shows construction details and illustrates time-saving and money-saving application methods.

Today, Weldwood Plywood is filling a great post-war demand . . . in many types of construction. If, therefore, your dealer's stocks are temporarily low, please be patient, ample supplies will be available soon.

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"GLO" BROILER

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AN OUTSTANDING JEWEL
...THE "GLO" BROILER
WITH INFRA-RED RAYS

HER FOODS COOK WHILE SHE'S AWAY

It's Automatic!

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\$2,000,000 in excess of estimates approved by city engineers were accepted for construction of a small portion of the Brooklyn-Queens Connecting Highway. Where once a grab of this nature would have been closely scrutinized by an alert press, it now passes unnoticed, or is briefly written off as "another Moses' victory". Actually, the initiation of this project at this time is not a triumph for anyone. It is a serious defeat for the citizens of New York, and it should serve as a dire warning to citizens of other cities who fail to take a living interest in proper city planning.

Briefly, what the proposed highway will do—that portion of it scheduled to start construction this fall—is put more than 1,000 people out of homes at a time when the Governor of the state, the Mayor of the city and even Mr. Moses admit the need of 100,000 dwelling units. Mr. Moses, incidentally, derived—apparently from reading numbers through the wrong end of a telescope—a figure of 180 "discommode" families, and Mayor O'Dwyer accepted that without further investigation. Consultation of readily accessible records in the office of John Cashmore, Borough President of Brooklyn, would have showed them some 300 families, and a routine check with the precinct police station would have given them an estimate of 1,000 persons to be made homeless.

Architectural FORUM, quite wisely, has remained aloof from the more sordid political aspects of city planning, highway construction, proper housing (or lack of it). In case anyone wonders why Cashmore did not point out the discrepancy in numbers of displaced persons to the Board of Estimate, it need perhaps be mentioned that the gentleman has publicly avowed his desire to be Democratic County Chairman. The patronage deriving from the allocation of highway contracts should not hurt his aspirations. Mr. Cashmore said, and one understands his point of view, "This project *must* go through." On five separate occasions, delegations of persons who stood to lose their homes—and, in many cases, their small, hard-won, independent businesses—tried to see their Borough President, tried to explain to him just what the highway would mean. Faithful to one ideal at any rate, Mr. Cashmore was too busy to see them.

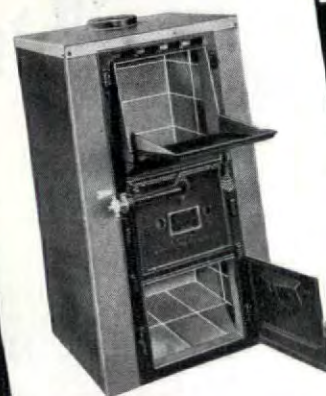
At the meeting of the Board of Estimate, mentioned earlier, when the appropriations for the excessive bids were authorized, the matter was brought up hastily, far out of turn on the day's calendar. When members of a Brooklyn delegation attempted to speak they were promptly silenced. "The highway *must* go through."

(Continued on page 54)

KERNERATOR INCINERATION

SPECIFICATIONS
AVAILABLE FOR
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- ✓ APARTMENTS
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We make several types of Kernerators: Ready-Built Portable and Ready-Built Bricked-In types for the average home. Flue-Fed types for single or multiple floor service in apartments and hospitals. Our nearest representative will be glad to discuss plans with you and supply you with specification drawings.

The name KERNER long and favorably known to architects and builders is now joined with the name MORSE BOULGER which has served municipalities, industries and institutions for many years with heavy duty units. The experiences of the two companies are combined ready to help you plan proper incineration facilities for all of your projects requiring incinerators.

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Douglas Fir Doors Are Being Produced in Quantity for the Reconversion Housing Program

TODAY, most Douglas fir doors are being channeled to meet the needs of the Reconversion Housing Program.* This, combined with the shortage of shop lumber from which stock doors are made, makes the supply situation for general needs very critical. However, even though current demand for housing and inventories is momentarily overwhelming, productive capacity is

ample to produce more doors almost immediately if the quantity of raw materials available to the factories is increased in the period ahead. But when fir doors are readily available again you can be assured that every door will be produced to high quality standards by modern precision methods.

PRE-FIT

Douglas fir doors will be available pre-fit to exact book size . . . ready to hang without on-the-job sawing and fitting.

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Douglas fir doors will be available pre-sealed . . . a feature which improves dimensional stability, reduces moisture absorption, and eliminates the need for one prime coat.

FACTRI-FIT

Douglas fir doors will be available completely machined on order—pre-fit, gained for hinges and mortised or bored for locks. Doors will be grade-marked, of course—for ease in specification and ordering. Scuff-strips will protect the precision-cut corners during handling and shipping. They will be better doors in every way!



*Study the Pre-fit and Factri-fit features of Douglas fir doors. They provide the biggest advance in stock door values in a decade; save time and labor in installation, improve appearance of doors in use.

Every door will be sturdy, attractive, durable—made according to rigid requirements of Commercial Standard 73-45 governing manufacture of fir doors.

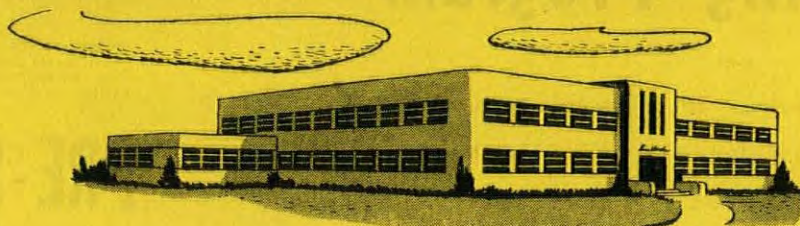
**Douglas Fir
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THE NATIONAL ASSOCIATION OF FIR DOOR MANUFACTURERS

SCHOOLS MUST BE SAFE..

PLAY SAFE WITH TRUSCON STEEL BUILDING PRODUCTS FOR SCHOOLS



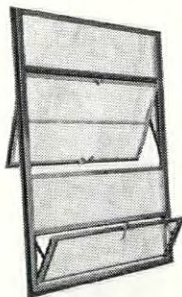
● You can meet the safety requirements of school buildings with Truscon's complete line of steel building products. They are fire-resistant and their load carrying ability provides an extra margin of safety. They also afford you an unlimited opportunity to create beautiful buildings that are in pace with modern teaching methods.

Every Truscon building product is scientifically

designed and factory produced. That's why they reach your job accurate, complete, ready to be installed easily and quickly.

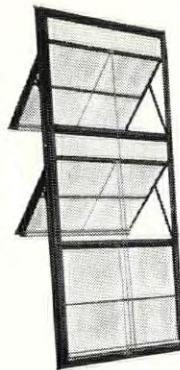
Not all of the items on these pages are immediately available. However, we are exerting every effort to make them so. In the meantime, for beauty, safety, long life and low upkeep, plan to use Truscon Steel Building Products.

ARCHITECTURAL PROJECTED WINDOWS



Attractive in appearance and convenient to operate. Provide maximum daylight, ventilation and freedom from drafts. Heavy one piece casement type sections in ventilator assures rigidity. Hardware is solid bronze. Screens and underscreen operating hardware are available for all ventilators.

DONOVAN AWNING TYPE WINDOWS



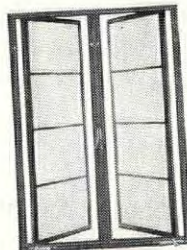
These windows are basically practical in the correct admission of light and proper ventilation without drafts. Sturdily built of unusually heavy special casement sections, they are positively and easily operated. Assure a high quality product incorporating features not available in any other window design.

DOUBLE-HUNG WINDOWS In Two Types—Series 1380 and Series 46

Series 1380 Windows are equipped with positive action motor-spring type balances and completely weatherstripped with spring bronze. Made from electro-galvanized strip these fabricated windows are bonderized and finished with a baked-on prime coat of paint. Available in single units or in integrally built twin, triple and panoramic window units all are available with or without sill ventilators. Series 46 windows are of the counterweighted design. They are especially adapted for use in office and public buildings, or where Underwriter's label of approval is required. Single or twin units may be had in either standard or special sizes and are available with or without sill ventilators. Made from new billet steel, electro-galvanized. Windows are bonderized and finished with a baked-on prime coat of paint.

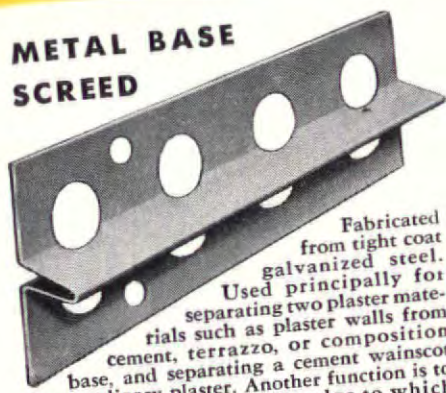


INTERMEDIATE CASEMENT WINDOWS



Constructed of specially designed one-piece sections throughout. Accurate weathering is assured through the final cold-rolling of sections to produce positive contacts between weathering surfaces. Hardware is solid bronze furnished in medium statuary finish.

METAL BASE SCREED



Fabricated from tight coat galvanized steel. Used principally for separating two plaster materials such as plaster walls from cement, terrazzo, or composition base, and separating a cement wainscot from ordinary plaster. Another function is to give a permanent straight edge to which both trades work.

METAL CASINGS



Meet a definite demand for an artistic, sanitary method of trimming around doors and windows. Afford many architectural effects. Metal casings are fire-resistant, vermin proof, easy to maintain and do not shrink or warp.

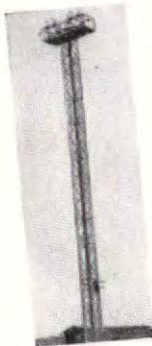
FERROBORD STEELDECK ROOFS



Truscon Ferrobord provides a fire-resistant, economical roof deck for all new construction or replacements. Covered with insulation and waterproofing, it weighs approximately 5 pounds per square foot.

FLOODLIGHT TOWERS

Made in a wide selection of heights, they offer a firm, long-lasting floodlight tower for lighting in stadiums, parking areas, etc.



CURB BARS



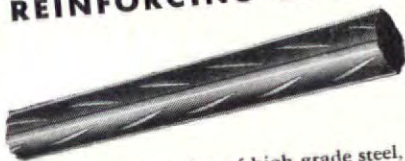
Protect exposed corners of concrete curbs, walls, steps, etc. Designed to give positive anchorage into the concrete. Plate surrounds and protects the corner without splitting concrete into two portions.

WELDED STEEL FABRIC



Truscon Welded Steel Fabric is made in various sizes for concrete reinforcing in all types of structures. Each joint is electrically welded for permanence.

CONCRETE REINFORCING BARS



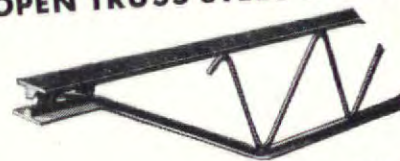
A special rolled section of high grade steel, with a series of longitudinal and diagonal ribs, so designed to provide the maximum bond with the enclosing concrete.

PRESSED STEEL INSERTS



Truscon Slotted Inserts are attached to the forms and are completely imbedded in the concrete. Bolt can be moved along slot to any location, allowing wide variation in position. Used in ceilings, slabs, beams or columns.

OPEN TRUSS STEEL JOISTS



Truscon developed the open truss steel joists to meet the demand for economical, light weight, fire-resistant floors in schools, and other light-occupancy buildings. They are easy to install. Completely shop fabricated, they reach the job ready for placing.

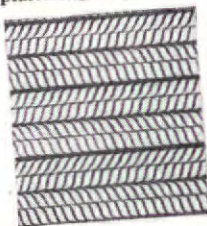
CLERESPAN JOISTS



Truscon "Clerespan" Joists meet all clear span requirements up to 64 feet. They eliminate undesirable columns and provide greater unobstructed floor areas, in gymnasiums and auditoriums.

METAL LATH

There is a Truscon Metal Lath for every plastering requirement. Flat laths for ceilings and sidewalls; riblath to reinforce concrete floors or plaster ceilings; expanded laths for stucco reinforcement; Corner Beads and Cornerite, to protect outside and inside corners.



CORNER BEADS



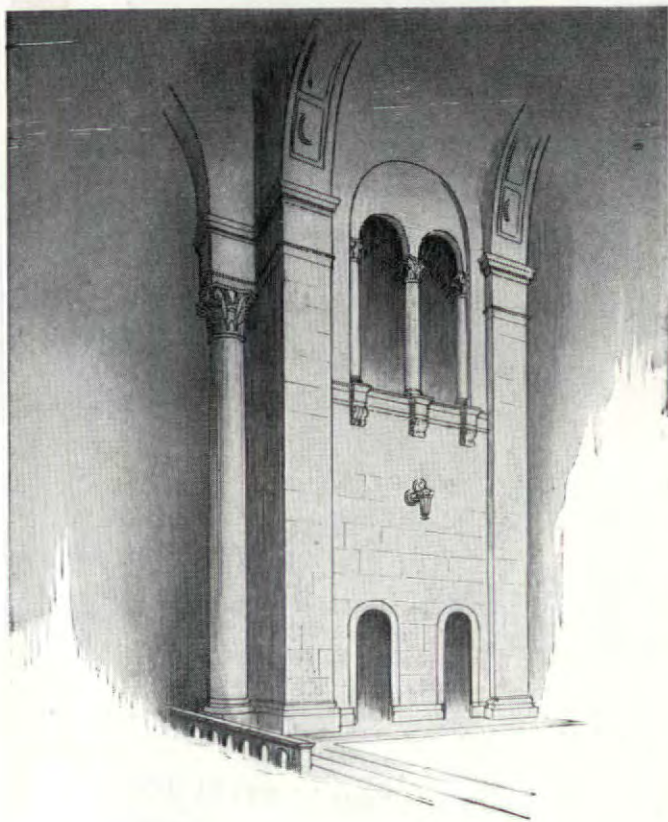
Recommended as an exposed corner reinforcement. The round nose is strongly reinforced by a deep groove which holds the plaster flush for a perfect bond. It can be wired, stapled or nailed to any kind of wall construction without the use of clips.

TRUSCON STEEL COMPANY

Reg. U. S. Pat. Off.

YOUNGSTOWN 1, OHIO • Subsidiary of Republic Steel Corporation

Manufacturers of a Complete Line of Steel Windows and Mechanical Operators... Steel Joists... Metal Lath... Steeldeck Roofs... Reinforcing Steel... Industrial and Hangar Steel Doors... Bank Vault Reinforcing... Radio Towers... Bridge Floors.



for Enduring Beauty

Architects, Craftsmen and Dealers who specify, apply and sell the original Ohio White Finish and its famous twin, Hawk Spread, know that the quality of these brands help to insure their reputation.

Both brands are scientifically processed from rock quarried from the heart of the world's purest deposit of dolomitic limestone . . . Both are always packed in distinctively striped Red Zig Zag Bags . . . the mark of enduring beauty for plastered walls and ceilings.



Now all this may appear on the surface as just another instance of the fact that New York can never change Tammany Hall. If it were simply a small local quarrel it would not be worth the interest of a magazine of national circulation, and we should hesitate to call your attention to it. But it has far wider implications. In the first place, almost every city in the country faces a growing traffic problem and a current unsolved housing problem. In the second place, the nation as a whole and urban population in particular face inflation. New York, thanks admittedly to the splendid highways and parks Mr. Moses built for it in former years, has achieved something of the status of guide in these matters. It is a dangerous—one might almost say drunken, guide right now, choosing highways before houses, inflation before economy.

No one will deny that traffic in New York is a mess, and some people beside Messrs. Moses, O'Dwyer and Cashmore will agree that the proposed highway will help clear things up. There are approximately seven miles of this highway to be built. Nearly two of these miles were cleared of houses before the war, three more lie in largely non-residential areas; Mr. Moses has elected to start work in the residential area. And there are no homes for the people who will be evicted. The real estate agency hired by the city to operate under the title Tenants' Relocation Service, Inc., has not relocated a single person in the three months it has been in existence. There are no homes to be had. Lack of building materials and mechanics have been cited as reasons for the shortage of housing. But building materials and mechanics will be used to construct the highway. Mr. Moses, with something less than astuteness, has remarked that a highway doesn't need bathtubs. He will scarcely deny, however, that a highway calls for money, men, and space which could be used to create new housing rather than merely to create a greater need for new housing. Another way of looking at the same thing is to say that every displaced person puts fresh pressure on the already scandalous black market in homes. On the simple human level the proposed highway is as effective and ruthless as a bombing. People are made homeless and left without hope of getting homes.

On a broader basis the highway is fantastic economics. Everybody, from the National Association of Manufacturers to the United Auto Workers, has agreed that prices are high now, but that they will come down once production really gets under way. Everyone from Wilson Wyatt to the National Association of Real Estate Boards

(Continued on page 58)

The SAD SAD STORY of the



UNCOMPLETED HOUSE

Many a home which represents the thoughtful planning of architect and owner and builder, has a forlorn, uncompleted look because its lawn was just an afterthought.

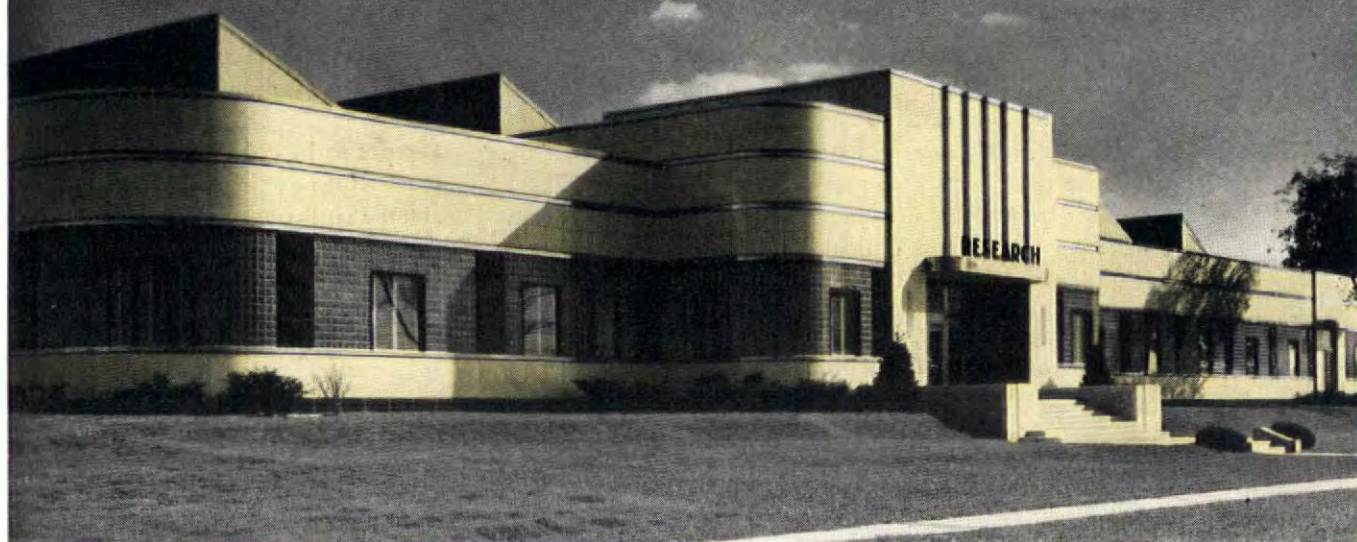
A fine house, like an exquisite gem, deserves a flawless setting. No matter what your soil or sun conditions, Woodruff has the 'know-how'—and the seed—to provide a luxuriant, durable lawn to do credit to the finest work of the home planner.

A Woodruff-engineered lawn is truly a 'Lawn for a Lifetime.' Don't build an uncompleted house. Write us your problems. We're at your service.

LAWN SEED DIVISION

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SEED GROWERS
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BUILD WITH THE "LIFETIME FINISH"



The Armco Research Laboratory at Middletown, Ohio, features light yellow porcelain enameled side-walls, contrasted with black pilasters of the same facing material and trim of ARMCO Stainless Steel

The smooth, attractive finish of porcelain enamel appeals to the imagination of the architect. As soon as building products become generally available, you will want to consider this versatile facing material for its fresh approach to functional planning.

A BUSINESS-BUILDER

Rich and bright, porcelain enamel lends distinction to storefronts and theater marquees—invites customers and helps build business. In many other building applications it supplies an up-to-the-minute touch. And it stays fresh and new-looking. Severe atmosphere conditions won't corrode or fade it. It stands up to winter cold and summer heat. Simple washing instantly restores its brilliance.

A wide range of colors and surface textures offers interesting possibilities in contrasts and color schemes. And remember, the appeal of porcelain enamel is often accented with the bright beauty of ARMCO Stainless Steel trim.

METAL BASE IMPORTANT

Leading manufacturers choose ARMCO Enameling Iron as the metal base for architectural porcelain enamel. "ARMCO" was the first special enameling iron and the most widely used today. It helps assure the *quality* finish you can count on to give lasting satisfaction to building owners. The American Rolling Mill Company, 2881 Curtis St., Middletown, Ohio. Export: The Armco International Corporation.



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

Galvanized ARMCO Ingot Iron.

ARMCO Galvanized PAINTGRIP Steel (also available with ARMCO Ingot Iron or Copper Steel base).

ARMCO Stainless Steel!

THE AMERICAN ROLLING MILL COMPANY

- SPECIAL-PURPOSE SHEET STEELS
- STAINLESS STEEL SHEETS, BARS AND WIRE



SELECTION OF ADHESIVES FOR RESILIENT FLOORING

Since all resilient flooring must be bonded to the subfloor, the selection of the proper adhesive frequently is as important to the installation as the selection of the flooring itself. The life and serviceability of the resilient floor depend greatly upon the use of the correct adhesives to meet its specific installation requirements. Since a thorough understanding of the problems involved is essential, a brief explanation of the mechanics of adhesion is in order.

In the installation of resilient flooring, the adhesive must hold the flooring material and subfloor together by surface attachment. This surface attachment, or bonding strength, must be great enough to prevent the flooring material and subfloor from separating under stresses slightly greater than those encountered in normal use. At the same time the bond between adhesive and material must not be so strong that the removal of old floors for replacement would be unduly difficult. (See photographs at right.)

Action of Adhesives—In general, resilient floor adhesives achieve bonding action either by chemical or mechanical adhesion. In chemical adhesion the bond is secured through

valance forces (electrical attraction between the atoms of the material and the adhesive). In mechanical adhesion bond is gained by the adhesive's penetration into the pores or interstices of the material.

To insure maximum adhesion, it is important in all cases for the adhesive to "wet" the surface of the materials to be bonded. This means that when spread the adhesive should form a thin, continuous film and adhere to every minute part of the bonding surfaces.

Factors to be considered—The two major factors determining the selection of an adhesive are the type of subfloor and the resilient flooring material being used.

To insure satisfactory adhesion, all subfloors must be completely dry. The exception to this rule is subfloors in direct contact with the ground where asphalt tile is the only resilient flooring recommended. Since these floors are always moist, special cements and primers not affected by dampness have been developed to meet this condition.

The subfloor should be free of foreign matter such as dirt, grease, oil, water, and chemical treatments such



old adhesives, waterglass, or other fillers. The adhesive should not be blamed for flooring failures due to a poor floor bond caused by formatters, flaky or powdery concrete, cracks, loose boards, and other subfloor irregularities. It should also be noted that subfloors saturated with the same solvents as those used in the adhesive, such as alcohol or water, will fail to absorb the solvents of the adhesive and thus break down or prevent the development of the adhesive's proper strength.

The adhesive must bond the resilient floor directly to the subfloor without chemical or physical damage to the flooring material. It must also be easy to handle and apply, should hold and retain the correct "tack" through the desired working period, and must not lose its working properties during long periods of storage. And important, too, the adhesive must have the correct viscosity, since adhesives that are too thin will penetrate too deeply, frequently resulting in failure of the bond due to lack of sufficient adhesive at the surface. Resilient floor adhesives should never be thinned or "cut back" unless specified by the manufacturer.

Types of adhesives recommended—Resilient floor adhesives are generally prepared from natural or wood by-products, synthetic and natural resins, asphalt and allied materials, coal tar products, and various types of natural and synthetic gums and rubbers. These materials are combined with organic solvents or water along with fillers and modifiers necessary to obtain correct bonding and working qualities for a particular flooring material.

Because types of resilient flooring differ in composition in order to meet the requirements for specific floor service or condition, adhesives must also satisfy those same requirements. For example, if the resilient flooring specified must have moisture and alkali resistance, the adhesive must have the same properties.

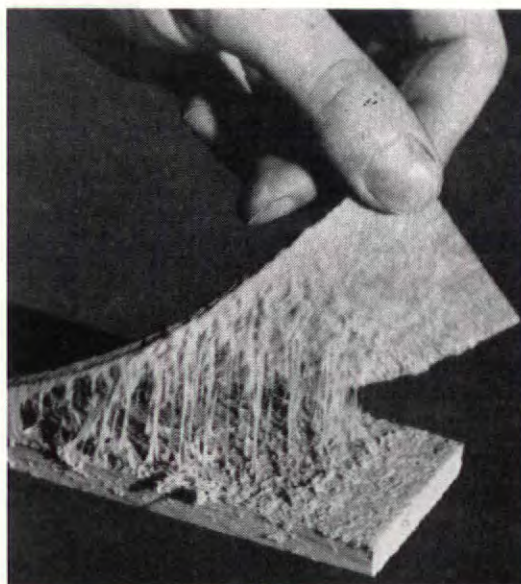
To guide architects in selection of correct adhesives for various combinations of resilient flooring and subfloors, Armstrong's Research Laboratories have prepared the table above. The most commonly encountered conditions are covered in this table. However, complete specifications, giving more detailed information on preparation of subfloors and the selection of correct adhesives, are available. These may be had without charge from the Armstrong Cork Company.

Instances on Special Problems—Frequently, unusual conditions such as extra high alkalinity of concrete or the non-porous characteristics of enameled tile, steel, and some terrazzo subfloors necessitate special adhesive recommendations. In such instances and for other special conditions not covered by standard specifications, Armstrong will gladly supply additional

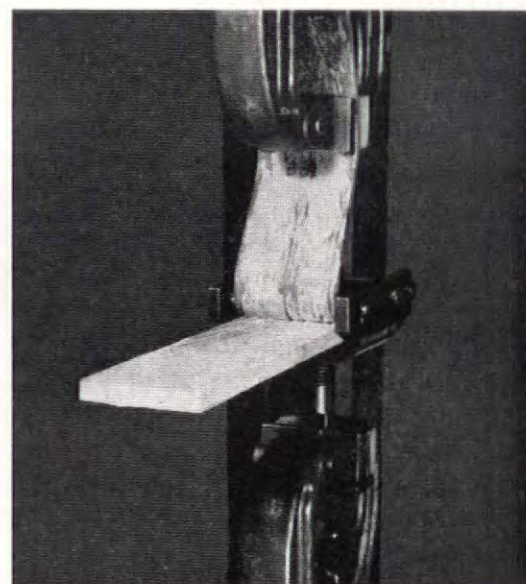
TABLE OF RESILIENT FLOORS AND RECOMMENDED ADHESIVES							
Information given in this table is based on actual installations using Armstrong's adhesives and resilient floorings. Adhesives are indicated by Armstrong's name or number.							
Type of Resilient Floor	Type of Armstrong's Adhesive Recommended According to Subfloor						
	Wood	Concrete (Suspended)	Concrete On or Below Grade	Metal	Marble (Suspended)	Magnesite (Suspended)	Terrazzo (Suspended)
LINOLEUM	No. S-128	No. S-128	None	No. S-220 or No. S-236	Rough No. S-128 Smooth No. S-220 or No. S-236	Special Recommendations by Armstrong	Rough No. S-128 Smooth No. S-220 or No. S-236
LINOTILE*	Resilient Tile Paste	Resilient Tile Paste	None	Resilient Tile Paste	Resilient Tile Paste	Special Recommendations by Armstrong	Resilient Tile Paste
RUBBER TILE	Resilient Tile Paste	Resilient Tile Paste	None	Resilient Tile Paste	Resilient Tile Paste	Special Recommendations by Armstrong	Resilient Tile Paste
ACCOFLOOR*	No. S-128	No. S-128	No. S-275 Primer and No. S-280	Special Recommendations by Armstrong	No. S-275 Primer and No. S-280	Special Recommendations by Armstrong	No. S-128
CORK TILE	Resilient Tile Paste	Resilient Tile Paste	None	Resilient Tile Paste	Resilient Tile Paste	Special Recommendations by Armstrong	No. S-128
STANDARD ASPHALT TILE	No. 160	No. 160	No. 80 Primer and No. 90	No. 160	No. 160	Special Recommendations by Armstrong	No. 160
GREASEPROOF ASPHALT TILE	No. 160	No. 160	No. 80 Primer and No. 90	No. 160	No. 160	Special Recommendations by Armstrong	No. 160
INDUSTRIAL ASPHALT TILE	No. 160	No. 160	No. 80 Primer and No. 90 None Below Grade	No. 160	No. 160	Special Recommendations by Armstrong	No. 160
CONDUCTIVE ASPHALT TILE	No. 160	No. 160	No. 80 Primer and No. 90 None Below Grade	No. 160	No. 160	Special Recommendations by Armstrong	No. 160

Note—On all wood floors, prior to resilient floor installation, lining felt must be securely bonded with Armstrong's S-128 Linoleum Paste or Armstrong's Resilient Tile Paste.

* Reg. U. S. Pat. Off.



The bonding strength of any adhesive is determined by its cohesive strength plus its ability to adhere to surfaces of both materials being bonded. The test strip above illustrates desired adhesion between the subfloor and flooring material surfaces and also shows the cohesion strength within the adhesive while "setting."



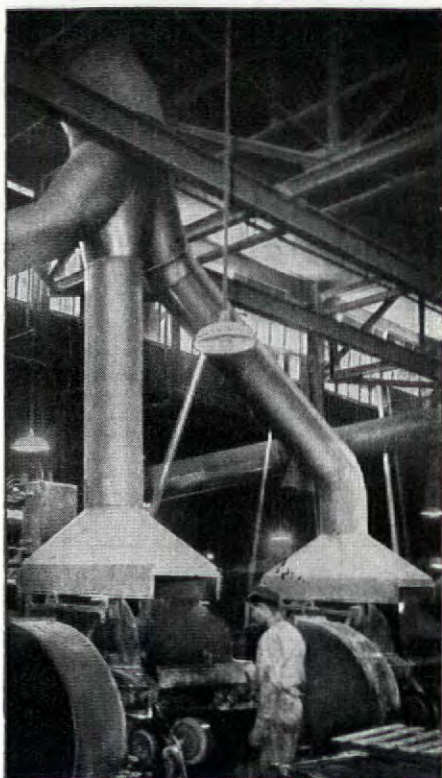
To insure adhesives of uniform quality, Armstrong's Research Laboratories continually test the bonding strength of adhesives before and after "setting." Here, the "stripping test," one of the many used, measures the bonding strength between the subfloor and the flooring material after the adhesive has fully set.

information which will be of help in determining the proper adhesive.

Resilient flooring adhesives have been manufactured by Armstrong for the past 25 years. In addition, adhesives of all types have been extensively studied by Armstrong's Research Laboratories. The knowledge thus gained makes

it possible for Armstrong to make sound recommendations to those facing special problems. For information on your particular adhesive or flooring problem, get in touch with any Armstrong district office, or write directly to the Armstrong Cork Company, 2309 State Street, Lancaster, Pennsylvania.





Ventilation that's QUICK ON THE DRAW

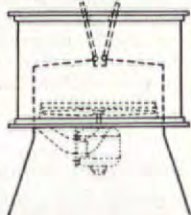
Industrial ventilation frequently can be simpler—and far more effective—when heat, moisture, fumes and dust are not permitted to spread.

At Midwest Rubber Reclaiming Co., East St. Louis, Propellair Verti-Stacks collect heat and fumes from directly above the rolling mills. A single Verti-Stack serves three, and sometimes four, hoods—exhausting high into the air above the roof.

Midwest installed their first Propellair 12 years ago; now have well over one hundred. In Verti-Stacks, ducts, walls, windows, or when mounted on stands, Propellair pull-push airfoil fans deliver maximum volume at maximum efficiency. They're simple; compact; easily installed. Write for all the facts.

The VERTI-STACK for Roofs

A sturdy power roof ventilator with butterfly dampers that open wide the instant fan is started; offer virtually zero resistance as discharge shoots high into air; close automatically; won't leak.



agrees that the worst of the housing shortage can be licked in two years. So, with all this in mind, New York calmly elects to spend money now throwing people out of homes, when they could wait two years and get the same highway at less cost after people had found homes. Not even the wildest advocate of public works has urged depression-type projects in the midst of a spiralling inflation—but New York is building them.

Even supposing the highway had to be built now—at peak prices to a city characterized by its mayor as broke—there is little in the current plans to recommend them as guides for other municipalities. These plans, calling as they do for “discommoding” (Mr. Moses’ nice-nellyism for “making homeless”) a thousand people, are the last of a long series; the last and the worst. Earlier drawings put the highway where it belongs, over the roofs of a long row of warehouses. This scheme allowed motorists a superb view of lower New York and its harbor, at the same time preserving the established homes of the neighborhood. This was proper engineering and planning; this was the use of modern thinking to keep from discommoding people unnecessarily. The sabotaging of this sensible solution is the measure of Mr. Moses as a planner and New York City as a guide.



Worthy of a Merchant Prince

Little more remains to be said except to point out a fact of minor importance in New York, but perhaps more serious in communities which value traditions more highly. The houses which will be torn down to make way for the highway are among New York’s finest examples of mid-Victorian architecture. Originally the homes

(Continued on page 62)

BUILD LASTING STRENGTH INTO CAVITY WALLS

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Copperweld WALL TIES

The ONLY Ties Combining The STRENGTH of STEEL and The PERMANENCE of COPPER

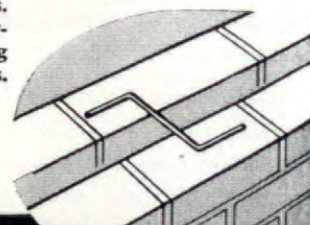
● Copperweld Wall Ties resist corrosion—and provide sustained high strength in cavity walls for the life of the structure.

These ties are made of high tensile alloy steel wire permanently protected with a heavy covering of copper by the Copperweld Molten-Welding Process. Leading architects are specifying these strong, non-rusting ties for their cavity wall jobs.

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Chamberlin Metal Weather Strips keep out summer dust and rain, keep windows, draperies and walls clean and attractive. Adaptable to all types of windows and to new construction or modernization needs. Pay for themselves in winter fuel savings. Improve storm window efficiency. Oldest and largest weather strip service in the world. 2½ million satisfied users. All installations made by factory-trained mechanics. Chamberlin assumes full responsibility for complete satisfaction.

Call or Write—Call local Chamberlin Branch, (see phone book) or write factory for further information.

Similar Service also available on Insulation, Calking, Storm Windows and Screens



See insert in Sweet's Catalog



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BRIXMENT MORTAR

Makes a Better Bond



To make a good bond with the brick, mortar must be plastic, and stay plastic until the brick is bedded. The



two photographs above show a good comparative test for plasticity—hence for bond. Try this with Brixment mortar!

—AND A GOOD BOND IS REQUIRED FOR STRONG, WATER-TIGHT MASONRY

The first function of a mortar is to form a strong, permanent *bond* with the entire surface of the brick. When such a bond is secured, the result is a strong, water-tight wall.

Brixment mortar makes it possible to secure this kind of bond because:

- (1) Its great plasticity and its high water-retaining capacity allow a more thorough bedding of the brick, and a more complete contact between the brick and mortar.
- (2) It hardens slowly enough to permit deeper penetration and more thorough keying into the pores of the brick.
- (3) Once formed, a bond between brick and Brixment mortar is permanent, because Brixment mortar does not undergo volume changes sufficient to weaken the bond.

Because of these characteristics, Brixment mortar makes a *better, stronger bond*.

LOUISVILLE CEMENT CO., Incorporated, LOUISVILLE 2, KENTUCKY
CEMENT MANUFACTURERS SINCE 1830

HOW TO STIMULATE

Fan mail

....and win
CLIENT APPROVAL

Specify EMERSON-ELECTRIC Kitchen Ventilating Fans

You're bound to increase your popularity rating with clients when you specify Emerson-Electric Kitchen Ventilating Fans in your home-building or modernization plans. Priced surprisingly low, these sturdy fans whisk out kitchen cooking odors, excessive heat, and prevent spread of greasy vapors to living room furnishings, woodwork, walls and curtains.

Square, weather-tight outer door frame is easy to brick or frame around. Telescoping sleeve is adjustable to any wall thickness up to 13 inches. Ten-inch quiet-type blades move 570 CFM in

free air... Write for catalog and installation data today, or refer to Emerson-Electric Catalog filed 29b-6 in 1946 Sweets Architectural File.

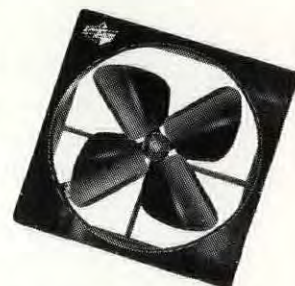
THE EMERSON ELECTRIC MANUFACTURING CO., ST. LOUIS 21, MO.

Branches: New York • Chicago • Detroit • Los Angeles • Davenport

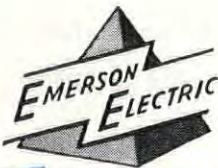
EMERSON - ELECTRIC HOME COOLER FANS *for Summer Comfort!*

Turned on after sundown, home cooler fans expel hot air trapped in attics and living rooms; draw cool outside air through open doors and windows. Include an Emerson-Electric Home Cooler Fan in your plans and specifications.

41



EMERSON

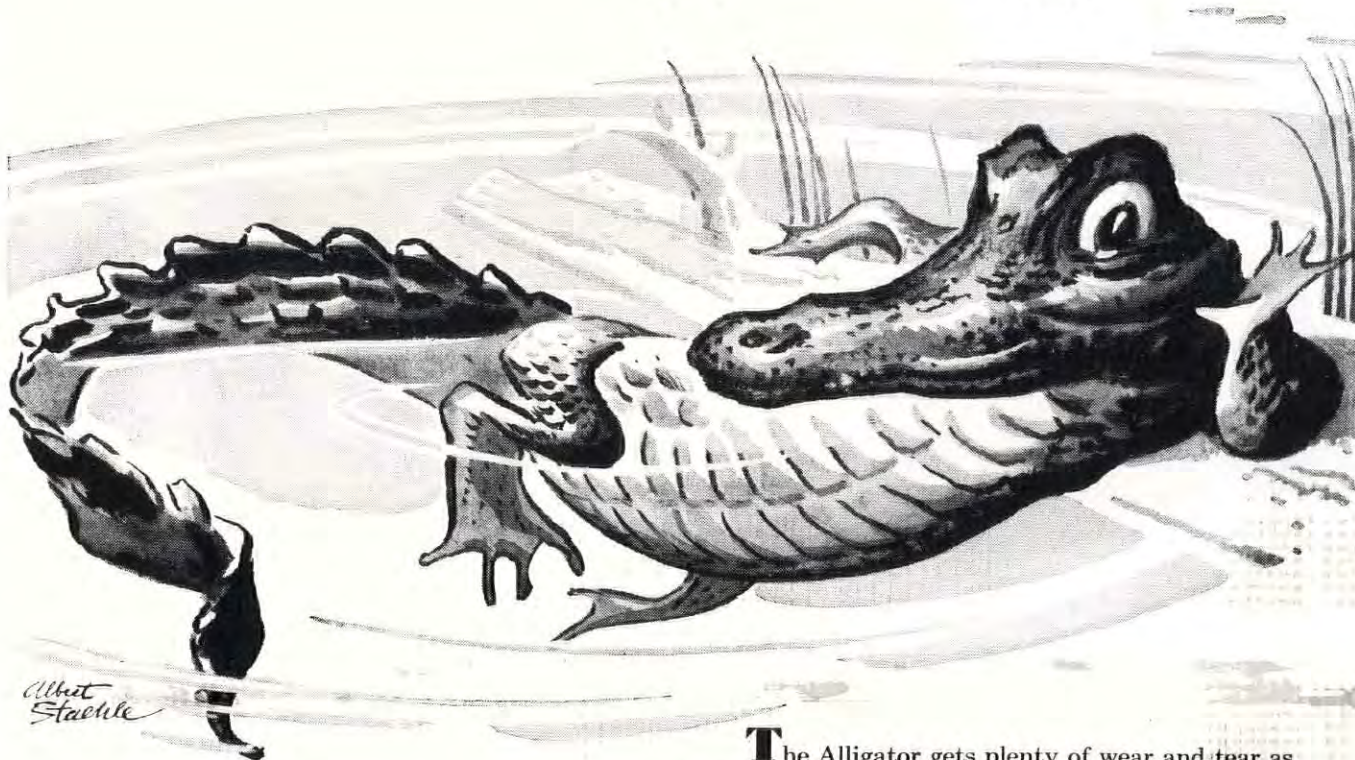


ELECTRIC

FANS • MOTORS

APPLIANCES

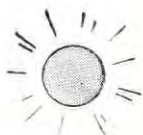
What keeps the 'gator feeling great can keep your clients happy, too!



Over 90 years of successful roofing experience has demonstrated the sound value of the gravel or slag wearing surface of a Barrett Specification* Roof:



1. It holds in place the heavy-poured (not mopped) top coat of coal-tar pitch—providing a doubly thick waterproof covering.



2. It provides protection against the sun's actinic rays which otherwise dry out the valuable oils in roofing bitumens.



3. It protects the roof against mechanical damage, hail and wind, wear and tear.



4. It interposes a surface of fireproof rock between the building and flying embers—makes a roof that carries Fire Underwriters' Class A Rating.

The Alligator gets plenty of wear and tear as he sloshes through the swamps. Does it worry him? Not a bit. He knows his *armored wearing surface* will keep him safe and sound.

The Barrett Specification* Roof, with its armored wearing surface of gravel or slag, provides comparable protection for building structures. It's so tough and long-wearing *it can be bonded against repairs and maintenance expense for as long as 20 years.*

Built up of alternate layers of coal-tar pitch and felt, topped by a thick *pouring* of pitch to *anchor* the gravel or slag wearing surface, it is the toughest, longest-lasting built-up roof made. It is waterproof, fire-safe, sun-resistant, and armored against mechanical damage.

As a service to your clients, recommend Barrett Specification Roofs on the buildings you design. The Atomic Bomb Plant at Oak Ridge, Tenn., the Empire State and R.C.A. buildings in New York, and many other famous American buildings—all Barrett-roofed—confirm the soundness of your recommendation.



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• FACTORIES
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• OFFICES
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LESS THAN
6¢ PER
SQUARE FOOT

BIRD
Rubberlike
**RUNNER CUTS FLOOR
UPKEEP COSTS!**

*Ideal Protection For
Heavy Traffic Areas*

Wherever constant foot-pounding batters busy floors, Rubberlike floor runner fills the bill for low-cost, durable protection. This modern composition product has rugged corrugations that cushion and quiet footsteps . . . it's a cinch to clean, needs no special maintenance, can be put down in a jiffy without cementing. Won't curl at edges. Water doesn't make it slippery—a boon where splashing or tracked-in mud are safety hazards. Used in thousands of heavy traffic spots—hotels, factories, institutions, schools, offices, cafes. In rolls 27 in. by 100 ft. or 36 in. by 75 ft. Order from Supply House or write for free sample to Bird & Son, inc., Dept. 159, East Walpole, Mass. *Reg. U.S. Pat. Off.



BIRD & SON, inc., EAST WALPOLE, MASS.

NEW YORK

SHREVEPORT, LA.

CHICAGO

of true merchant princes, built in the days when the great Quaker traders could sit in their libraries and watch their ships come and go from their own piers unloading cargoes into their own warehouses all on their own land, these houses still retain the qualities of their builders; sturdiness, simplicity and good taste. They have other historic values. To cite an example, one of the houses to be demolished is the place from which Roebling, stricken with arthritis, built the Brooklyn Bridge, spending day after day on its balcony, eye glued to spy-glass, watching his triumph come to fulfillment. It is a house worth living in, a house worth preserving. The city will raise tulips on its site.

Today, apparently, the plight of a mere handful of people being unnecessarily thrown into the street is not, in itself, enough to make much fuss about. As an example of ruthless, arrogant "planning" coupled with political rapacity it is, however, a signpost to every community in the United States showing the way to ever deeper chaos.

MONTGOMERY SCHUYLER, Arch.-Eng.

LIAM DUNNE, Designer

Brooklyn, N. Y.

TOMES FOR TALIESIN

Forum:

The Taliesin Fellowship has long needed a library of books basic to that which we are. A group of us has accordingly taken on the job of getting that library. As a friend of Mrs. Wright's and of the Fellowship, we felt that you would not only understand the need.

We have begun here by collecting the few books we have, and by preparing the balcony of the Fellowship living room as a suitable library. We plan on operating the thing in as simple a manner as possible, each of us being mutually responsible for it, as we are now responsible for the drawings, photographs and the actual buildings which can only, and should only, be found here.

We are not looking for our "Andrew Carnegie", nor do we wish to simply fill our shelves with books suitably and attractively bound. From you we seek advice on methods of getting the books, names of people who would like to contribute, and some of the books themselves (if possible).

We believe that the Fellowship will always fulfill a need for the entire world as a living, working center for Organic Architecture. It is thus something which a museum could never be. It is also something which this could better be if it were equipped with a basic library.

Spring Green, Wis.

RICHARD A. MILLER

(Publisher's Letter on page 68)

SURVEYS SHOW

**demand for
electric
water heaters
going...**

UP UP UP

The Trend is to *Electric* WATER HEATERS

In the 6 prewar years, sales of Electric Water Heaters almost tripled. And a 1943 contest conducted by McCall's Magazine shows that 2.4 times as many women wanted Electric Water Heaters as now have them. They're "the coming thing," because they're:

SAFE—Flameless, fumeless

CLEAN—Smokeless, sootless

ADAPTABLE—Permit short hot water lines—Require no flue or vent.

TROUBLE-FREE as electric light!

Installing Electric Water Heaters in every house you build, means giving women what they want!

Electric Water Heater Section
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

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**A House Wired For An Electric
Range Is Already Wired For an**

**Electric
WATER HEATER!**

**national
magazine
surveys*
prove
women
want**



electric ranges!



The way to find out what women want is to ask them. Leading women's magazines have done that. Here's what they learned:

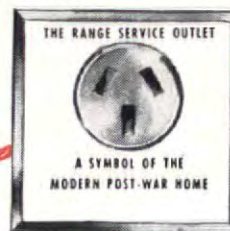
- * **WOMAN'S HOME COMPANION** survey shows that *more* women plan to buy an Electric Range than *any other type!*
- * **McCALL'S MAGAZINE** readers made the Electric Range their 2-to-1 "must have" choice in a recent contest.
- * **SUCCESSFUL FARMING** survey shows that nearly twice as many REA customers will own an Electric Range after *first two postwar* years as "now have" one.
- * **HOUSEHOLD MAGAZINE** survey shows that 3 times as many women want Electric Ranges as "now have" them.
- * **COUNTRY GENTLEMAN** survey shows that among the upper two-thirds of white farmers, the Electric Range is the 2-to-1 choice!

The answer is that women prefer Electric Ranges for convenience, cleanliness, dependability and economy. The way to give them what they want is easy—wire the homes you build for Electric Ranges! This built-in wiring costs little, but pays big dividends in selling houses.

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TO KEEP THEM MODERN
Wire your houses
FOR ELECTRIC RANGES





When the blueprints call for
RADIANT HEATING...

here's why you'll want *Copper Tube*

YOU'RE designing for *lasting* appreciation. So, for the radiant heating system, be sure to include *copper tube* in your specifications. The great durability and long-range economy of Chase Copper Tube mean a satisfied client, and satisfied clients build business and prestige for you.

You boost your stock with heating contractors, too, when the specifications call for Chase Copper Tube.

It's easy to bend, light in weight, comes in long lengths, and is sold through plumbing and heating wholesalers throughout the country.

The demand for Chase Copper Water Tube is so great that we are not able to satisfy it at all times. However, the technical information is now available to you for future planning. For a complimentary copy of our new handbook write, on business letterhead, to Dept. AF-96.

**7 Reasons
WHY CHASE COPPER TUBE
FOR RADIANT HEATING**

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



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BRASS & COPPER CO.

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SUBSIDIARY OF KENNECOTT COPPER CORPORATION

This is the Chase Network—handiest way to buy brass

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Color Dynamics

... Pittsburgh's new painting method utilizes energy in color to make modern schools more inviting—and to increase efficiency of pupils and teachers



● Domestic Science Room of South Milwaukee High School. The effect of cool cleanliness is in keeping with the use of the room. Accents of color are used for contrast.

NOW . . . It's Possible to Improve Classroom Morale!

SINCE Pittsburgh announced its science of COLOR DYNAMICS, educators are learning more about the purposeful use of the *energy in color* to assist pupils and teachers in their work.

By applying the principles of COLOR DYNAMICS, modern schools are being given color arrangements in keeping with the activities which take place within them. Classrooms are painted in tones of color which assist concentration, stimulate energy and lessen eye fatigue. Libraries have become more peaceful and quiet, cafeterias brighter and more cheerful, foyers friendlier and more inviting, auditoriums look like open courts.

● Proper colors also create visual

changes in size and shape of painted surfaces. Rooms are painted to seem more spacious, halls wider and brighter, ceilings higher or lower—at will.

● Wherever the principles of COLOR DYNAMICS are followed, the efficiency and morale of pupils and teachers are improved.

For a comprehensive explanation of Pittsburgh's science based upon the reactions of normal human beings to color, write today for a FREE copy of the revised and enlarged copy of our new book—"COLOR DYNAMICS for Grade Schools, High Schools and Colleges." Pittsburgh Plate Glass Co., Paint Division, Dept. AF-9, Pittsburgh 22, Pennsylvania.



Paint RIGHT With Color Dynamics
Paint BEST With Pittsburgh Paints!

The benefits of COLOR DYNAMICS are made more enduring when you use Pittsburgh's long-lasting quality paints. There's a PITTSBURGH PAINT for every need!

WALLHIDE—in three types: **PBX**—extra durable finish which can be washed repeatedly without streaking or spotting; **SEMI-GLOSS**—for higher sheen; **FLAT**—velvet-like finish for offices, libraries, dining rooms. These paints are enriched with "Vitolized Oils" for live-paint protection.

WATERSPAR ENAMEL—for furniture, woodwork, metal trim. Its china-like gloss resists marring and abrasion.

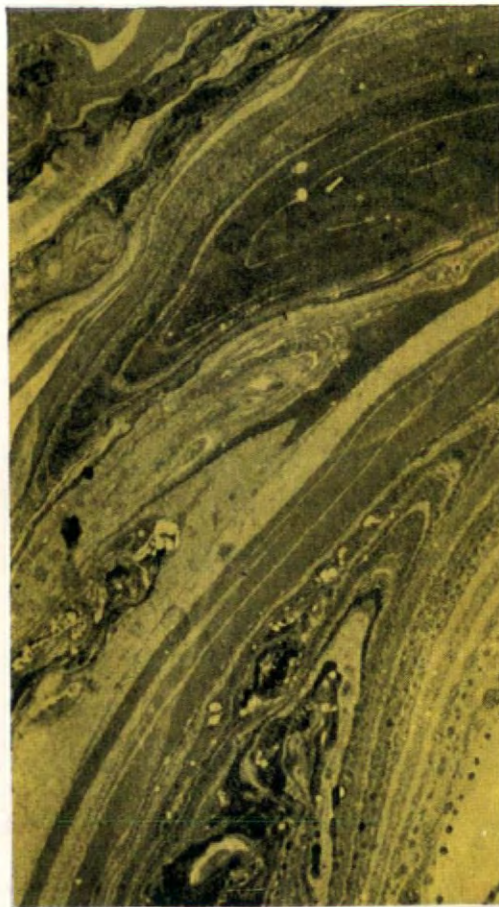
FLORHIDE—for floor surfaces. Quick-drying, tough, can be scrubbed frequently with soap solutions.



PITTSBURGH PAINTS

PITTSBURGH PLATE GLASS COMPANY, PITTSBURGH, PA.

PITTSBURGH STANDS FOR QUALITY PAINT AND GLASS



MARBALIA*

This famous WALLPAPER is basic specification for contemporary interiors—

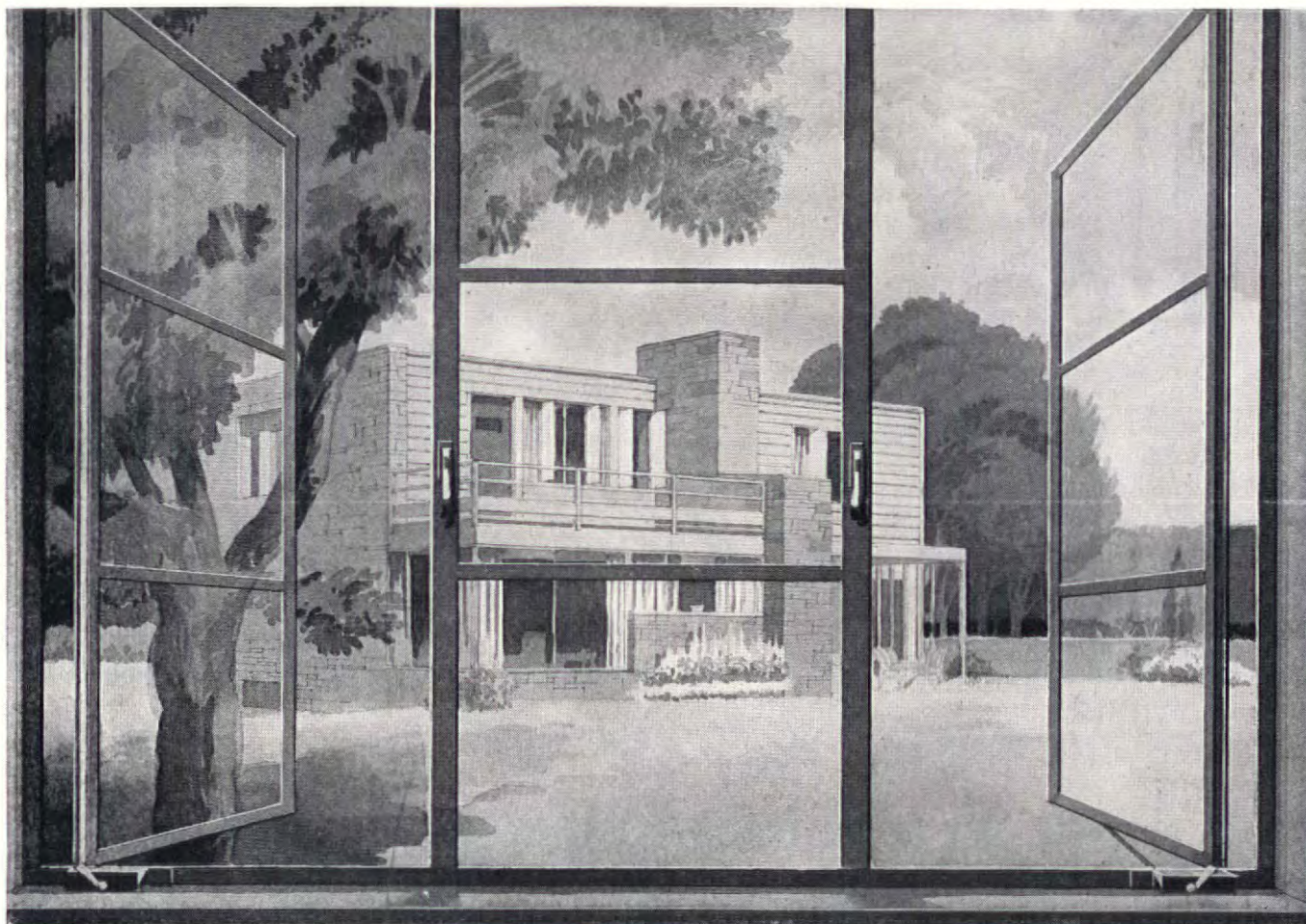
throughout the United States.

laverne originals

225 FIFTH AVENUE, NEW YORK, N. Y.

1001 effective color patterns, plastic
surfaced, washable, economical.

*Reg. U.S. Pat. Off.



House in Melrose Park, Pa. Architect, Louis I. Kahn. Builder, Master Masons Construction Co.

Built on a wooded slope in a lovely Philadelphia suburb, this two-story home is an example of gracious living in the modern manner. Lupton Steel Casements are used to good advantage to achieve pleasing daylight distribution and natural ventilation. Trouble-free operation, low-cost installation and attractive hardware add to their desirability for the modest home as well as the imposing residence. Lupton Casements are complete units available with sturdy, effective screening. Write for the new 1946 Catalog or see our Catalog in Sweet's.

MICHAEL FLYNN MANUFACTURING CO.
E. Allegheny Avenue at Tulip Street, Philadelphia 34, Pa.

LUPTON

METAL WINDOWS

cooperation

*...based on real
experience**

Size, shape, speed, load, controls, signals, clearances, building code requirements . . . these are only a part of elevator layout. Keeping up with all the details is no part-time job.

But in your city there is an office of the Otis Elevator Company established to provide this data so that you may avoid unnecessary work and expense.

There is nothing new about this advisory service. It has been going on since Elisha Otis invented the first elevator almost a hundred years ago, since "Escalator" became an Otis trade name at the turn of the century. Its results are seen in more than half the vertical transportation equipment in the world.

To Architects, Engineers and owners, "Otis" means prompt cooperation based on real experience. For the finest in vertical transportation tomorrow, call your Otis representative today.

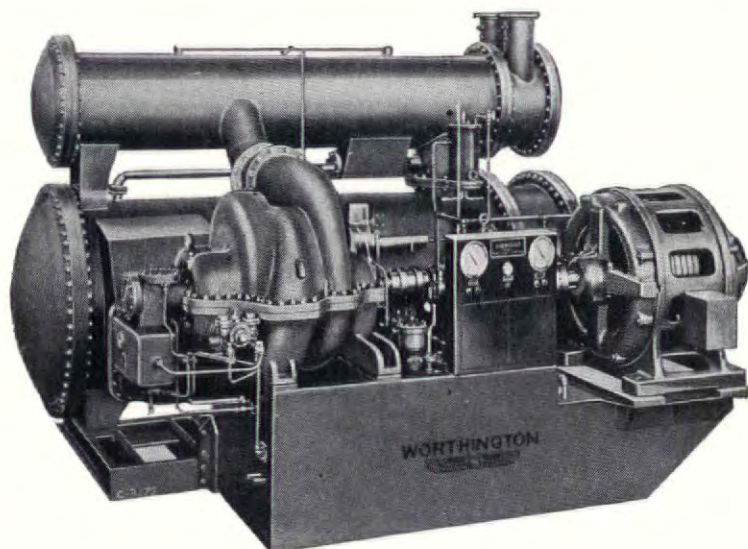
** Otis offices in 245 cities have but one interest . . . to provide the best and safest elevator and escalator transportation possible.*



WORTHINGTON

Air Conditioning and Refrigeration Report

Worthington Pump & Machinery Corporation, Harrison, New Jersey



WORTHINGTON CENTRIFUGAL REFRIGERATION SERVES INDUSTRY IN MANY IMPORTANT WAYS

The applications of Worthington Centrifugal Refrigeration are many and varied. Chilling water for air conditioning; chilling water or brine for industrial processes; cooling chemical and other liquids; maintaining constant temperatures in testing rooms — these are but a few of its commoner uses. In addition, its large-volume compressors are well suited for producing ultra-low temperatures for technical research.

A system consists essentially of compressor, condenser and evaporator. Worthington manufactures these in their entirety, from foundry to finished product. For steam-turbine-driven units, Worthington also makes the turbine, as well as many

other auxiliaries vital to a complete refrigeration plant. Rarely does the purchaser have such an opportunity to fix responsibility for a system's over-all operation on a single manufacturer.

Worthington Centrifugal Refrigeration Systems, in capacities ranging from 150 to 2600 tons, combine minimum floor space requirements with maximum accessibility. Their rugged construction, advanced design and outstanding efficiency assure many years of dependable, low-cost refrigeration.

Worthington Pump and Machinery Corporation, Harrison, N. J. Specialists in air conditioning and refrigeration for more than 50 years.

AG-14

WORTHINGTON



*Air
Conditioning
and
Refrigeration*



Noted Western Hotel Adds Worthington Air Conditioning

The popular Adams Hotel in Phoenix, Arizona, follows today's trend by installing a Worthington centrifugal refrigeration unit for air conditioning. In assuring its guests of healthful, comfortable air the year round, this modern hotel joins a large and growing list of famous hostleries now using Worthington equipment.



"Packaged Air Conditioning" for Smaller Business Spaces

Worthington Self-Contained Air Conditioners, Model SYC, are ideal for smaller stores, shops, offices. Two sizes: 3-ton and 5-ton refrigeration capacities. For year 'round supply of fresh, clean invigorating air — cooled in summer and heated in winter. A competitive necessity... and another good reason why *there's more worth in Worthington.*

Look To Worthington for "Integrated" Systems

As makers of so many of the "inner vitals" of an air-conditioning or refrigeration system — compressors, condensers, pumps, turbines, valves, fittings, etc. — Worthington is your logical source for an "integrated" system to give you efficient, economical, trouble-free service. Your nearby Worthington Distributor will gladly supply full details.

Born with a
2000-year-old reputation . . .



EAGLE Ready-To-Use WHITE LEAD PAINT

Preferred painting material of American planners and builders since Thomas Jefferson's day, white lead's 2000-year-old reputation is still unmatched for durability, beauty and economy.

Now you can specify a new, convenient form of pure white lead. It's more useful to your clients, easier to use for painters. We give you Eagle Ready-To-Use White Lead Paint, in gallon form, ready to open, stir and apply.

White lead protection that's extra smooth!

This marvelous new Eagle-Picher paint brings you a new plus—greater brushability, greater smoothness—and until you try Eagle RTU yourself you can't possibly know what we mean. It covers evenly, leaves practically no brush marks. Its flexible film clings fast despite wear and weather. It dries to a brilliant white gloss that doesn't crack or scale, but chalks gradually, actually preparing the surface for eventual repainting.

Eagle Ready-To-Use White Lead Paint comes in two forms: Primer Sealer Coat and Outside White Finish Coat. One, two and five gallon pails. Made by a company with 103 years of experience. Eagle RTU is being made available as rapidly as possible.

THE EAGLE-PICHER COMPANY

Cincinnati (1), Ohio

Member of the Lead Industries Association



EAGLE PURE WHITE LEAD

A favorite since 1843



Made by the makers
of Eagle White Lead in Oil
—a favorite since 1843

A LETTER FROM THE PUBLISHER

Dear Reader:

Anyone who thinks journalism is a cushy job these days better not say so within earshot of FORUM's Miss Mix. After an auspicious flight to Los



Angeles, Miss M. picked up a smaller plane for Monterey; spent a day and night there, then made an unplanned hop to San Francisco for the weekend, the while having difficulty fending fog with a thin dress and a tooth brush. Monday found her back in L. A. with a reservation but no room, which initiated her to a series of studio couches in private homes and hotels (one night in a ballroom behind a furniture barricade), and finally co-occupant of one of those little cottages with Mrs. Webb, gracious mother of Clifton. Miss M. considers her safari highly interesting but "definitely not cushy!"

* * *

These days the FORUM is getting more than its normal quota of compliments on its layout. Author of these works is, of course, the magazine's Art Director,



Paul Grotz. The process which produces such fine pages has become increasingly complex over the years, is a secret as jealously guarded as the atomic bomb formula. We have learned recently, however, one feature of the Grotz technique. As each story layout is completed, the layouts are photostated at greatly reduced scale and mounted on the wall, until there emerges finally the complete magazine. This, Grotz explains, helps produce a proper visual balance. However, since we have rarely noted anything happening to the layout once it reaches the miniature state, we have concluded that Grotz simply likes to admire the photostats. Well, what's wrong with that?

* * *

The August cover, which many have mentioned, was done by Jimmy Lamantia who works for the FORUM when the

mood strikes him, which is between visits to his New Orleans home and architectural studies at Harvard. Jimmy has little use for the past, none at all for the present, but gets a glint in his eye when the future is mentioned. A number of men of stature in the design world—Otto Eggers, Louis Rosenberg, Heyworth Campbell, Joe Sinel and Ernest Born—preceded Jimmy on the FORUM's covers. We are ready to offer fairly long odds that Lamantia will maintain the tradition. Strangely enough, three of his predecessors are now on the West Coast—Born and Sinel in San Francisco and Rosenberg in Portland. Only Eggers and Campbell have stuck to New York. But all of them have stuck to their pencils and draw like fiends.

* * *

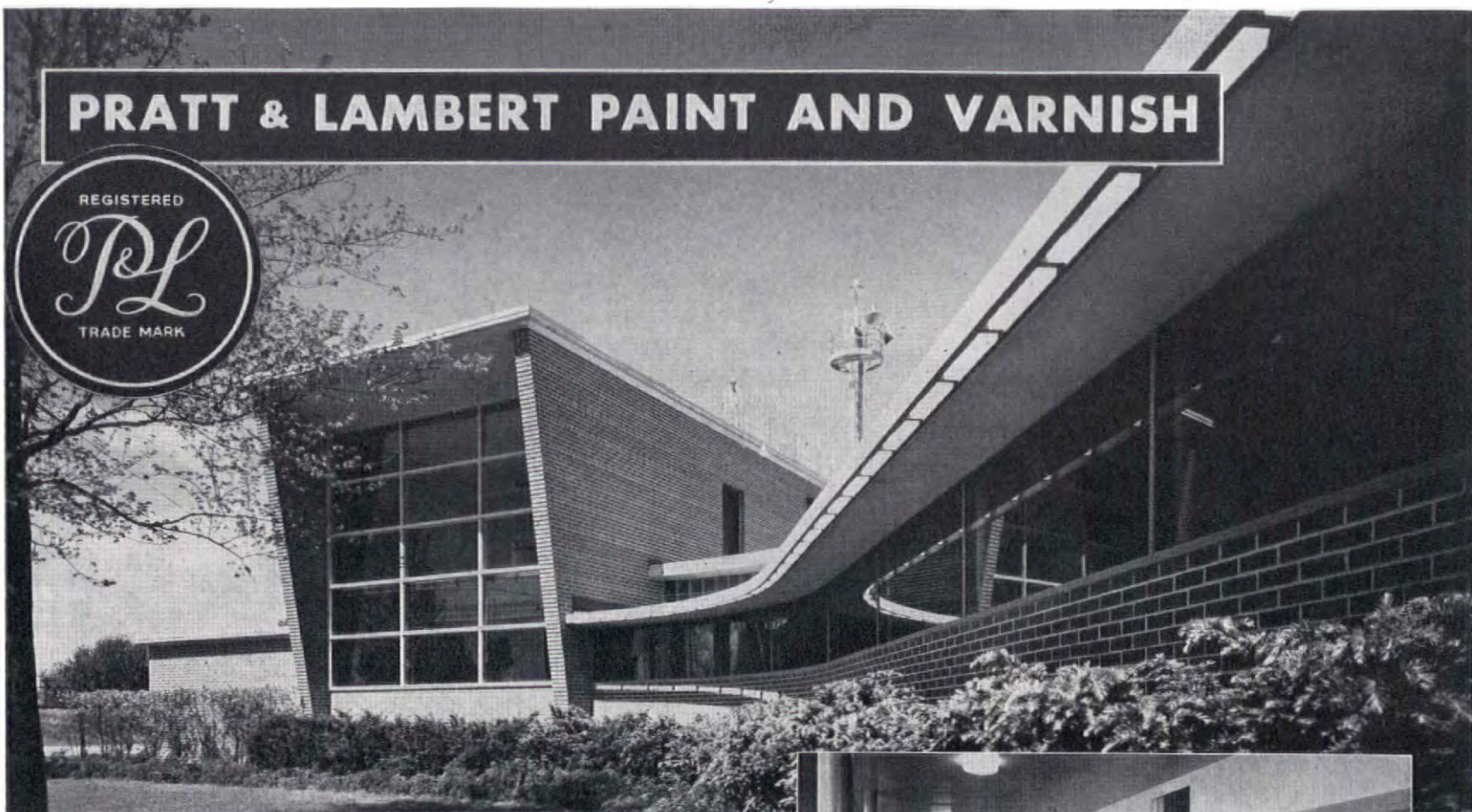
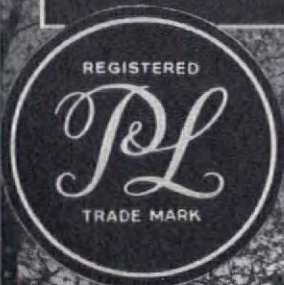
Presentation drawings to help the client visualize the building he is paying for have lost none of their importance, but drawings alone are seldom considered adequate any more. Almost all buildings are studied in scale model and, in a good many cases, full-size models of important repetitive features are built. For example, we have just come from seeing a complete mock-up of a hotel bedroom. Every piece of furniture has been accurately reproduced, studied, tried, revised. Ditto the lighting, color schemes, fenestration, floor covering, closet, and bathroom. The result is a knock-out. Everything works. Everything looks right. Many things have been improved over the best existing rooms. Working with the architects have been the hotel manager, the head



housekeeper, the banker who holds the mortgage, the owner of the hotel, the contractor, and a cross-section of a hundred or more people who have taken a critical guests-eye view of the room. All this takes time and money, but if the designing had stopped on paper, it could not have been so good. This is one of the outstanding new buildings the FORUM is looking forward to presenting in great detail.

H.M.

PRATT & LAMBERT PAINT AND VARNISH



Photo, Hedrick-Blessing Studio, Chicago.

DEDICATED to the advancement of the science and art of illumination, this novel product development and testing laboratory of the Benjamin Electric Mfg. Company, at Des Plaines, Ill., opened in June, features noteworthy improvements in construction, equipment and architectural design.

In the new building are an electrical section, a physical test section, a photometric laboratory, an acoustical laboratory, and a product development and model shop. These laboratories have added facilities for the reception of visitors and the cultivation of community relations.

The air-conditioned conference room will be used for engineering and sales meetings, foremen's meetings, and for other group discussions. The north wall features an unusual design of 12" x 12" and 6" x 6" glass blocks. The interior is of white oak rift-sawn paneling, with asphalt tile flooring.

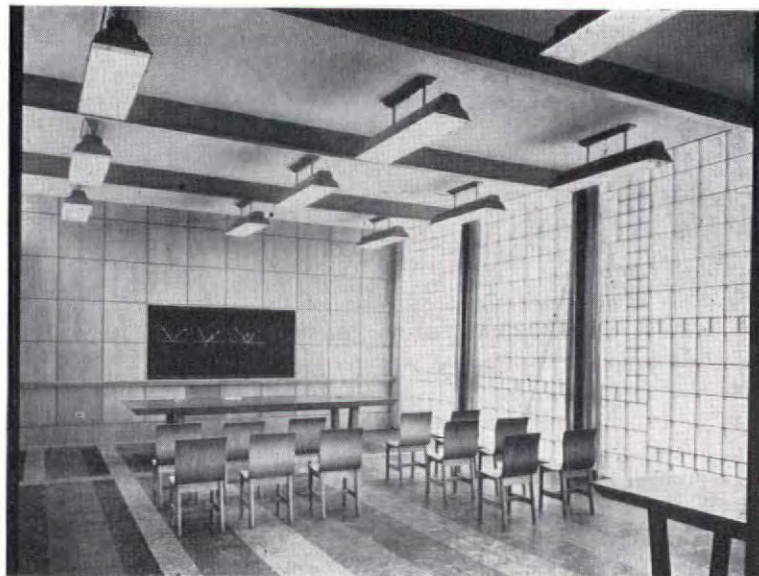
It is significant that in this ultra-modern structure P&L Paint and Varnish were used for their outstanding decorative and preservative qualities. The P&L Architectural Service Department co-operates with architects in providing distinctive decoration and explicit painting specifications for any project.

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

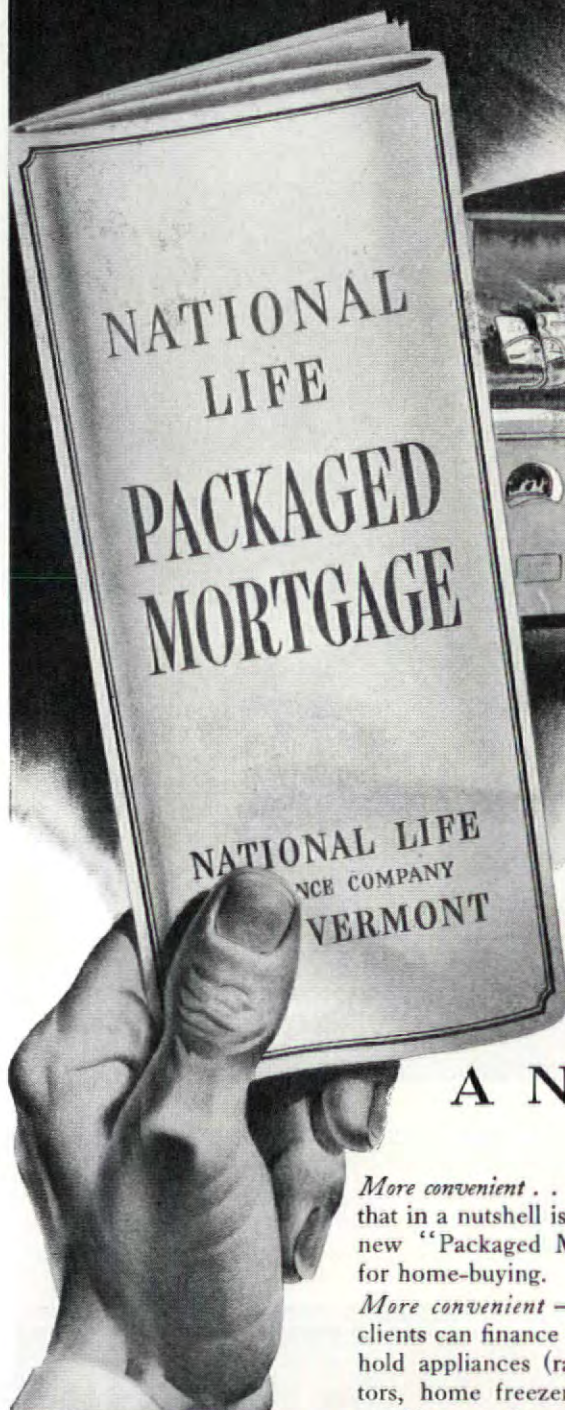


NEW BENJAMIN ELECTRIC LABORATORY, DES PLAINES, ILL.
PERKINS & WILL, Architects and Engineers, Chicago.
G. F. FREDRICKSON, Painting Contractor, Chicago.
WILLIAM A. DEAN, Landscape Designer, Chicago.

Top Photo: General exterior view; center: Display cases; bottom: Conference Room.



Coming — MILLIONS of NEW HOMES



Here

A NEW, EASIER WAY TO BUY THEM

More convenient . . . less expensive — that in a nutshell is National Life's new "Packaged Mortgage" plan for home-buying.

More convenient — because your clients can finance all major household appliances (ranges, refrigerators, home freezers, dish-washing machines, garbage-disposing sinks,

home laundry equipment) under *one* contract, along with house and land. They deal with only *one* lender. *More convenient*, too, because the homeowner has no extra-big bills right at the start. Payments spread out evenly over the life of the loan are easier to meet.

Less expensive — because rates under the "Packaged Mortgage," with all its convenience, are actually lower than with conventional installment financing.

Acclaimed by architects, realtors, builders and buyers all over the country, this new plan fills a long-felt need in the home-financing field — makes houses easier to buy . . . easier to sell. You'll be doing your clients and prospects a real favor when you introduce them to National Life's "Packaged Mortgage." For full information, and name of our nearest loan correspondent, just clip and mail the coupon.

NATIONAL LIFE INSURANCE COMPANY HOME OFFICE — VERMONT MONTPELIER,

A Mutual Company, founded in 1850, "as solid as the granite hills of Vermont"

CLIP AND MAIL THIS COUPON NOW

NATIONAL LIFE INSURANCE CO., DEPT. M-6, MONTPELIER, VT.

Please send me full information on your new, low-cost, all-inclusive plan for home-financing, and address of your nearest loan correspondent.

Name

Business or Home Address



Roddiscraft

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*More
for Everybody*

**Stock size ordering
..greater production**



By devoting our production exclusively to stock sizes, we have been able to increase materially the volume of Roddiscraft products going to our customers. While this greater volume is still insufficient to meet all requirements, *more* customers are getting *more* Roddiscraft flush veneered doors and plywood. Plus-production of stock sizes has enabled us to increase our output considerably. Adequate stocks will be maintained in our conveniently-located warehouses to supply the Roddiscraft doors and plywood you need at the moment you need them.

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DETROIT, MICHIGAN	11855 E. Jefferson Ave.
KANSAS CITY 8, MO.	2729 Southwest Blvd.
LOUISVILLE 10, KENTUCKY	1201-5 S. 15th St.
LONG ISLAND CITY, N. Y.	Review and Greenpoint Ave.
MARSHFIELD, WISCONSIN	
MILWAUKEE 8, WIS.	4601 W. State Street
NEW YORK CITY 18, N. Y.	515 W. 36th St.
SAN ANTONIO, TEXAS	727 N. Cherry Street

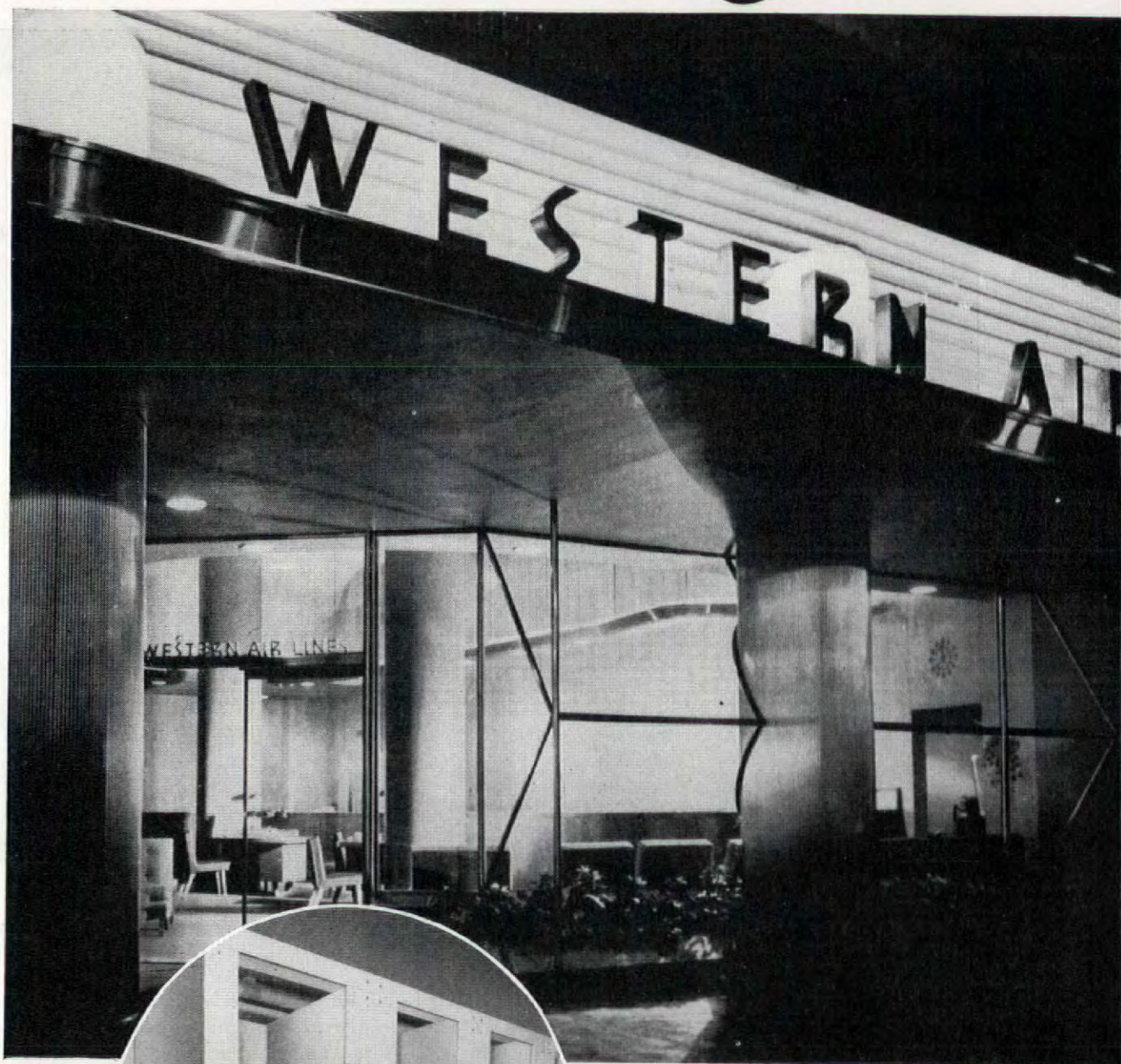
DEALERS IN ALL PRINCIPAL CITIES

Roddiscraft

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MARSHFIELD, WISCONSIN

EFFECTIVE USES OF

Glass



America has produced no better material for toilet room walls, stiles and partitions than Carrara Structural Glass. Its practical qualities of permanence, easy cleaning and strength are as noteworthy as its polished beauty. Carrara is available in 10 attractive colors. Here is a dormitory toilet room, done in Carrara Glass, at Allegheny College, Meadville, Pa. Architect: Jens Frederick Larson.

N PUBLIC BUILDINGS

A new method of setting Plate Glass was applied in this recently completed Air Lines office. To minimize reflections, the glass was set in a protruding V-shape, protected against light from above by a dark, non-reflecting canopy and from below by plants and a black sidewalk. For such applications as this, Twindow, the window with built-in insulation, is excellent. It allows clear vision, virtually prevents condensation on the glass, cuts heating and cooling costs substantially. Architect: H. Roy Kelley.

Windows in office buildings, both from the design and functional standpoint, merit unusually careful attention from the architect. To be sure of good-looking, clear-vision windows, many architects specify Pennvernion Window Glass, a quality glass which possesses a degree of clarity, freedom from distortion and beauty exceptional in a sheet glass. Twindow, Pittsburgh's new window with built-in insulation, is well suited for use in modern office buildings like this. The Bankers Insurance Building, Macon, Ga. Architect: W. Elliott Dumwody, Jr.



Stair rails can be beautiful . . . when they're made of Herculite Tempered Plate Glass. Herculite is four to five times stronger than ordinary Plate Glass of the same thickness, much more resistant to impact. This glass—with its combination of strength, transparency and good taste offers the architect new design possibilities both in public building and residential interiors. Architects: Holabird & Root—A. R. Clas, Associate.

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

★ Design it better with

Pittsburgh Glass



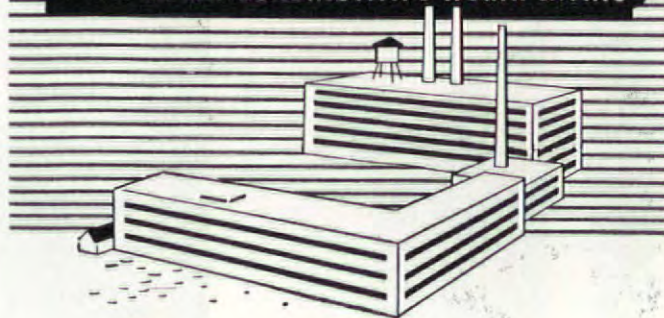
"PITTSBURGH" stands for Quality Glass and Paint

PITTSBURGH PLATE GLASS COMPANY

Pittsburgh Plate Glass Company
2339-6 Grant Building, Pittsburgh 19, Pa.
Please send me, without obligation, your booklet entitled: "Ideas for the Use of Pittsburgh Glass in Building Design."

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

IF IT'S WORTH BUILDING... IT'S WORTH SAVING



"Weatherize"

Concrete and Masonry Walls with HYDROCID Colorless

Continual exposure to changing weather conditions is eventually as hazardous to a brick, concrete, masonry or stucco structure as to a human being. "Weatherizing" exterior walls with the proper water-repellent coating—HYDROCID Colorless—will help keep them healthy through rain and snow, heat and cold.

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

Since HYDROCID Colorless forms a transparent film, the walls retain their original beauty and appearance. Absorption of dust, soot and stains is checked. Application is easy—by brush or spray.

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



ASK FOR demonstration showing how HYDROCID Colorless actually repels water—gives greater protective efficiency. For descriptive folder, write Dept. A9.

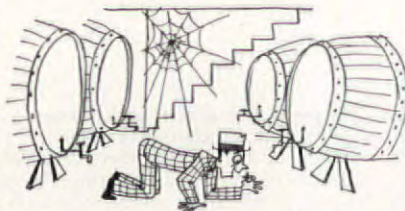
SONNEBORN "BUILDING SAVERS"

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L. SONNEBORN SONS, INC.
88 Lexington Avenue, New York 16, N. Y.

In the Southwest: Sonneborn Bros., Dallas 1, Texas

Collaborative effort between architects Ralph Gulley of Donald Deskey Associates and Edgar Lynch did not begin with the bowling alley (p. 108). It started during their student days in Paris over—of all things—a flytrap. This extraordinary mechanism, Lynch's most highly prized discovery, rotated by clockwork and employed a grenadine-dipped bait. It also provoked considerable curiosity and wonder in certain circles of Parisian cafe life. One bleak evening, with a demonstration scheduled for the Cafe des Deux Magots to be followed by an insect derby, Lynch was horrified to discover that flies have a habit of hibernating in winter. Gulley, however, was undaunted. Plunging to the depths of the Deux Magots basement, he returned triumphant with a fly of such questionable habits that it needed only one sniff of grenadine to pass out cold. That the innate trapping spirit displayed by the Gulley-Lynch team can be turned to commercial ends is illustrated by the work they are currently doing for Brunswick-Balke-Colender. Their specialty—designing traps for bowling and billiard balls.

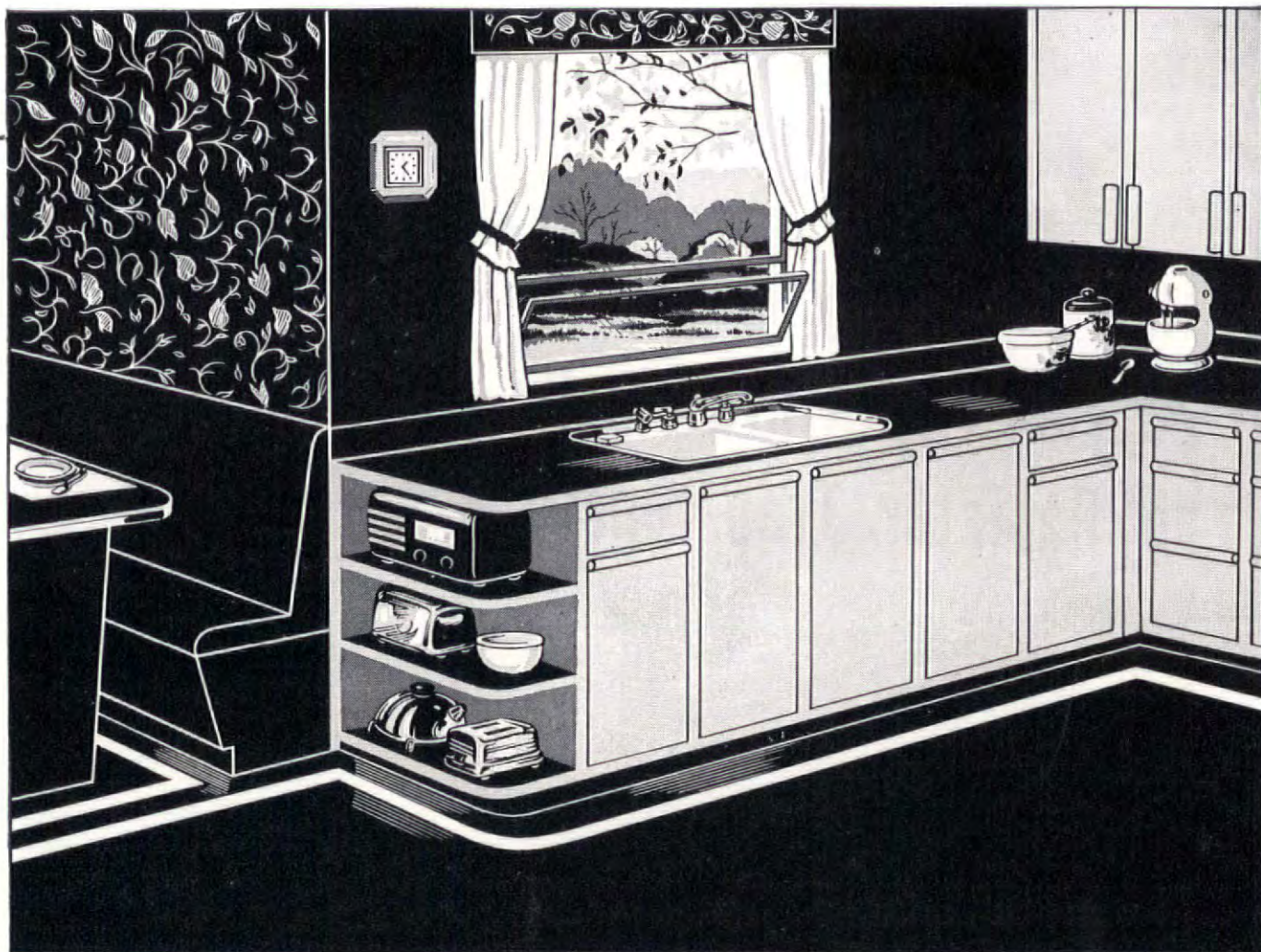


Nothing less miraculous than parenthood could have stirred mild mannered, law-abiding Vernon Sears, architect of the U. S. Plywood office (p. 111), to take the law into his own hands. A daily ritual of cringing and shuddering at the spectacle of his wife and perambulator-borne offspring negotiating the snarling, T-shaped intersection between home and the verdant

calm of Central Park had its inevitable effect. What with right and left turns, the mere color of the traffic lights seemed irrelevant to motorists and pedestrians. Sears died inwardly with each crossing attempted by him family. Mrs. Sears and baby came near dying outwardly. Father brooded over this conjugal dilemma until one night, morosely draped over a bar, rebellion struck him like a bolt. He dashed to the telephone booth, slammed the door, spent the balance of the evening dropping nickels and shouting hoarsely into the mouthpiece. In the sickly light of morning a worn but fearless Sears, supported by forewarned friends and members of the press, stepped into the middle of the intersection, majestically waved all traffic to a standstill. Cheered on by partisans, Mrs. Sears and pram proudly sailed across the empty asphalt, paused only to sniff the cold and sunless air, sailed back again unthreatened by the mechanized torrent.

Four young Harvard architects invaded Chicago under the camouflage of one mustache when Reginald R. Isaacs was last year appointed Director of Michael Reese Hospital's development program. Since wielding his first T-square in an architect's office at the age of 14, Isaacs had accumulated no mean experience in that profession, housing and city planning. However, tipped off by Chicago supporters that Michael Reese officials regarded his accomplishments with favor but his youth with skepticism, Isaacs (who is 34) hastily grew a mustache which apparently assuaged all official fear. His present employer, a 65-year old institution, has wisely decided that it is more prudent to stand and fight urban blight than to try to flee. Isaac's role in this battle is one of strategy requiring a plan for future expansion of the hospital and development of its environs. A recent addition to staff is sociologist Eleanor E. Torell, who is neither a man, an architect nor a Harvard grad. Associate architect John T. Black; planner, Martin D. Myerson; assistant architect, Frank Weiss. Headed by patriarch Isaacs, who is several years senior to his colleagues, this unflagging group plugs full community cooperation—believes that the bell does not toll for Michael Reese alone.





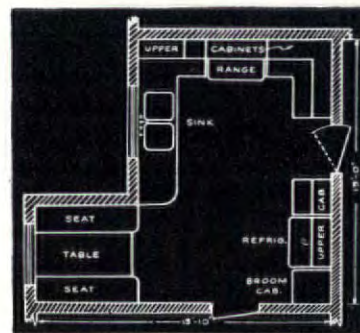
Ideal sink for small homes ... the KOHLER Delafield

IN the compact, attractively designed kitchens in so many recently built small homes, the Kohler Delafield sink has proved thoroughly practical and satisfying. With its two roomy compartments it provides working comfort and convenience, and is adaptable to many arrangements.

The Delafield is made of non-flexing cast iron, time-tested base for the lustrous, pure white, easy-to-clean enamel surface, which is acid resisting clear through. The smooth working faucet mounted on the 3-inch ledge has a swing spout and automatic spray which operates on pressure of lever on

nozzle. Fitting is made of durable brass and is chromium plated.

Like all Kohler plumbing products, the Delafield sink embodies recognized first quality maintained through adherence to the long-established, high Kohler standards of materials and workmanship. Kohler quality is further safeguarded by the fact that all products are made at one great plant where there can be unity of supervision, coordination, and effective control of production. Kohler products are backed by 73 years of manufacturing experience. For full information write Kohler Co., Dept. 9-AF, Kohler, Wisc.



THE KOHLER DELAFIELD sink fits readily in a floor plan such as the one above, which combines efficiency, convenience and good economy of space. Two sizes—32x21", 42x21".

KOHLER OF KOHLER

PLUMBING FIXTURES AND FITTINGS • HEATING EQUIPMENT • ELECTRIC PLANTS

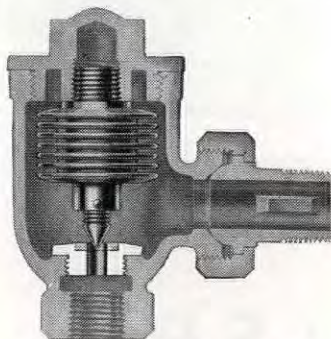
This Webster System served 23 years with practically no Radiator Trap repairs



HOTEL BELLERIVE, KANSAS CITY, MO.
Built in 1922. Architect, Preston J. Bradshaw, St. Louis.
Owner, Barney Goodman. Operated by Beacon Rental Co.

This is the story of 605 radiator traps — and how they served for 23 years with practically no repairs.

In selecting equipment for the Hotel Bellerive in 1922, Architect Preston



WEBSTER SYLPHON TRAP
Originally installed in Hotel Bellerive. Darker portion shows replacement made after 23 years service.

J. Bradshaw, of St. Louis, sought long life and low maintenance cost. He specified Webster Sylphon Traps for which the contractor paid \$3.68 each.

For 23 years, heating comfort was unimpaired and this building required only 24 new radiator trap interiors—one per year.

They might have bought traps at \$2.00. But, what happens to economy when such a trap becomes inoperative? Add 90 cents for new interiors at five-year intervals and you would have a trap cost of \$5.60 to date compared with \$3.68 for the best available equipment.

Also important is the trouble-free heating service provided by Webster Equipment—the avoidance of heating complaints which might have



FRED N. SCHAAD
Webster Representative in Kansas City. Schaad moved to Kansas City from Columbus about a year ago after having been a Webster Sales and Service Representative in the Ohio capital for 18 years. He is typical of the men who make possible Webster's service to customers.

meant added indirect cost — even loss of rental income.

During the 1944-45 heating season a complete check-up and overhaul of all traps was begun by the Hotel Bellerive. Replacement of worn interiors with genuine Webster Sylphon Attachments, each with new bellows, valve piece and insert seat gives the hotel a better trap than the original one because manufacturing processes have improved, bellows are stronger and more uniform, valve piece and seat are now stainless steel whereas in 1922 they were brass.

Of course, this service record of Webster Equipment would not have been achieved without conscientious operation of the heating system at proper low pressures and competent supervision by the rental company. Proper selection of heating equipment and proper use—these are both essentials of heating economy.

Are You Planning a 194? Hotel Bellerive?

In 1922, the logical choice was a Webster Vacuum System with Webster Traps on radiators and drip points.

Today the choice would be a "Controlled-by-the-Weather" Webster Moderator System with:



(1) Webster Outdoor Thermostat Control automatically assuring the lowest possible pressure consistent with comfort;



(2) Webster System Radiation — concealed convectors made of copper tubing and aluminum fins, with integral Webster Traps and Valves;



(3) Webster Float and Thermostatic Drip Traps on heating coils of air conditioners and drip points of the piping system;



(4) Webster-Nesbitt Unit Heaters for garage space and similar heating zones.

Let Webster experience serve you.

WARREN WEBSTER & CO., Camden, N. J.
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Webster
Heating Systems

ZONOLITE CONCRETE INSULATES G. D. SEARLE & CO. NEW LABORATORY

Herbert G. Banse, Chicago - Architect
George A. Fuller Company, of Chicago
General Contractors



Zonolite Offers Lightweight, Fireproof Roof —Insulated Against Heat, Cold and Sound

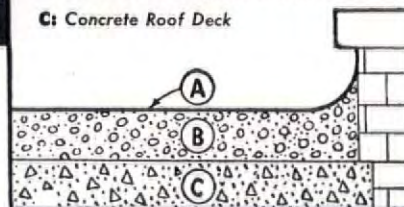
If you are not thoroughly familiar with Zonolite—the *unique* mineral insulation—you are urged to send for a complimentary copy of the 86-page Zonolite manual describing this micaceous, non-metallic product in its many forms and uses. With so many of America's largest buildings using Zonolite, you owe it to yourself to become fully acquainted with its unusual properties.

Zonolite Concrete is easily formed into cants, saddles and slopes to give proper drainage.

It was used for insulating roof fill on the G. D. Searle & Co. laboratory pictured above, and in so many hundreds of other outstanding new buildings within the past few years, that a copy of the Zonolite manual really *belongs* in your file. Send for it today!

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- A: Built-up Roofing over entire job
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- C: Concrete Roof Deck



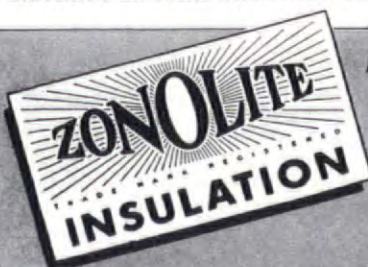
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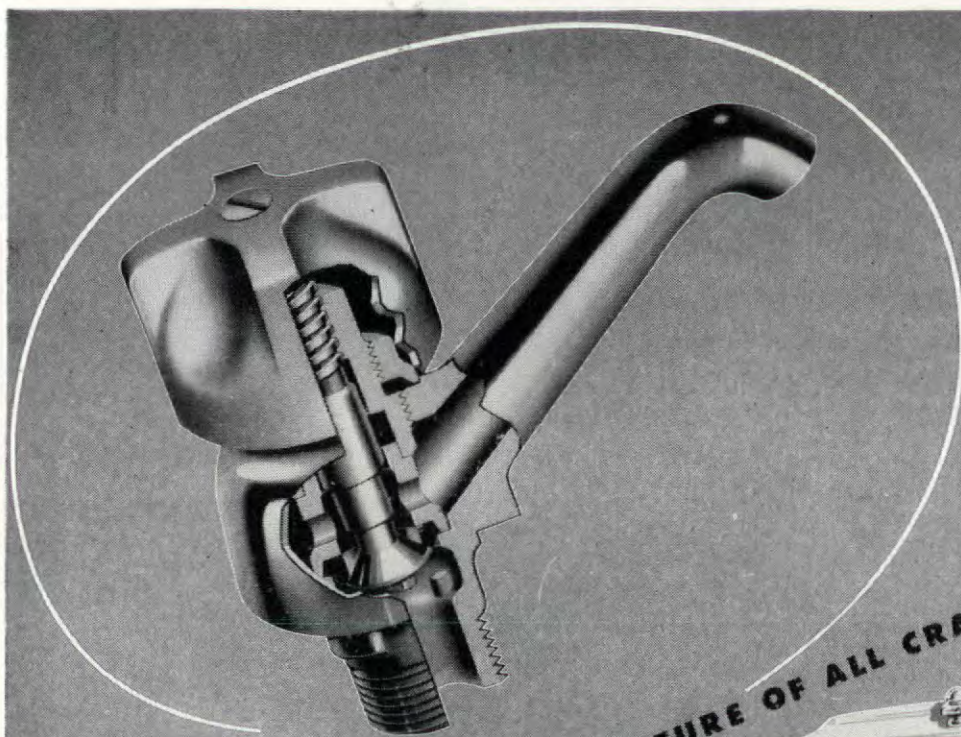
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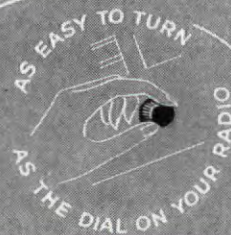
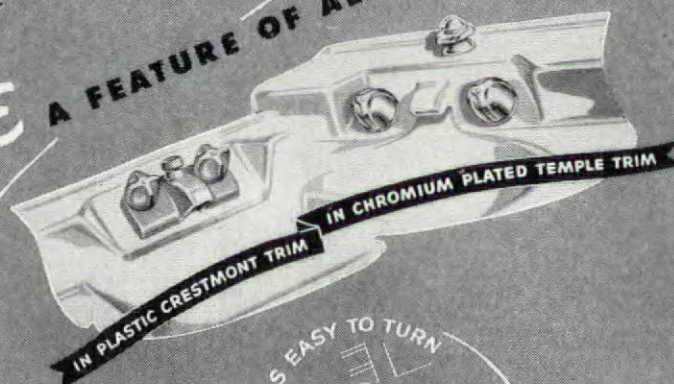
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Dial-ese adds to the convenience of Crane quality equipment for low-cost homes.

Users appreciate the way new Crane faucets open and close at a finger's touch, thanks to *Dial-ese*. Seats are easily replaced and single unit fits all Crane faucets, simplifying maintenance.

Dial-ese is an exclusive feature found in all new Crane plumbing trim and typifies the sound engineering back of the Crane line.

ADVANTAGES

- Water pressure below seat means easy closing . . . prevents dripping.
- Stem threads are lubricated.
- Short stem means less friction.
- Stem packing below threads prevents corrosion.
- Lock nut prevents turning—keeps packing joints tight.
- Entire unit replaced quickly like a cartridge.
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Window frame "floats" in insulating air space. Perfect fit is assured under all conditions. Ends costly repairing and re-fitting.



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COMBINATION SCREEN AND STORM SASH!

Rusco Combination Windows are designed and constructed for PERMANENCY. They're made of rust-resisting, galvanized and Bonderized steel . . . finished with finest quality baked-on enamel. Plastic screen never needs painting . . . will not stain woodwork or masonry.

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Rusco is the "tailor-made" Insulating Sash . . . for all types of commercial or domestic architecture. In design and construction . . . in final benefits to the owner . . . it offers greater advantages in comfort, convenience, safety, economy and beauty. Manufactured by the pioneer in "window conditioning" . . . the first

manufacturer to produce a practical all-metal self-storing combination screen and storm window.

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of the weather-*

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UNITED STATES PLYWOOD CORPORATION

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Decorative MICARTA*

**...to bring lustrous, colorful beauty
to modern architecture and interiors**

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Decorative Micarta Walls are cheerful, bright, and easy to clean.

With Decorative Micarta, your modern interior ideas can be made to blossom forth into fascinating reality. You can make walls, counters, and table-tops gleam and sparkle with an eye-appealing beauty . . . a durable beauty that years of service cannot dim.



On tables and counter tops, Micarta resists spilled liquids and hard usage.

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Decorative Micarta sheets may be glued or cemented to plywood, wood composition, or metal. Sheets are 1/16" thick, 30" x 60", 36" x 72", 36" x 84", 48" x 96", with current manufacture predominately in the 48" x 96" size. For prices and complete information, call your nearest United States Plywood distributing unit.



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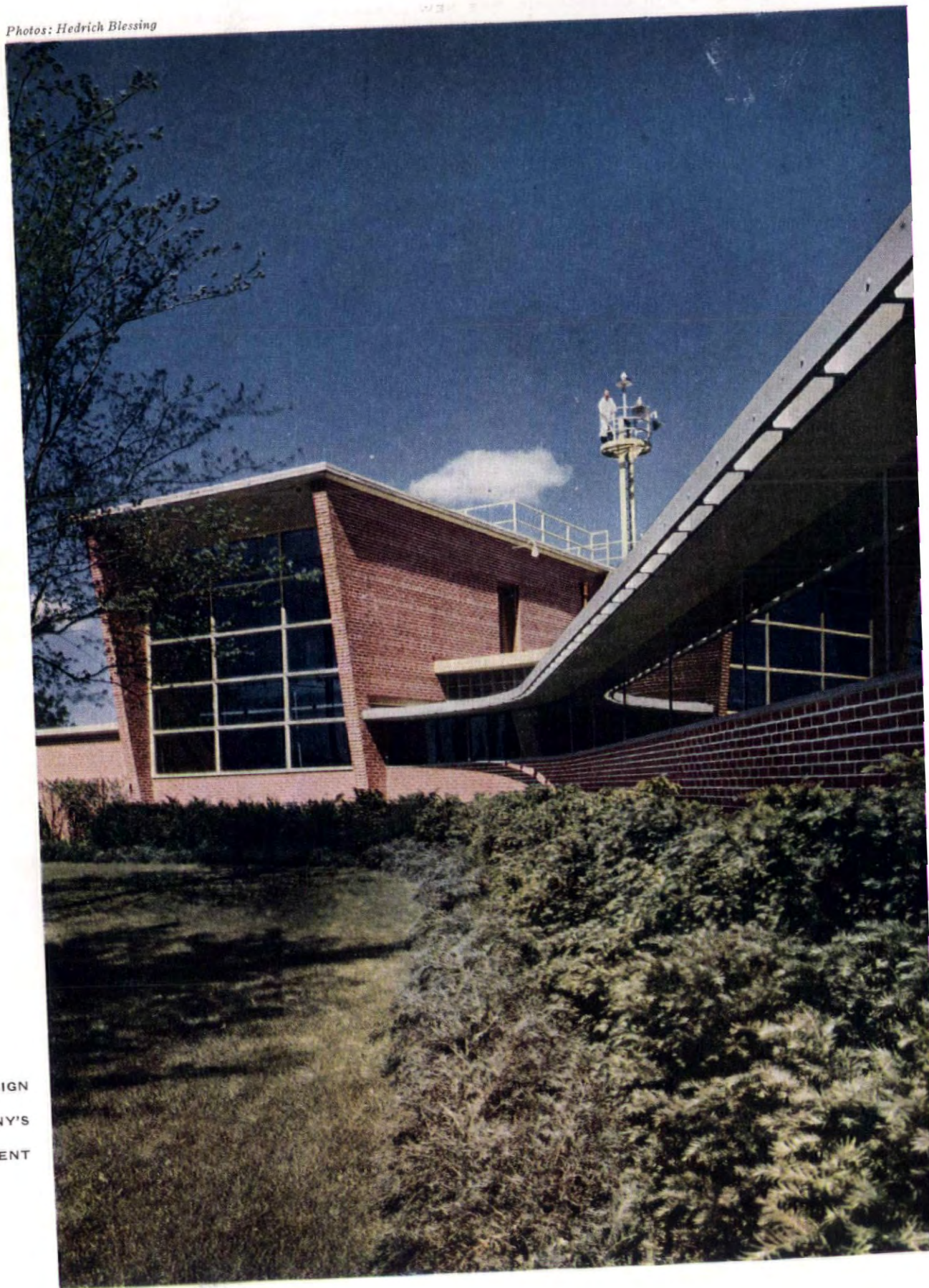
UNITED STATES PLYWOOD CORPORATION, 55 West 44th Street, New York 18, N.Y.

The Architectural

FORUM

Magazine of Building

Photos: Hedrich Blessing



HERE GOOD DESIGN
IS THE COMPANY'S
BEST ADVERTISEMENT

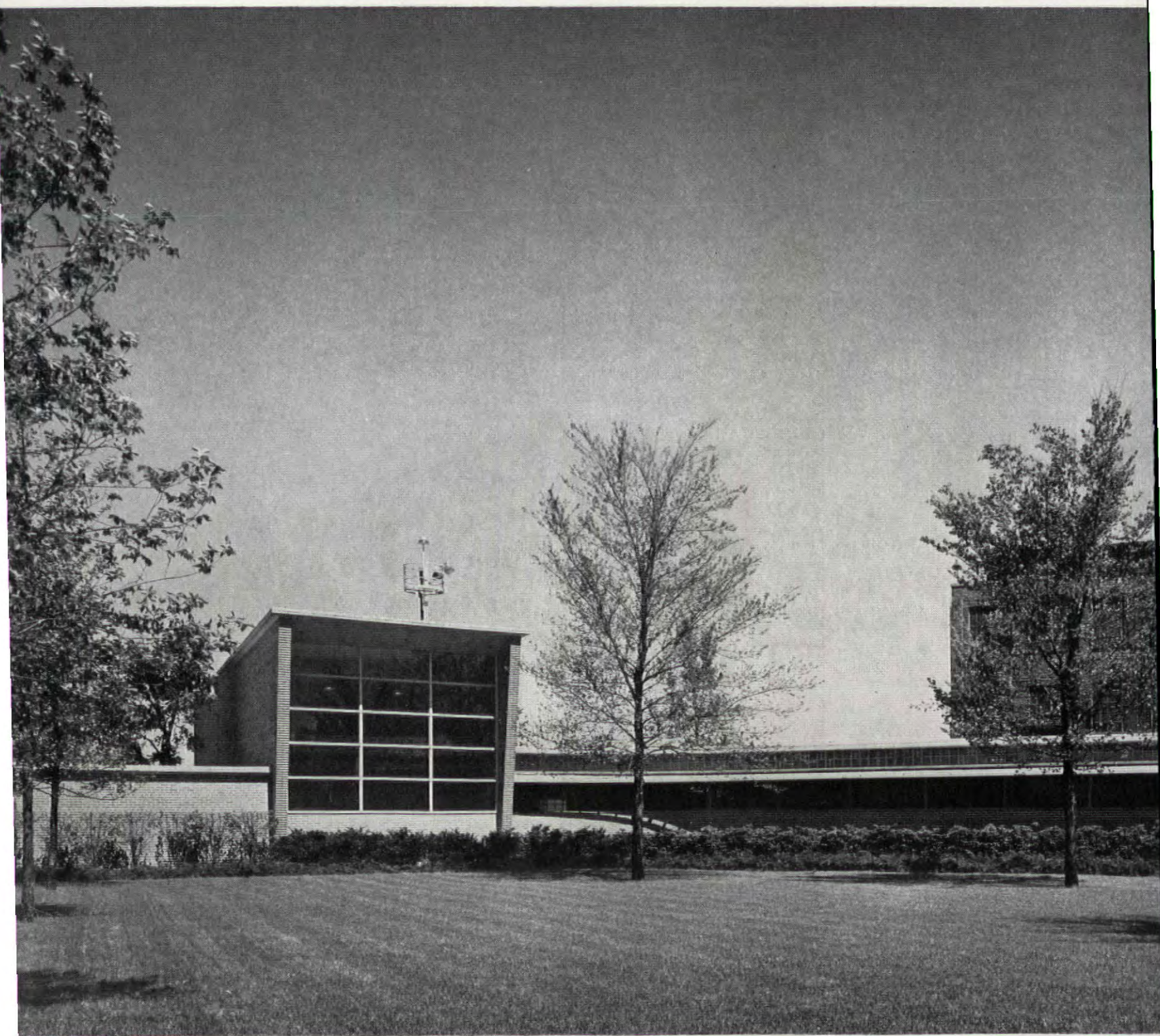
NEW LABORATORY

The Benjamin Electric Company's plant at Des Plaines, Ill., turns a new and more pleasant face to the outside world.

The primary requirement in the design of this new building for the Benjamin Electric Company was that it provide sorely needed laboratory space for product development and testing. But—in addition to this—the owners had several other requirements as well. They needed facilities for handling visitors to the plant; they needed space for lectures, sales meetings and conferences; and they wanted the new building to be the first lap of an ambitious three-year program of plant modernization and beautification which would enhance the predominantly residential character of the neighborhood.

The designers have accomplished all four objectives with admirable skill and economy. They had, it is true, a fortunate set of conditions to start with. The existing plant faced a main highway but sat well back from the property line across a railroad spur. While the existing three-story red brick structure had at least the merit of plainness, it could scarcely be considered distinguished. The prob-

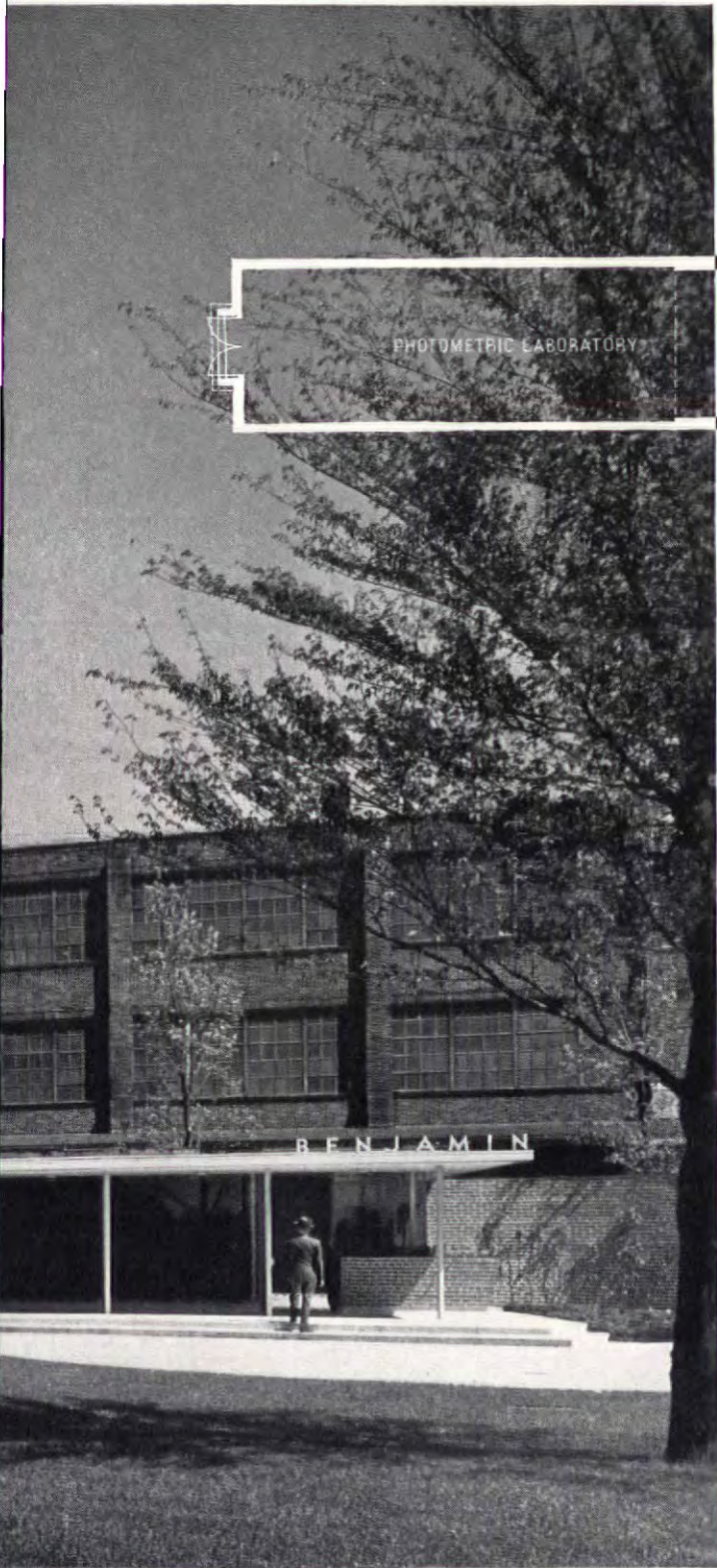
BY ITS SITEING AND LANDSCAPING, THE NEW LABORATORY SCREENS EXISTING PLANT FROM HIGHWAY. THIS IS FIRST STAGE IN A P



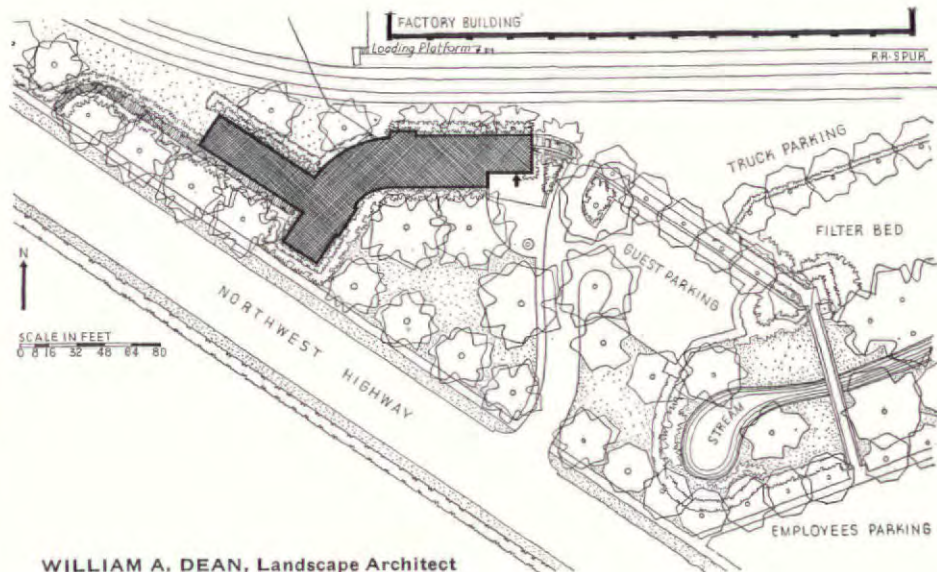
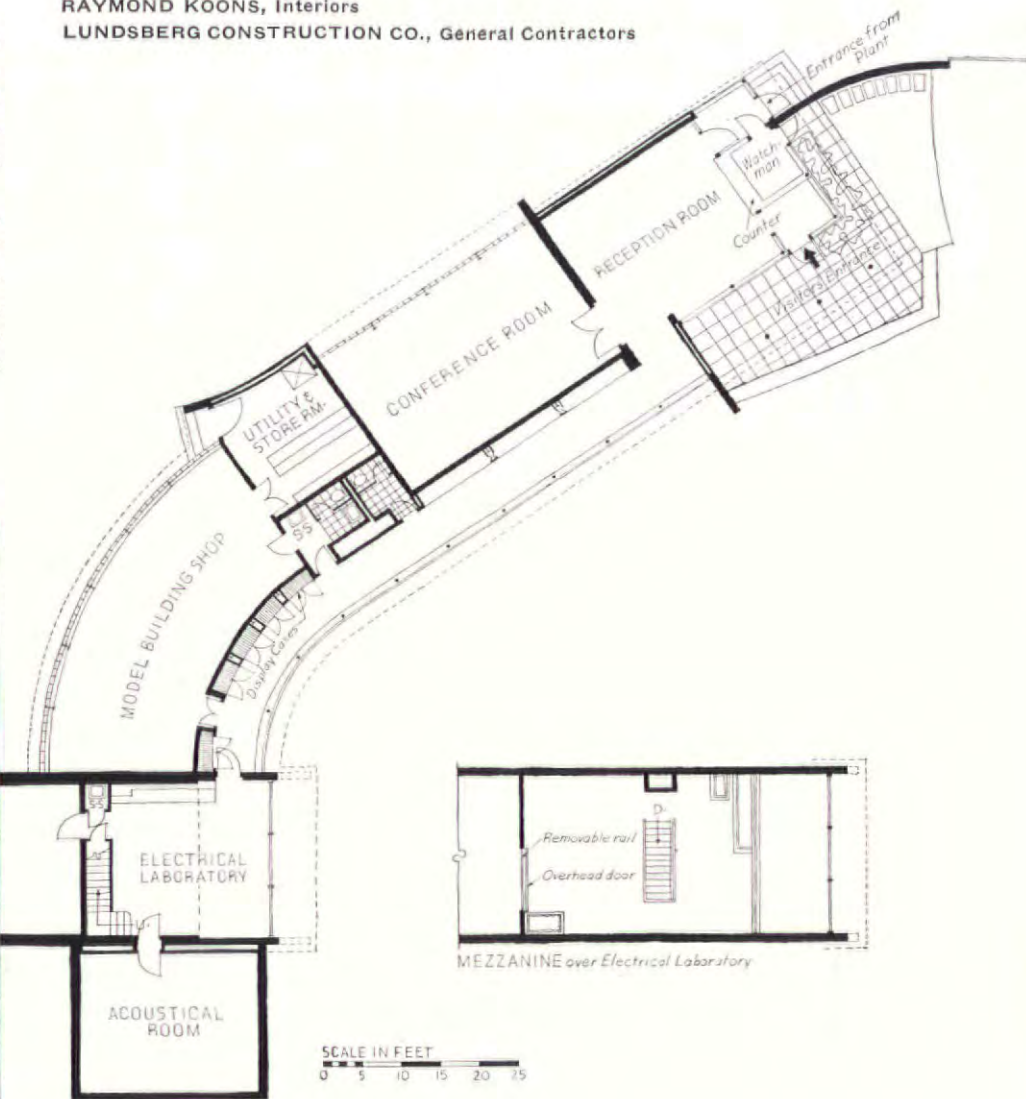
em, then, was the development of the triangular plot between rail-
road and highway in such a way as to screen the older building.
Thanks to the collaborative effort of architects and landscapist, it
has been judiciously pushed into the background. An entirely new
main entrance has been created. Carefully avoiding the usual
blatant billboard and electric sign, it relies instead upon long curv-
ing lines and huge rectangular window for impact. The result is a
plant most neighborhoods would be proud of.

The plan provides one control point for all visitors at the informa-
tion booth in the reception room. They can either be met here or
escorted to the plant, offices or laboratories. A handsome south-
facing, glass-enclosed gallery, lined with lighted display cases, leads
to the individual laboratories. Model shop and conference room are
lighted by the clerestories along the south wall and solid glass block
walls along the north.

USING ENTIRE PLANT LAYOUT TO PARK-LIKE APPEARANCE



PERKINS AND WILL, Architects
RAYMOND KOONS, Interiors
LUNDSBERG CONSTRUCTION CO., General Contractors

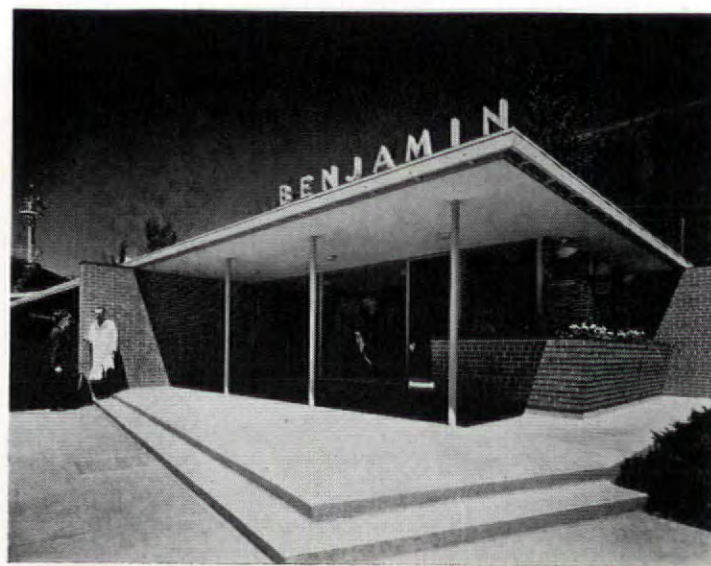


WILLIAM A. DEAN, Landscape Architect

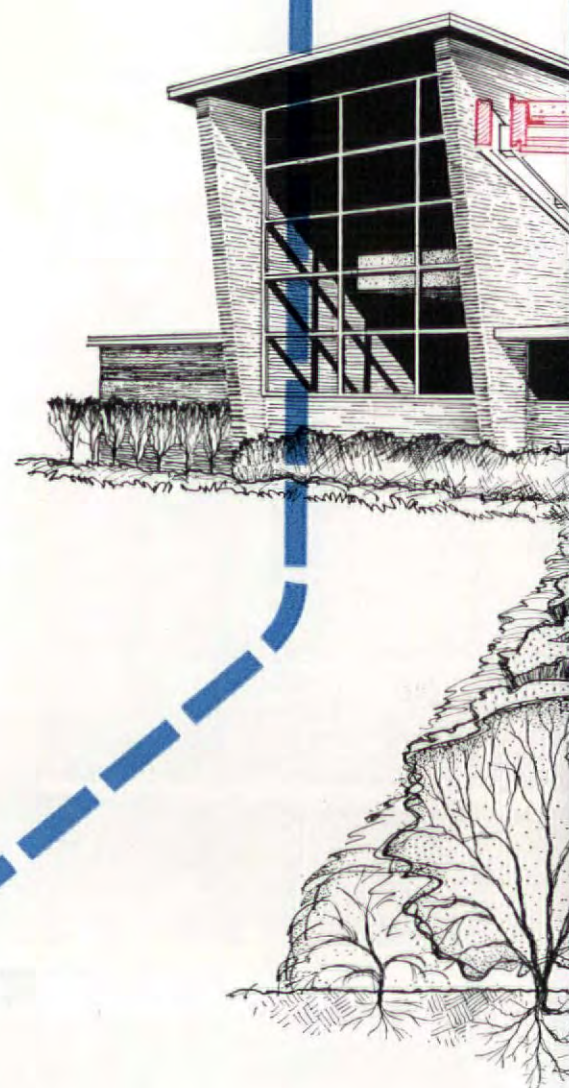
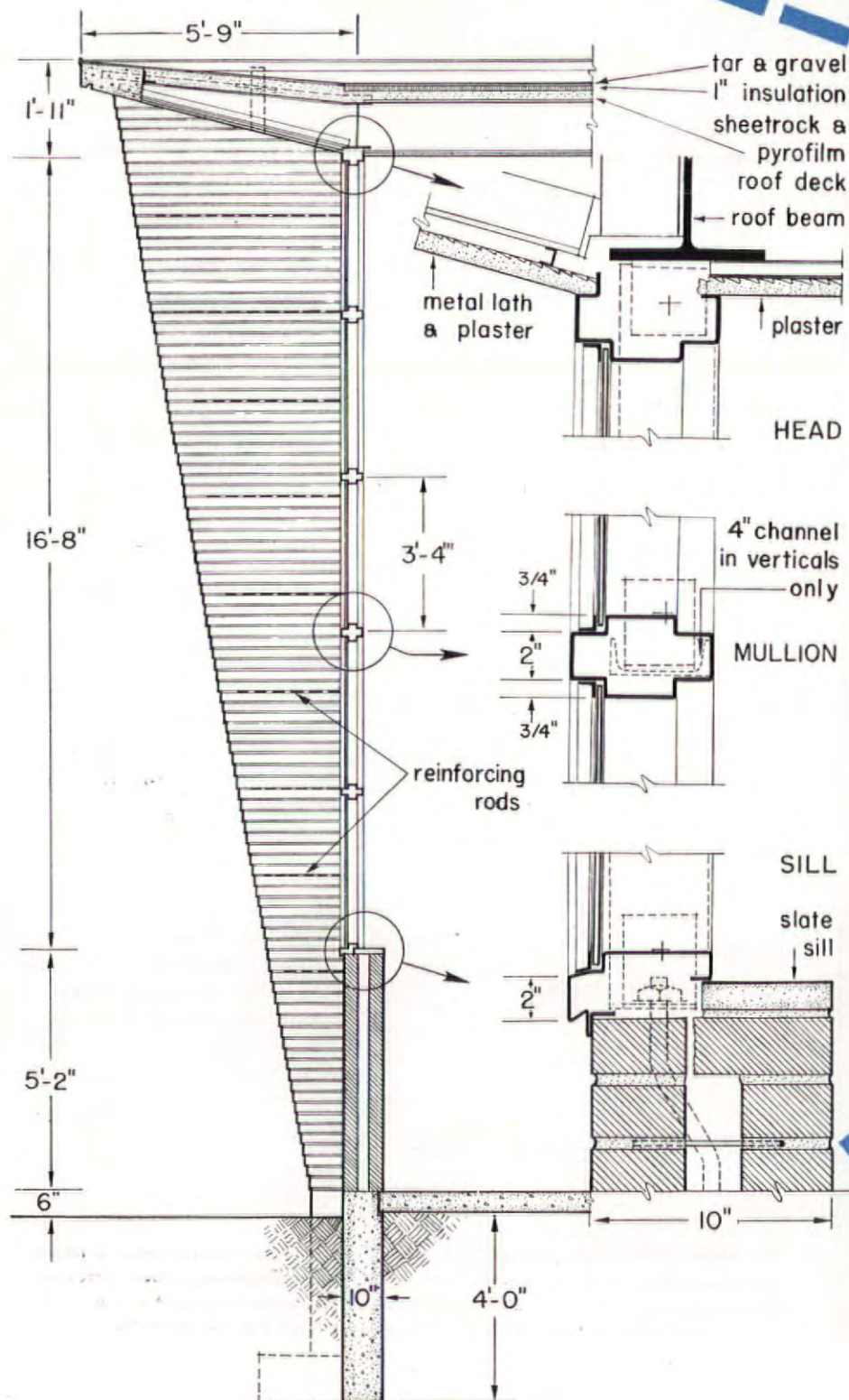
THE TRIANGULAR PLOT between highway and railroad has been converted into a
handsome buffer of building, walls and planting which effectively subordinates the
harsh outlines of the older building beyond. The separation of guest and employee
parking and the ornamental use of water from the filter bed are admirable.

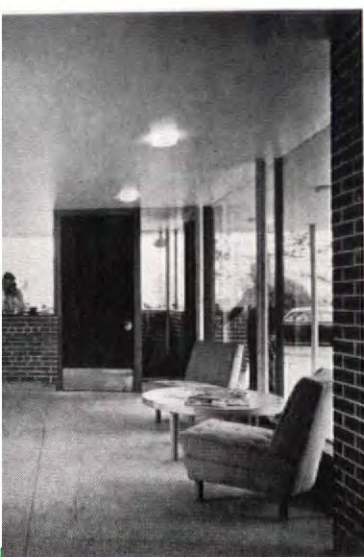
BENJAMIN ELECTRIC LABORATORY

Architects Perkins and Will have packed a wealth of structural and mechanical ingenuity into a building of brick, glass, concrete and steel.

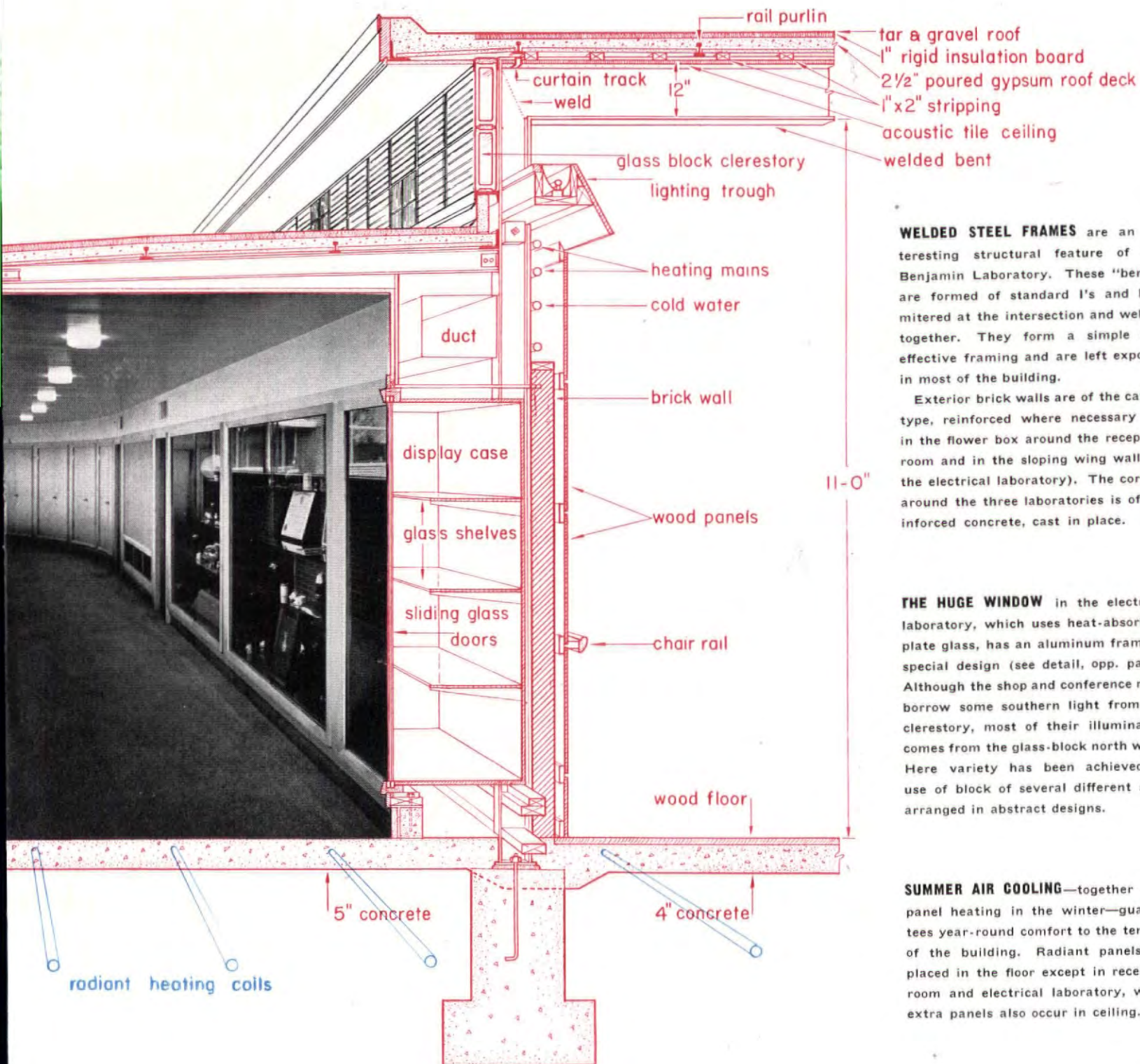


THE MAIN ENTRANCE SERVES BOTH LABORATORY AND PLANT RECEPTION





EXPOSED CAVITY BRICK WALLS DELICATE WELDED BENTS MAKE UP THE HANDSOME FRAME GLASSBLOCK PANELS HAVE INTEGRAL PATTERN



WELDED STEEL FRAMES are an interesting structural feature of the Benjamin Laboratory. These "bents" are formed of standard I's and H's, mitered at the intersection and welded together. They form a simple and effective framing and are left exposed in most of the building.

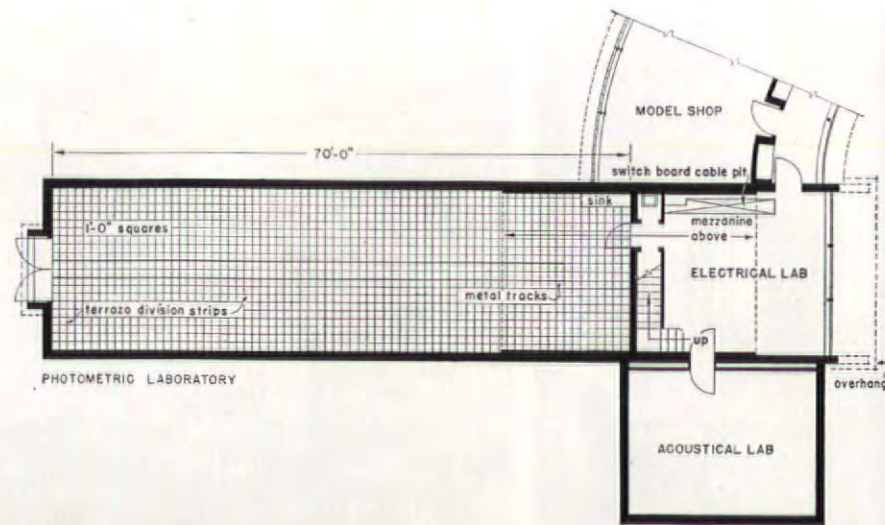
Exterior brick walls are of the cavity type, reinforced where necessary (as in the flower box around the reception room and in the sloping wing walls of the electrical laboratory). The cornice around the three laboratories is of reinforced concrete, cast in place.

THE HUGE WINDOW in the electrical laboratory, which uses heat-absorbing plate glass, has an aluminum frame of special design (see detail, opp. page). Although the shop and conference room borrow some southern light from the clerestory, most of their illumination comes from the glass-block north walls. Here variety has been achieved by use of block of several different sizes arranged in abstract designs.

SUMMER AIR COOLING—together with panel heating in the winter—guarantees year-round comfort to the tenants of the building. Radiant panels are placed in the floor except in reception room and electrical laboratory, where extra panels also occur in ceiling.

BENJAMIN ELECTRIC LABORATORY

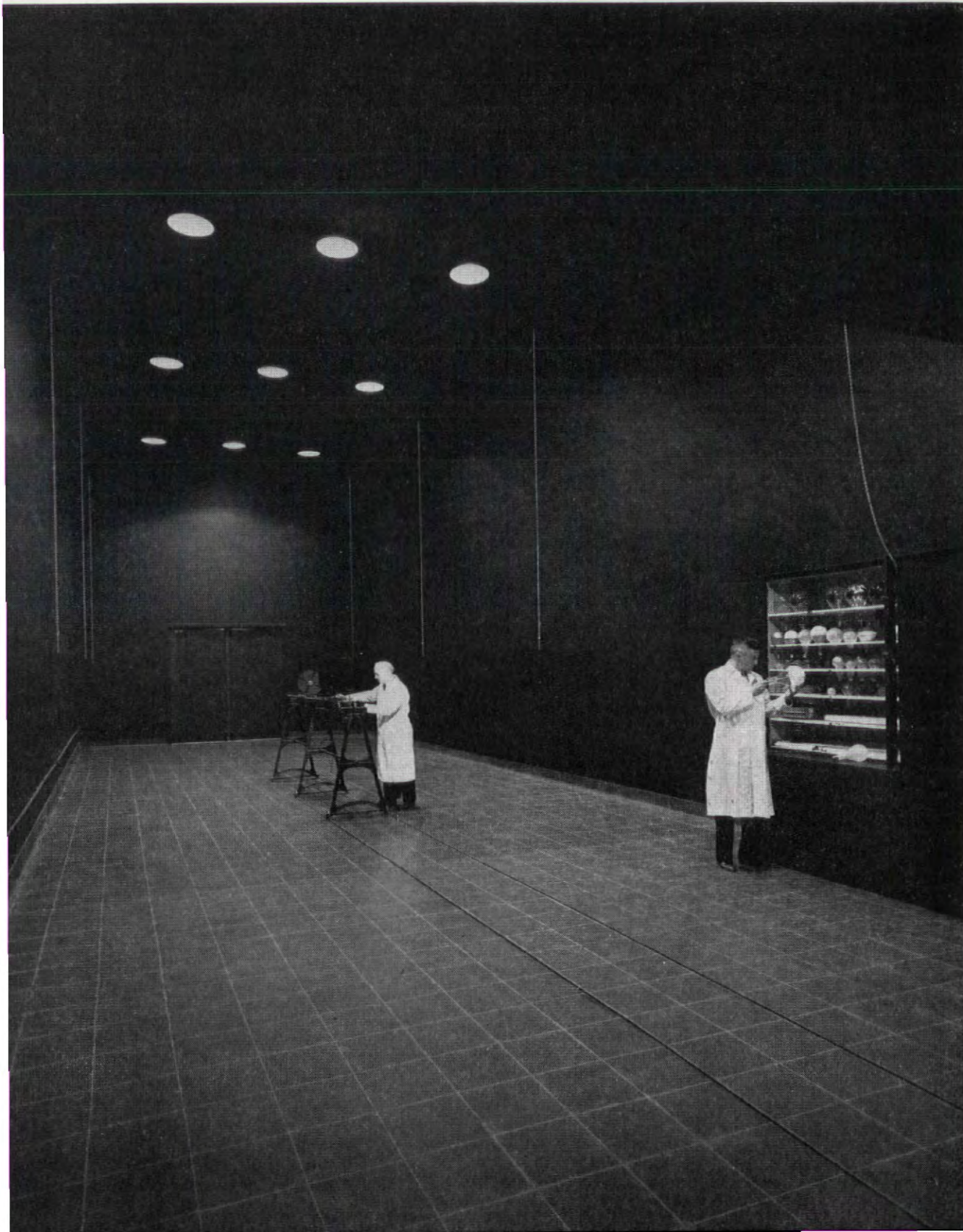
PERKINS AND WILL, Architects
 RAYMOND KOONS, Interior Design
 WILLIAM A. DEAN, Landscape Architect
 LUNDSBERG CONSTRUCTION COMPANY, General Contractors



PHOTOMETRIC LABORATORY is 70 ft. long, 20 ft. wide and 22 ft. high for the testing of floodlights and other narrow beam equipment. Doors at end permit extension of test distances.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—face brick, Red Range, Streater Brick Co. Sills and exterior copings—slate, Structural Slate Co. Ceilings—Zonolite acoustic plaster, Universal Zonolite Insulation Co. Structural frame—welded steel, Wendnagel Co. Floors—terrazzo, The Tile-Tex Co., Standard Mosaic Tile Co. **ROOF**—3-ply tar and gravel, Koppers Roof Co. Decks—gypsum Pyrofill slab, U. S. Gypsum Co. **SHEET METAL WORK:** Flashing—Armco sheet metal, American Rolling Mill Co. **INSULATION:** Roof deck—rigid insulation board, Flintkote Co. **WINDOWS:** Sash—metal, extruded aluminum, E. K. Geyser Co. glass—plate, Libbey-Owens-Ford Glass Co. Glass blocks—Insulux, Owens, Illinois Glass Co. **DOORS**—Johnson Hardwood Door Co., Hardwood Products Corp. and James L. Lyon Co. **HARDWARE**—Yale & Towne Mfg. Co. **PAINTS**—Pratt & Lambert, Inc. **ELECTRICAL FIXTURES**—Benjamin Electrical Mfg. Co. **PLUMBING FIXTURES**—Crane Co. **HEATING AND AIR CONDITIONING:** Heating—radiant heating coils of welded wrought iron pipe buried in floor slab or above suspended ceilings, A. M. Byers Co. Controls—Johnson Service Co. Hot water specialties—Bell & Gossett. Air Conditioning—Carrier Corp. Climate changer—The Trane Co. Filters—Owens-Corning Fiberglas Corp. Ventilating grilles—Anemostat Corp. of America. Contractors—Buildice Co. Heating Contractor—H. S. Kaiser Co.

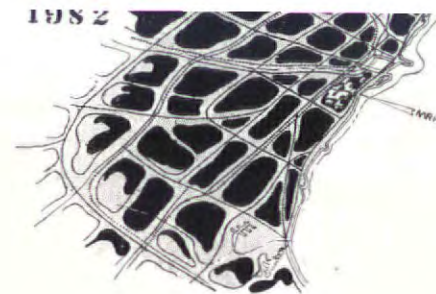
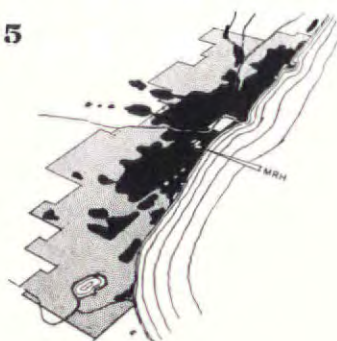
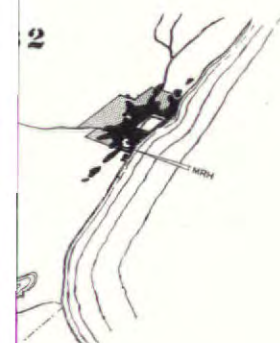


1946

1982

1905

2



A HOSPITAL PLANS

Seven square miles of Chicago slums are scheduled for redevelopment under a unique planning program sponsored by Michael Reese Hospital.

MICHAEL REESE PLANNING STAFF:

REGINALD R. ISAACS, Director
JOHN T. BLACK, Associate Architect
MARTIN D. MEYERSON, Associate Planner
FRANK WEISE, Assistant Architect
ELEANOR E. TORELL, Sociologist

WALTER GROPIUS, Architectural Consultant
WALTER H. BLUCHER, Planning Consultant

While many U. S. cities are chalking up a solid record of planning frustration, Chicago, Illinois is quietly going ahead with one of the most provocative slum clearance programs on record. Not a comprehensive, city-wide plan, it may nevertheless rehabilitate one of the worst blighted areas in Chicago's South Side. This limited yet well-organized project is perhaps unique in the planning field, for it is being carried through, not by a public agency, but by a private hospital. Realizing that blighted surroundings are detrimental to the function and growth of any institution, the hospital's executive board set out to reshape its own environment. Under a program of enlightened selfishness they have produced a community plan ranking with the best attempts by official commissions. Furthermore, the scheme is not just a pretty plan on paper. A considerable part is definitely scheduled for construction and funds have already been earmarked for this purpose. Other aspects of the project make it an example to those who take a defeatist position. It is an attempt to stabilize an area within an otherwise unplanned city. It is seeking to get backing from the entire community and to soothe opposing interests into working together. It will contain one of the first private housing projects to allow mixed Negro and white occupancy.

The project started, not because the hospital board preferred to do things its own way, but because the wheels of official organizations were turning too slowly to meet increasingly bad conditions. Despite Chicago's excellent past record of public planning the present situation is a difficult one. The Chicago Plan Commission, at one time working in close collaboration with the Housing Authority, recently went off on an anti-public housing tangent and the two groups have been feuding loudly and angrily ever since. The Regional Plan Association which might be expected to assert a certain amount of leadership, takes the standoffish view that Chicago is not its special province. Little is being done to remedy the desperate housing situation or to clear slum

areas. No over-all scheme has been developed for rerouting the network of railroads which blankets the city with grime and noise. Instead, the railroads themselves are hard at work on a white-washing job to demonstrate that all is for the best in the best of all possible worlds.

Meanwhile, Chicago grows dingier, more overcrowded and down-at-heel. Blight has already taken over one-third of the city and no part of the metropolis is completely safe from its encroachment.

This is the situation which confronted Michael Reese Hospital in the fall of 1944. A non-sectarian institution supported by the Jewish community, it had grown since 1882 to be one of the largest private hospitals in Chicago with 750 beds and a staff of over 2,000. But through the years, the surroundings of Michael Reese had become more and more run-down until it was at last an island in one of the worst Chicago slums. In spite of its record of achievement, the hospital experienced a near-revolt of doctors, staff and patients who protested against a ramshackle environment and wished to move to another location.

This was easier thought about than done. A \$10 million investment in existing buildings and equipment could not lightly be written off. Moreover, it was soon discovered that there were no adequate sites to be had for a reasonable price—and no sites which would be proof against eventual blight. The hospital's present location on Lake Michigan, only a few minutes from Chicago's "loop", is excellent from the geographical point of view. Michael Reese decided to stay put and solve its problems on the home ground.

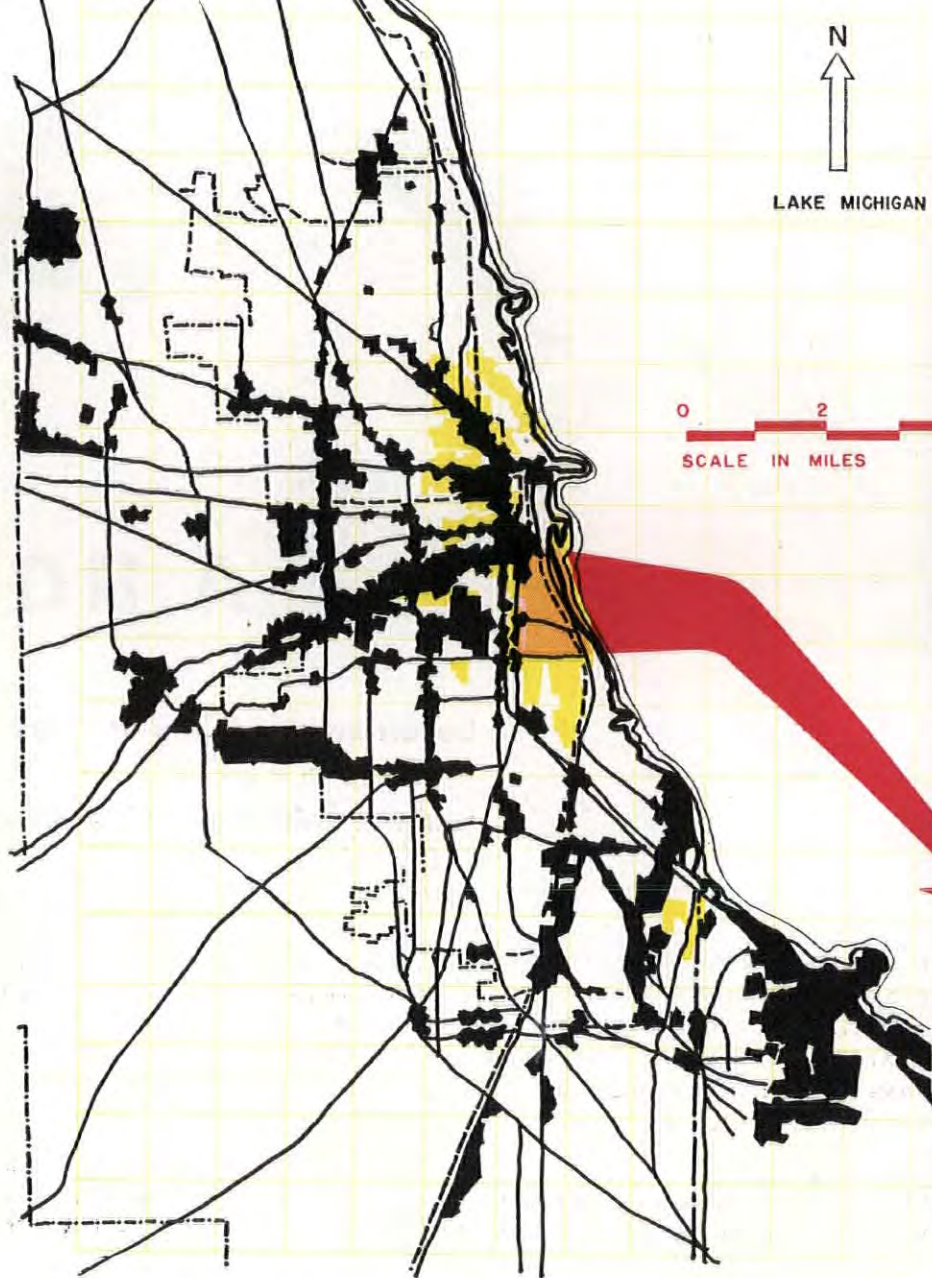
Thus, in September, 1945, a special planning staff was set up to work out a long-range plan for a new medical campus plus a redevelopment scheme for blighted neighborhoods contiguous to Michael Reese property. The hospital itself proposed to build one housing project, to care for both its own staff, and the inhabitants of slum dwellings which now rim the hospital campus.

However, to provide a truly stable environment, a larger area than that directly adjacent to Michael Reese needed rehabilitation. Residential districts to the south are part of a densely settled Negro belt, where a growing population is packed into decayed housing and hemmed in on all sides by restrictive covenants. Scattered throughout the area are many large industries—R. R. Donnelly printing plant, Cuneo Press and Mentzer-Bush printing; the Simonize Corp. and E. L. Mansure textile concern. Many of these companies, like Michael Reese, were considering moving. Lack of housing for workers plus the fact that girl workers hesitate even to enter the area made their labor supply increasingly unstable. In addition, the tangled traffic situation slowed down plant operation. Nearby hospitals were also considering leaving the district for more pleasant surroundings.

The Michael Reese plan was therefore expanded to take in these institutions and industries plus the slum districts to the south—a seven-square mile area bounded by Lake Michigan on the east, the Pennsylvania Railroad tracks on the west, 12th Street on the north and 47th Street on the south.

With this larger area as their planning task, the most pressing problem before the Michael Reese staff was to enlist the active backing of the entire community. Business men, hesitating to move (as had the hospital) because of their tremendous investment, were ready to recognize the plan's benefits. The Illinois Institute of Technology, included in the area to the southwest, had already decided to remain and was deep in its own expansion plans. Under the new program, they decided to build a housing project for the community at large in addition to a scheduled development for their own staff. The Chicago Housing Authority had previously given the Negro slum area near Michael Reese A-1 priority on their rehabilitation program. They now agreed to coordinate their housing projects with the over-all community plan. Insurance companies looking for investments, were so impressed with the coordinated program that they may institute a number of private housing projects in the area.

Michael Reese's busy planning staff also enlisted support from the Catholic Archdiocese, the Urban League (a Negro cultural organization), C.I.O. and A.F. of L. officials, railroad executives, real estate men and the City Planning Commission. These diverse groups represented influential but conflicting interests in the community and it is of paramount importance that they be persuaded to work together. The upshot of Michael Reese's tactful and unflagging efforts was the formation of the South Side Development Association, a non-profit community organization which they deemed essential to the success of the program. In spite of initial hesitation and suspicion, the executive committee of this Association is now off to a good start under joint leadership of Negroes and whites, public housers and real estate men, industrialists and labor leaders, Catholic and Protestant clergymen. Its objective is to put through the long-range development plan and to take over responsibility for community rehabilitation when Michael Reese finishes its two-year planning session. The program it sponsors includes regrouping of industry and railroads; attraction of new industry; rerouting of the tangled street system; and erection of good housing with low land coverage to allow space for playgrounds and community facilities. Its success thus far is due to the realization that community improvement will be to the benefit of all.



obsolete zoning means . . .

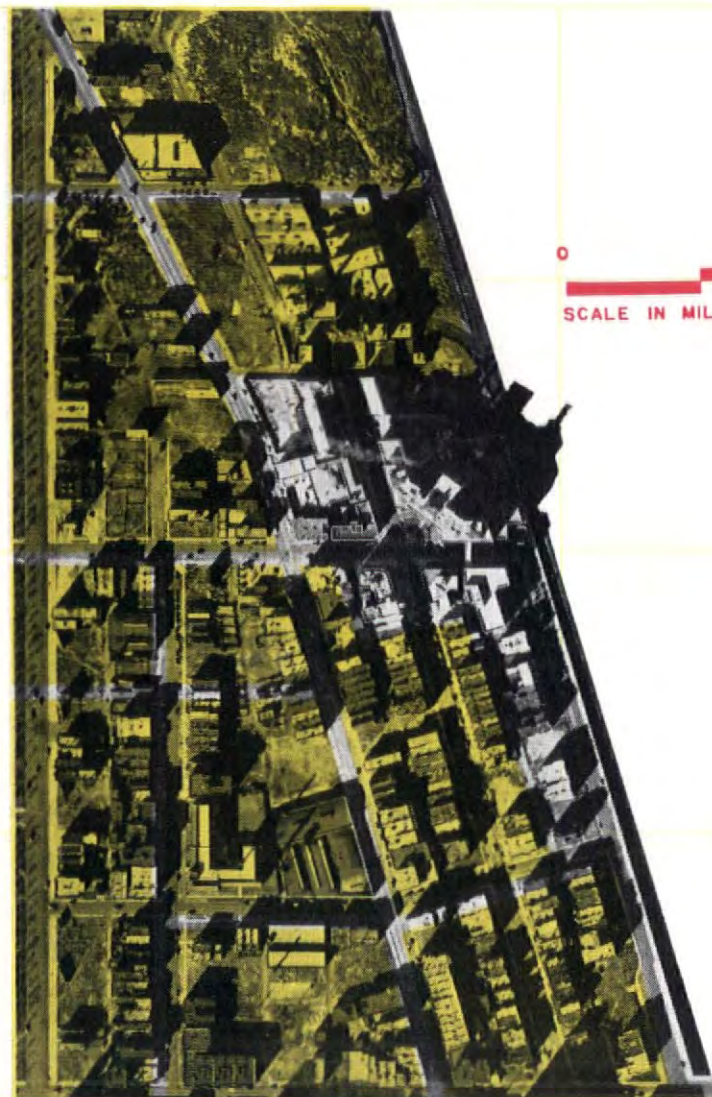
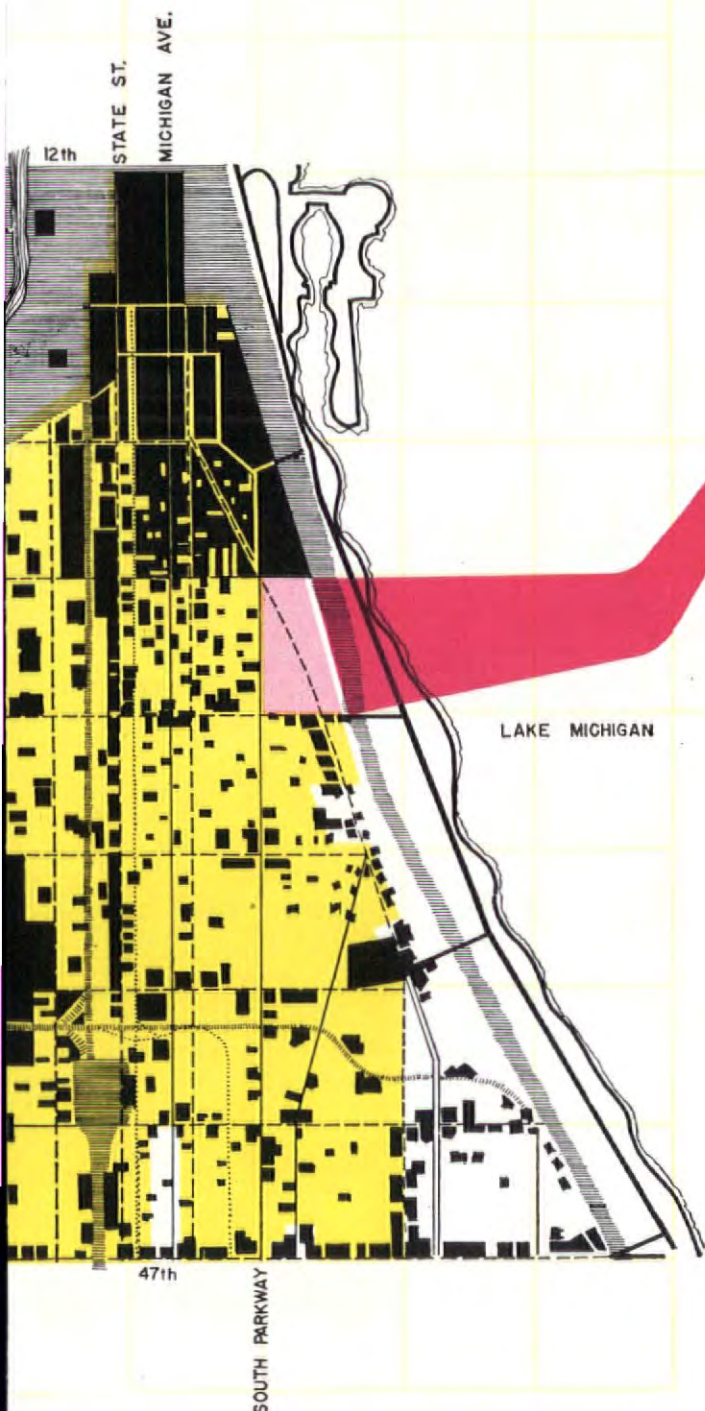
Like most U. S. cities, Chicago suffers from two of the worst handicaps to healthy urban growth: a rigid grid pattern of streets and a haphazard railroad network. These two elements in the layout of the city have helped set the stage for decay throughout the entire metropolitan area. It is often said that, more than any other one factor, the railroads made Chicago. But if they did, it is also true that they have done the most to break the city. In the same way, if the grid street system has created real estate values, it has in some instances, depreciated them.

The map of the Chicago metropolitan area above readily indicates the random railroad placement which slices the city in every direction without regard for land usage. Twenty-eight different railroad lines, serviced by six passenger terminals and hundreds of freight terminals have been built in Chicago during the city's development. So far, there has been no successful effort to coordinate the many lines and to provide central terminals in convenient locations. Near each railroad, industries have grown up, creating a spreading pattern of blight throughout residential districts.

The grid street pattern, represented on the diagrams by a superimposed module, has also cramped the proper development of residential areas and has made every street into a traffic raceway. Some of the major thoroughfares which intersect at one-mile intervals are shown on the plans. Actually,



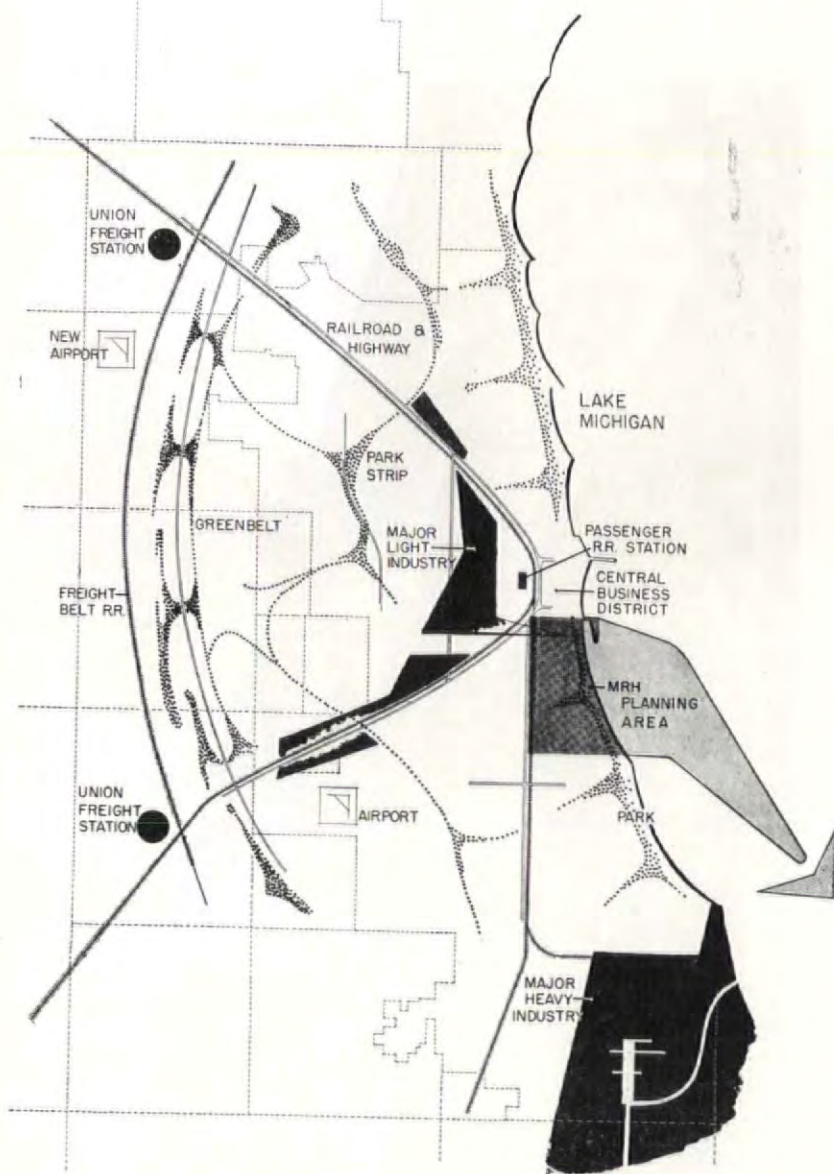
- BLIGHTED AREAS
- RAILROADS AND YARDS
- INDUSTRIAL AREAS
- TRANSIT LINES



an obsolete city

however, there is a criss-cross of streets spaced $\frac{1}{8}$ and $\frac{1}{16}$ of a mile apart which further complicates the strangling pattern. Ribbon zoning for industry and business which follows the street system has blanketed the city with a grid of commerce. Present zoning laws actually specify this system of placement. Results are shown in the diagram (left) of the South Side slum area chosen by Michael Reese for redevelopment. Although there is a concentration of industry to the north, the entire seven-square miles are spotted with business concerns.

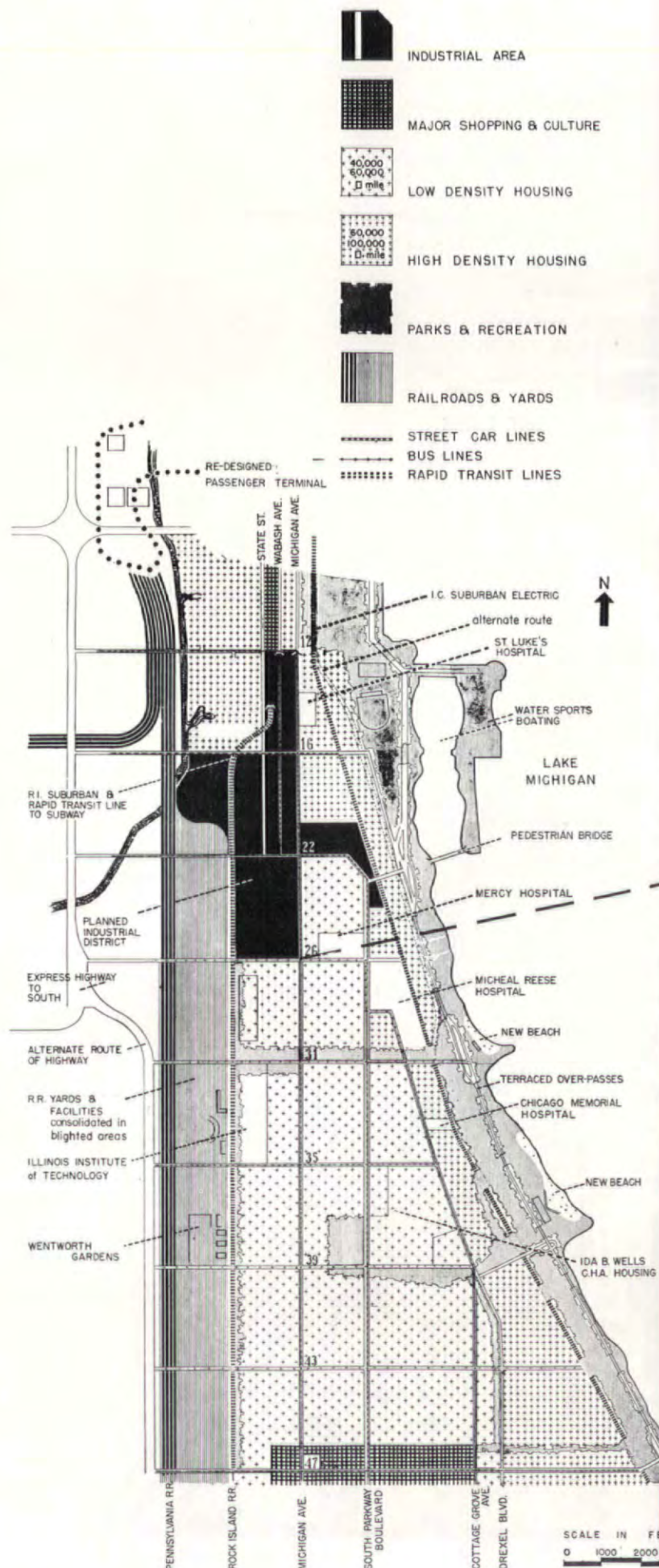
The comparatively small area which will be taken over by the expanded Michael Reese campus (above) is an example of the worst effects produced by this type of zoning. Formerly a fashionable residential district, it is now flanked by railroads and encroached upon by industry. The fine old houses have been split up into tiny, dark flats and have fallen into a state of slummy disrepair. Narrow streets, servicing both automobiles and trucks, create a hazardous traffic tangle. Perhaps the worst problem is the complex ownership of land. There are hundreds of houses, owned by different persons or firms and some are built on as little as 16 ft. of land. To assemble the desired site for Michael Reese means a tremendous problem in title-clearing and negotiation. Working out a scheme for the entire seven square-mile area involves an entirely new conception of street and building placement.

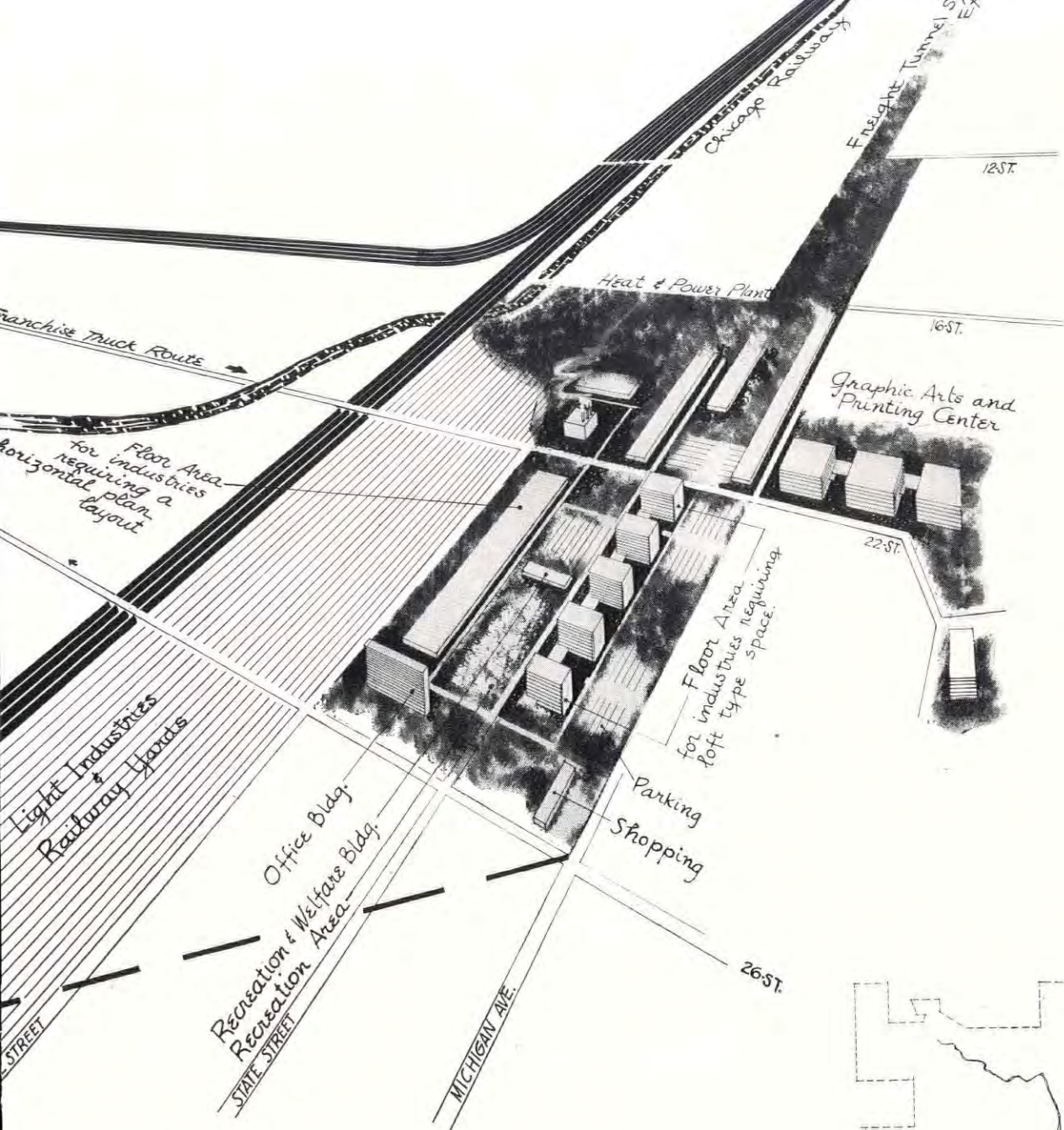


organized land use . . .

An ideal organization of Chicago, similar to the one shown above, would simplify the railroad, highway and industrial pattern and introduce open space throughout the entire city. Under present circumstances, such an over-all plan is no more than a dream, but this long-range conception of the city is a prerequisite to planning any smaller area.

The particular section under study by Michael Reese fits into the larger scheme and at the same time meets the requirements of the present situation. Parts of the one-mile grid pattern have been retained, but these streets are planned as expressways for fast through traffic. The closely spaced subsidiary streets (not shown) would be limited to slow-moving traffic and used only for access to residential developments. Some of them would be closed or rerouted to provide extra space for playgrounds and community facilities. Within the mile grids, residential districts would be developed at different densities as shown on the map (right). However, all housing would be constructed on the theory of low land coverage with plenty of open space for parks, recreation and community facilities. Because the planners believe that small "contained neighborhoods" providing home, shopping, school, recreation and work within walking distance of each other, are impractical in a large city, they have not tried to provide each housing district with all these services. A regional shopping center is scheduled for the extreme south end of the residential area and



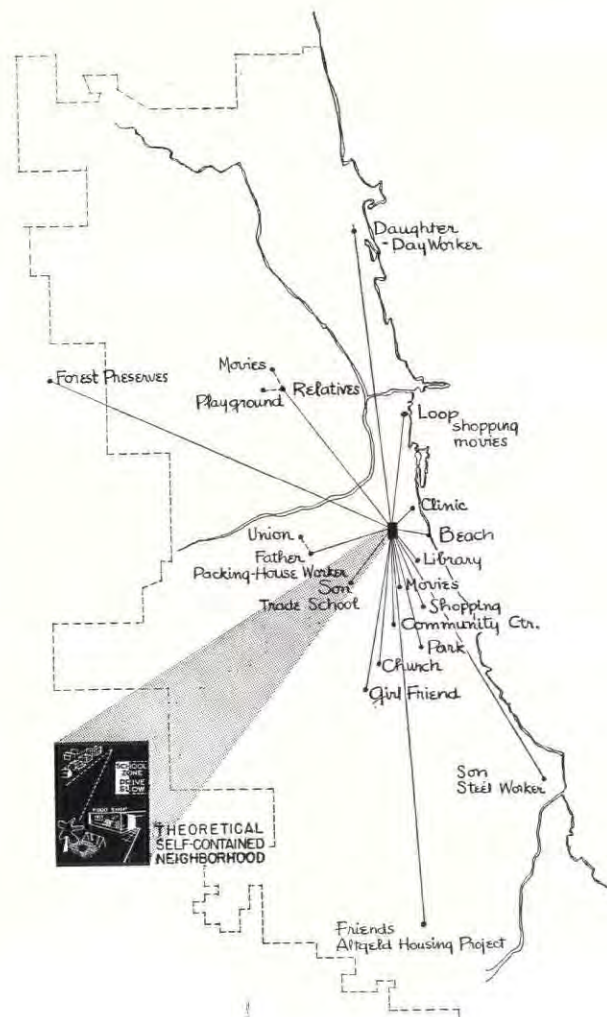


unties the urban tangle

schools will be located at convenient intervals. Industries would be gradually shifted from residential districts to the north section where the greatest number of them are already concentrated.

In relocating transportation within the area, the Michael Reese planners have correlated it with the specific facilities which it serves. It is proposed that freight and through passenger rail lines at present on the lakefront will be placed to the west where a number of tracks now run. Directly adjacent to these railroads, is a blighted residential pocket which would be given over to rail yards and light industry and separated from future housing by a belt of green. The Illinois Central suburban railroad cannot be moved from its shoreline position, but railroad executives are considering covering the tracks to eliminate soot and noise and improve the view.

The planned industrial district (above) is part of the proposed scheme to segregate industrial and residential developments. New business will be encouraged to settle here and will find it advantageous to do so since all the auxiliary needs of industry—large loft buildings, truck renting service, restaurants, employ recreation and welfare buildings, union headquarters, etc.—will be provided as part of the redevelopment plan. Heavy truck traffic which now poses a problem throughout the entire area, will be limited to special franchise truck routes serving only this industrial district.



Scrubby businesses will go.



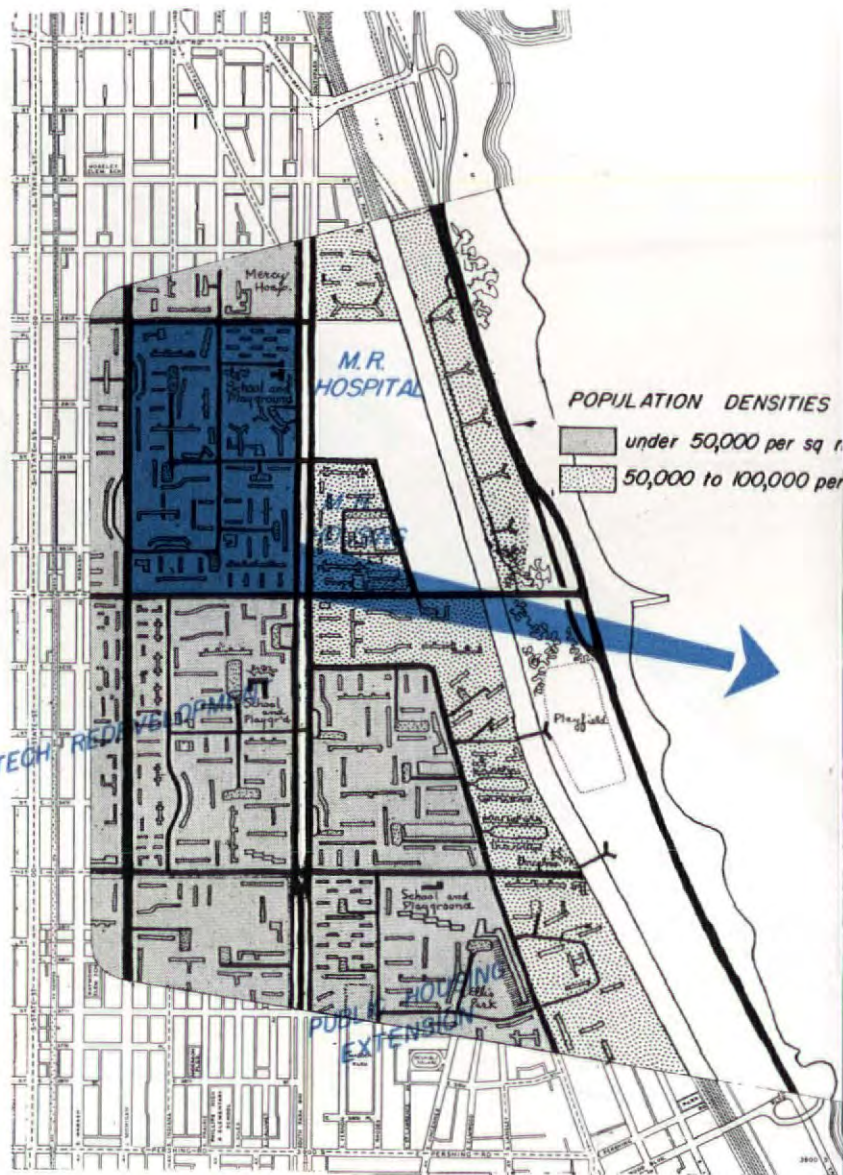
Mansions needed for transitional housing . . .



. . . and decayed churches will be spruced-up.



Tenements will be replaced by modern apartments, wide lawns.



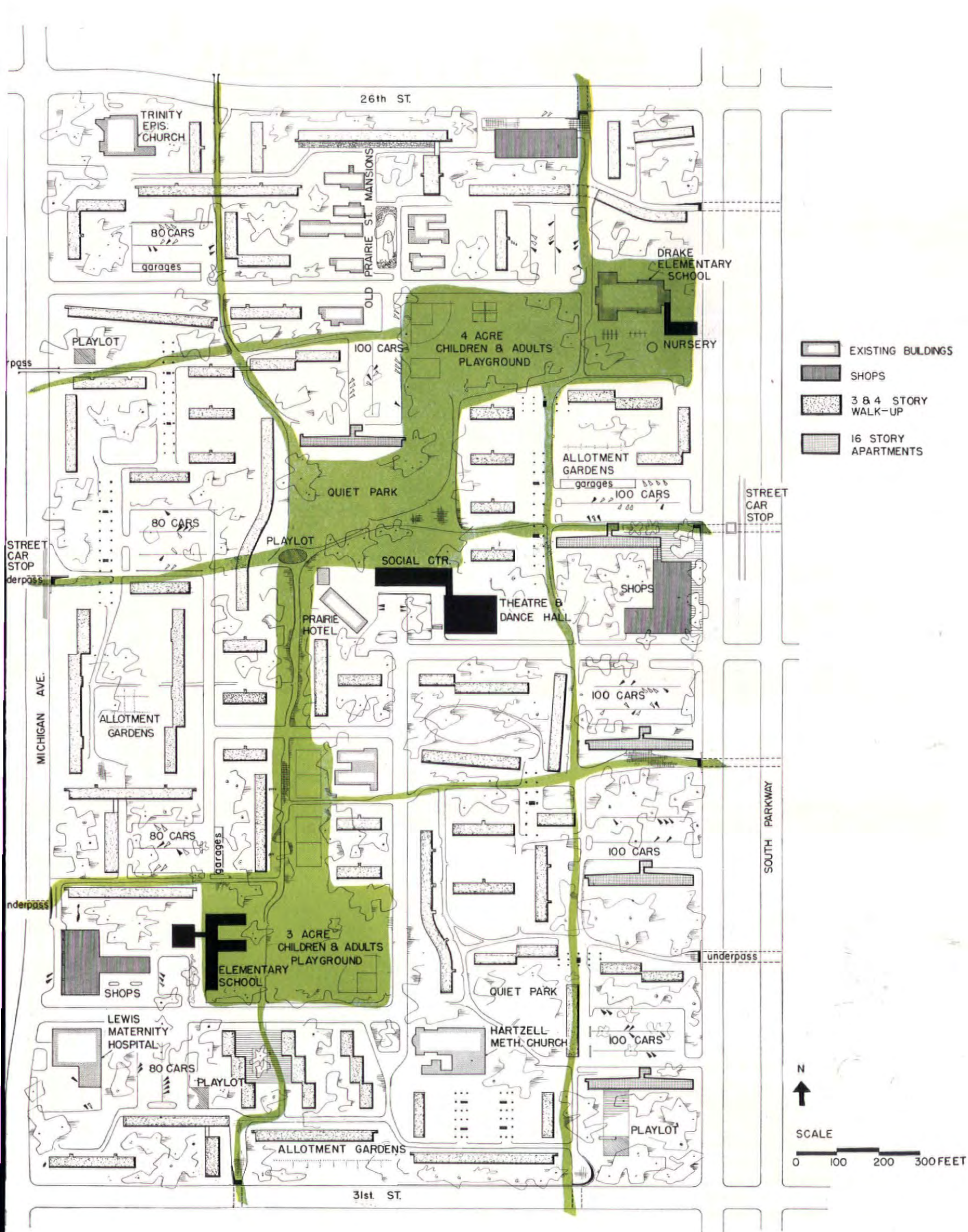
residential districts forsake the grid pattern

The housing situation was perhaps the most crucial problem tackled by the Michael Reese planners. Although the hospital will actually rebuild only its own campus and possibly one housing development, general plans had to be made for the entire residential area. This consisted mainly of establishing a policy for future development. One of the most important changes is the abandonment of the grid pattern except for through traffic streets bounding each housing district. Within these limits, the project will follow an informal layout of tall apartment houses and three-story walk-ups with low land coverage and plenty of open space for lawns and playgrounds. The size of each district will be dependent on the service range of community facilities.

In order to base their plans on facts, the staff cooperated with the Metropolitan Housing Council in sending over a thousand questionnaires and 35 interviewers to collect basic social and economic data. The results of this survey include weekly income, rents, family size, number of workers per family, length of residence, age groups, an employment breakdown and present transportation, community facilities and housing conditions. According to this information, monthly rents in new projects will have to average about \$30 with variation provided above and below that level. The age-group breakdown revealed that there were many more children than adults in the area, a fact which influenced the design of the projects. Exact data on the size of families also governed the plans.

Certain districts near the Michael Reese campus and connecting with the Illinois Tech projects have been worked out in detail as a guide for insurance companies who are planning to invest here. One of these detailed district plans, a nine-square block area, is shown on the opposite page. Part of it will be developed by private investors, but to provide homes which the majority of tenants can afford, 40 to 60 per cent of this district will have to be subsidized public housing. At present the planning staff is working on this job with the Housing Authority which has given it priority for redevelopment.

The site plan as shown is merely a suggested layout developed by the Michael Reese planning staff and will undoubtedly be changed in detail when an architectural office starts drawing up final plans. However, the physical principles already worked out will remain the same. Basic to the scheme is the separation of vehicular and pedestrian traffic. No sidewalks are provided along the streets, but instead pedestrians walk through gardens and parks. This separate footpath system connects with other districts by means of over and underpasses across through traffic streets. The interior access street system is designed so that no motorist will have more than a minute's walk from the parking area to his residence. Control of the automobile plus abandonment of traditional setback regulations in apartment houses, permits a free disposal of buildings to create good architectural relationships.



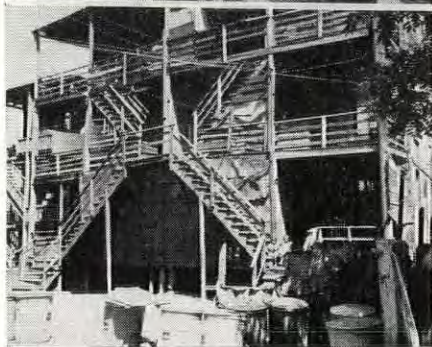
Railroad tracks to the east . . .



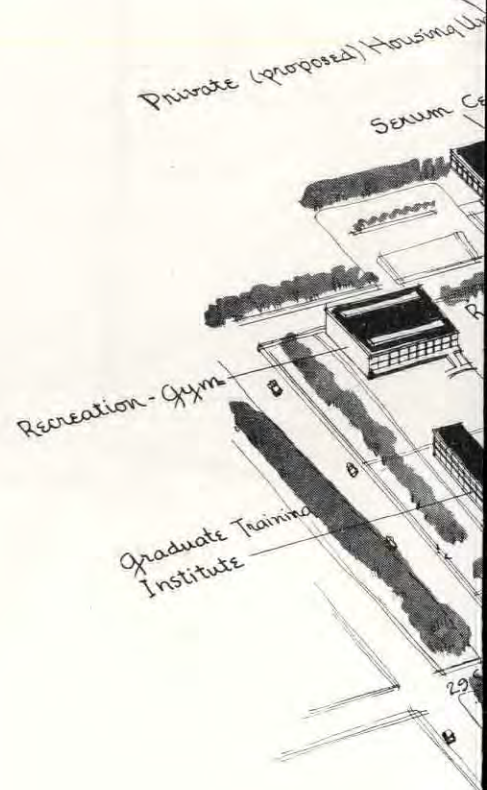
Industry to the north . . .



Slums to the south and west . . .



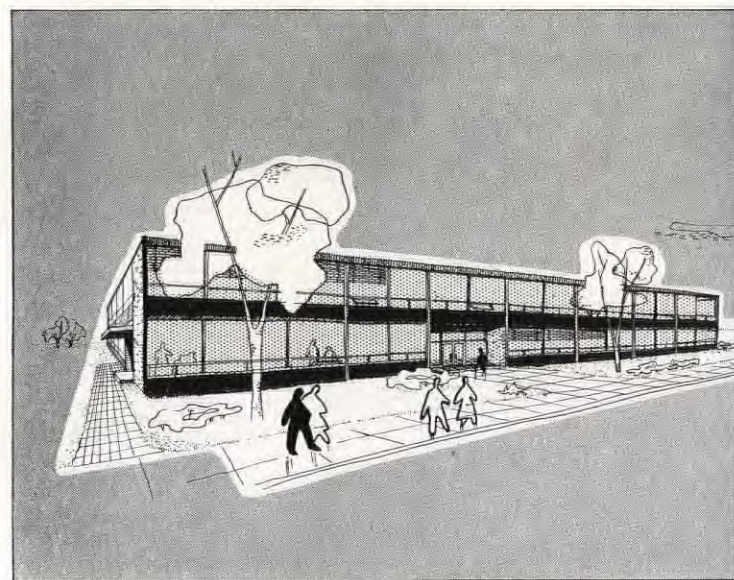
. . . mark the present boundaries of Michael Reese Hospital.



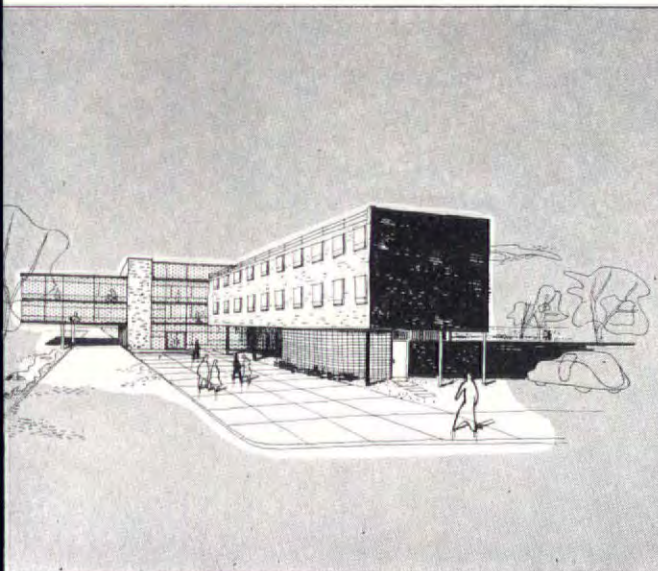
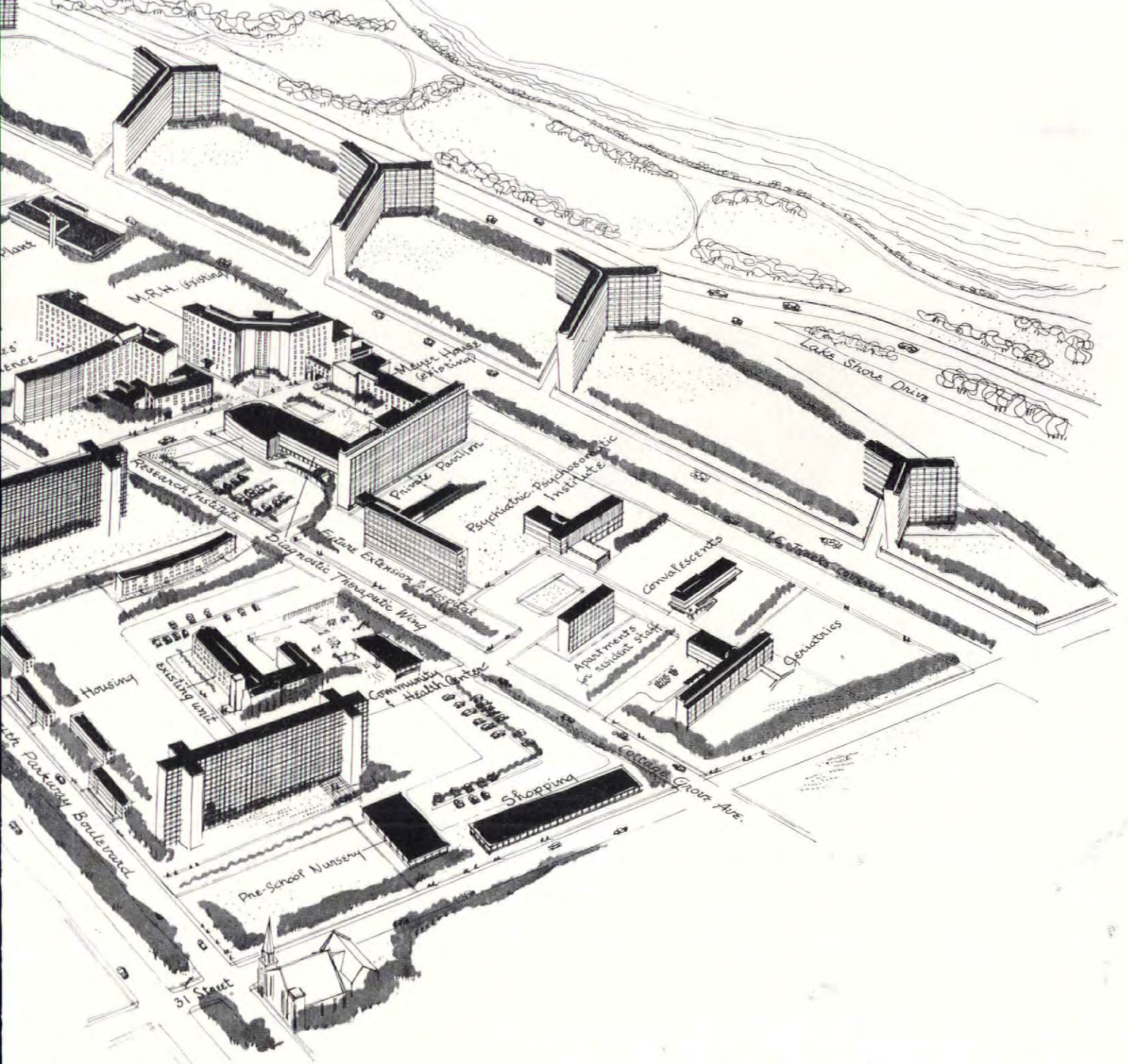
Michael Reese hospital gets a new campus

Plans for the expansion of the Michael Reese campus have been broken into two-, five-, ten- and twenty-year programs. Thus, as new buildings are added, they will fit into an integrated scheme similar to the master plan of a city. Perhaps the most urgent work at present is land assembly, for the existing campus occupies only a small portion of the projected site shown above. The first steps have also been taken to raise the entire campus level to 14 ft above the adjacent railroad tracks. This will make feasible a plan to cover the unsightly rail lines.

The present hospital plant is undergoing thorough study in order to calculate maintenance costs and to find means of improving its functioning. This survey will provide a sound basis for future design and is already guiding the plans of buildings scheduled under the two-year program. These include a Psychiatric-Psychosomatic Institute, one of the first to be built by any hospital in the U. S.; a separate convalescent home; and a 200-bed private pavilion which will become the nucleus of the growing hospital. The five-year program will introduce a Serum Center, a centralized Institute of Research and a new power plant. Under study for the ten-year program is an ambitious post-graduate School of Medicine, a new surgical wing and a pavilion for the chronically ill. Twenty years hence, if all goes well, Michael Reese will boast a new Children's Hospital, a hotel for patients' families and a Home for the Aged.



SERUM CENTER

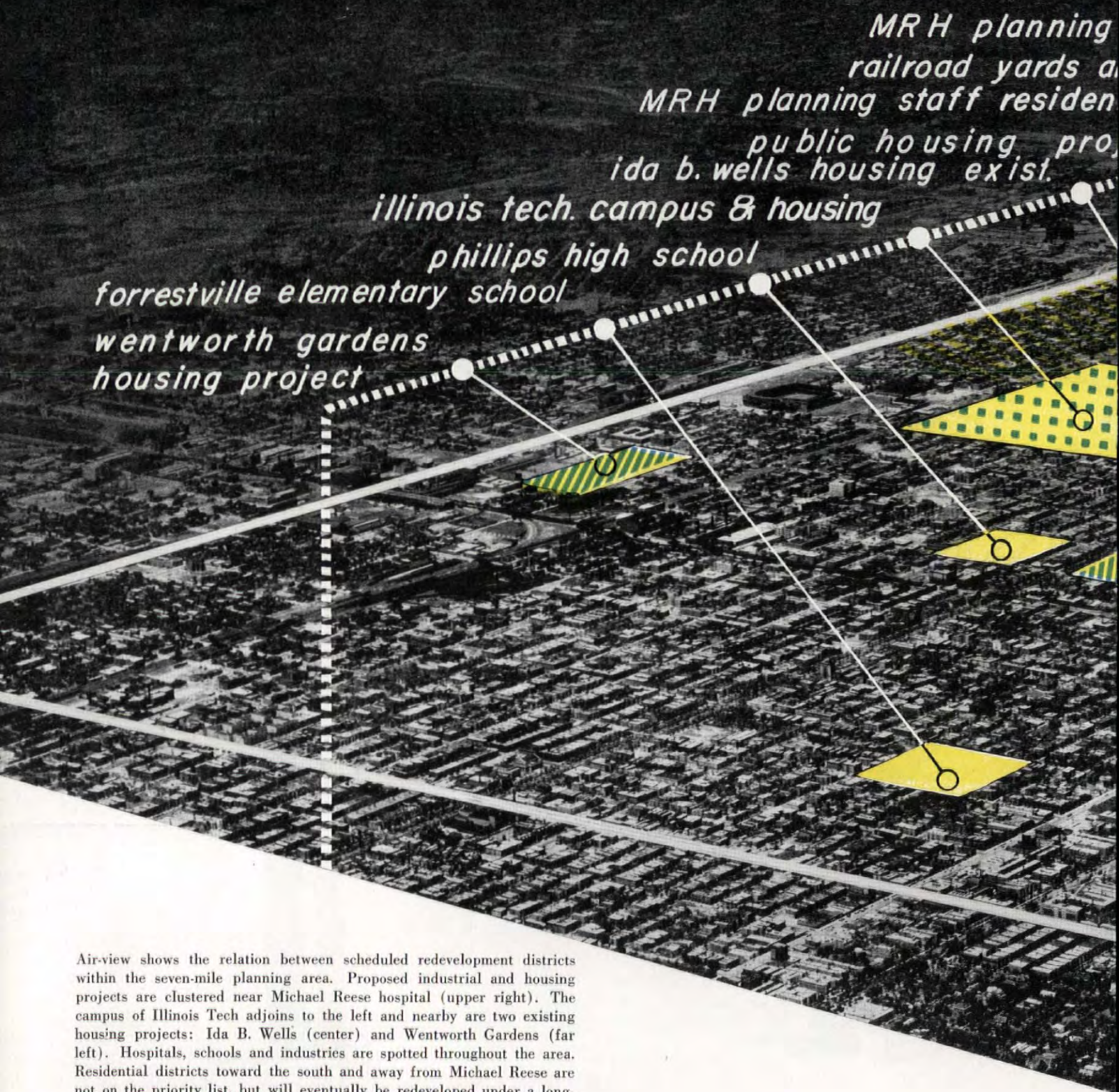


CONVALESCENT



200 BED PAVILION

Chicago's South Side makes a new beginning



Air-view shows the relation between scheduled redevelopment districts within the seven-mile planning area. Proposed industrial and housing projects are clustered near Michael Reese hospital (upper right). The campus of Illinois Tech adjoins to the left and nearby are two existing housing projects: Ida B. Wells (center) and Wentworth Gardens (far left). Hospitals, schools and industries are spotted throughout the area. Residential districts toward the south and away from Michael Reese are not on the priority list, but will eventually be redeveloped under a long-range program. In the democratic tradition of Michael Reese, which takes pride in a staff composed of both Negroes and whites, all housing is proposed for mixed occupancy. Only joker in the program is that even subsidized housing cannot offer rents low enough for the poorest members of the community. Thus, homes must be found elsewhere in the overcrowded and restricted city for sizable numbers of South Side residents.

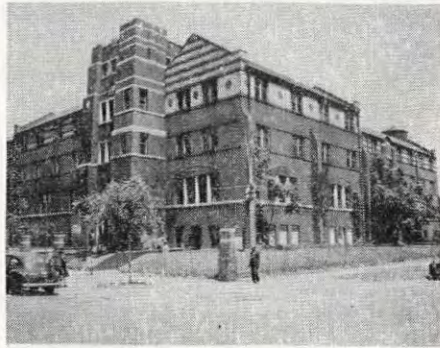
Industrial study
industry
dy

michael reese hospital
● campus
● housing

Scattered shanty housing . . .



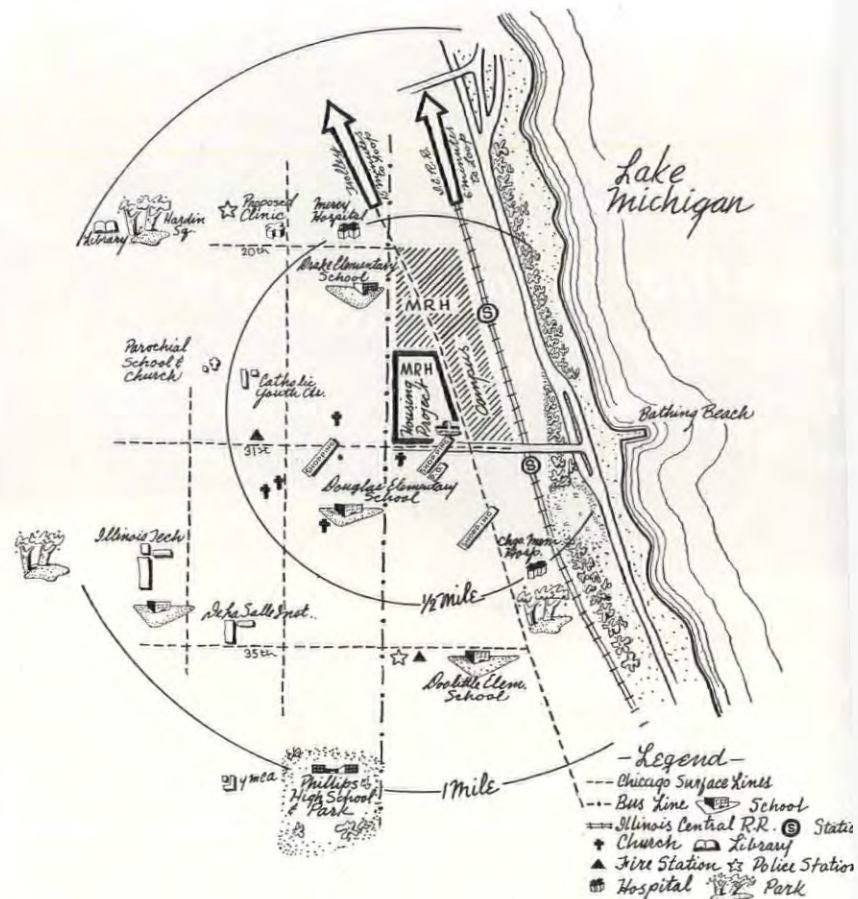
converted institutions . . .



derelict mansions . . .



. . . and gutted sites
make up the
present slum community.



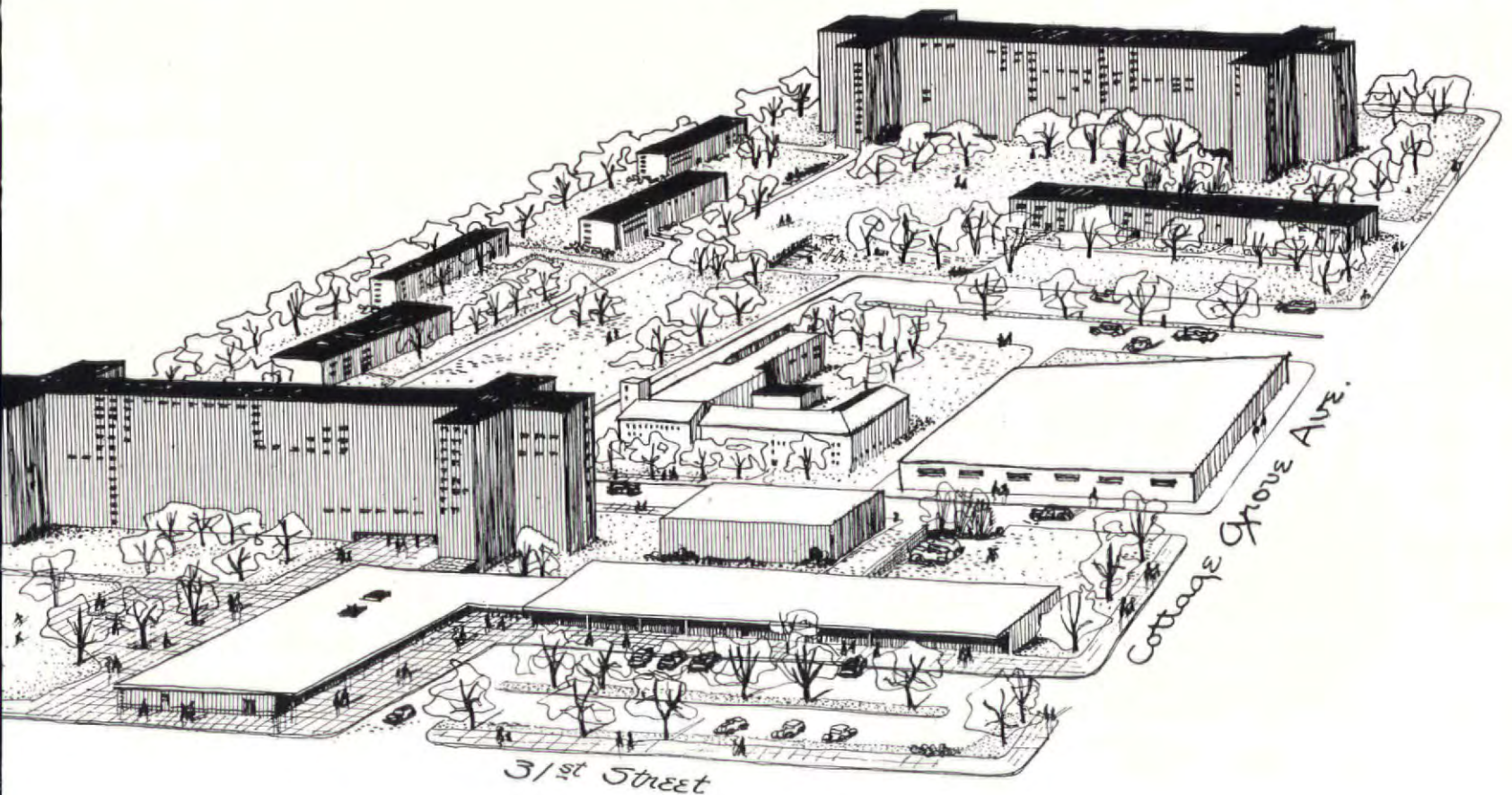
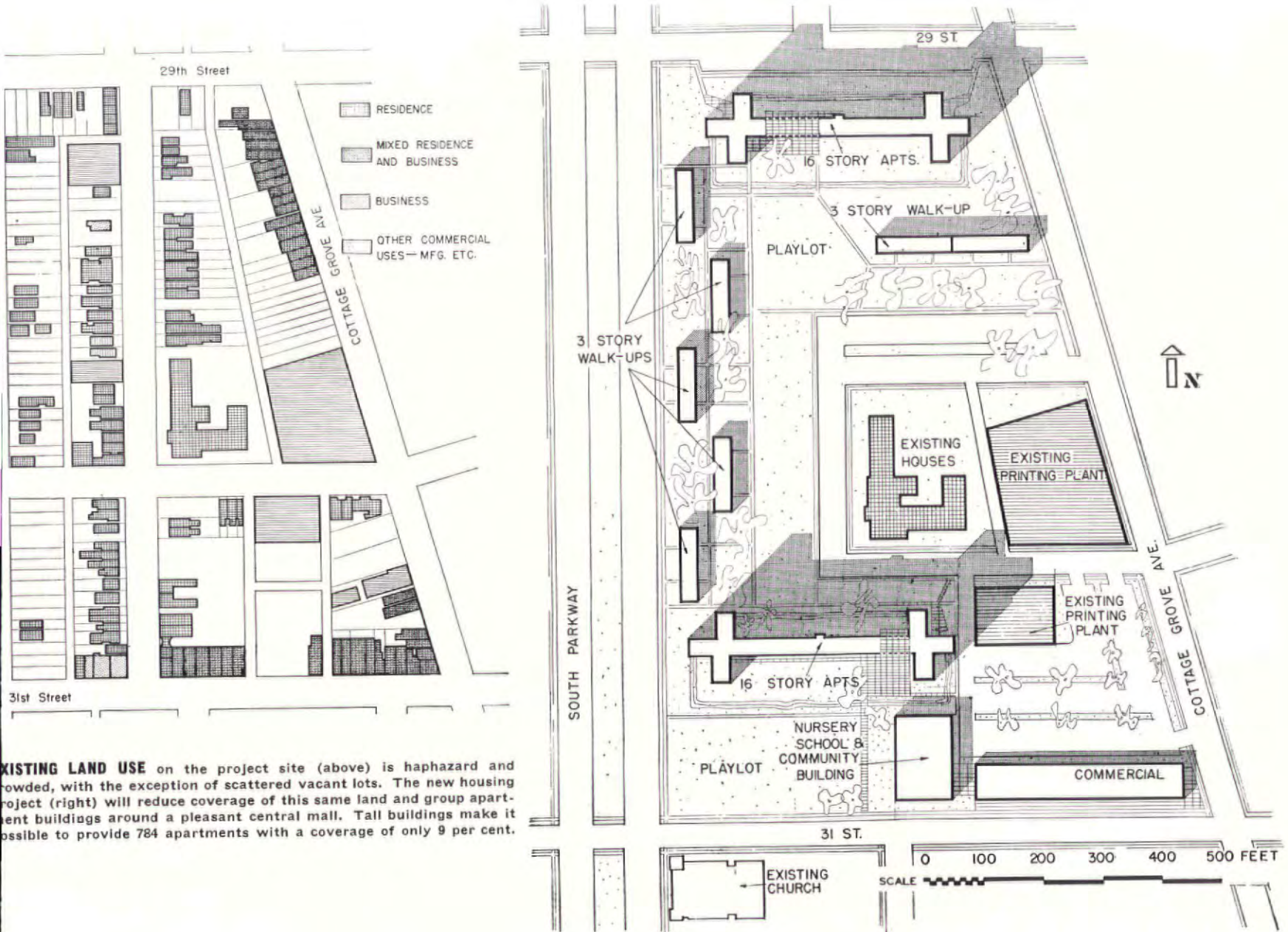
COMMUNITY FACILITIES which already exist within the planning area will be used to provide a minimum standard of service for the Michael Reese housing project. More will eventually be built under a long-range program, but at present they are less urgently needed than the new housing and have therefore been given a lower priority.

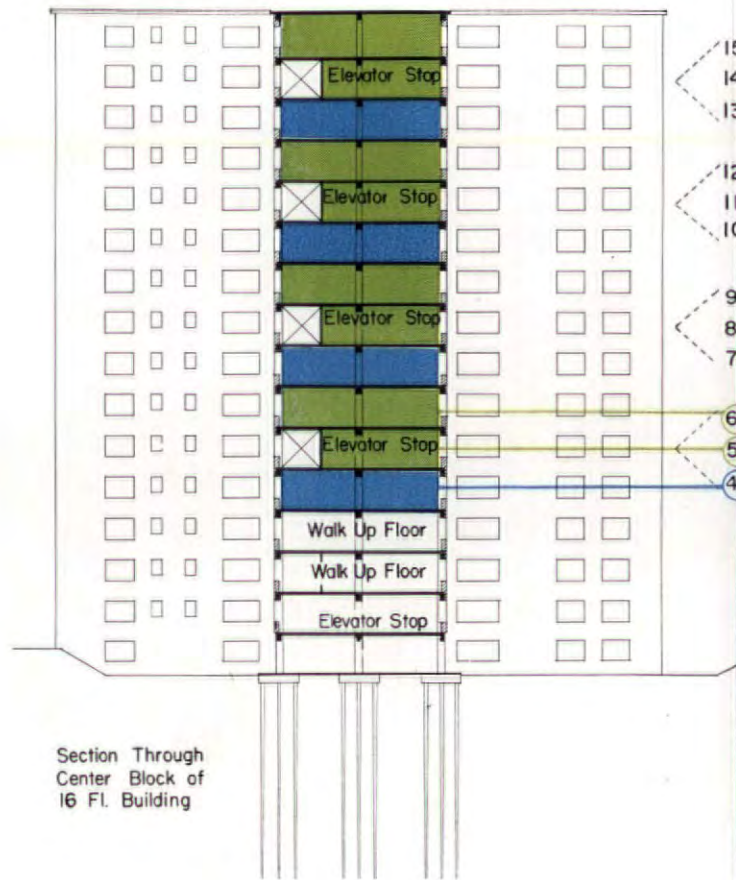
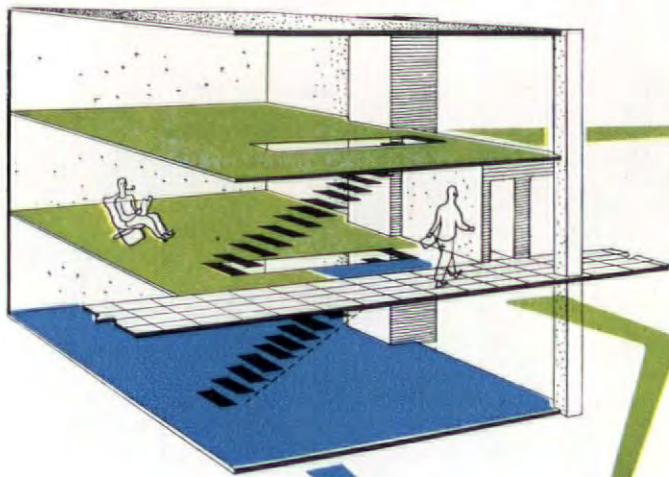
the hospital builds a housing project

The new housing project scheduled for early erection next to Michael Reese campus, is planned mainly to answer the need of the hospital's employees. A survey conducted among staff members revealed that 71.2 per cent of those persons responding were interested in new housing in a location convenient to their work. The size of the project was predetermined by this knowledge and by the decision to provide a percentage of apartments for the community at large. The survey, which included an income study, also helped set the scale of rents. They will range from \$45 to \$80 monthly, a rather high scale, but compatible with salary statistics. Tenants not on the Michael Reese staff will inevitably be drawn from the better-off members of the Negro community. Few persons now living on the site could afford the rents and will therefore need to be housed in subsidized projects.

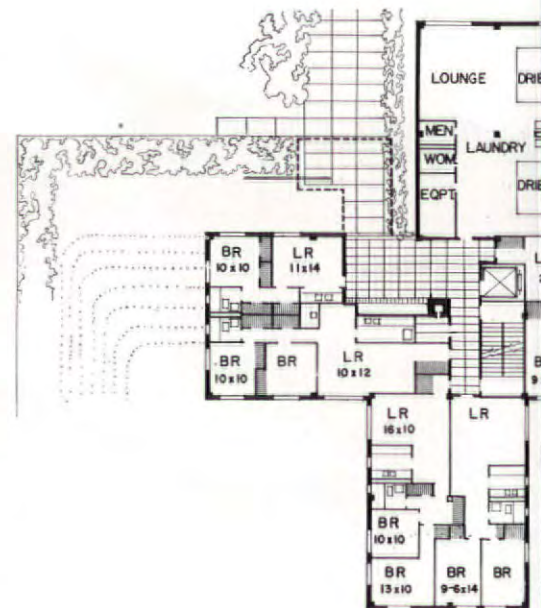
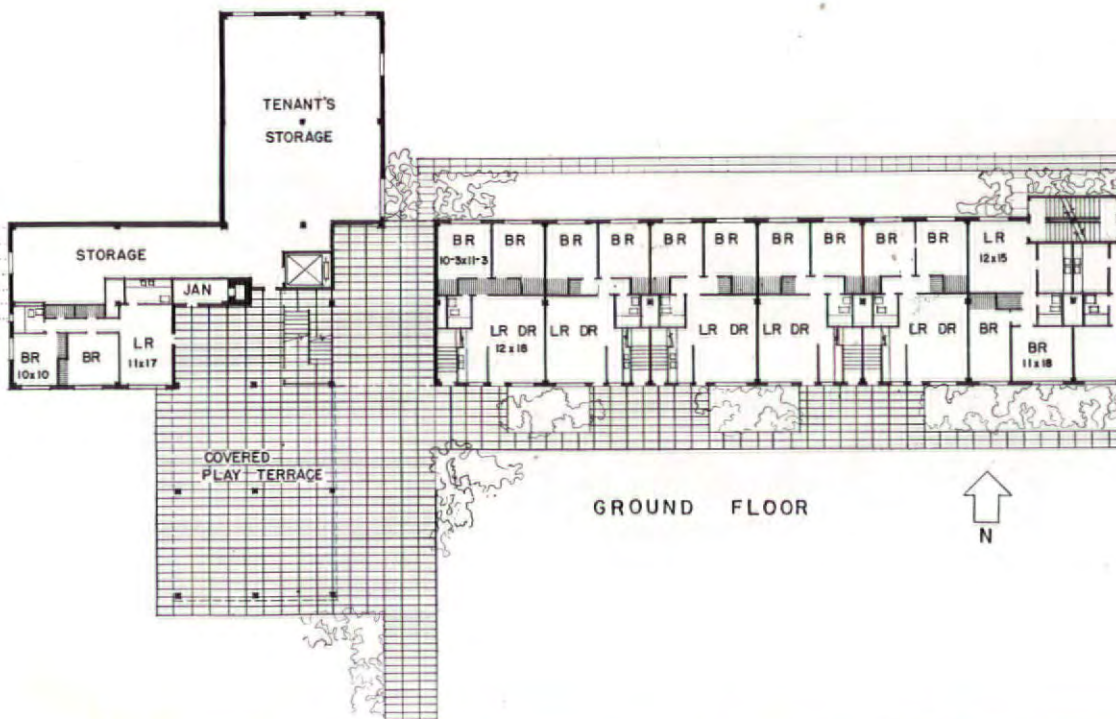
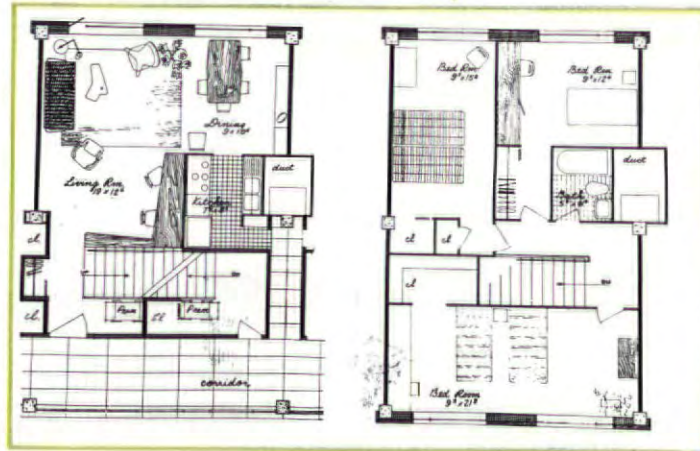
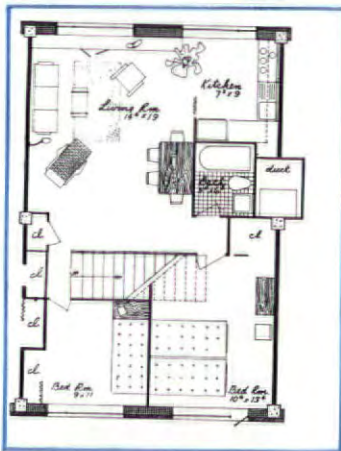
The tentative scheme for the hospital project calls for buildings of two types: sixteen-story elevator apartments and three-story walk-ups. The latter will be reserved for families with the largest number of children and are planned for easy conversion to either four, five or six bedrooms. In the tall buildings, which will be broken into smaller apartments, indoor play space is provided on each floor. On-site social facilities and a nursery school will be located in a special community building. The large amount of open space will be used by the children for outdoor play.

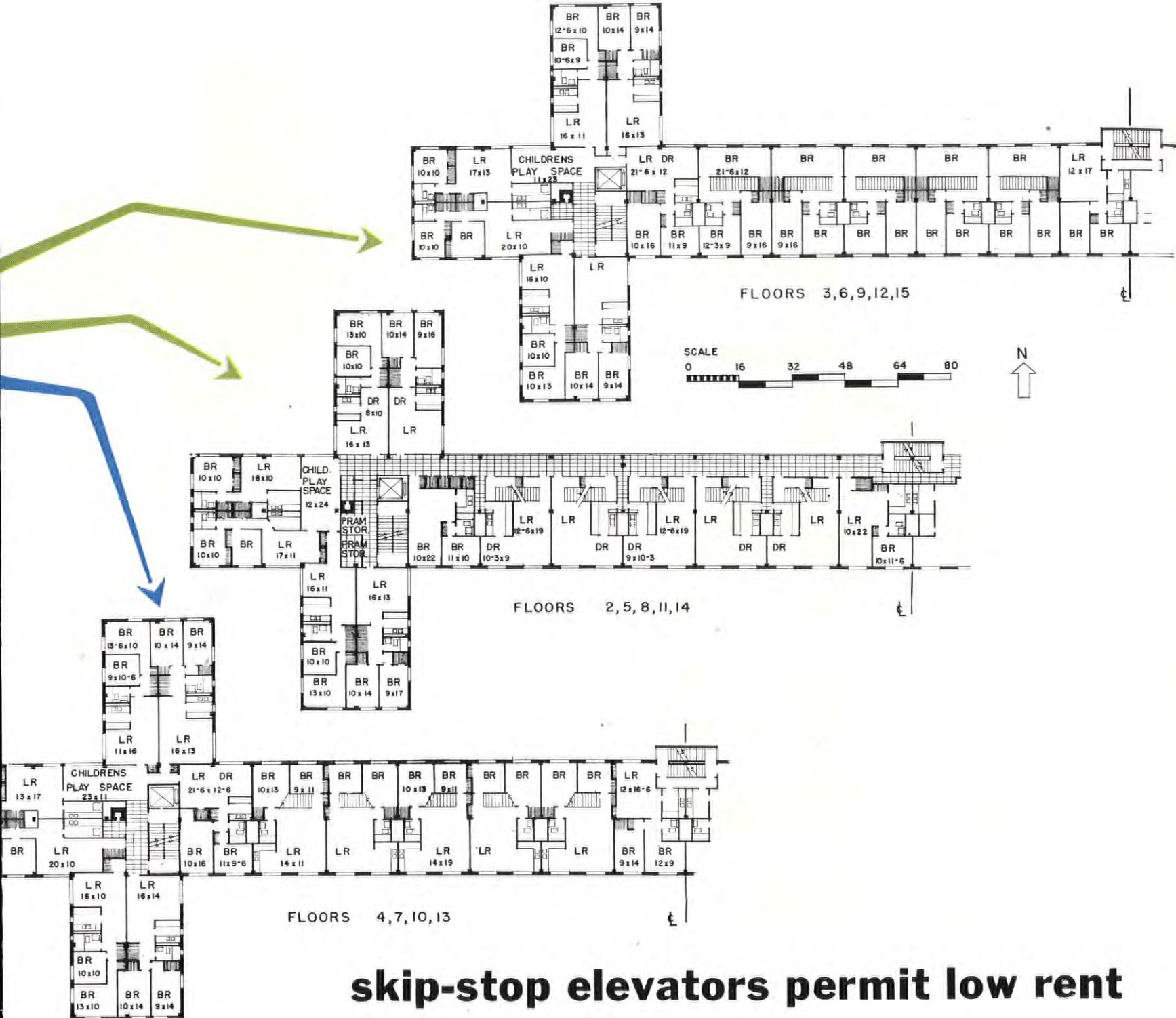






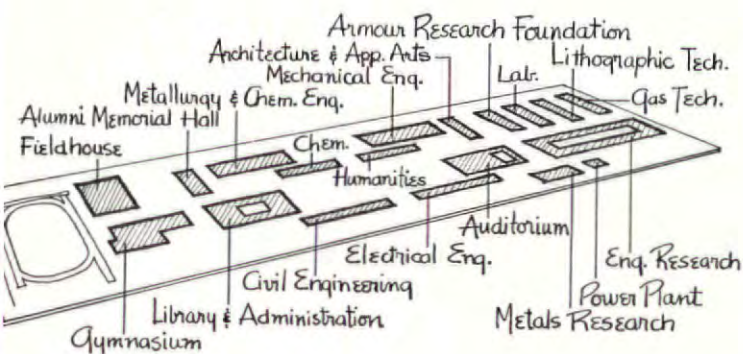
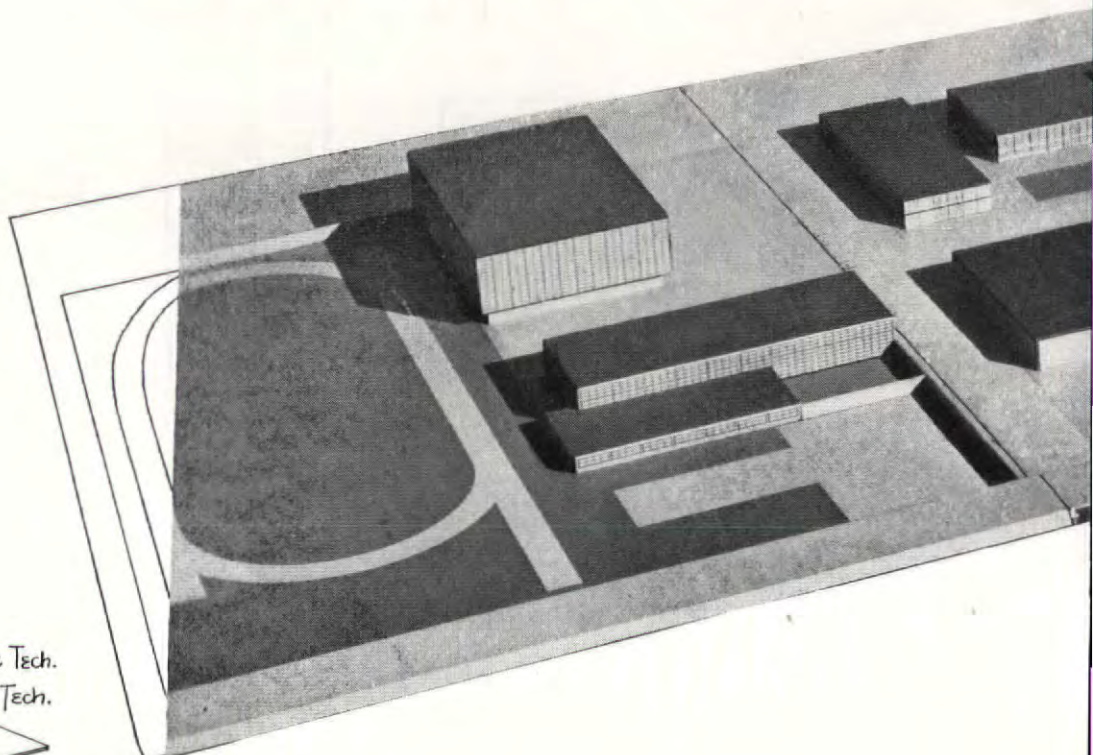
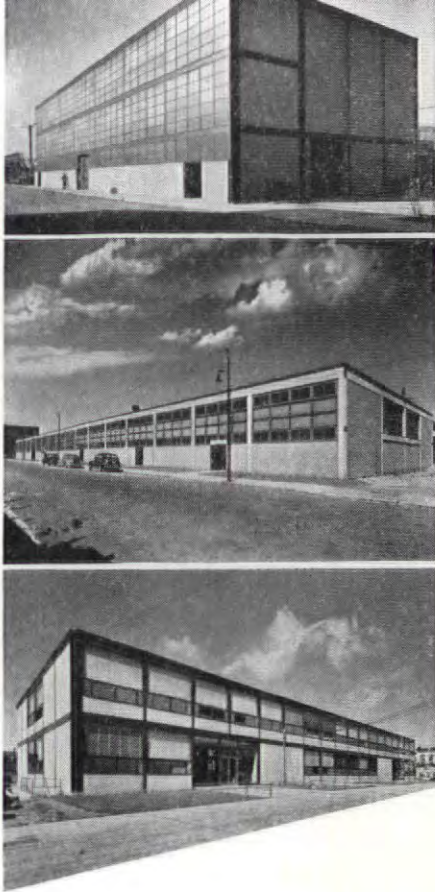
Section Through
Center Block of
16 Fl. Building





skip-stop elevators permit low rent

Combining the best features of the cross and in-line plans with some innovations of their own, the designers of the 16-floor apartment buildings for the Michael Reese housing project propose to hold construction and operating expenses to a minimum. Basis of the major economy is horizontal division of each 350-family building into three-story sections, only the central floors of which are served by elevators. From north-side corridors on these access floors, tenants will enter directly the living-dining level of six-room duplex apartments or walk down one flight to three-and-one-half room flats. Since the first two floors above and the one floor below the entrance level are also served by stairs, elevators will stop at only the fifth, eighth, eleventh and fourteenth floors. To offset the fact that each elevator will have to serve 491 residents, they will be large enough to accommodate 18 passengers and fast enough to make an average round trip in little more than two minutes. Advantages of the elevator system: reduction of initial costs (additional control and door equipment would cost about \$900 per stop), reduction of maintenance expenses (interior stairs will be tenant-maintained) and reduction of public hall space to 6 per cent of total floor area (normal ratio: 10 per cent). In addition to its elevator economies, the design of these large (2,957,600 cu. ft.) buildings is commendable for the provision of interior play space on each floor and the cross ventilation enjoyed by each apartment. Detailed cost and operating estimates are presented on page 104.



Illinois Tech replans 16 city blocks

MRH campus

Before Michael Reese initiated their planning project, the Illinois Institute of Technology was already underway with its own \$17 million expansion program. To date, three new college buildings, designed by Tech's Mies Van der Rohe, have been completed. On the boards is an entire new Mies-designed campus which will follow the site plan of the block model shown above. This expanded college will take in the area from 31st to 35th streets and from State street to the New York Central tracks as marked on the air-view at right.

MIES VAN DER ROHE, Architect

Of particular interest are two mixed occupancy housing projects, one for faculty and students, the other a development for the general public which Illinois Tech will coordinate with the community program. Although plans are still indefinite for these projects, the college has tentatively decided on large dormitories for students plus staff apartment houses containing a choice of duplex or single family units. Most of the 12 blocks (east of the campus proper) which have been chosen for the site, are already owned by the Institute and surrounding districts have been marked by the Housing Authority for early redevelopment. This section of the over-all planning area is therefore assured of excellent residential districts. If the South Side Development Association continues its enthusiastic start, the course of blight will be reversed in the entire seven-square mile area. Slums will disappear, to be replaced by modern, well-planned communities.

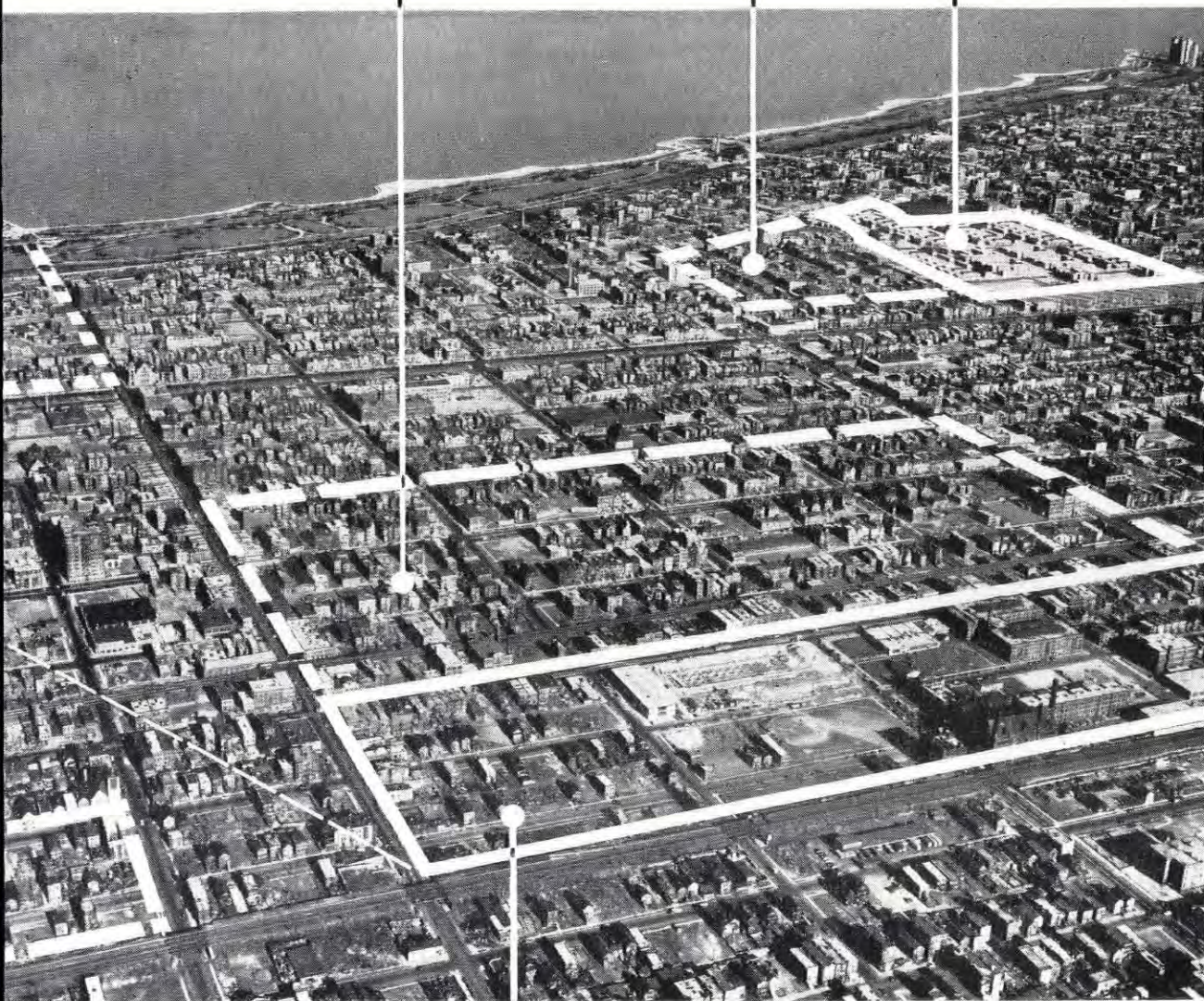
*public housing
proposed —*



illinois tech. housing

ida b. wells public housing

public housing proposed



SOUTH PARKWAY

MICHIGAN AVE.

N.Y. CENTRAL R. R.

illinois tech. campus

FINANCIAL ANALYSIS of hospital housing project indicates that private investment of \$5.5 million would permit low rents, yet earn a comfortable return.

The statistics shown on this page relate exclusively to the housing project to be built by Michael Reese Hospital (see pp. 98-101). They include vital statistics measuring the size and character of the development and an analysis of estimated costs, operating expenses and income of the new construction. In brief, this analysis indicates that development of the site and construction of the two 16-floor buildings, the seven 3-floor buildings and the community building would require an investment of about \$5.4 million. Operating costs, including interest, amortization, taxes and vacancy allowances, would come to about \$600,000 per year. If financed with a 33-year FHA-insured mortgage at 4¼ per cent interest and a 10 per cent equity investment, rents could be set at \$16.34 per room per month. These could be lowered by \$1.55 per month, if an insurance company were to make a direct investment in the project on the basis of a 5 per cent gross principal return and a 4 per cent interest rate over a 41-year period.

In addition to the income from residential buildings, the ten stores in the proposed shopping center would net an estimated \$16,435 per year on an investment of about \$230,000—a return of about 7 per cent after insurance, management expenses, repairs, reserves and taxes.

Unless specifically noted to the contrary, all statistics below pertain only to new construction; existing dwellings which would be retained in the redevelopment are excluded from the construction and operating cost analysis.

PROJECT STATISTICS

LAND AREA

New residential	731,000 sq. ft.
Existing residential	74,800
New Commercial	75,000
Existing industrial	81,500

TOTAL (Excluding boundary streets) 962,300 sq. ft.

BUILDING COVERAGE

New residential	84,000 sq. ft.
Existing residential	16,000
New commercial	20,000
Existing industrial	57,000

TOTAL 177,000 sq. ft.

APARTMENT BREAKDOWN

Elevator apts. (2 bldgs. x 350 units)	700 apts.
Walk-up apts. (7 bldgs. x 12 units)	84
Existing apts.	175

TOTAL 959 apts.

ROOM BREAKDOWN

108 one-bedroom apartments	324 rooms
534 two-bedroom apartments	2,136
102 three-bedroom apartments	510
40 four-bedroom apartments	240

TOTAL—284 new apartments 3,210 rooms

LAND & DEVELOPMENT COST ESTIMATE

	TOTAL	PER ROOM
Land—597,800 sq. ft.	\$447,750	\$139.50
Removal of existing streets—3,000 sq. yds.	1,850	.58
Resurfacing remaining streets—5,000 sq. yds.	5,500	1.71
Construction of new streets—11,000 sq. yds.	38,500	11.99
New top soil—15,000 cu. yds.	42,750	13.33
Planting & shrubbery	19,000	5.93
Sidewalks—4,000 yds.	9,150	2.85
Steam distribution main—1,300 ft.	9,150	2.85
Water main—branch lines & connections.	2,750	.86
Sewer main—branch lines & connections.	4,600	1.43
Electric service—underground	4,600	1.43
Architects' fees on site development.	5,100	1.56
Sub total	\$590,700	\$184.02
Less—credit for removal of existing bldgs.	9,200	2.87
TOTAL new residential & community facilities..	\$581,500	\$181.15

CONSTRUCTION COST ESTIMATE

	16-FLOOR BUILDING	PER ROOM
Permits	\$ 300	\$.21
Excavation & backfill	30,000	21.19
Damp-proofing & drainage	8,272	5.84
Foundations—piling & concrete	59,343	41.91
Structure—concrete & reinforcing	198,955	140.51
Forming	95,775	67.64
Concrete floor finish	53,233	37.59
Face brick, tile backing & tile partitions.	194,432	137.31
Plaster partitions & inside wall finish.	194,575	137.41
Steel stairs	21,996	15.53
Windows, screens & weather stripping.	80,160	56.61
Roof, insulation, downspouts & gravel top.	12,025	8.49
Millwork—doors, cabinets, handrails, etc.	88,650	62.61
Finish hardware	24,260	17.13
Miscellaneous metal—lintels, bolts, etc.	5,000	3.53
Painting	52,200	36.86
Heating	131,000	92.51
Plumbing	144,900	102.33
Electrical	63,000	44.49
Laundry equipment	12,200	8.62
Elevators	54,000	38.14
Mail boxes	2,000	1.41
Exhaust fans & ducts	10,000	7.06
Incinerators	10,000	7.06
Fire equipment	23,110	16.32
Refrigerators & ranges	78,750	55.61
Contingencies	82,109	57.99
Insurance & FAOB payments	40,250	28.42
Contractor's overhead, profit, etc.	311,035	219.67
TOTAL for one 16-floor building.	\$2,081,530	\$1,470.00
Total for two 16-floor buildings	\$4,163,060	\$1,470.00
Total for seven 3-floor buildings	608,069	1,608.65
TOTAL new residential	\$4,771,129	\$1,486.33
Community building	91,500	28.51
TOTAL new resid. & commun. facilities.	\$4,862,629	\$1,514.84

ANNUAL OPERATING COST ESTIMATE

	16-FLOOR BUILDING	PER ROOM
Steam for heating	\$ 25,488	\$ 18.00
Water	1,416	1.00
Electricity	2,832	2.00
Janitor and helpers	6,938	4.90
Scavenger	708	.50
Exterminator	141	.10
Legal	170	.12
Decorating—Interior (apts.)	11,328	8.00
Exterior & halls	2,832	2.00
Management	11,895	8.40
Landscaping	255	.18
Elevator repair and maintenance	1,034	.73
Window shades or blinds	849	.60
Screens	212	.15
Janitor supplies	496	.35
Electrical repairs	496	.35
Old age benefit taxes	71	.05
Unemployment taxes	42	.03
Miscellaneous repairs	1,020	.72
Insurance	4,965	3.51
Taxes	38,062	26.88
Reserve for depreciation	6,231	4.40
Total for one 16-floor building	\$ 117,481	\$ 82.97
Total for two 16-floor buildings	\$ 234,962	\$ 82.97
Total for seven 3-floor buildings	30,562	80.86
TOTAL new residential	\$ 265,524	\$ 82.72

METHOD OF FINANCING

	No. 1*	No. 2**
Operating costs	\$265,524	\$265,523
Interest & Amortization	287,084	282,786
Return on Equity	55,557
Vacancy allowance	21,309	21,309
REQUIRED RENTAL—New residential ..	\$629,474	\$569,618
(Per room per month)	(\$16.34)	(\$14.79)
* No. 1: 10 per cent equity investment; balance covered by FHA-insured mortgage, 4¼ per cent interest, 33-year term.		
** No. 2: Direct investment by insurance company; 4 per cent interest, 5 per cent gross principal return, 41-year term.		



ATTRACTIVE, MODEST ENTRY AT STREET LEVEL HAS ADVERTISING VALUE FOR BASEMENT ALLEYS, PROFITS BY NEWS-STAND'S SALES

BOWLING ALLEYS

"Everybody bowls"—and these prototype designs are to guide the game to even greater popularity.

Despite its lurid reputation, Prohibition had at least one virtue—it dragged bowling out of the basement, wiped its nose and transformed it from a breeding ground for bibulous bookies to a wholesome outlet for family recreation. Today, bowling is America's number one participant sport. U. S. alleys annually gross \$220,000,000. Featured today and soon to come are such spectacular devices as mechanical pin setting devices, electric-eye foul lines, and automatic screen-reflected scoresheets. Brunswick-Balke-Collender Co., leaders in bowling, billiard and bar equipment, now offers a group of prototype designs, developed by the company's architectural research department with the assistance of Donald Deskey Associates. Next on the agenda is the promotion of billiards

to the rank of sister-sport for progressive bowling establishments.

Bowling is a still-growing retail business. The commodity involved is recreation. With more and more enthusiasts joining the ranks everyday, the country now boasts 16,000,000 regular bowlers. In view of such popularity (and it is still on the rise), it is not inconceivable that within the next few years even the smallest communities will want to build their own alleys. Commercial success in this field, as in other retail lines, is more and more dependent on sound design. In nine out of ten cases the architect will probably not have time to thoroughly research his problem. Like the International Harvester's stores (FORUM, Jan. '46), this instance proves the ever-increasing value of prototype design-research.

BOWLING ALLEYS

Edgar Lynch, Chief, Architectural Research Dep't.

Brunswick-Balke-Collender Co.

Donald Deskey Associates, Architectural Design Consultants

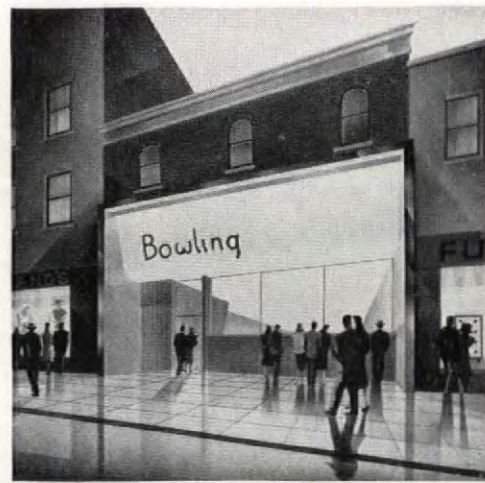
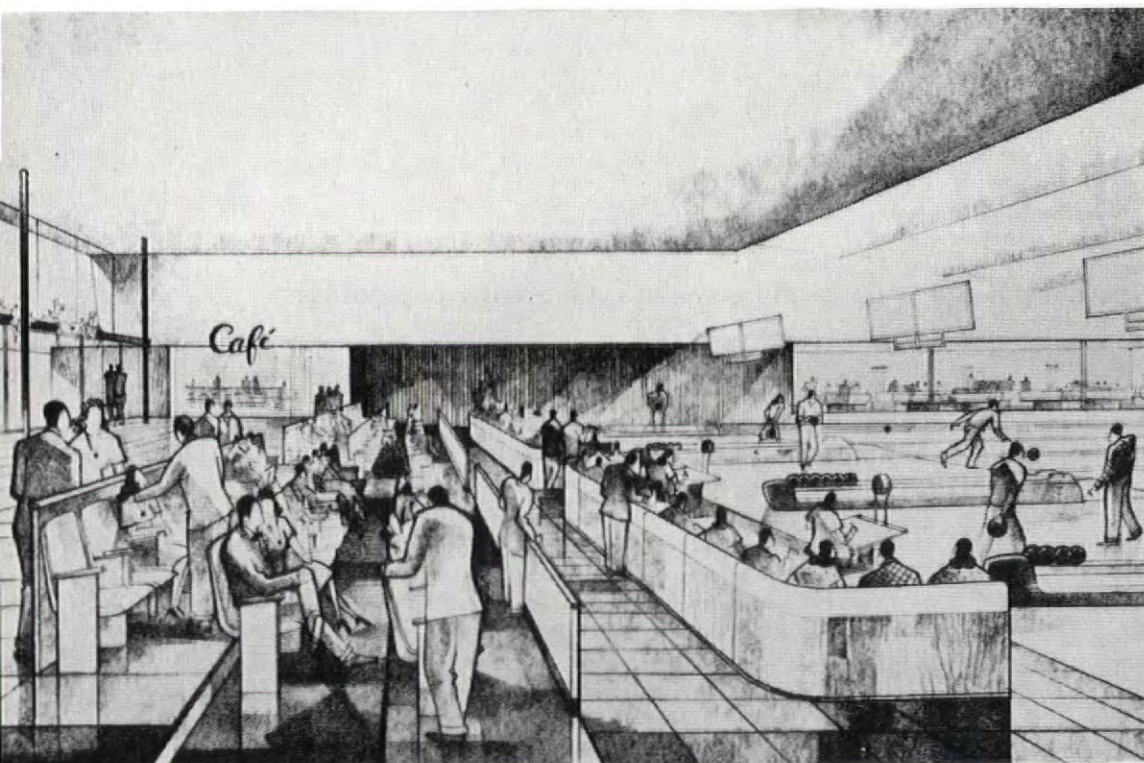
4 LANE ALLEY

Recalling many obsolete buildings still in use today, the design for a small bowling alley (right) is typical of deep, narrow mid-city lots with minimum frontage. It is planned for execution in two stages. The first (upper right), shows refurbished ground floor with second floor left untouched, a temporary measure compensated for by the scheme which draws all attention to the interior. However, in its final form the building will have been completely rehabilitated. A four-alley establishment is about minimum as far as operating at a profit goes. One important function of the Brunswick program is to suggest means of putting rundown properties back on a money-making basis. The company attaches great importance to the use of materials in such cases. For this particular building, glass, stone veneer, stucco, wood, stainless steel and terrazzo are suggested.

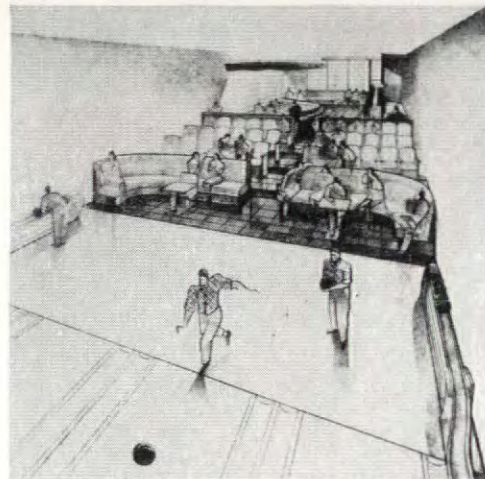
8 LANE ALLEY

For its medium size the scheme for an eight-lane alley (below), emphasizes a trend toward combining refreshment facilities with bowling and billiards. Lounge area with soda fountain, control counter, check-room and office are located immediately adjacent to the main entrance. A separate street entrance has been provided for the cocktail lounge to the left which is also accessible from the woman's lounge beyond. The floor of the billiard room is 18 in. above that of the bowling alleys. A glass wall between the two prevents transmission of sound but allows spectators a simultaneous view of both sports. The billiard room has its own control counter and generous seating for onlookers.

SPACIOUS GALLERY AND REFRESHMENT AREA ENHANCES APPEARANCE FROM STREET



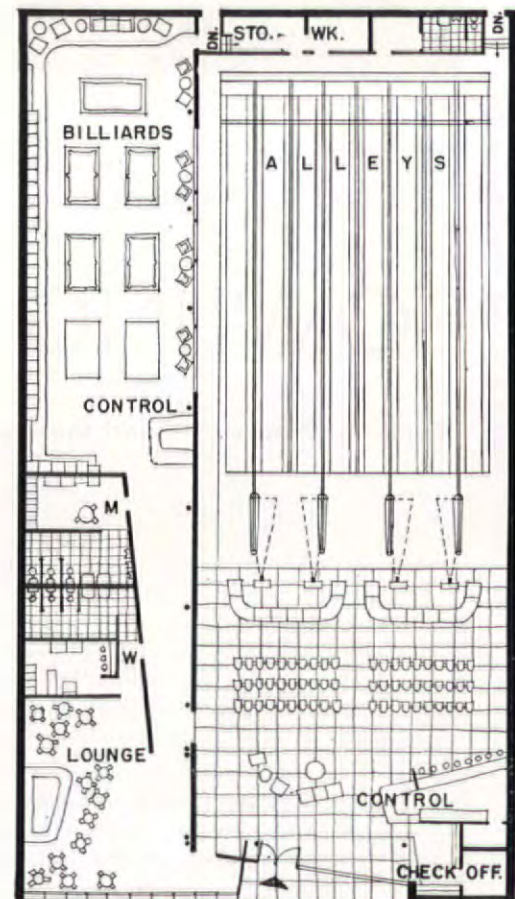
FIRST STAGE OF REMODELING PROJECT



SEATING LEVEL IS SLIGHTLY ELEVATED

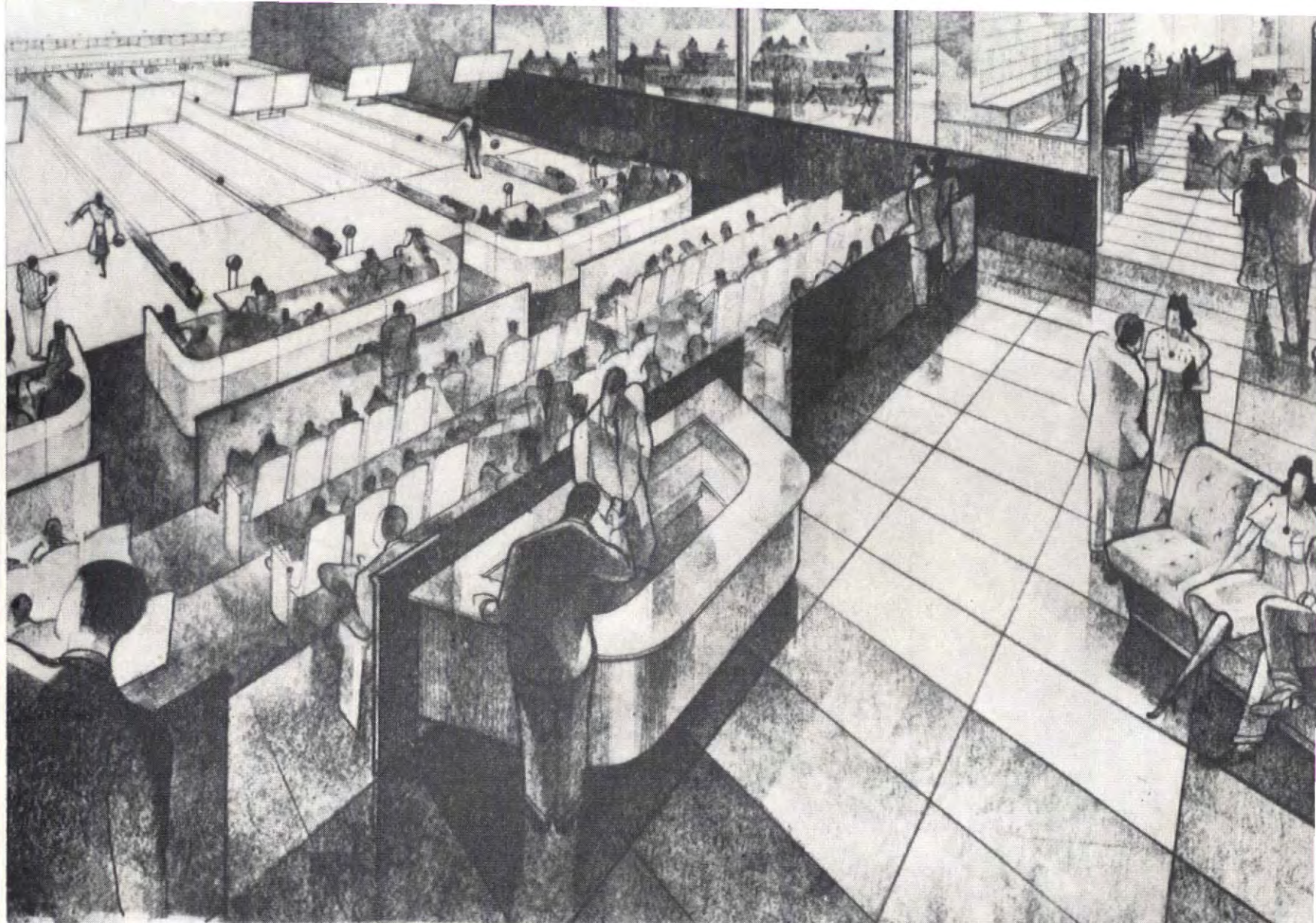


GROUND FL.
1/32" = 1'-0"

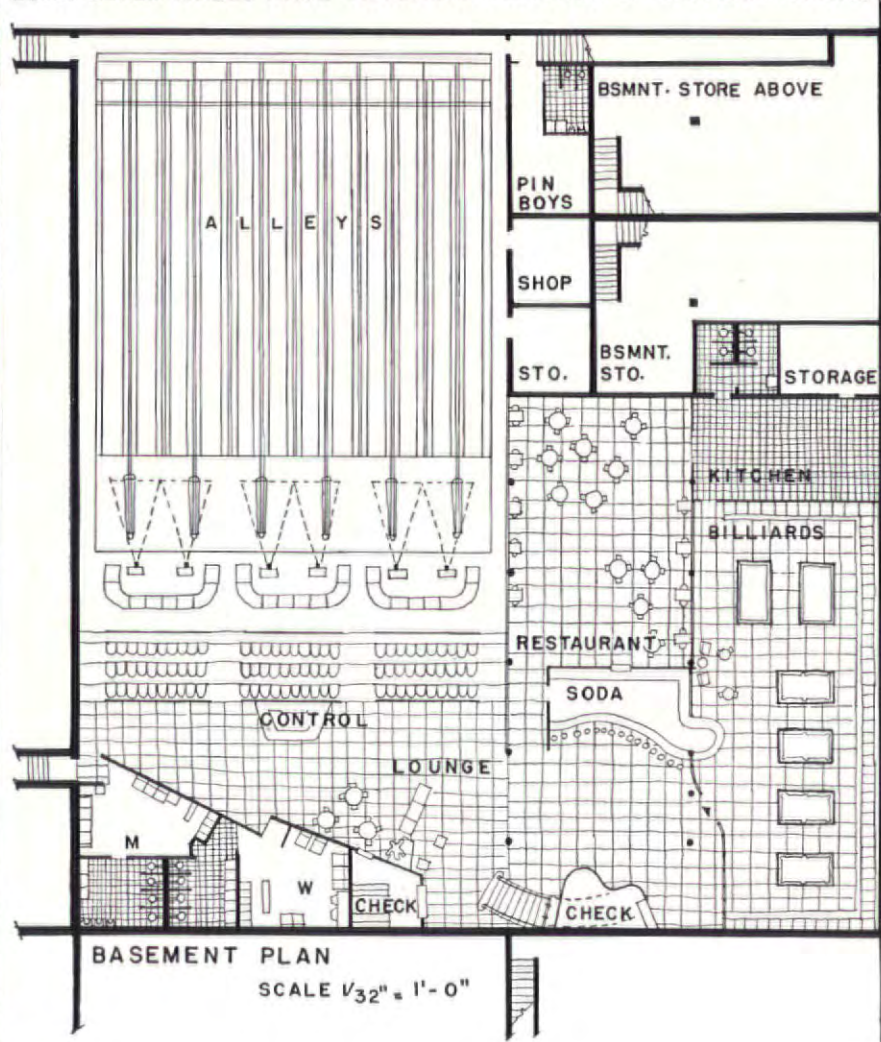


GROUND FLOOR PLAN

SCALE 1/32" = 1'-0"



LONG GLASS WALLS HAVE PRACTICAL FUNCTION OF BAFFLING SOUND, SIMULTANEOUSLY OPENING VARIOUS SECTIONS TO EACH OTHER

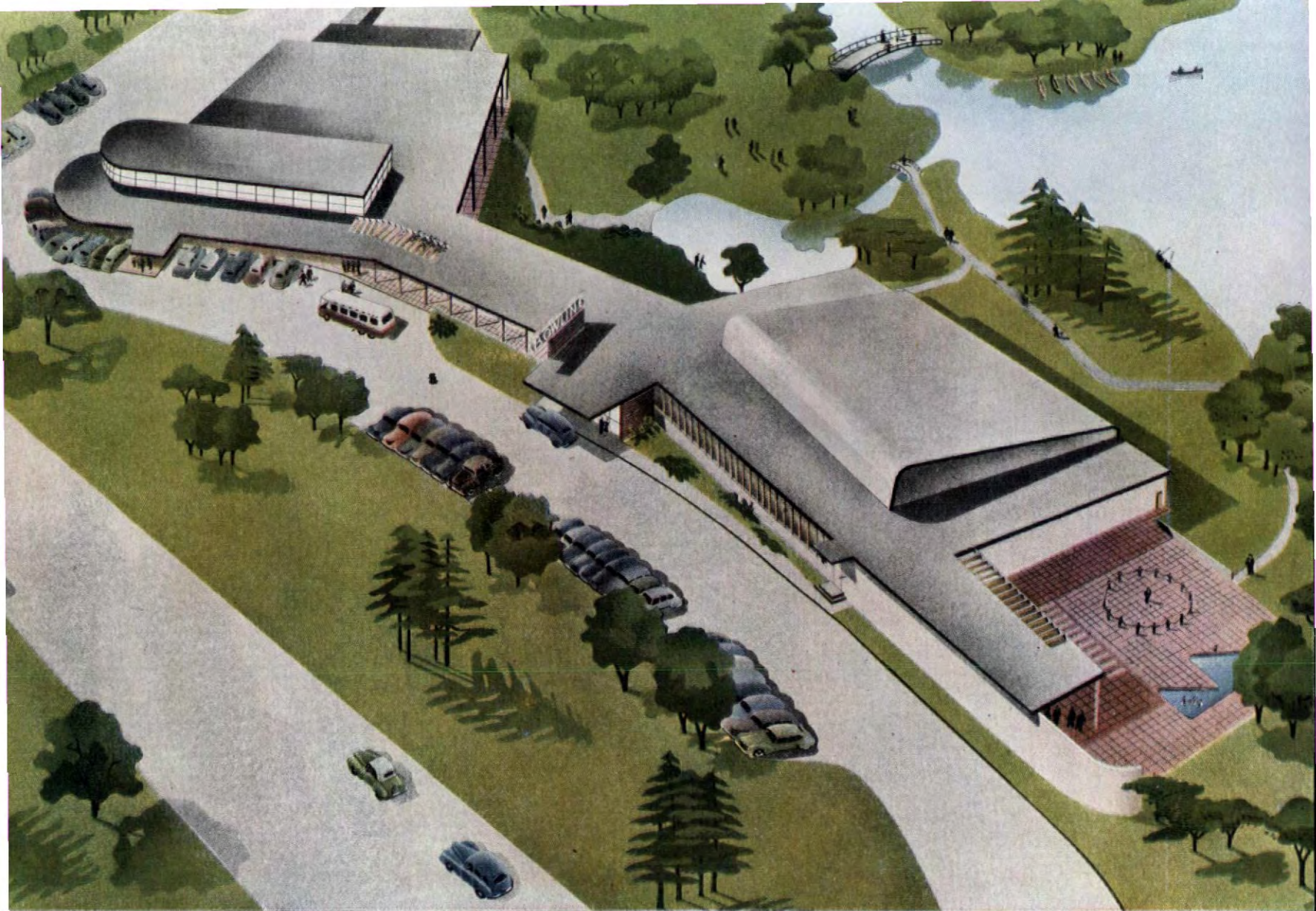


12 LANE ALLEY

This design for a twelve-lane bowling installation was developed for low-rental basement or second floor space. However, it does provide for a small foyer and newsstand at the more expensive street level. It is believed that the revenue from the stand and the advertising value of eye-level appeal to the pedestrian more than offsets the additional expense. A cocktail lounge overlooks the bowling alleys in addition to the usual spectator's gallery. The cloak room, located under the stairs, is shared by the billiard room and restaurant, relieving congestion during crowded league games, etc. The soda fountain occupies a generous area and provides direct service to the billiard room which is also served by the restaurant kitchen.

BOWLING BUSINESS

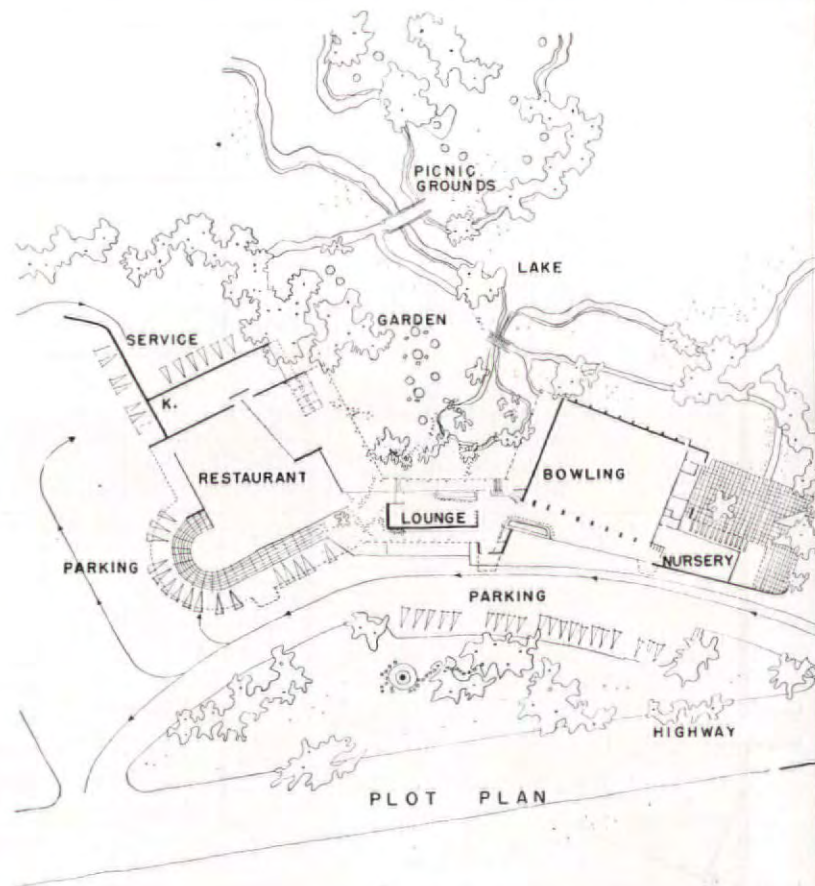
At present there are about 9,000 U. S. bowling alley establishments housing 75,000 alley beds. Total capital investment per alley bed is currently \$3,000 to \$5,000. Reasonable gross on a modest 8 alley establishment might amount to \$15,000 for a ten month year, with a profit of \$5,000. Expenses might include rent at 35 cents per square foot, depreciation at 8 per cent, maintenance at about \$5 per alley per operating week. Location of a bowling alley is important but some locations unsuited to stores are suitable for alleys. A new building designed for 12 bowling lanes, cocktail lounge and a luncheonette cost \$65,000, of which land and building represented \$28,000. The bowling business is remarkably sound. In ten years the largest equipment company in the industry has not had to uproot a single alley and in only twelve instances were the original owners forced to sell out.

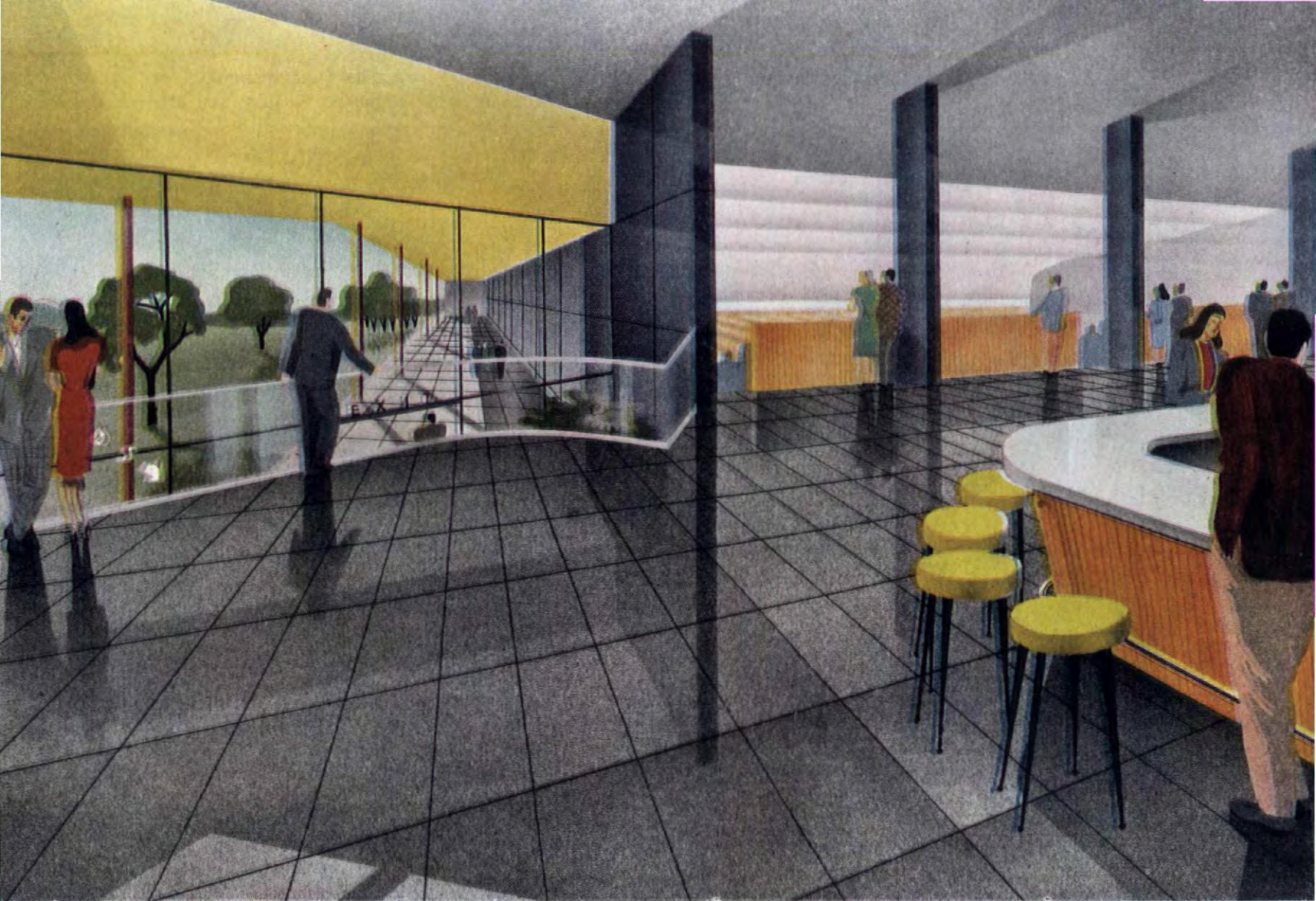


FLANKING A BUSY HIGHWAY, IMAGINARY SITE ENVISAGES A NATURAL OR ARTIFICIAL LAKE, INCORPORATES ITS SHORE AS PICNIC GROUND

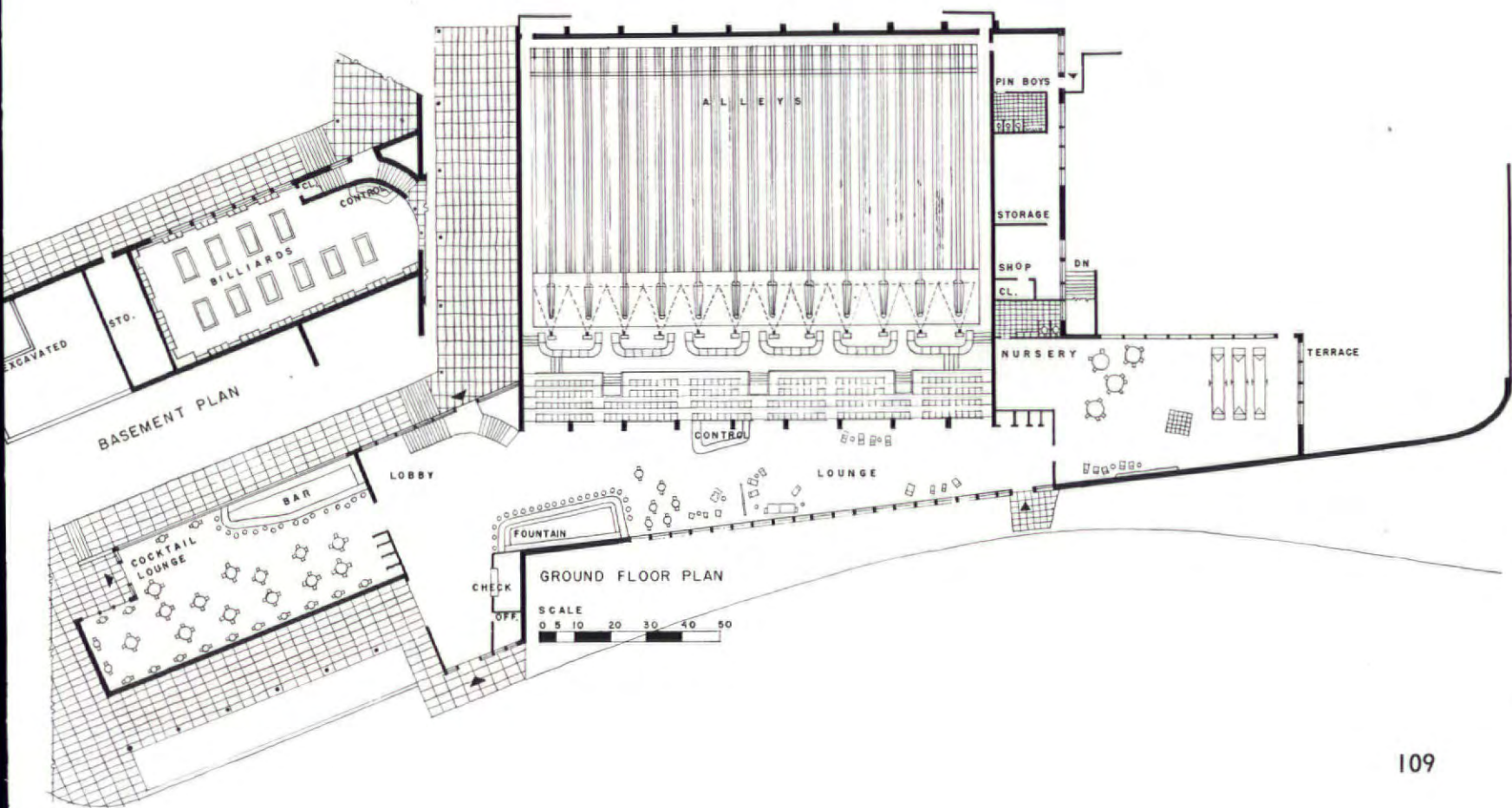
Spacious alleys are planned for out-of-town sites.

Largest and most elaborate of the prototype designs provides 24 bowling alleys and ten billiard tables. It is designed for a typical suburban site, assumed to be sloping and adjacent to a highway leading to a large metropolitan center. The cocktail lounge and its terrace connect an ample recreation area with the restaurant. The latter provides complete drive-in lunch and fountain service. An unusual convenience for establishments of this type is the inclusion of a day nursery which offers supervised care of children. Though the plan indicates that the billiard room is in the basement, it is actually on only a slightly lower level accounted for by the contours of the site. For flat ground, the plan would work out simply on a single level.



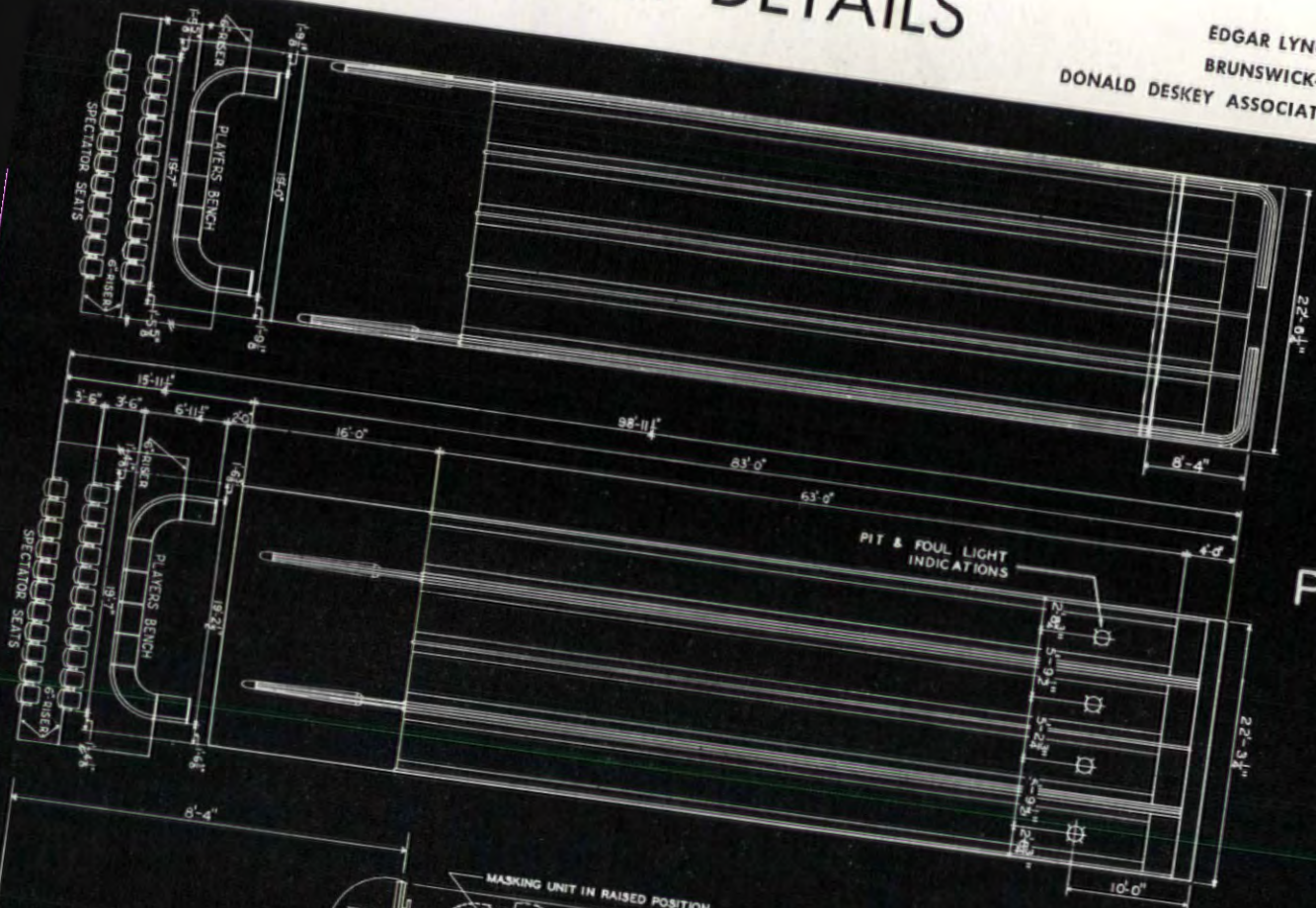


BRINGING TO MOTORISTS, OUT-OF-TOWN BOWLING ESTABLISHMENT CAN AFFORD TO OFFER ITS PATRONS MORE OPENNESS, EXTRA AMENITIES



BOWLING ALLEY DETAILS

EDGAR LYNCH, CHIEF, ARCHITECTURAL RESEARCH DEPT.
BRUNSWICK-BALKE-COLLENDER CO.
DONALD DESKEY ASSOCIATES, ARCHITECTURAL DESIGN CONSULTANTS



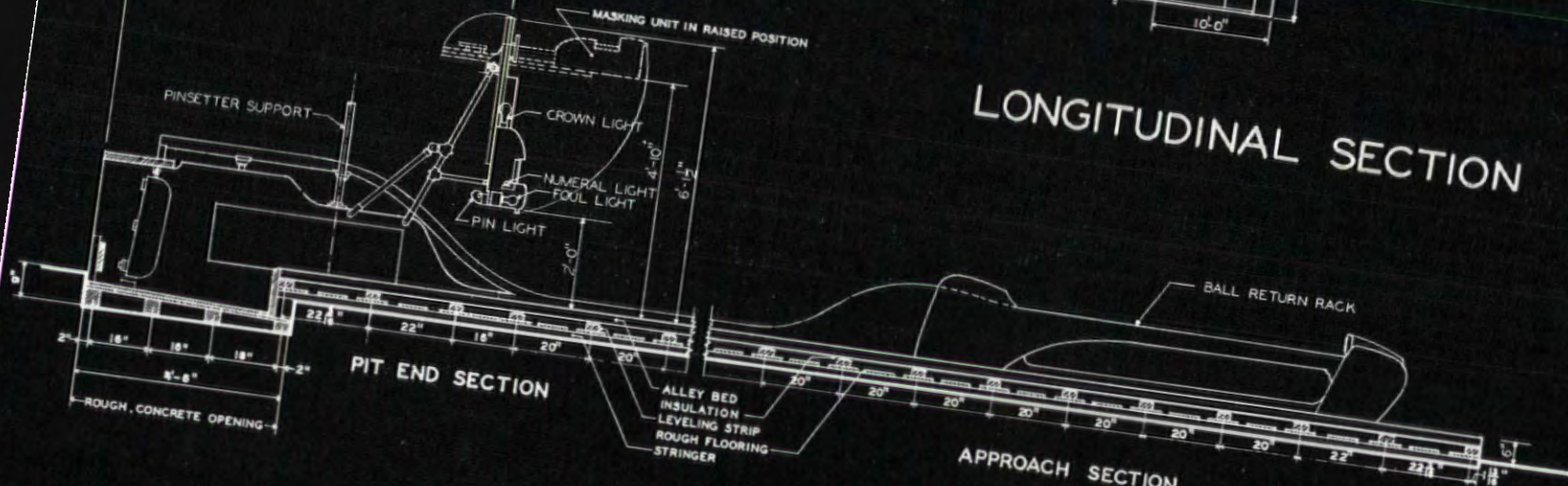
PLAN

FOR ALLEYS WITH OUTSIDE BALL RETURN. DESIGNED IN UNITS OF FOUR.

SCALE
 $1/16" = 1'-0"$

PLAN

FOR ALLEYS WITH CENTER BALL RETURNS DESIGNED FOR UNITS OF TWO.

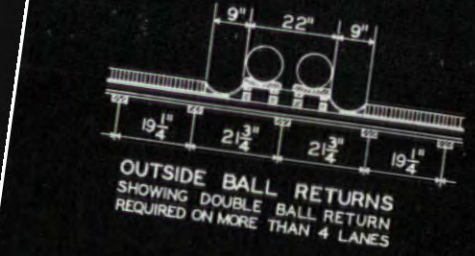


LONGITUDINAL SECTION

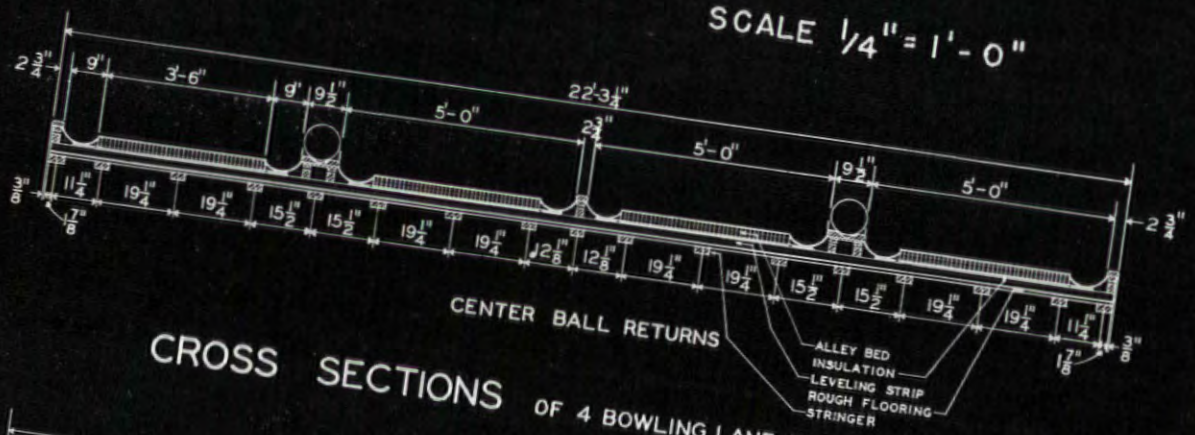
PIT END SECTION

APPROACH SECTION

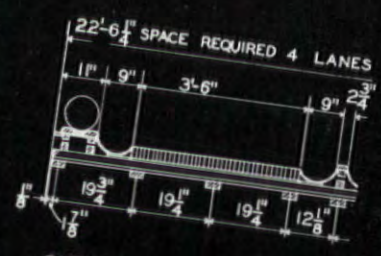
SCALE $1/4" = 1'-0"$



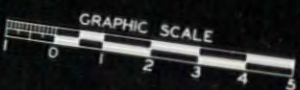
OUTSIDE BALL RETURNS
SHOWING DOUBLE BALL RETURN
REQUIRED ON MORE THAN 4 LANES



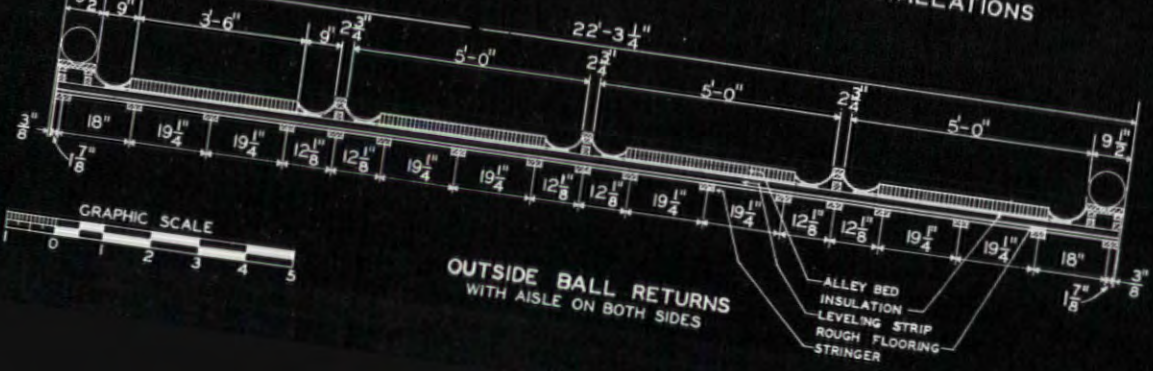
CROSS SECTIONS
OF 4 BOWLING LANE INSTALLATIONS



OUTSIDE BALL RETURNS
PLACED AGAINST WALLS



GRAPHIC SCALE



OUTSIDE BALL RETURNS
WITH AISLE ON BOTH SIDES

Photos: Erre Staller



FACADE HAS PANELED SCREEN OF STAINLESS STEEL SQUARES, EACH CENTERED BY A SHADOW BOX

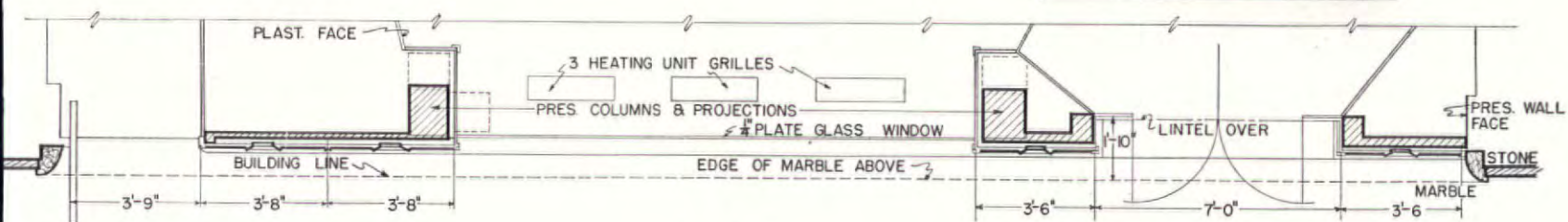
REMODELED OFFICE BUILDING

New Home of the U. S. Plywood Corporation

VERNON SEARS, Architect

HARPER RICHARDS, Designer

CHARLES HERMAN CO., General Contractors



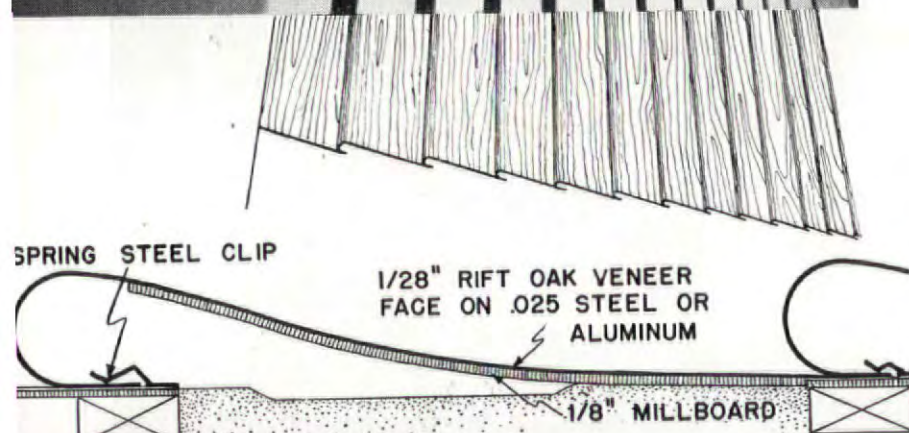
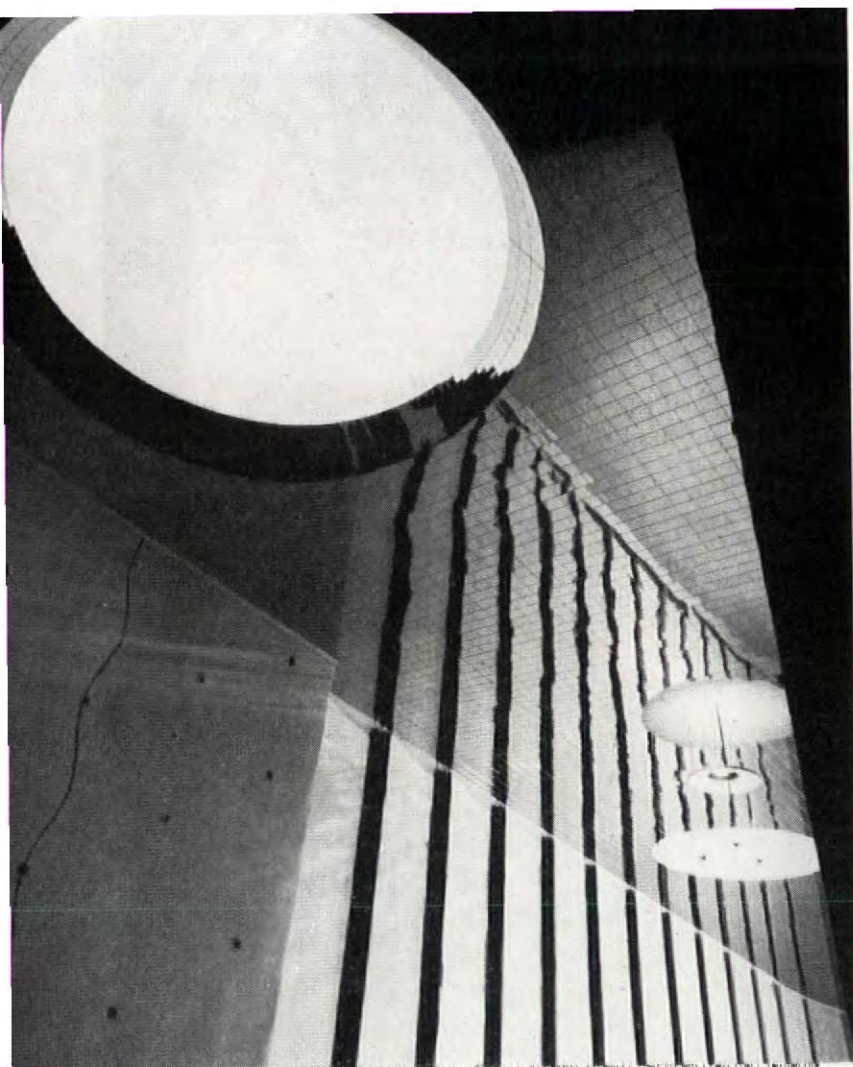
Vernon Sears and Harper Richards collaborate to give U.S. Plywood a plywood home.

If there is any additional way in which plywood could have been used in the new home office of U. S. Plywood Corp. in Manhattan, Mr. Lawrence Ottinger, its ebullient president, will be a sorely disappointed man. For, to an extent unusual even for American businessmen, Mr. Ottinger is a firm believer in the ability of his product to do anything. And he gave staff architect Vernon Sears and designer Harper Richards *carte blanche* to prove it. In this sense, the seven-story remodeled building (formerly the premises of the staid City Club) is a show room in which, almost incidentally, the work of running a \$30-million-dollar-a-year business also occurs. Plywood and allied laminated products appear everywhere, in applications of all sorts—as wall and ceiling finishes, in cabinet and furniture work, in traditional paneling and modern lamps. These installations are deliberately varied from room to room and floor to floor, to demonstrate both the wide range of the company's products and the many possible methods of installing them.

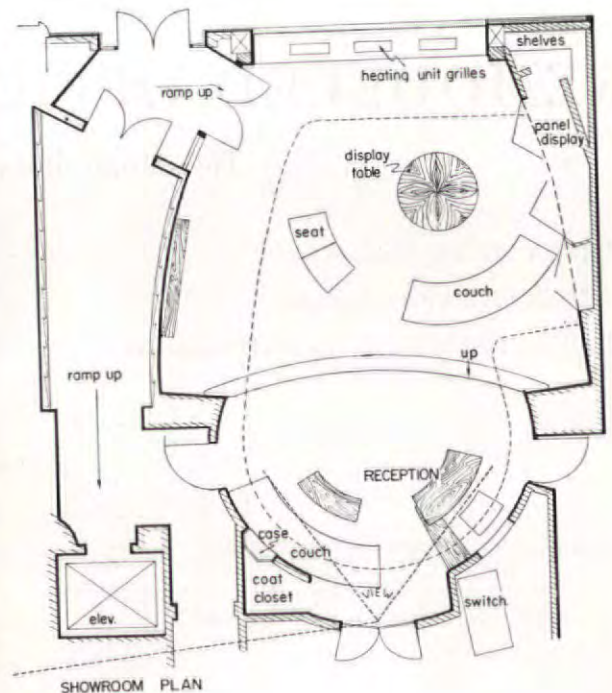
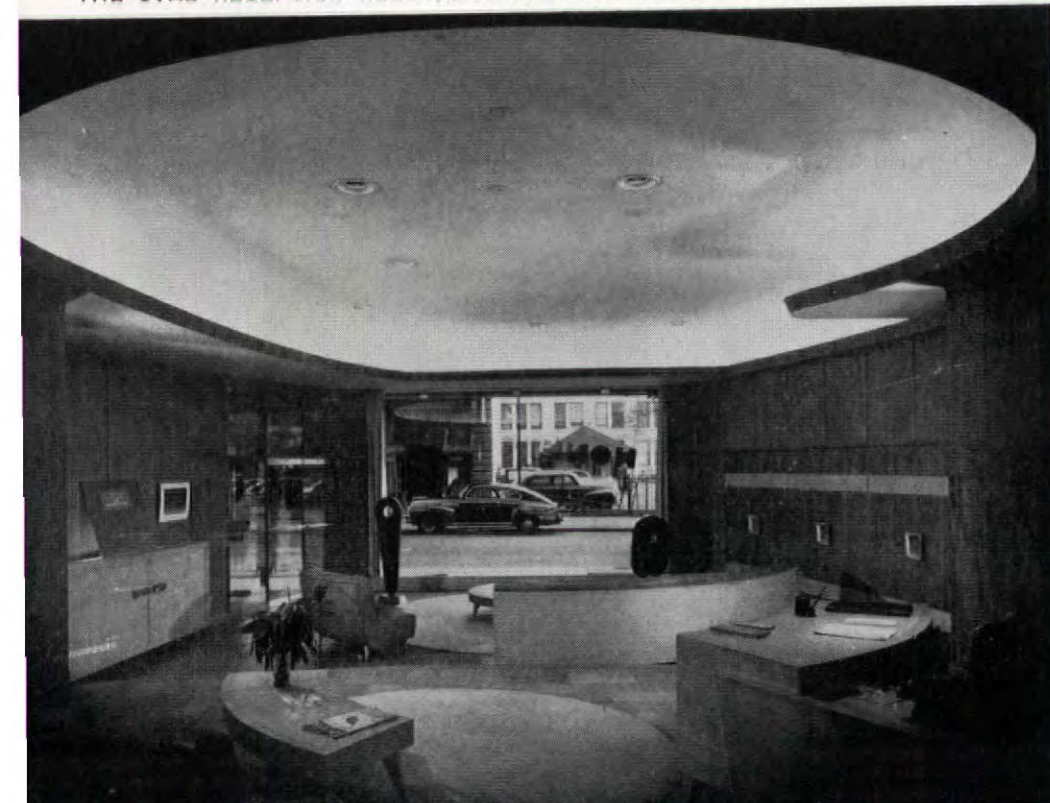
None of this sylvan virtuosity, however, reduces the over-all effectiveness of the building as an efficiently organized work space. Except for the street floor lobby and reception room and the pent-house director's room, the entire building has been reconstructed into pleasant, well-lighted and air-conditioned office space. Mr. Sears, architect of the project as a whole, has permitted a wide range of styling in the interiors. These run from the fluted walls and glass-tile ceiling of the main lobby (left) to a vice-presidential office, walnut-paneled in the eighteenth century manner, with panels, rails and molding all of plywood. They range from elaborate custom-built installations to homely features which any carpenter could build on the job.

On the street floor facade, Mr. Richards has used the company's "Flexmetl"—a metal-wood laminate—to form a handsome screen of stainless steel (p. 111). Each square is centered by a framed and illuminated shadow box in which samples of various laminates are displayed. He also designed the egg-shaped reception room (below), one wall of which is devoted to display racks for rare veneers.

The only major structural alteration to the building was the introduction of a "service mezzanine" in the unusually high third floor. This space has been cannily employed to house the air-conditioning and ventilation system for the entire building. It also provides easy servicing for the elaborate ceiling lighting on this floor.

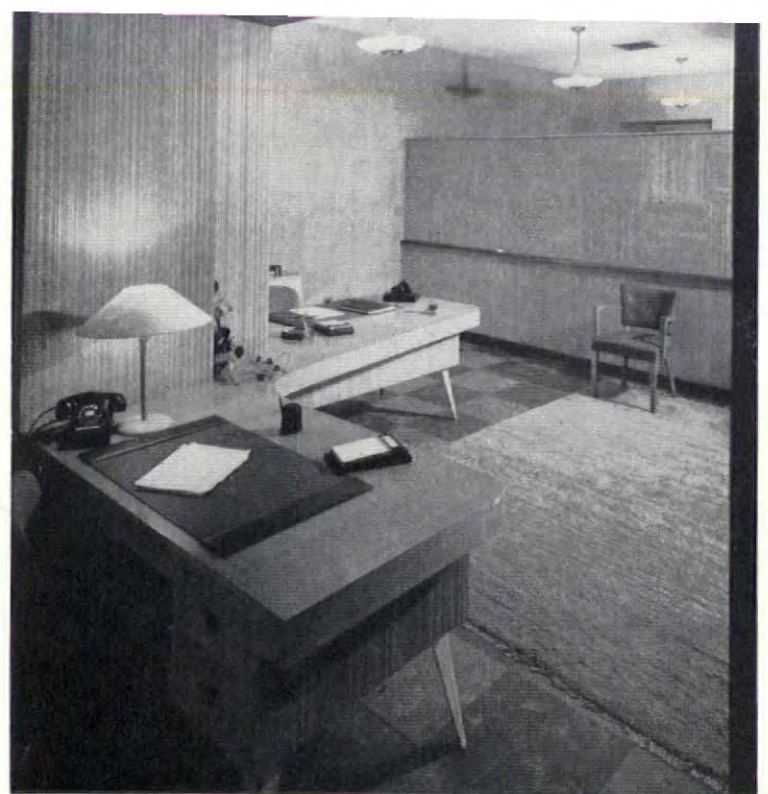


THE OVAL RECEPTION ROOM IS FURNISHED AND SHEATHED IN RARE VENEERS

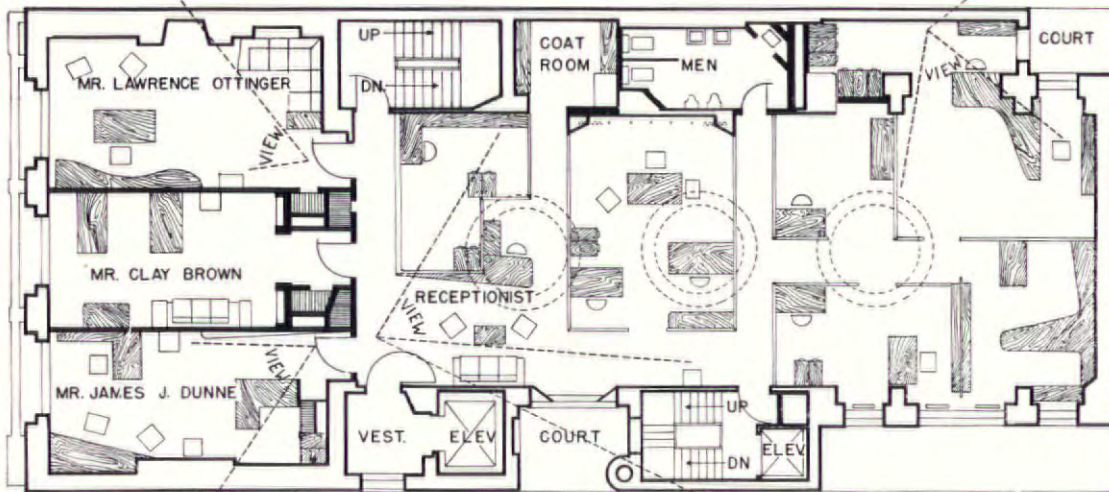




CUSTOM-BUILT WALLS USE TEAK PLYWOOD, SOLID TEAK BASE



STRIATED FIR WALLS HAVE BEECH STAIN, GLAZING, DULL WAX



THIRD FLOOR PLAN

FINISHES AND EQUIPMENT

WINDOWS: Sash—existing steel. Glass—some Thermopane, Libbey-Owens-Ford Glass Co. **ENTRANCE DOORS:** Herculite, Pittsburgh Plate Glass Co. **FLOOR COVERINGS:** First floor—oak tile, Wood Mosaic Co.; remainder—asphalt tile or carpeting on plywood sub-floor. **WALL COVERINGS—U. S. Plywood Corp.** **WOODWORK—Jacob Froehlich Cabinet Works.** **PAINTS—Breinig Bros.** **LIGHTING FIXTURES—Kurt Versen Co. and Rambusch Decorating Co.** **AIR CONDITIONING—Trane Co.**

DIAGONAL STRIATED SQUARES ARE BACKDROP TO BUILT-IN DESKS



WALNUT TOPPED DESKS, COUNTERS HAVE STRIATED FIR SIDES



WILLIAM, THE CONQUERO

Once there was a little boy who wanted to be a Success. He was a poor boy and shy and he lived with his mother, his father, and his brother, Hal, in a dark flat on Chicago's north side. Night after night a small insistent voice whispered in his ear: "Don't waste time . . . Don't waste time . . . Don't waste time . . ."

So the little boy didn't play sandlot baseball or hang around the drugstore on Saturday afternoons. Instead he got a job ushering in a movie house and studied very hard at mechanical drawing . . .

When the little boy grew up and went to architectural school he still remembered what the voice had said. He worked his way through college, but he also became an honor student. And he was not just a student, either. He was Captain of the Fencing team, Captain of the University Brigade, president of two dramatic societies, a member of the Interfraternity Council, and the art fraternity, Chairman of the Senior Prom and a faithful worker on the campus magazine. He weighed 175 pounds when he entered college and 130 when he left. But everyone liked him and said that surely he would be a Success.

When he was graduated in 1930, architectural draftsmen were selling apples on street corners, but the little boy got himself a job with one of the oldest and most respected firms in Chicago. In exactly 18 months he had set up his own practice and before long was making \$20,000 a year. He became a registered architect in Illinois, Indiana, Michigan, Ohio, Kentucky, Oklahoma, New York, California, Wisconsin, Arizona and the District of Columbia. He also passed the National Council of Architectural Registration Boards #144 which allowed him to practice in any state without further examination. When he reached the ripe old age of twenty-five, he had already done buildings in 26 states and had moved into luxurious penthouse offices. It was then that he took unto himself a wife and she was the most beautiful girl in the world. People looked at him and looked at his office and looked at his wife and sighed enviously: "Isn't he a lucky fellow?" But again the small voice spoke: "Don't waste time . . . Don't waste time . . ."

So he went to California and became a motion picture producer, earning Hollywood rather than U. S.-size dollars per week. But he did not neglect his architectural practice. In fact, his designs got better and better and in 1940 he was awarded the Scarab Medal for the most distinguished record of achievement by any architect under 35. His theaters were included in the Encyclopedia Britannica, his biography in Who's Who. He even crashed the Blue Book and began to call Lady Mendl by her first name. Now surely he had become a Success. But the voice was still there: "Don't waste time . . . Don't waste time . . ."

Loran F. Smith



AT 37, William Leonard Pereira cuts a strapping, boyish figure in his Oxford grays or casual slacks and sport-jacket. Except for a sprinkle of gray in his crisp, wavy hair he might easily be mistaken for the cornet player in a college band. Six ft. one in. tall and weighing a taut 180 pounds, he is full of the bounding energy of youth. His friendly grin and easy manner, assets which have served him well all his life, are not wearing thin. The boy architectural genius of the 1930's definitely has his world by the tail.

As a matter of fact, he's had it in this highly desirable position since approximately the age of 14. But his world grows constantly larger as Pereira is able to swing more weight. It now encompasses an architectural practice composed only of million-dollar work; a solid and lucrative position in the motion picture industry; an absorbing interest in medical and sociological research; a charming home in Beverly Hills, California; an Indiana farm where he indulges his hobby of breeding five-gaited horses; a gay and beautiful wife; an adoring nine-year-old son; and friends among the most important personalities in Hollywood.

Since the offices of W. L. Pereira first set up shop in Chicago fourteen years ago, approximately \$85 million worth of work has flowed from their drafting boards. In the present Los Angeles headquarters, \$18 million worth of business is now in progress. Most important jobs on the boards are a \$7½ million Memorial Medical Center for Beverly Hills (FORUM, Nov. '45) and a lush pilot theater for Paramount Studios.* These two jobs are representative of Pereira's work, for through the years he has established himself as both a hospital and theater specialist. Their sound plans also reveal the painstaking research and analysis on which he bases any architectural solution and which accounts for his resounding success at complicated organizational planning. He has little desire to do residential work for it does not involve enough charts and graphs. Vast technical projects are the jobs which excite his imagination. "I don't know whether I'm an architect with a penchant for research or a researcher with a penchant for architecture," he explains.

The ability to separate component functions of a business or institution and regroup them according to a related plan is the talent which hurtled Pereira into the movies seven years ago. Out to snare the job of designing a \$15 million studio for Paramount, he discovered that firms from all over the country were angling for the same project. Thinking fast, Bill asked if Paramount knew what they wanted. Paramount said no. Turning on

the full force of his persuasive personality, Bill then suggested that if they in the business didn't know what they wanted, how could anyone from outside tell them? The upshot of this *coup d'état* was a commission to do basic research on the functioning of a studio and to write a program for its requirements. Cries of joy greeted Pereira's unraveling of the movie tangle. He was immediately signed as architect and offered a job as producer by ecstatic executives.

WHY an architect should want to get into the movie racket is a question which puzzles many do-or-die designers and may continue to puzzle them until the next depression hits. Meanwhile Bill Pereira is sitting pretty on a two-pronged income, safely hedged against an act of God in either architecture or motion pictures; able to pick and choose in each profession. Before starting his double life, Bill had developed a case of ulcers. With the increased security of two careers his ulcers have magically disappeared.

Pereira's former tension undoubtedly centered around the inevitable slack periods which crop up in any architect's office. He is not happy unless he is working a reasonable facsimile of 24 hours a day, seven days a week. Under the present set-up he is able to juggle the two jobs, devoting most of his time to architecture when not actually shooting a film, concentrating on movies when things get hot at the studio. If he runs into a snag in either department, he immediately switches to the other instead of worrying himself into sleepless nights. When the attack is resumed afresh, the impossible is usually accomplished in a matter of minutes.

How he manages to work as many consecutive hours as he does without collapsing of galloping fatigue is a subject of awed discussion among his co-workers. But after eight strenuous hours at the studio and another five at the architectural office (or vice versa), he looks as fresh and relaxed as if he had just stepped out of a shower. Evenings, Saturdays and Sundays he literally lives at the office and only once in the memory of his friends were they able to drag him to the beach on Sunday. The reaction was not good. Bill was as nervous as a small boy stealing jam until he sheepishly pulled out a script and started talking business.

Such devotion to duty is no new phenomenon with this earnest young man. When courting his wife, the former Margaret McConnell, he allotted her the generous sum of one Saturday night a month. Not quite understanding that this represented an ardent advance, Margaret left peevishly for Hollywood where she had been offered a movie contract. Bill had to spend a hideous amount of time driving out to California the following summer to recapture his flown bird. He managed to marry

Margaret out of the movies, however, and she's been trying to see something of him ever since.

Actually, with prodding from Margaret, the Pereiras keep up a fairly gay social life sandwiched between Bill's unorthodox hours. They often dine at fashionable restaurants and, after 12 years of marriage, have been caught holding hands under the table. At the few Hollywood parties which Bill feels it wise to attend, they are the picture of a successful and charming young couple. When not facing the world, they may occasionally relax in their seven-room clapboard house in Beverly Hills, which modestly does not even boast a swimming pool. Bill has refinished the interior in his favorite color scheme of subdued beige and brown with the exception of the master bedroom which is done in lush shades of apricot. He has bowed to the California climate by introducing several large glass walls. This, however, is almost his only concession to the famed California way of life, for Bill, as always, lives at a super-charged Pereira tempo. After breakfast with Margaret to soft music from his new radio-phonograph (the only relaxed period in his day), he zooms off in a gray Cadillac coupe and may not be seen again for 11-17 hours.

In view of his beaver-like addiction to work it may be surprising to discover that in some quarters William Pereira is considered a "dilettante", a "four-flusher" and "just a big noise." Indeed, some of his colleagues have accused him of cheapening and betraying the venerable profession of architecture. From his advantageous position atop the movie money-bags, Pereira can afford to ignore these jibes, offering only a gentle reminder that some architects have shoe stores and others gold mines which allow them to practice when and how they please. As long as his architectural work lives up to the standards of good design, Pereira sees no reason for being ashamed of his movie connections. And when pinned to facts, even his severest critics are forced to admit that Pereira's work is among the best: that it is thorough, honest and occasionally inspired.

Those who knew Bill at the beginning of his spectacular career, however, do not overlook an important and rarely understood factor in his success. This is his older brother Hal. When the two boys were scarcely out of knee pants they had already begun to evolve a scheme for the future. There was no money in the Pereira family for such nonsense as college, so Hal went to work as a draftsman soon after graduation from high school and one year at Illinois. Bill was chosen as front man to receive the advantages of an architectural education and it was Hal's earnings supplemented by Bill's outside work which made it possible. This was the first step in the Pereira brothers' carefully planned career.

A year after Bill set up his own practice,

* Also in the works: Hospital for the Motion Picture Relief Fund Project; Culver City Motion Picture Studio; Theater for Fanchon & Marco in Los Angeles. Futures include: Studio for RKO; Theater in Goodland, Ind.; Two large planning projects in Palos Verdes, Calif.

he took in big brother as a partner. Hal, by now an experienced and expert designer, although not a registered architect, became the unsung talent in the newly opened offices. He supplied the artistic side of the Pereira coin, Bill the technical; but, according to pre-ordained plan, W. L. Pereira was the boy the public started hearing about.

Such a set-up has occasionally raised the question of Bill's competence as an independent designer. But this doubt was squashed forever when Hal took a job as architectural supervisor at Paramount (and where he is doing all right, thank you), leaving Bill to go it alone.

WILLIAM'S particular talent has since proved more than effective, and is perhaps unique in architecture. It is composed of five parts research, four parts clear, hard-headed deductive reasoning, and one part actual designing. This methodical approach which began to jell as far back as college, made him the despair of his architectural professors. The Standard Beaux Arts system then current at the University of Illinois, where Bill received his training, was to sit a student down at his drawing board for a few hours with the assignment of working out a basic scheme for a building. He was then expected to spend the next six weeks preparing detailed drawings of the scheme without change. To Bill this seemed the sheerest nonsense. Even at that early age he was convinced that the greater part of designing should be a thorough analysis of the problem involved, with a finished solution evolving quickly and easily from a basically sound conception; consequently the rebellious student made change after change in his designs as each six weeks wore on. One of his instructors, strained to the breaking point, told Bill that he wasn't worth the powder to blow him up with. This, we might add, is one of the few times the Pereira technique has not met with whole-hearted approval.

It was not until 1936, however, that it reached its present highly developed state. Prior to that time, Pereira was feeling his way in contemporary architecture, fishing around for a point of view. In addition, he had not yet learned his subsequent suave method of handling clients.

In those days a modern solution to any building was approached by the owner with great trepidation and Bill was insufficiently acquainted with problems of merchandising and competition to combat the clients' fears. As a result he was forced to take their criticism seriously. The Esquire Theater (FORUM, Apr. '38) is a case in point. Built when he was only 26 years old for the potent Balaban & Katz theater chain, it represents their first anguished switch from rococo movie palaces to a simpler, more clean-cut architectural treatment. Nevertheless, it was a compromise with the original plans and Pereira now classifies it as part of his "goopy period." He explains that the owner approached the job from an

applique standpoint and that he was unable to put across anything more drastic than contemporary applique. "At best," states Pereira austerely, "it is a skillful decorating job with certain operating advantages. But it is *not* a good piece of contemporary architecture."

Luckily, because of his subsequent work, Pereira can afford these humble words. In fact, it was the Esquire job that taught him what he considers his most important lesson. From that time on he never went into an interview unless armed to the teeth with facts, figures, cases and calculations. Often, nowadays, the client comes away with the rather disconcerting impression that this architect knows more about his business than he does himself.

Dr. W. L. Marxer, head of the Beverly Hills Medical Executive Committee and a power behind the new Memorial Center, explains that his board surveyed the entire profession before choosing Pereira. "Not one ran even a close second to him in intelligence and grasp of the medical problems involved," says Marxer enthusiastically. Undoubtedly not one had placed a standing order with Brentano's for every book ever written on hospitals plus a few extras on tuberculosis, psychosomatic medicine and cancer, either.

Before Bill was through with the hospital job, however, his Brentano beginning looked like small peanuts. He studied hospital records for the West Los Angeles area (location of the new center) to discover the existing need for hospital beds. He sent out detailed questionnaires to members of the Beverly Hills Medical Society concerning the number of patients they would send to a new hospital and their suggestions for improved facilities. He studied disease rates to determine the number and distribution of beds between medical, surgery, maternity, pediatrics, psychiatric, tuberculosis, and general contagious diseases. He made another breakdown between acute, chronic and convalescent cases. He visited existing hospitals to discover the most effective nurse-bed ratio and the number of required administrative employees. He watched operations, clinical diagnoses and laboratory tests to see exactly what kind and how much space and equipment was needed where. He talked to dozens of doctors.

The most important conclusion reached during this exhaustive study was that present hospital standards are standards of habit. Shaped by Pereira's relentless army of facts, the new medical center will differ radically from its habit-ridden fore-runners.

With the Paramount Theater for Beverly Hills, Pereira is smashing the established order in another field. It is to be an experimental motion picture house, price no object, undertaken without previously conceived notions of seating capacity, technical equipment, display or patron comforts. Before setting pencil to paper, he spent five months dissecting the various elements of the theater as though he were going into the business. He called in an internationally known acoustical

expert, Dr. Verne Knudsen, as consultant, conducted a private Gallup poll of theatergoers, and generally had himself a field day. The result, so far only in model stage, is a luxurious theater and television tower complete with glass-walled lounge, art gallery, music corner and soft drink bar plus an adjacent music store and flower shop. From the technical point of view it is the latest word in sight sound and seating excellence. The shape of the auditorium was controlled entirely by acoustical requirements. No two walls are parallel and both walls and ceiling are broken up to minimize and direct sound reflection. A low ceiling, small balcony and thin balcony truss reduce the volume of the auditorium, further improving sound reception. Thin plywood walls containing an air space are used to produce a higher quality of tone. The floor curve was fixed at the ideal for viewing the screen and seats spaced to allow easy passage. Even the usual annoyance of entering a darkened theater from a bright lobby was eliminated by placing a labyrinth between the foyer and auditorium.

Paramount, realizing that the new theater is going to cost plenty, regards it philosophically as money spent to improve their whole chain of motion picture houses. They expect it to have a profound effect on other designs when costs are more in line with prices than they are at present.

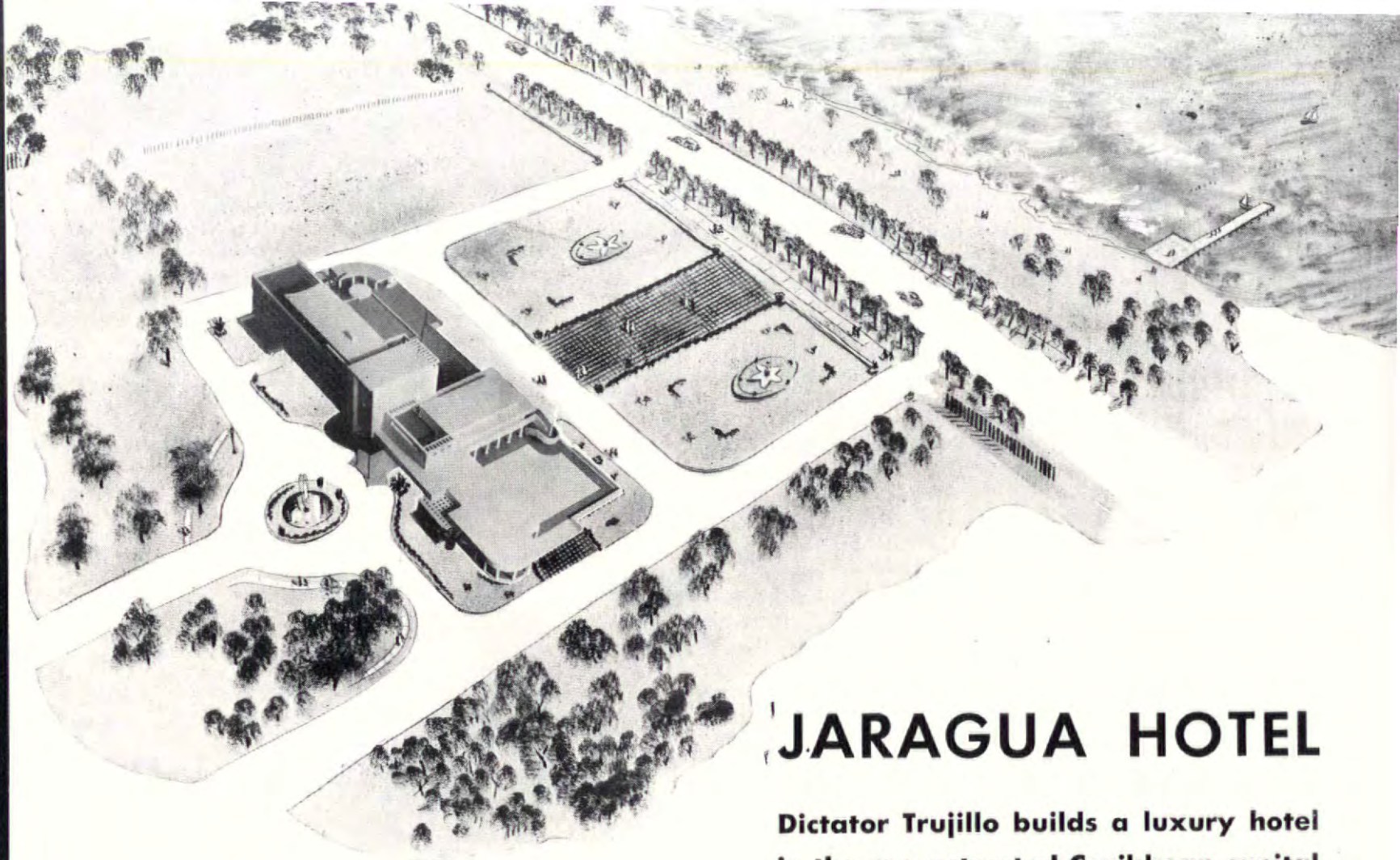
SUCH wide-open jobs are the plums of the architectural profession and Pereira has learned to pluck and ripen them with consummate skill. It was not ever thus. But even at the start of his career, green and inexperienced, he didn't do too badly.

Graduating into the forbidding world of the depression, he managed to land a job with Holabird & Root, one of the best architectural offices in Chicago. Here he displayed the talent which had begun to bloom in college and which has been one of the main factors in his success ever since. He planned his time so well that he not only polished off his own work in short order, but was able to take over for hard-pressed co-workers. Soon it became a saying around the office: "Let Bill do it." The older men even began letting him handle their client interviewing and job selling. Recalls John Root: "Bill Pereira just looked successful. He was so self-confident that a client couldn't help believing him."

In the next year and a half, however, the depression hit with a real wallop and, despite excellent work, Bill's salary was chipped away to almost nothing. Characteristically deciding that he could no longer afford to stay with the firm, Pereira, at the age of 23, set out on his own.

It has been a wonder to many more experienced men that this young upstart could open an office and make it go at that particular time in history. But Bill, as usual, had a system. While established firms were quietly closing their doors and going into the wholesale gro-

(Continued on page 122)



JARAGUA HOTEL

**Dictator Trujillo builds a luxury hotel
in the reconstructed Caribbean capital
which today bears his name.**

TOWARDS THE BLUE CARIBBEAN, THE JARAGUA HOTEL TURNS A FACADE OF SHINING WHITE. BALLROOM OCCUPIES WING AT LEFT



Architect Guillermo Gonzales Sanchez designs—and his brother, Alfredo Gonzales Sanchez, constructs—new hotel in an old Caribbean seaport.

With aerial and ocean traffic between the two Americas at an all-time high, the modern luxury hotel is fast becoming a ubiquitous feature of Latin American capitals. The Jaragua Hotel, in Ciudad Trujillo, capital city of the Dominican Republic, is another on the growing list. These hotels occupy a unique position in comparison with hotels in this country—serving more as social centers or clubs which facilitate the meeting of local aristocracy and North American tourists and business men than as simple hostelry. This function explains the lavish ratio of public areas to rentable guest rooms in the Jaragua. (There are only 63 single guest rooms and 3 suites in the building, though an addition is planned.)

Built and owned by Trujillo, the iron-fisted dictator of the little republic, the Jaragua is situated on a 50-acre plot. It faces the sea across George Washington Avenue—part of the ambitious new capital which Trujillo has been building ever since a hurricane wiped out the old city of Santo Domingo in September, 1930. The Jaragua, like most of the new construction is especially designed to resist winds of hurricane intensity and is reported to have successfully withstood the earthquakes of last month.

Architecturally, the project should be a feather in the cap of Guillermo Gonzales Sanchez, the young Yale-educated Dominican architect who designed it. Certainly, it is the equal of North American resort hotels and superior to most commercial ones. The plan gives good exposure to the public rooms and to over half the bedrooms, all of which face the sea, overlooking the swimming pool and dancing terrace. Service and traffic is confined to the north side, while bathers have a separate stairway near the pool for easy access. The pool itself is large and filled with filtered salt water. The huge, partially-covered roof terrace, which has its own bar and serving pantry, commands a fine view of the city and the sea. The entire structure is of reinforced concrete.

CONSTRUCTION OUTLINE

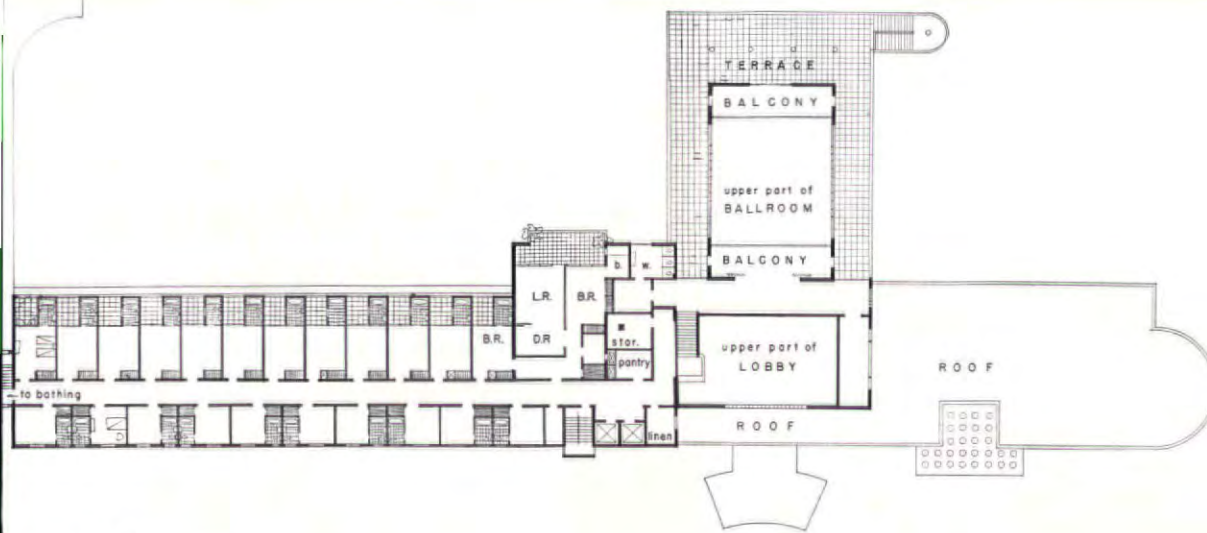
STRUCTURE—reinforced concrete. Interior partitions—hollow brick. Structural steel—Truscon Steel Co. **ROOF**—Barber Asphalt Corp. roofing. **SHEET METAL WORK**: Flashing—copper. **SOUND INSULATION**: Ballroom—acoustical tile, David E. Kennedy. **WINDOWS**: Sashwood, casement. Glass—Pittsburgh Plate Glass Co. Glass blocks—Insulux, Owens-Illinois Glass Co. **ELEVATORS**—Otis Elevator Co. **FLOORS**—Main lobby—rubber, David E. Kennedy. Ballroom—wood, E. L. Bruce Co. Remainder—cement tile. **FURNISHINGS**—Heywood-Wakefield Co., Widdicomb Co., Thonet Bros. and American Chair Co. **DOORS**: Main entrance—Herculite, Pittsburgh Plate Glass Co. **HARDWARE**—Sargent & Co. **PAINTS**—Muraltone, Muralo Co. **ELECTRICAL INSTALLATION**: Switches—Arrow, Hart & Hegeman. Fixtures—Lighting Distributors, Inc. **PLUMBING FIXTURES**—American Radiator-Standard Sanitary Corp. Kitchen Equipment—Nathan-Duparquet Straus, Inc. **HEATING**: Boiler—Cleaver-Brooks Co.



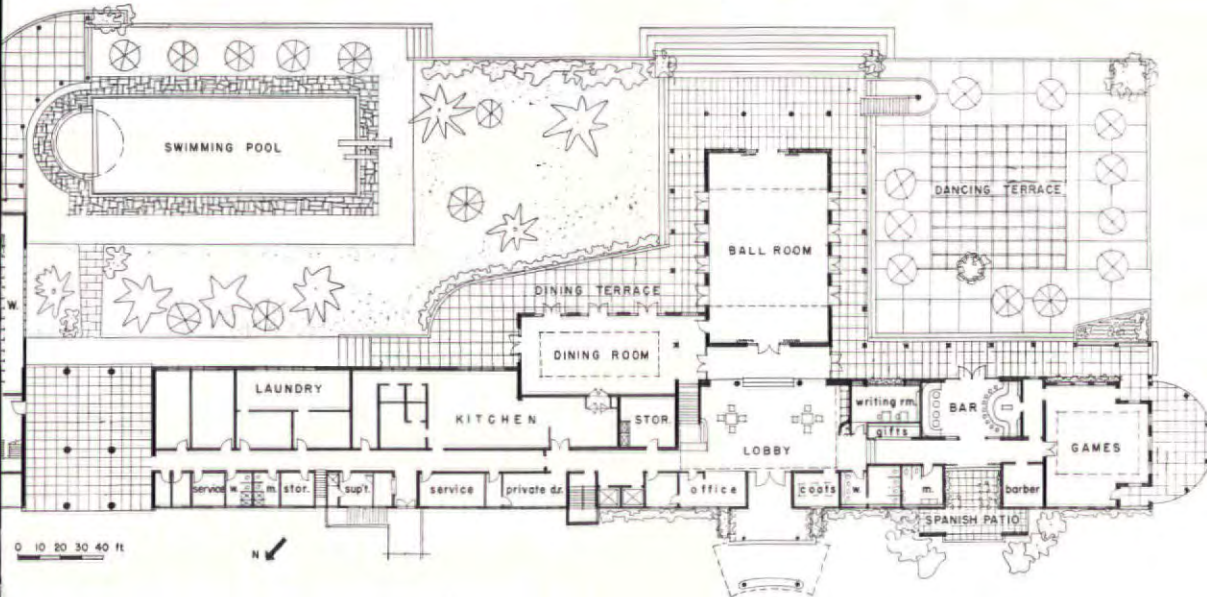
MAIN ENTRANCE IS DOMINATED BY STAIR AND ELEVATOR TOWER

A CANTILEVERED STAIR IN REINFORCED CONCRETE CONNECTS COCKTAIL TERRACE WITH COVERED GALLERY AROUND BALLROOM AT BALCONY LEVEL





Typical bedroom floor. New bedroom wing will extend beyond bathers' stairs, at an angle almost due north.



Clublike quality of project is apparent in layout of first floor, all of whose public areas face the sea.

A GLASS-SHEATHED CONCRETE PERGOLA PROTECTS BATHERS FROM SHARP EAST WINDS





LOBBY FOLLOWS TROPICAL TRADITION: PLAIN WHITE WALLS AND TILE FLOORS

A LOW PLASTER WALL SEPARATES DINING TERRACE FROM POOL AND LAWN



HOTEL JARAGUA

GUILLERMO GONZALES SANCHEZ, Architect
ALFREDO GONZALES SANCHEZ, General Contractor



BALLROOM has a huge baroque chandelier designed by the architect. Balconies at either end connect with covered gallery around outside.



SPANISH PATIO, opening off bar, has tile floor, plaster walls and reinforced concrete slat roof, pierced by circular holes for shade and ventilation.



MAIN DINING ROOM has tiled floor, mirrored walls, cork ceiling. Light fixtures are unfortunate. Another dining room on roof is served by dumbwaiters to kitchen.



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(Illustration shows Power-Operated Door)

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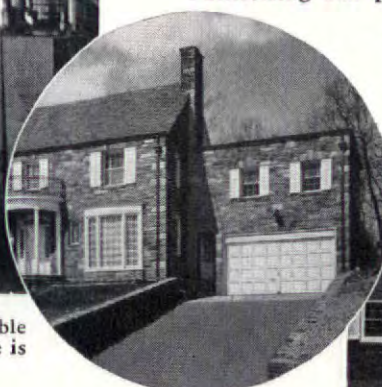
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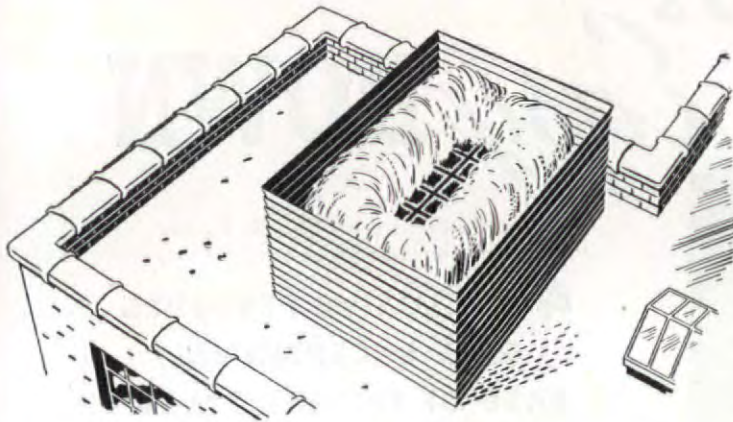
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cery business, Pereira was out tramping the streets. Whenever he saw a store, a restaurant or an office that looked promising he went in and asked if he could help them remodel. In this way he picked up a job or two a week with small fees of \$100-\$200. Interior decoration, advice on merchandise display, nothing was to be sneezed at. As Bill himself puts it: "I was willing to do an awful lot of things to keep that sign up."

In spite of such valiant efforts, business was pretty dull in 1932 when he walked into the lobby of the ancient Dearborn Theater on Chicago's north side. He asked to see the manager and learned that plans were afoot to redecorate the theater, spending \$5,000 mainly on drapes and upholstery. Pereira boldly asserted that he could do a complete remodeling job for that amount of money and sketched the plans to prove it on the back of a handy envelope. The impressed manager turned out to be Elmer Balaban whose big brother Barney was head man of Balaban & Katz. This little episode started Pereira in the bigtime theater business. During the next six years he built 75 theaters for Balaban & Katz in 26 states. The firm who had previously done all the work for Balaban & Katz, however, looked with a jaundiced eye on this newcomer who had snatched such a juicy chunk of business from under its nose. At that time a story grew up, which still follows Bill, that he had married into the Balaban family. This unfounded rumor annoys Margaret more than it does Bill, who knows exactly why he married her.

The Balaban tag was again applied to Bill when he took Hollywood's tinsel studios by storm, for Barney had by then become head of Paramount Pictures. Actually, like the self-reliant young man that he is, Pereira landed the \$15 million studio design job without once mentioning Balaban's name. And since that first foothold, his canny movie career has had little assistance from anyone except Bill Pereira.

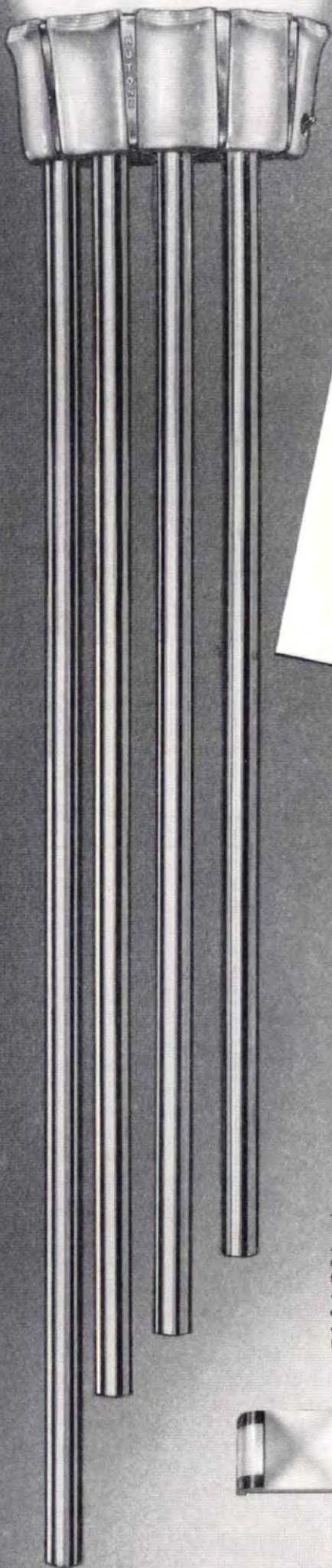
Wisely refusing a proffered producer's job, Bill set out to learn the movie business from bottom to top. His first position designing sets under Hans Drier lasted a little over a year. "He left," says Drier, "because he is Bill Pereira and he has a self-starting motor." As usual, the motor was not idling.

He moved from art director to director of special effects and production designer in rapid succession; switched from Paramount to Selznick to RKO; (Continued on page 124)

Mr. and Mrs. W. L. Pereira, Chicago Architect's Ball, 1939



Photo by William Vandivert



It's New! THE NUTONE Majestic

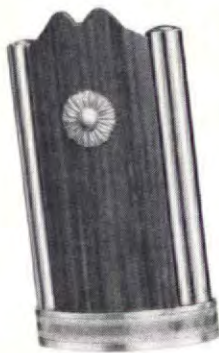
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The MT. VERNON

... a 2-door Colonial chime for stairway, hall, or living room. Handsome hammered brass cover with satin brass tubes. List, \$7.95.



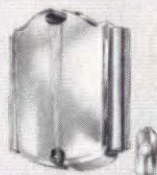
The SKYLINE

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The JEWEL

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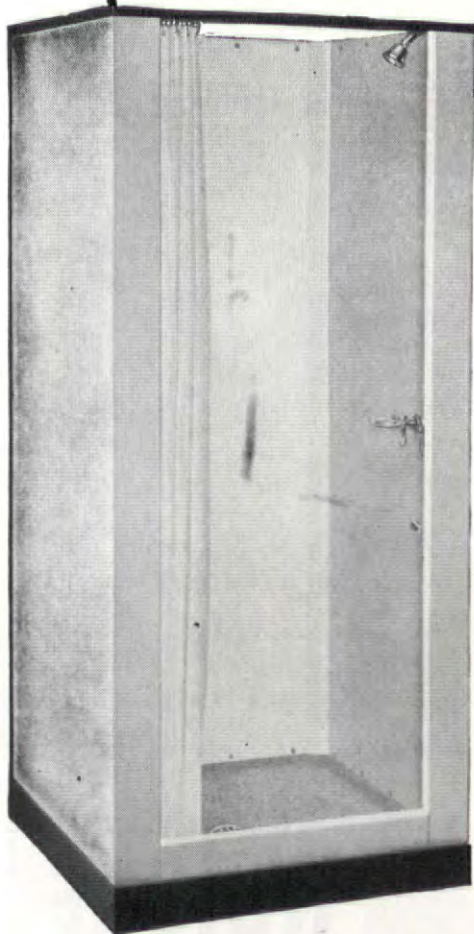
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spent 85 consecutive days under water in a glass tank directing cameramen (he *did* come out for air at night) picked up an Oscar for his trick photography in *Reap the Wild Wind*; designed every shot for *Jane Eyre* and *Since You Went Away*; began to be known at Romanoff's restaurant where only the Hollywood elite get Mike's nod; and found time to write a technical book on optical effects for Paramount Studios.

Although comet-like careers are no new story to Hollywood, movie moguls are hard put to classify Pereira. They are baffled, like others before them, at his tireless pace; they are also bemused by his uncanny sense of timing. He became a producer only after he knew more about the entire industry than any other producer. Experienced artists like Vladimir Luten mutter that he doesn't know anything about making movies. But his first two pictures, *Johnny Angel* and *From This Day Forward*, both hit the jackpot for a million dollars. He has become the idol of young actors and directors who feel that he is the only bigshot willing to give them a chance. Accomplished actresses like Joan Fontaine grow ecstatic over his tactful presence and shrewd judgment.

This smooth-working combination of charm and relentless drive which has already pushed Pereira to the top of two professions, stems undoubtedly from his peculiar heritage. His most vivid childhood recollection is of visits from his grandfather, an aristocratic Portuguese who had come up through Brazil to America before the Civil War. Of one thing this gallant gentleman was convinced: the most important part of his grandson's education was learning to ride and fence. Thus, the offspring of a poor Chicago family learned these courtly arts almost as soon as he could walk. Grandfather Pereira maintained the comfortable illusion of aristocracy on a small income from his native country, wearing always black and fine linen and looking like a Goya painting with his white beard and impressive moustaches. Bill remembers that, when his grandfather was offered a second helping at dinner, he always replied that he had had a "delicate sufficiency." The old gentleman never quite got used to the crass commercialism he found in America and apparently this distaste for the marts of trade was implanted in his son, for Bill's father had little interest in setting the world on fire.

It was at an early age, therefore, that Bill made up his mind to be a success. A friend of his recently remarked that Pereira was born ninety years old, and there is more than an element of truth in it. Even as a child Bill had little desire to play, but felt as though he were wasting his time and longed to be out in the "real" world, making his own way. He had few friends among the other boys, but stuck almost exclusively to brother Hal, who shared the bond of mutual rebellion and ambition.

At the age of 14 Bill got his first job as an usher in the Riviera motion picture theater and here he spent most of his "leisure" hours. He attended Crane Technical School for two years, concentrating on woodworking and mechanical drawing and making only one B out of a parade of A's the entire time he was there. In order to get into college he transferred in 1924 to Senn High School, a massive and forbidding pile of yellow brick and gray cement which swallowed in its dreary depths 3,500 students, putting them through the paces of the Chicago public school system. Here again, Bill concentrated on mechanical and architectural drawing, for even in high school he was obsessed with the idea of becoming an architect and felt that he must work at it every minute. He did spare enough time from studies and

(Continued on page 128)

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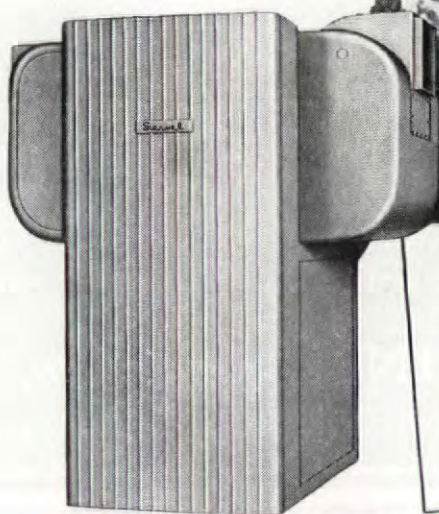
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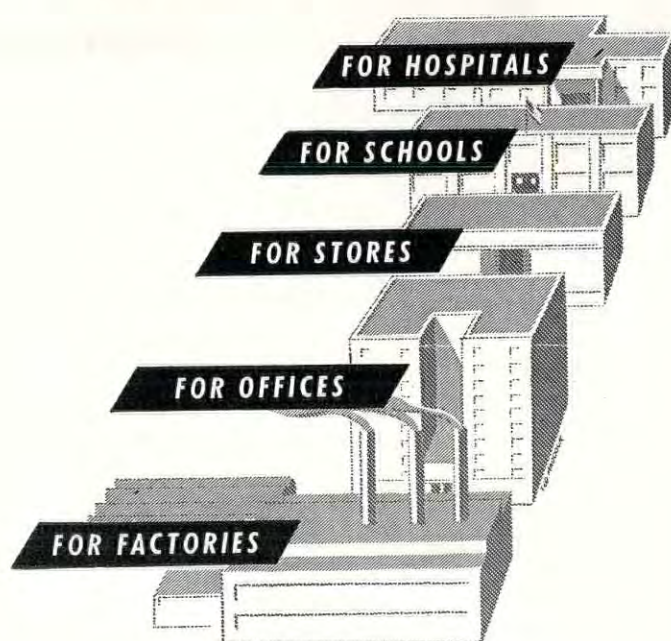
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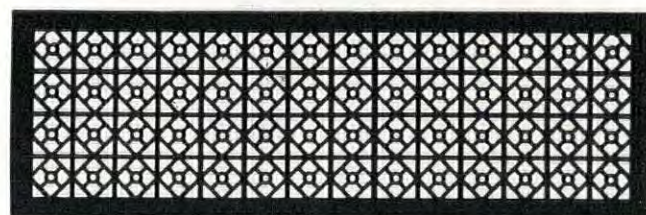
WILLIAM, THE CONQUEROR

his ushering job, however, to keep up the Pereira tradition of fencing, and in his senior year became captain of the high school team. The Senn High School News for 1925 carried an enthusiastic tribute to his prowess:

"Captain Bill Pereira gave one of the finest exhibitions of 'guts' and fencing ever seen on a mat. Despite an infected foot Bill fenced every bout in fine fashion, turning in the high score of 36. Although he was barely able to stand, the green and white captain fought for every point and was rewarded with the ribbon for third highest man on the mat." And again: "He has developed into a good man on defense and offense. He is quick and sure of foot." The unknown writer of these words displayed a rare gift of prophecy.

William L. Pereira remains something of an enigma, however, for he has all the trappings of a man who has sold out to success. His work in the movies continues to raise architectural eyebrows and his faculty for cultivating influential friends is often suspect. But even skeptics are impressed with his resistance to decay. In spite of travelling exclusively with Republicans, he remained through the years a vocal Roosevelt man. In spite of fabulous earnings, his architectural work never slacks off. In spite of a position to maintain, he recently joined a push (which missed only by a fraction) to oust the old guard from the California A.I.A. and elect Richard Neutra president. Among many of his architectural colleagues he is regarded as a potential leader of the profession. This, they hastily add, could happen only if he got out of the movies. Movie executives, on the other hand, feel that he is one of the few young producers with a real future. That is, of course, if he gives up architecture. Meanwhile Pereira, apparently oblivious to this double controversy, continues to wear his architectural coat and his picture pants without wasting any time deciding which to put on first.

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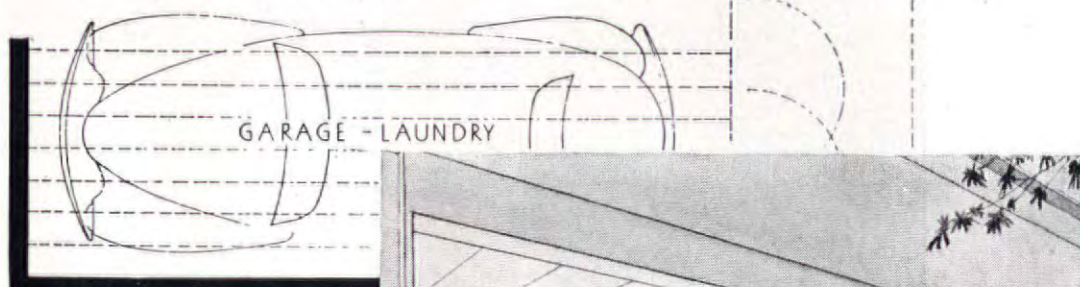
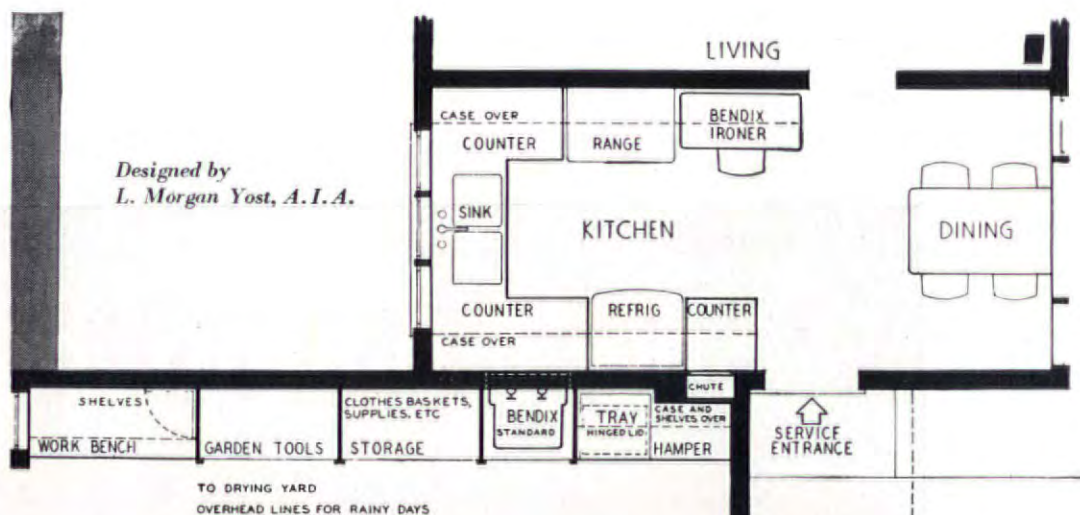
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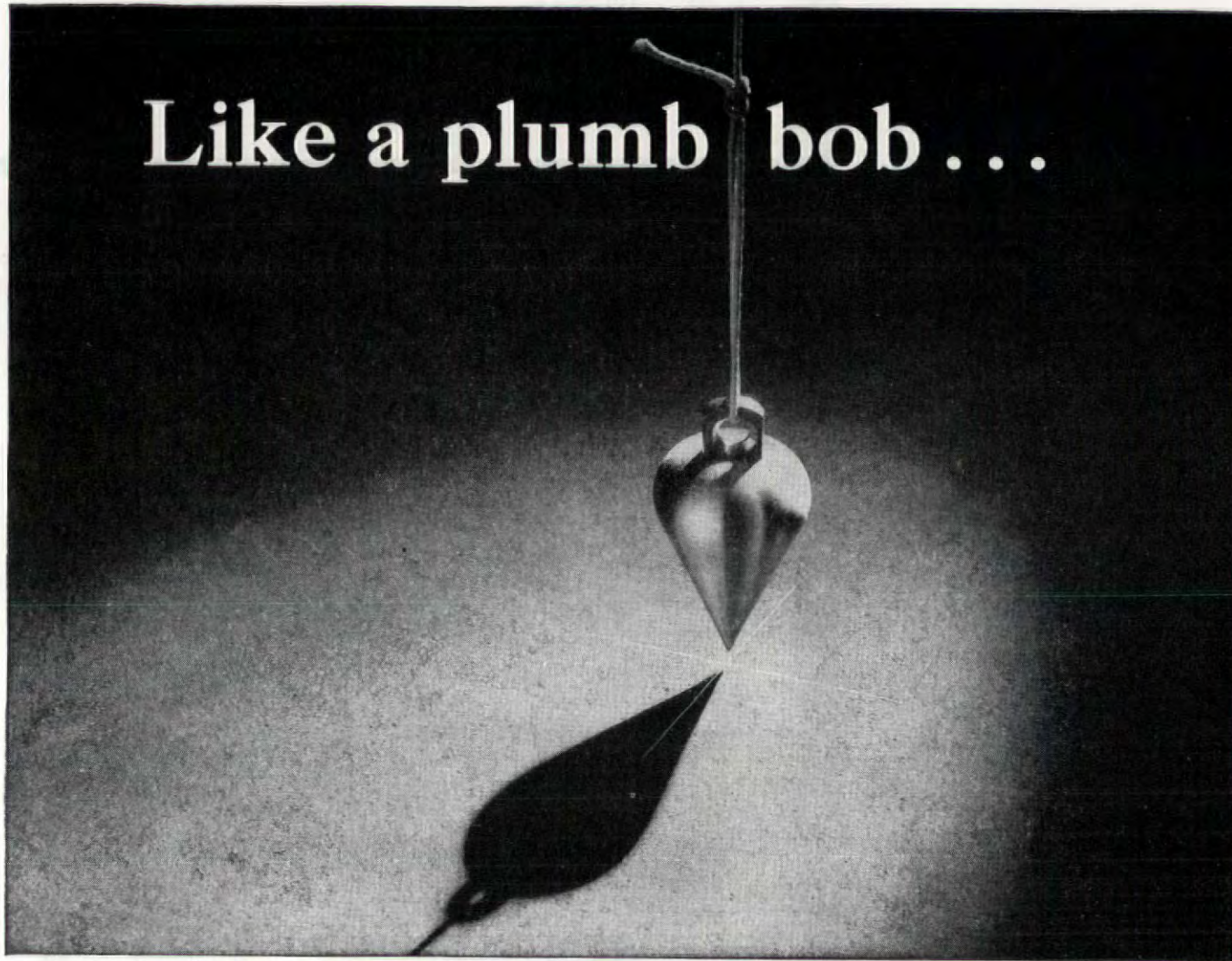


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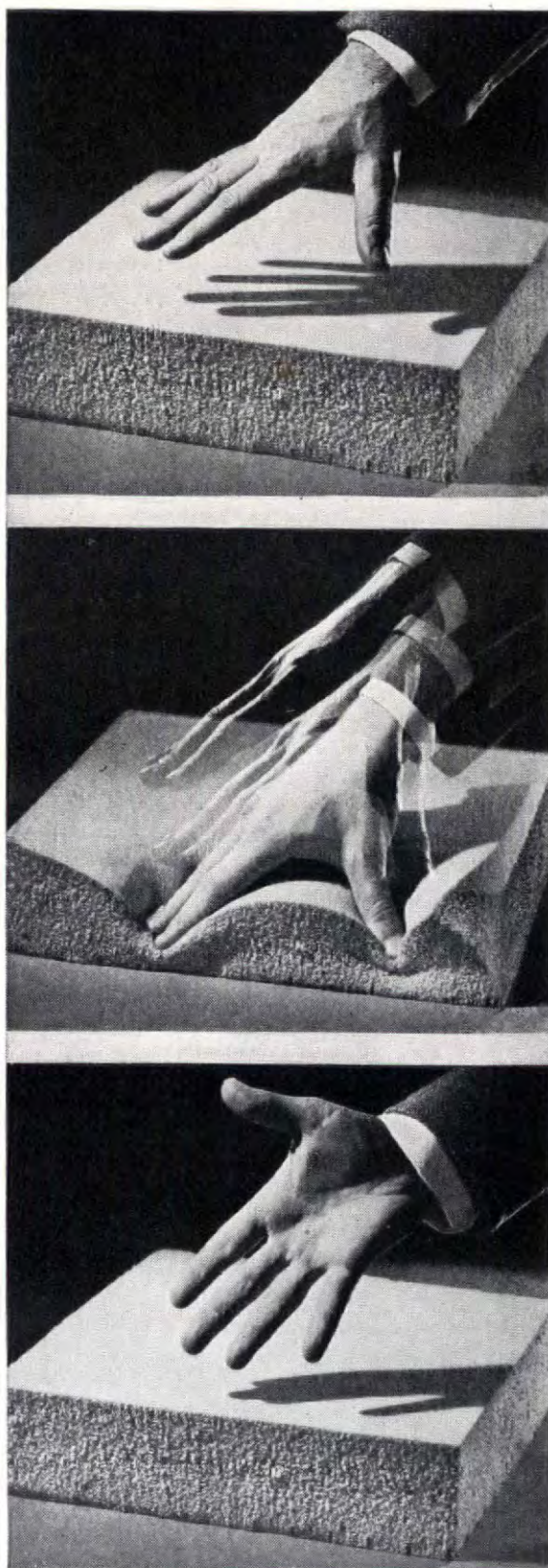
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And what's its secret? Koylon Foam combines the natural resiliency of pure latex with the buoyancy of air. It actually "breathes"...absorbs air in millions of tiny latex cells—releases it on contact with the body. Result: a resilience that's matchless for comfort!

The beauty of it all, too...there are no mechanical parts—no springs—to wear out...no stuffings to bulge or sag. This means lower maintenance costs. Further, eleven years of testing on major railroads prove that Koylon Foam adds to seat upholstery life.

That's why we say: If you sell "seats"—or "sleep"—better sell Koylon Foam!

*Comfort Engineered
for Sitting and Sleeping*

"U.S."
Koylon
FOAM

"U.S." KOYLON FOAM DIVISION • MISHAWAKA, INDIANA



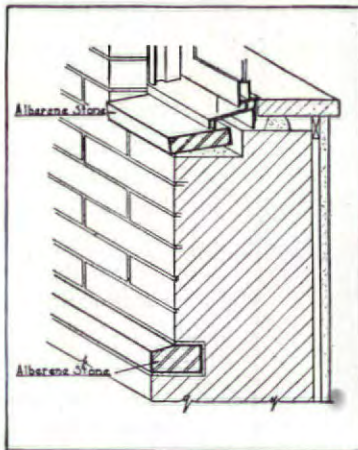
UNITED STATES RUBBER COMPANY



Riverside Hospital, Tuberculosis Pavilion, No. Brother Island, N. Y., N. Y., Electus D. Litchfield, Architect.

Sills, coping and trim of Alberene Stone are durable, colorful and economical

Alberene Stone is ideal for exterior use because it is impervious to moisture; it does not chip, scale or split. Its natural light blue-gray tone harmonizes with practically any other colors. The fact that it can be cut into thin sections makes for definite economies. Used for sills, coping, spandrels, exterior or interior trim. Alberene Stone is free for all time of maintenance costs. Our Mills in Virginia are the largest in the country devoted to producing special purpose quarried stone. We are prepared to make deliveries *promptly* of stone in a color range of gray, dark gray, blue, blue-black, dark green and black, in various textures and finishes; and *prompt delivery is an important consideration in the present emergency*. Inquiries will receive immediate attention.



Detail showing 1 3/4" thick Slip Sill, and 2 1/4" thick Belt Course of Alberene Stone as used in Riverside Hospital. At circular sections, Sills carry through to form a hand course. Alberene Stone used for roof and balcony copings, also. Similar Sill treatment, 1 1/2" thick, being furnished for U. S. Army Tripler Hospital in Hawaii; York & Sawyer, Architects.

ALBERENE STONE CORPORATION OF VIRGINIA
419 Fourth Avenue, New York 16, N. Y.
Quarries and Mills at Schuyler, Virginia
Sales Offices in Principal Cities

ALBERENE STONE

THE NATURAL STONE OF DIVERSIFIED UTILITY



THE AUSTIN ENGINEERING COMPANY of New York and Cleveland has just completed this three-story dust-proof, air-conditioned building for the Winthrop Chemical Company, Inc. of Rensselaer, N. Y. The new plant will provide 50-thousand sq. ft. of space to accommodate operations in the manufacture of pharmaceutical preparations in ampule form.

THE CORNING GLASS WORKS, Corning, N. Y., has announced plans for building a pilot plant to facilitate its experiments on new products and develop manufacturing methods without interfering with the company's regular production schedule.



THE NEW \$15,000,000 CURTIS COMPANY plant now under construction at Sharon Hill, Pa., will house printing, binding and shipping operations. The building (above), designed by Stone and Webster, N. Y., is located on a 100-acre site which will provide parking for the cars of 5,000 Curtis workers as well as facilities for the loading and unloading of a minimum of 50 freight cars a day.

THE AMERICAN BOOK CENTER FOR WAR DEVASTATED LIBRARIES, INC., has been formed to collect and ship abroad printed materials which are essential for the physical, economic, social and industrial reconstruction of Europe and the Far East. Scholarly books and periodicals on all subjects, distinguished fiction and non-fiction (especially works issued during the last decade) will be welcomed. Limited shipping facilities prevent sending recreational, children's or out-of-date publications. The Center will be glad to give further information on materials needed. All shipments should be sent prepaid to the American Book Center, c/o The Library of Congress, Washington 25, D. C.

AN INTERNATIONAL CONGRESS AND EXHIBITION OF HOUSING AND TOWN PLANNING will be held in Hastings, Sussex, England from October 7-12. Special sessions will be devoted to examining already formulated plans, new housing techniques, decentralization, housing economics and plan implementation.

THE NATIONAL RETAIL FURNITURE ASSOCIATION, Chicago, Ill., announces publication of a bulletin for veterans covering details of on-the-job training in the retail furniture industry. Specimens of forms required by the Veterans Administration, an analysis of occupational demands for disabled veterans, and outlines of 12 courses already approved by several states are included.

THE ASPHALT TILE INSTITUTE at a recent meeting in New York City announced the election of officers for the coming year: president, Charles Neumann; vice president, H. Dorn Stewart; secretary-treasurer, Ralph Bolgiano.

MINNEAPOLIS-HONEYWELL REGULATOR Co. has announced the opening of new offices in Denver and Salt Lake City and expansion of existing offices in Washington, D. C., Los Angeles and Spokane.

(Continued on page 136)



"O.K.—we all agree on Lumite screens. What I want to know is—how many of you are going to live here?"

• Grandpa and Uncle Jasper and Cousin Minnie have plenty of advice to give about the new house. Seems as if they never *would* agree. But one thing was settled from the first—Lumite plastic screens for windows, doors and porches. Your clients have heard about Lumite. Architects *know* that in recommending Lumite they are helping their clients, as well as themselves, to attain the ideal of "the perfect house."

No window eyesores on the Lumite-screened house! Lumite

won't stain or rust . . . keeps its fresh beauty for a lifetime. No screens for Father to paint—Lumite *never* needs painting because the color is *in* the cloth. No screens for Junior to kick out—Lumite will not dent or bulge. And easy for anyone to clean! A wipe with a damp cloth keeps Lumite sparkling like new.

Recommend Lumite for a house that you and your clients will be proud of!

We'll be glad to send you our A. I. A. 35P folder, with sample.

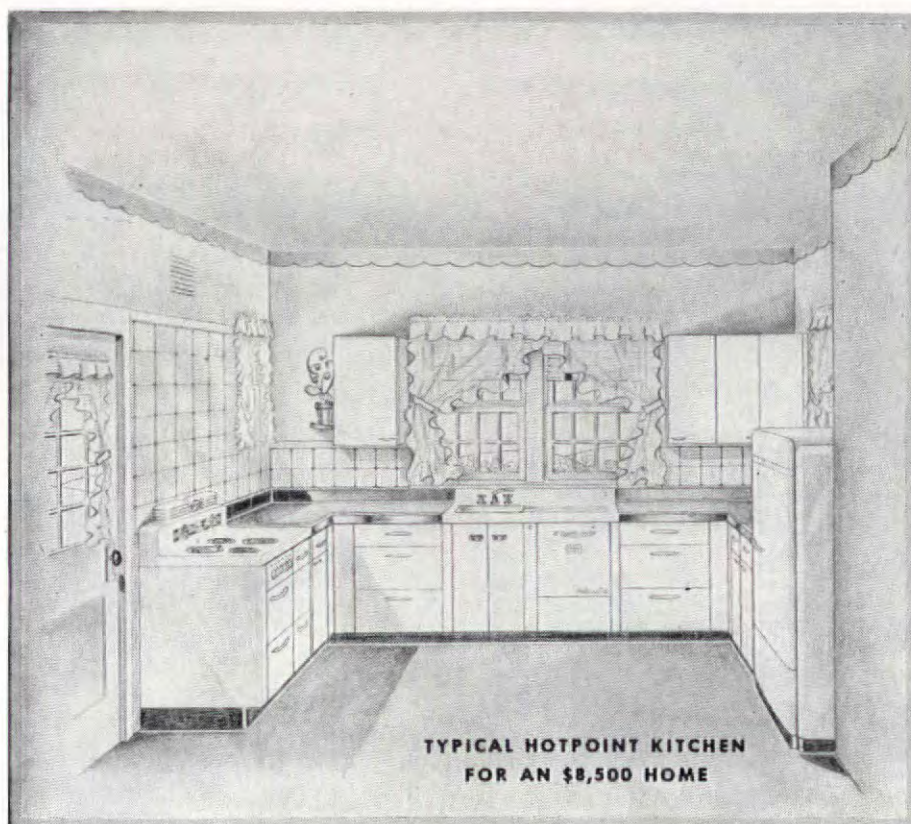
LUMITE DIVISION, Chicopee Manufacturing Corporation
47 Worth St., New York 13, N. Y.

LUMITE

MODERN PLASTIC INSECT SCREEN CLOTH

HERE'S WHY LEADING ARCHITECTS SPECIFY LUMITE:

- Cannot stain
- Won't rust or rot
- Never dents or bulges
- Needs no painting
- Color cannot fade
- Easy to frame
- Lighter in weight
- Sensibly priced
- Lasts years longer
- Woven of Dow's Saran
- Strong! (Lumite is woven of heavy gauge plastic filament—0.015")



RECOMMENDED EQUIPMENT			
ITEM	QTY.	DESCRIPTION	CAT. NO.
1	1	RANGE	37"
2	1	REFRIGERATOR	6 CU. FT.
3	1	DISHWASHER-SINK	48" WIDE
4		DISHWASHER	
5		DISPOSAL	
6		CABINET-SINK	
7		SINK CABINET	
8			
9	2	BASE CABINET	24" "
10	1	" "	15" "
11			
12			
13			
14	2	COR. BASE CABINET	42" WIDE
15		UTILITY CABINET	
16	1	WALL CABINET	18" "
17	1	" "	15" "
18	1	" "	30" "
19	1	" "	18"x36" "
20			
21		COR. WALL CABINET	
22	2	FILLER	BMP 34"
23	1	"	W/F 30"

Hotpoint KITCHEN PLANNING SERVICE
COMMERCIAL ENGINEERING DIVISION
DRAWN *Ann Tarny*
APPROVED *E. G. Tich*
DWG. NO. AKL45664 DATE B-22-45
EDISON GENERAL ELECTRIC APPLIANCE CO., INC.
8600 WEST TAYLOR STREET CHICAGO, ILLINOIS

PLAY IT SMART... build for '66 in '46!

DESPITE skyrocketing prices . . . inflation threats . . . housing shortages . . . clients want to invest in long-term comfort, security and convenience. They can afford homes today with tomorrow's advantages. With electricity recognized as the fuel of the future, a planned, all-electric kitchen belongs in every home. The difference in cost is negligible, as our kitchen specialists will demonstrate. A Hotpoint electric kitchen, complete to the smallest matching cabinet, gives your client pride of ownership now and years after the building boom has passed.

Learn the details of cost and planning from Hotpoint kitchen specialists. Send for the *Portfolio of Personalized Kitchen Plans* for homes in all income brackets. Attach the coupon below to your letterhead and mail to us today for your copy of this useful *Portfolio*.

Electric Kitchen Trend Well Established! Attention has been focused on the electric kitchen as the No. 1 room in the modern home by over a million and a half dollars of national advertising by Hotpoint during the war years—by scores of articles in leading magazines and newspapers—and by distribution of over two million booklets "Your Next Kitchen" by Hotpoint to home makers who will build or remodel.

Hotpoint ranges carry a Class "O" rating from Five Underwriters which means zero clearance on all sides. They may be installed tight against the rear wall with inflammable cabinets tight against each end.

HOTPOINT REGIONAL SALES OFFICES. EASTERN: 570 Lexington Ave., New York City 22, Plaza 3-9333. SOUTHERN: 304 Red Rock Bldg., Atlanta 3, Walnut 2959. CENTRAL: 1456 Merchandise Mart, Chicago 54, Superior 1174. WESTERN: Western Merchandise Mart, 1355 Market Street, San Francisco 3, Underhill 2727.

In most states, all Hotpoint kitchen equipment can be included in F.H.A. insured mortgages.

The Hotpoint Institute
5651 West Taylor Street, Chicago 44, Illinois

Without obligation, please send me your *Portfolio of Hotpoint Personalized Kitchen Plans*. This offer available in United States, Territory of Hawaii and Alaska.

Name _____

Firm Name _____

Address _____

City _____ State _____

Copy, 1946 Edison General Electric Appliance Co., Inc., Chicago

Hotpoint
ELECTRIC KITCHENS
DEPENDABILITY ASSURED BY
40 YEARS EXPERIENCE



ON JOBS THAT ARE TOO TOUGH FOR OTHER INSULATING MATERIALS . . .

PC FOAMGLAS insulates permanently

PC Foamglas is not affected by moisture, vapor, vermin, or the fumes of most acids. It is fireproof, waterproof. It does not swell, rot, flake, warp or check. Thus, factors that cause many roof insulation failures do not cause Foamglas to lose its original insulating value.

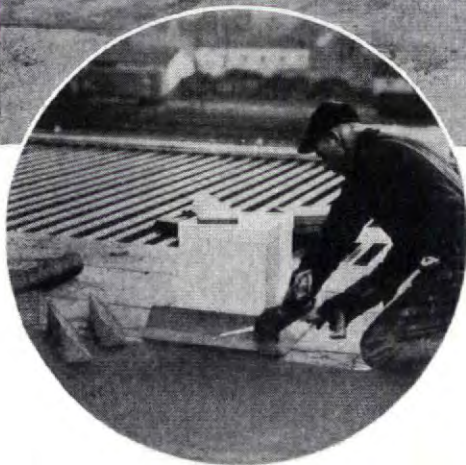
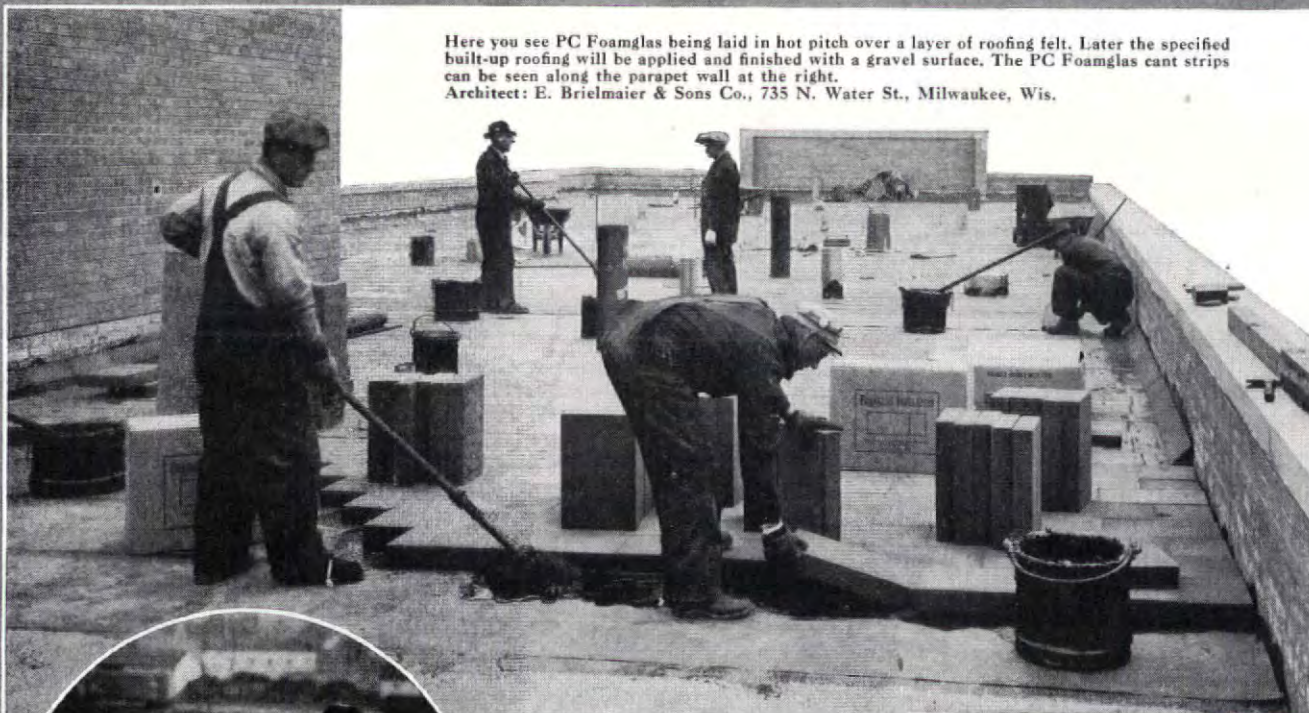
PC Foamglas ticks tough insulating problems on roofs, in walls and floors. The big, oblong

blocks are light in weight, easy to handle, but still rigid, strong and durable. PC Foamglas stays where it is laid. It does not creep, slip, pack down or powder.

In all sorts of plants all over the country, wherever conditions are really tough, PC Foamglas does an efficient job. It helps to maintain temperature levels, to minimize condensation.

Here you see PC Foamglas being laid in hot pitch over a layer of roofing felt. Later the specified built-up roofing will be applied and finished with a gravel surface. The PC Foamglas cant strips can be seen along the parapet wall at the right.

Architect: E. Brielmaier & Sons Co., 735 N. Water St., Milwaukee, Wis.



Makeshift wooden cant strips have long been a source of roofing trouble. Now you can get cant strips made of PC Foamglas. You need not fear that they will check, swell, shrink or rot.

You will find a lot of worthwhile information on the use of PC Foamglas insulation for specific purposes in our authoritative, illustrated booklets. Send in the convenient coupon for your selection of free copies. Pittsburgh Corning Corporation, Room 173, 632 Duquesne Way, Pittsburgh 22, Pa.

Pittsburgh Corning Corporation
Room 173, 632 Duquesne Way
Pittsburgh 22, Pa.

Please send me, without obligation, your free booklets on the use of PC Foamglas Insulation for:

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

Address.....

Name.....

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

PC FOAMGLAS *Waterproof* *Fireproof* **INSULATION**

T. M. REG. U. S. PAT. OFF.



IN THE HOSPITAL

THIS...

NOT THIS..

MAKES
WOOD FLOORS
SANITARY!

Unlike surface finishes, Seal-O-San sinks in ...fills and seals every open joint and cell

THE architect who specifies Penetrating Seal-O-San for hospital floors wins the gratitude of everyone charged with efficient hospital management. For Seal-O-San not only keeps the surface clean, it makes certain that every wood cell *below the surface* remains clean.

A Seal-O-San finish becomes part of the wood. Penetrating deep, the liquid fills the empty cells, eliminating the *hidden* sources of dirt. Sealing the cells, it forms a protective finish that actually reinforces surface fibres. Thus, a Seal-O-San finished floor is covered with a *wear-resisting* seal that locks out dirt or moisture. As a result, stains and dust are *easily* removed. Costly scrubbing is seldom necessary.

Moreover, the tougher Seal-O-San finish keeps dirt from piercing the surface and getting a foothold. It puts an end to cracks and crevices that harbor germs or dirt. That's why a

Seal-O-San floor *stays clean longer*... why maintenance becomes simple and inexpensive.

Unlike hard, brittle, surface finishes, Seal-O-San will not chip, crack, or peel. Consequently, Seal-O-San has convinced hundreds of hospital administrators that it will not break down where traffic is heaviest.

Seal-O-San leaves a beautiful, soft-lustre, natural finish—as smooth and polished as a fine piece of furniture. And the ease of application—with a lambswool mop—brings worthwhile labor savings.

Your insistence on *beauty, cleanliness* and *simple maintenance* for hospital floors will inevitably lead you to Seal-O-San. Why not write for specifications and details—*today!*

HUNTINGTON LABORATORIES INC

DENVER

HUNTINGTON, INDIANA

TORONTO

P-E-N-E-T-R-A-T-I-N-G
SEAL-O-SAN
PERFECT SEAL AND FINISH FOR WOOD FLOORS

J. W. FISKE IRON WORKS, New York, N. Y., has taken over the Smyser Royer Co., York, Pa. and will continue manufacture of their patterns of ornamental metal work and architectural lighting fixtures.

THE U. S.-MENDEL PLYWOODS, INC., a company jointly owned by the Mengel Co. and United States Plywood Corp., announces the opening of the fifth in a chain of plywood distributing warehouses in Houston, Tex.

GENERAL ELECTRIC COMPANY announces that Guy Stone has been appointed manager of the laminated plastics plant now under construction at Coshocton, Ohio; David Fitzgerald has been named as manager of employee relations for the plastics division and will be responsible for coordination of employment and rates.

MINNEAPOLIS-HONEYWELL REGULATOR CO. announces new offices in Denver and Salt Lake City and expansion of existing offices in Washington, D.C., Los Angeles and Spokane.

W. H. DAVIDSON AND H. E. SERNER have formed an organization for the sale of special equipment in process engineering with offices at Commercial Trust Building, Philadelphia, Pa., and 342 Madison Ave., New York, N. Y.

CHARLES INGHAM and THOMAS PRATT are now members of Ingham & Boyd, architects, which will be known as Ingham, Boyd & Pratt, 1211 Empire Bldg., Pittsburgh, Pa.

JAMES MORELAND, JR. announces his return to architecture in association with the office of Douglas McLellan, Architects Bldg., 816 W. 5th St., Los Angeles 13, Calif.

JAMES S. PLAUT has returned to his post as Director of the Institute of Modern Art, Boston, Mass. after four years of active duty with the Navy.

FENNO and PODE, architects, announce the addition to their partnership of W. Newell Reynolds, AIA. After October 1st, the firm Fenno, Podd & Reynolds will be located in its new office at 360 Delaware Avenue, Buffalo 2, N. Y.

WILLIAM VAN ALLEN has become a member of the architectural firm Carroll & Grisdale, Philadelphia, Pa., now to be known as Carroll, Grisdale & Van Allen.

DERRICK and GAMBER, architects, have named William H. Odell, AIA, associate member of the firm.

AWARDS

THE MUSEUM OF MODERN ART, New York, N. Y., announces winners of the fabric design competition sponsored by retail stores throughout the country which will distribute the winning fabrics. Mrs. Yvonne Delattre, Bloomfield Hills, Mich., first prize (\$500); Milton Weiner, Philadelphia, Pa., second prize (\$350), also a third prize (\$250); Fredric Karoly, E. 48th St., New York, N. Y., won the other third prize.

JAMES KELLUM SMITH, member of the architectural firm McKim, Mead and White, was given the honorary degree of Doctor of Humane Letters by Amherst College.

ASSISTANTSHIP

THE DEPARTMENT OF LANDSCAPE ARCHITECTURE, Michigan State College, offers a half-time graduate assistantship for the year 1946-7. Further information may be obtained from the Department of Landscape Architecture, Michigan State College, East Lansing, Mich.

NEW OFFICES

VONNEGUT, WRIGHT & YEAGER, an architectural firm, has opened offices at 1126 Hume Mansur Bldg., Indianapolis 4, Ind., and also at 402 Opera House Bldg., Terre Haute, Ind.

(Continued on page 140)

Graduation time for the ADLAKE WINDOW that was tested 1 MILLION times!



When we put an actual Adlake Window to a rigid test, it passed its one millionth opening with flying colors!

What did the test prove? Simply this:

After 1,000,000 cycles of opening and closing, the exclusive nonmetallic weather stripping used by Adlake showed little or no signs of wear!

What's more, the increase in air infiltration was practically nil, and the window moved as freely and easily as it did at the very beginning of the test!

NO WARP, ROT, SWELL, STICK OR RATTLE

An Adlake Window gives a lifetime of efficient service because it's precision-built right down to the last detail. No painting—no maintenance of the lustrous aluminum to worry about. Patented serrated guides give finger-tip control . . . no warp, rot, swell, stick or rattle—*ever*. And Adlake is designed to blend harmoniously with

either modern or traditional structures.

Why not drop us a card today for complete data?

THE FOLLOWING TABULATION SHOWS THE RESULTS OF THE TEST, AS CONDUCTED BY AN INDEPENDENT RESEARCH FIRM:

Number of cycles of opening and closing upper and lower sash	Air infiltration—cubic feet per minute per foot of inside crack perimeter at a pressure equivalent to an air velocity of 25 miles per hour
0	0.237
100,000	0.315
200,000	0.320
300,000	0.332
416,200	0.427
507,800	0.481
750,000	0.557
1,000,000	0.579

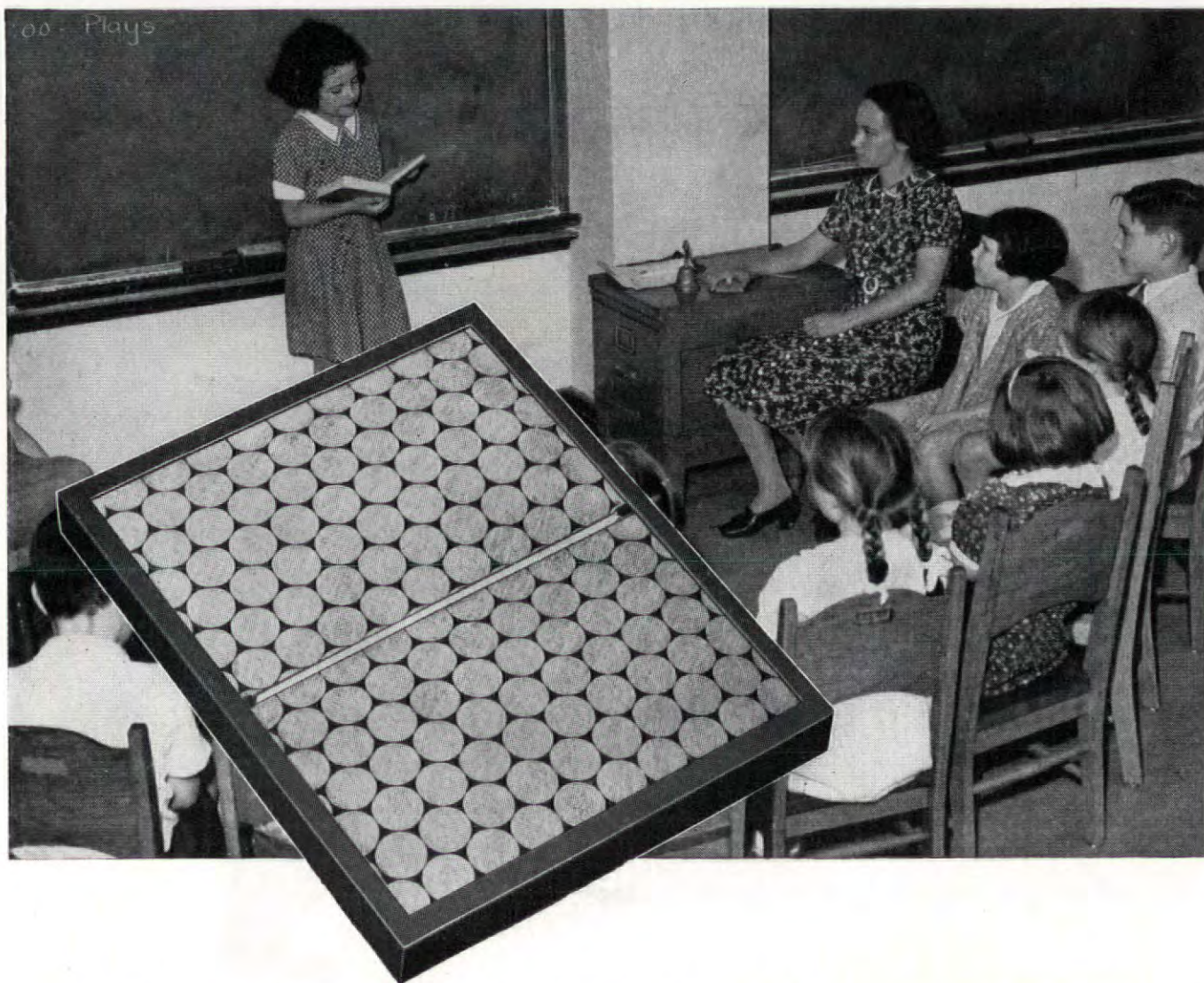
THE ADAMS & WESTLAKE COMPANY

Also Window Makers to the Transportation Industry

ESTABLISHED IN 1857

ELKHART, INDIANA

NEW YORK • CHICAGO



DUST-STOPS* add something to modern education

From small nursery school to large university building, *properly conditioned air* is making important contributions to students' comfort. And clean, filtered air is a vital part of the process of air-conditioning.

Department of Education engineers and building superintendents have found that filtered air can be obtained at both low initial *and* low maintenance costs with DUST-STOP Air Filters.

The DUST-STOP is a replaceable type air filter. Packs of adhesive-coated FIBERGLAS fibers provide an efficient medium for catching and holding most atmospheric and manufactured dusts.

DUST-STOP Air Filters are adaptable all the way from the smallest to the largest commercial and industrial heating, ventilating and air-conditioning systems. They

may be installed in custom-built or the complete, ready-to-assemble, DUST-STOP steel frame cells. These cells can be built up into filter banks *to handle any cfm of air required*. Once the filter bank is installed, maintenance is easy and economical—for replacement DUST-STOPS are readily available from authorized suppliers in nearly every community.

Complete information on DUST-STOP Air Filters will be sent on request. Write for 24-page illustrated booklet—"Air Filtration in Central Systems" (A5.2.1). Owens-Corning Fiberglas Corporation, Department 830, Toledo 1, Ohio. Branches in principal cities.

In Canada, Fiberglas Canada Ltd., Toronto, Ontario.

DUSTSTOP

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

AIR FILTERS

—a FIBERGLAS product

When you have a Flooring problem

Ask a Flooring Expert



Your Tile-Tex Representative

Get the skilled opinion of your Tile-Tex sales representative when a difficult flooring problem comes up. He's a flooring expert! Here's why:

Asphalt Tile flooring is *our* business and has been for over 21 years. Tile-Tex installations are everywhere—in schools, institutions, restaurants and hotels, stores and offices, factories and homes! They've been applied under every conceivable kind of flooring condition—are designed to meet the use requirements of each particular floor area—to give your client maximum satisfaction at minimum cost.

Through actual on-the-job experience, your Tile-Tex field representative has encountered most of the special flooring problems presented by various types of building areas. His value to you is further increased by the fact that he has available to him the

case histories of thousands of Tile-Tex Asphalt Tile installations made over the past 21 years.

Let the Tile-Tex sales representative in your area *serve you*. A word from you will bring him to your office.

THE TILE-TEX 1946 PLEDGE

- 1 Adequate Plant Facilities
- 2 Continuous Product Development
- 3 Uniform Product Quality
- 4 Controlled Installation Standards
- 5 Maintenance Service Program

THE TILE-TEX COMPANY, Inc.

Asphalt Tile Mfr. Subsidiary of The Flintkote Company
Chicago Heights, Illinois • 220 E. 42nd Street, New York City



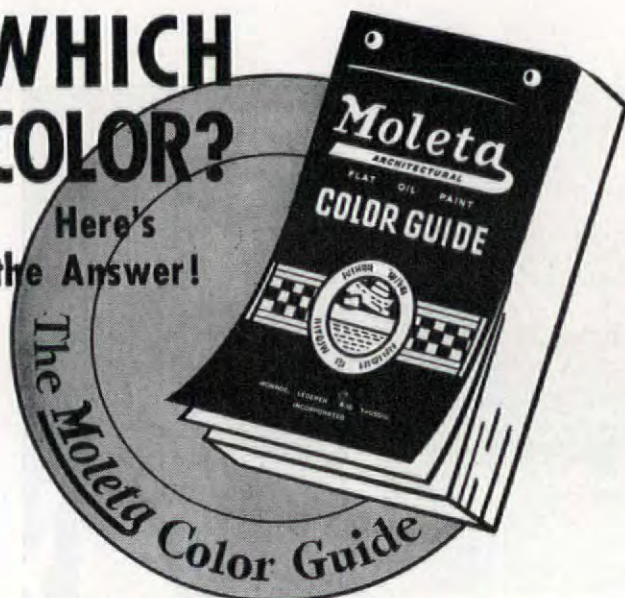
**LOOK TO *Tile-Tex* IN '46
FOR THE BEST IN FLOORING**



ANNOUNCEMENTS

WHICH COLOR?

Here's
the Answer!



A "find" for the ARCHITECT! This comprehensive Color Guide (pages 9" x 15") displays 150 beautiful colors ranging from pastels to deep shades. Formulas are given on the reverse of each color sheet to show how the shade can be quickly made. Price, \$5.00 . . . delivered anywhere in the U. S. A. Write for your copy.

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ARCHITECTURAL OIL PAINT
THE TRULY WASHABLE FLAT PAINT

EVOLUTIONARY IN ENGINEERING
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COOLSTREAM CAPACITY CLIMBS

Rising above original estimates—
Delivering more than promised—

Coolstream Electric Water Coolers
Exceed Expectations and
Surpass Specifications

The CP-10 is delivering more
than the charted 10 gallons—
The CP-10 is breaking
its own record!

Send for Catalog

THE COOLSTREAM
CORPORATION
240 BUTLER ST., BROOKLYN 17, N. Y.

ALBERT MELNIKER, AIA, until recently with the U. S. Engineer Corps, has resumed practice at 130 Bay St., Staten Island 1, N. Y.

JOHN LYON REID, architect, and SIDNEY BAMBERGER, engineer, have established the firm Bamberger & Reid at 110 Market Street, San Francisco, Calif.

MICHAEL LIPINSKI and JOHN VALTZ have established an architectural partnership at 14 Central Avenue, Lynn, Mass.

SAMUEL COOPER, AIA, RE, and C. REGINALD PERRY, AIA, announce their partnership as Cooper & Perry for general architectural and engineering practice at 204 Journal Bldg., Knoxville, Tenn.

LEON BROWN, AIA, formerly Captain, U. S. Engineer Corps, has resumed practice at 1129 Vermont Ave., Washington, D. C.

P. M. TORRACA, AIA, announces the opening of his office in the Gurley Building, Stamford, Conn.

SCHWEIKHER & ELTINE has reopened its architectural office at Meacham Road, Roselle, Ill.

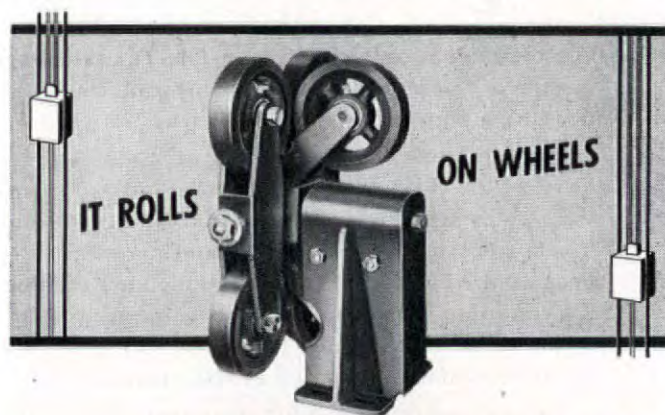
K. RODERICK O'NEAL, architect and engineer, is located at 111 West Jackson Blvd., Chicago 4, Ill.

FRANCIS GRIFFIN, RE, has joined Donald White, AIA, to practice under the firm name White & Griffin, Architect-Engineer Associates, 1727 St. Antoine St., Detroit 26, Mich.

OSMUNDSON, STALEY & GIBSON, landscape architects, offer services in the landscape design and development of residential, institutional and industrial sites. Their office is at 3409 Grand Avenue, Oakland, Calif.

JOHN SOMERVILLE, architect, and MILO GRIGGS, engineer, will specialize in work on industrial plants and processes in their office at 230 E. Walnut St., Green Bay, Wis.

(Continued on page 144)



SPECIFY

**ELSCO ROLLER GUIDES
FOR ELEVATORS**

REDUCE

Electric Current
Maintenance Costs
Fire Hazards

ELIMINATE

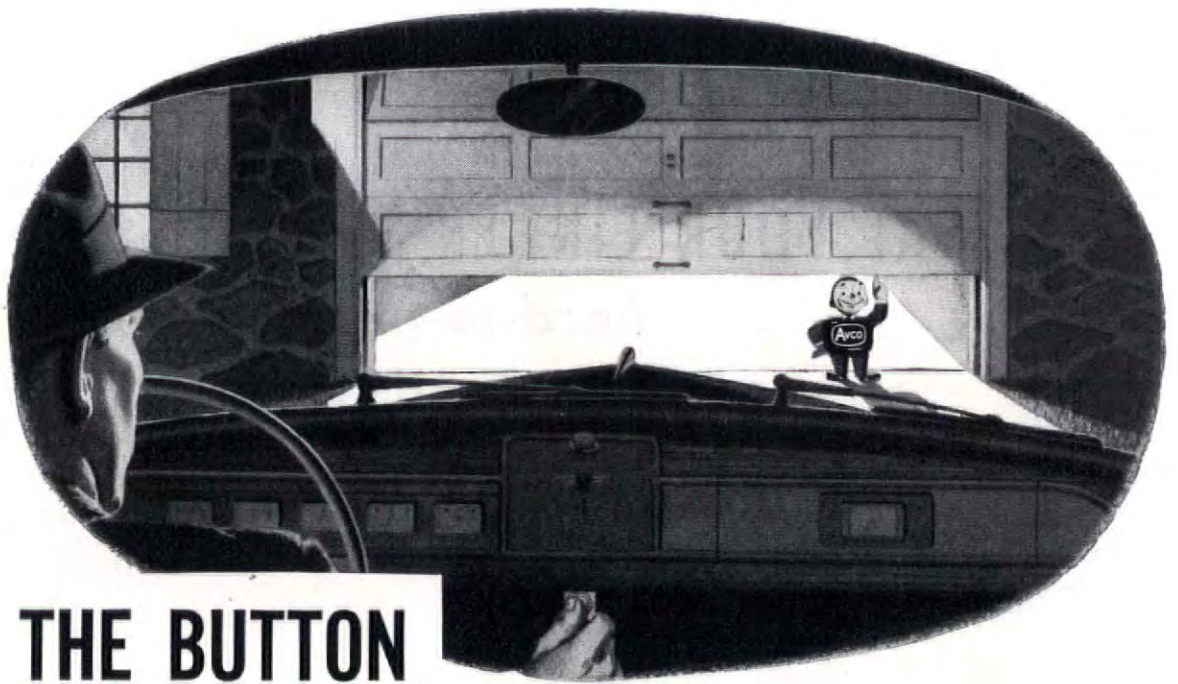
Greasing and Cleaning Rails
Rail and Joint Knocks

ElSCO Roller Guides roll on wheels on a dry, greaseless rail. Easily installed on all elevators, new or old. Approved by the Board of Standards and Appeals. Patented. Manufactured only by _____.

INQUIRE

ELEVATOR SAFETY CORP.

Dept. A 165 Broadway, N. Y. C. 2, N. Y.
CO 7-1433



RIGHT ON THE BUTTON

An automatic doorman at your service—24 hours a day

AT YOUR SERVICE is a built-in Avco "private doorman." Always on duty, its convenience and safety features make it a "must" for the completely modern home.

Just a press of a button in the car as you enter the driveway and the Avco Automatic Door Operator goes to work—garage doors open, or close, garage lights and house entrance lights may be turned on or off *automatically*, if desired. With driveway and doorway lighted, entering the garage is easier, safer for any member of the family.

Quickly installed on any standard type garage door, the Avco Automatic "doorman" is guaranteed to give continuous low-cost operation. The purchase cost is nominal. For full information, write or wire for the name of your distributor today.



1 Entering the drive, you press a control button on the instrument panel of your car. Battery current energizes a coil under the car floor.

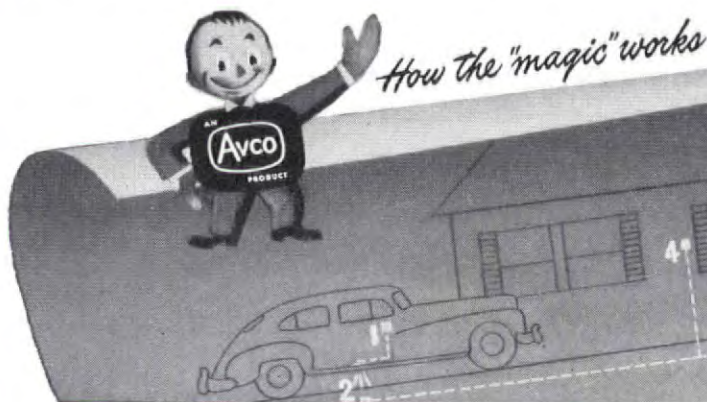
3 This switch operates the control mechanism inside the garage. Doors unlock and open . . . driveway and garage lights are turned on.

2 A sealed, all-weather mercury switch is buried under the drive—at any desired position. As the energized coil passes over this spot, the mercury switch is actuated.

4 Control buttons inside garage and house close and lock garage doors . . . turn lights off. This simple process operates in reverse when you are leaving the house.

AVCO *Automatic* DOOR OPERATOR

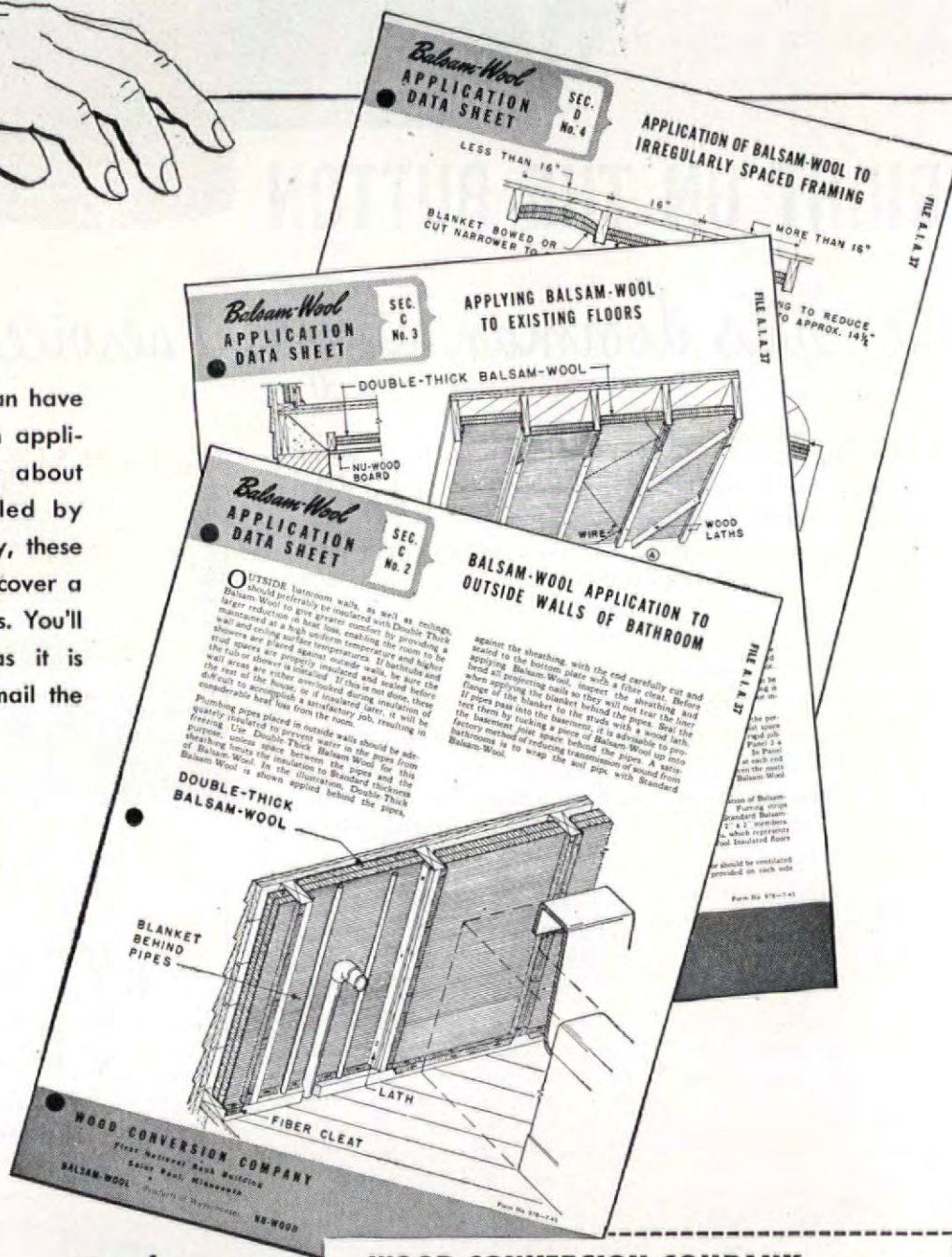
The Horton Manufacturing,
Division—The Aviation Corporation, Dept. A5—Circleville, Ohio



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At your finger tips, you can have latest findings on insulation application—hard-to-get facts about specific problems! Compiled by Wood Conversion Company, these Balsam-Wool Data Sheets cover a wide variety of applications. You'll want the complete set—as it is yours for the asking. Just mail the coupon!



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Reproduced at the right is another dominant advertisement which will appear in Better Homes & Gardens, Pathfinder, and Small Homes Guide during the months of September, October and November. This convincing message about Cotton Insulation will reach 5,564,000 more of your prospects.

You'll find Cotton Insulation sales are easy pickings, for your customers have recognized the advantage of Cotton Insulation and are ready now to talk installation. Too, this matter of installation is another case of sheer ease... for you simply roll out Cotton Insulation as you would a blanket. Help is no problem either, for Cotton Insulation is not irritating to the skin.

*Use this same
COUPON your prospects
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Get your copy of this informative book on Cotton Insulation, giving detailed accounts of government tests; and fully illustrated with facts that make sales easy for you. Mail the coupon today for your FREE copy.



● Give your home the cozy warmth of Cotton Insulation this winter—and pay for it with savings in fuel costs!

Government tests show that Cotton Insulation is up to 36% more efficient—keeps your home more comfortable with less fire and fuel—than other commercial insulations.

Read for yourself the amazing story of Cotton Insulation, its comfort and safety advantages for you. In this 38-page illustrated book you'll see how easy it is for you to use Cotton Insulation. It's simply and easily installed. And there you have it—real insulation forever, for Cotton Insulation never packs, is flame proof, repels vermin. In fuel savings alone, Cotton Insulation pays for itself time and time again. Use the convenient coupon below. Get your free copy of this book now.

★ NATIONAL COTTON COUNCIL OF AMERICA

★ COTTON INSULATION ASSOCIATION



National Cotton Council
Box 18, Dept. F, Memphis, Tennessee
Name _____
Address _____
City _____ State _____

ANNOUNCEMENTS

THE MODERN WAY to Dispose of GARBAGE and REFUSE

Majestic Fuel-less Home Incinerator



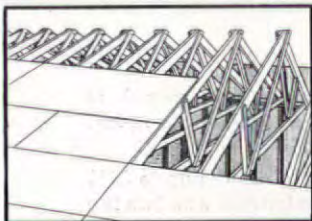
NO ODORS ESCAPE

In both new and modernized homes, the convenience that wins immediate approval is this odorless, safe and sanitary unit for reducing wet-or-dry rubbish and garbage to ashes. Compact and smartly styled, this ruggedly built *Majestic* Portable Home Incinerator gives lasting, carefree service. Costs nothing to operate. Uses only waste as fuel. Connects to any 8-inch furnace flue without draft interference. Unique downdraft through refuse speeds drying. *Majestic's* built-in type incinerator of similar design fits flush with wall in chimney recess of basement or utility room. Write today for details!

The Majestic Co.
1109 ERIE STREET
HUNTINGTON, IND.

Majestic-built units of heavy-gauge formed steel proved so advantageous for wartime needs that this construction is now adapted to many Majestic Building Necessities. Nationally Known and Advertised for 40 Years

SUPPORT BOTH CEILING AND ROOF WITH DUAL-PURPOSE



"HOMETRUSSES" (AMERICAN RAFTERS)

Erected in place, American Hometrusses immediately perform two services. As rafters they support the total weight of the roof. As joist they easily carry full ceiling loads.

Using Hometrusses reduces expensive "custom" framing. Roof decking is nailed directly to the top chords while ceilings are simply fastened to the lower chords below.

"Hometrusses" are economically designed. Well made of highest grade woods. They are light in weight, exceptionally easy to handle. Used on hundreds of houses throughout the country.

**AMERICAN
ROOF TRUSSES**

WRITE FOR CATALOG

6852 STONY ISLAND AVE., CHICAGO 49, ILL.

HOWARD MEYER, AIA, recently released from active duty as Major in the Engineer Corps, announces the opening of his office at 2907 Maple Ave., Dallas 4, Tex.

LEROY THOMPSON, architect and engineer, has reopened his office at 355 Congdon Ave., Elgin, Ill.

RENTENBACH ENGINEERING COMPANY, a newly formed group for general engineering and architectural work, will be located at Kingsport, Tenn.

FRANK GRAD & SONS, architects and engineers, have opened a branch office at 1633 Connecticut Ave. NW, Washington, D. C. N. CIRINO, civil engineer, announces the opening of his office at 21 Columbus Ave., San Francisco, Calif.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION has opened a district office at 1617 Pennsylvania Bldg., Philadelphia, Pa.

BEESTON, STOTT & PATTERSON, designers of commercial buildings and products, have opened an office at 587 5th Ave., New York, N. Y.

MARTIN BAUMANN will specialize in the design of commercial interiors at 4415 N. Oakland Ave., Milwaukee, Wisc.

WILLIAM & BARBARA PFOUTS have opened a studio of interior and exterior architectural design, rendering, drafting and other services at 326 Castlegate Road, Pittsburgh 21, Pa.

STANLEY CHAMBERLAIN, industrial designer, has opened a studio for all types and media of model and display fabrication at 317 E. 91st St., New York, N. Y.

DON PUTNEY, architectural designer, H. J. SHELTON, JR., mechanical engineer, and JOSEPH TANAKA, design engineer, have opened offices at 3517 Pine St., St. Louis 3, Mo.

NEWSON SHEWITZ and PHYLLIS SLOANE have formed an industrial design partnership with offices at 2422 Prospect Ave., Cleveland 15, Ohio. (Continued on page 148)



Enhance the Natural Beauty of Wood WITH TEXTURE-REVEALING CABOT CREOSOTE STAINS

For maximum beauty and long-lasting protection . . . specify Cabot Creosote Stains. Rich colors penetrate deep into the wood. A 60% content of undiluted creosote oil, the best wood preservative known, gives years of protection.

Cabot Creosote Stains are easy to apply . . . cost half as much as good paint . . . won't peel or blister, even on green lumber.

FREE BOOKLET "Stained Houses" . . . contains complete details on Cabot's Creosote shingle stains. Write for your copy and color card today! Samuel Cabot, Inc., 1273 Oliver Building, Boston 9, Mass.

Cabot's Shingle Stains
CREOSOTE HEAVY-BODIED

HOT WATER...

Packaged in Glass!

SMITHway PERMAGLAS Water Heaters

Here's hot water, heated by gas or electricity, *stored in a glass package*... in a tank of glass-fused-to-steel.

Sparkling blue and mirror-smooth—sanitary as a clean drinking glass—the *Permaglas* tank CANNOT rust or corrode under *any* local water condition.

There's Only ONE

Permaglas

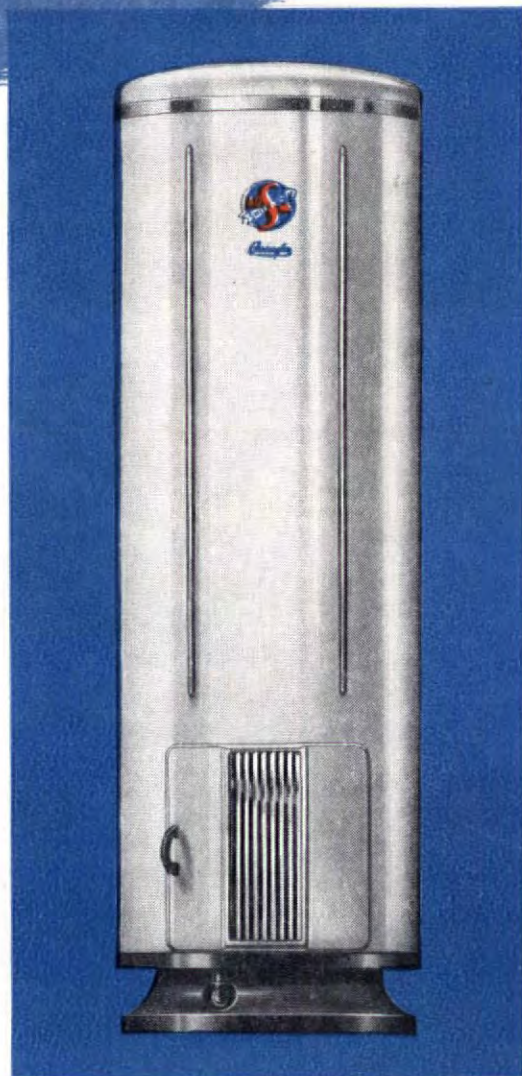
Only A. O. Smith produces the truly modern water heater with the tank that delivers hot water as sparkling clean as the source itself.

It's truly modern, too, in style and convenience—equal to the finest and newest homes. Ample capacities, even for the newest automatic washing machines and dishwashers.

Specify Sparkling Clean Hot Water

Specify *Permaglas*—the one automatic water heater that meets *all* demands for complete service, great convenience, long life... and *clean* hot water.

Write today for all the facts, to the A. O. Smith office nearest you.



Permaglas



A. O. SMITH Corporation

AUTOMATIC • STORAGE
WATER HEATERS

NEW YORK 17 • ATLANTA 3 • CHICAGO 4
HOUSTON 2 • SEATTLE 1 • LOS ANGELES 14

INTERNATIONAL DIVISION: MILWAUKEE 1—Licensee in Canada: JOHN INGLIS CO., LIMITED

★ There's a degree of *Electrical Living* for every home ★

...AND THIS IS THE MINIMUM FOR

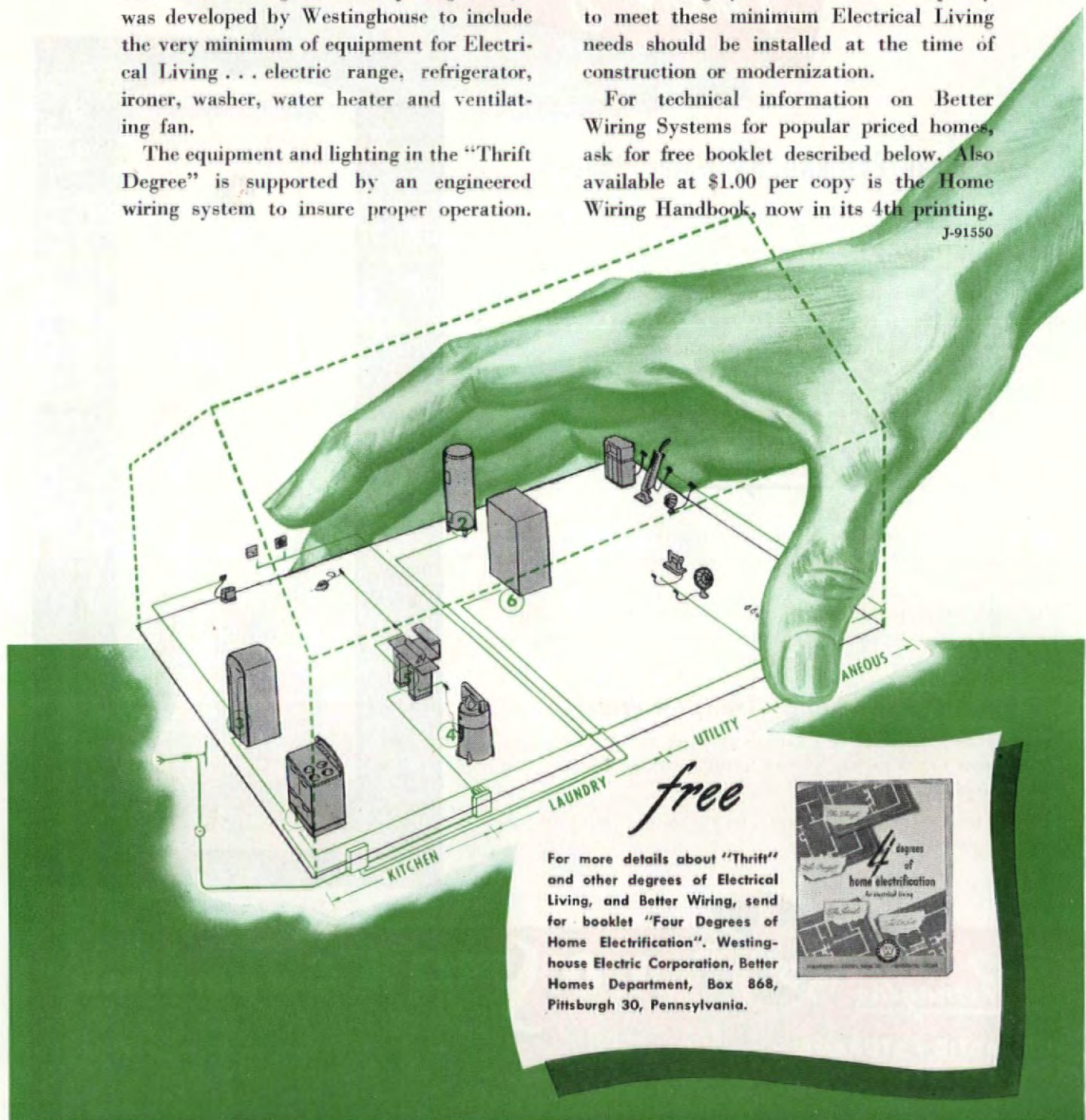
When planning and building homes for families with modest incomes, you will find this "Thrift Degree" a helpful guide. It was developed by Westinghouse to include the very minimum of equipment for Electrical Living... electric range, refrigerator, ironer, washer, water heater and ventilating fan.

The equipment and lighting in the "Thrift Degree" is supported by an engineered wiring system to insure proper operation.

Even though all this equipment is not bought when the house is built or modernized, a wiring system of sufficient capacity to meet these minimum Electrical Living needs should be installed at the time of construction or modernization.

For technical information on Better Wiring Systems for popular priced homes, ask for free booklet described below. Also available at \$1.00 per copy is the Home Wiring Handbook, now in its 4th printing.

J-91550



For more details about "Thrift" and other degrees of Electrical Living, and Better Wiring, send for booklet "Four Degrees of Home Electrification". Westinghouse Electric Corporation, Better Homes Department, Box 868, Pittsburgh 30, Pennsylvania.



MODERN HOMES *the Thrift Degree*

These Bryant wiring devices will help insure a quality wiring job...



GENERAL-PURPOSE SWITCHES

A complete line of Standard Type, Mercury Line and Interchangeable Line switches for single-pole, double-pole, three-way and four-way installations. These Bryant switches carry a "T" rating and are listed as standard by Underwriters' Laboratories, Inc. They have plaster ears to assure perfect alignment with wall surface when installed.



SWITCH WITH OIL BURNER COVER

Where oil burner control near head of basement stairs is required, this single-pole, flush handle switch is ideal. Red covers are inscribed—"Oil Burner—Emergency Switch".



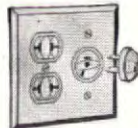
DOOR SWITCH

A "must" in modern homes. Automatically turns on closet light when door is opened. Furnished with box and plate for mounting in door jamb. Has adjustable plunger (Nos. 2968 and 2969).



CLOCK HANGER

The right way to hang a clock. Recessed to provide space for surplus cord. Clock conceals hanger. No. 2992 (Brown) and No. 2992-1 (Ivory).



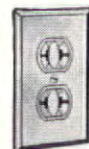
RADIO OUTLET

For modern radio installations. Two outlets... one for connection to power circuit, and other to aerial and ground wires. Brown (No. 27146) or Ivory (No. 22146-1).



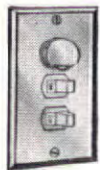
RANGE OUTLET

This three-wire outlet provides a convenient way to connect electric range. Brush brass plate (No. 3846). Three-wire range cord set also available.



DUPLEX CONVENIENCE OUTLET

Two types... one with separate terminals so only one outlet is controlled by wall switch (No. 4832-Y); other is conventional with common terminals (No. 4832).



NIGHT LIGHT

A modern night-time convenience... lights the way to bedroom or bath. One switch controls night light; other controls hall or room lights.



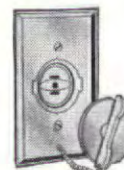
SWITCH AND CONVENIENCE OUTLET

Specially desirable for bathrooms. Convenience outlet is always hot. Switch controls lighting (No. 2989). Bakelite plate.



CLOSET LAMP HOLDER

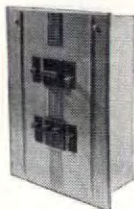
An inexpensive way to provide a closet light. Designed for wall or door switch control, or with pull-chain. Each type made in two sizes, for 3 1/4" x 4" box. Each has shade holder groove.



WEATHERPROOF CONVENIENCE OUTLET

Has plate and quick clamp cover, attached by chain, to prevent exposure to moisture when not in use (No. 3880).

And Westinghouse Circuit Breakers give modern circuit protection



Completely Automatic, they open circuits when a worn cord causes a "short" or if circuits are overloaded by too many appliances. A flip of breaker lever—even by a child—restores

service when condition is corrected. Nothing to replace. Avoids unnecessary interruptions. Flush mounted—can be installed in any convenient place, such as a kitchen. Reasonable in cost. Offers a sales advantage when installed in homes you build.

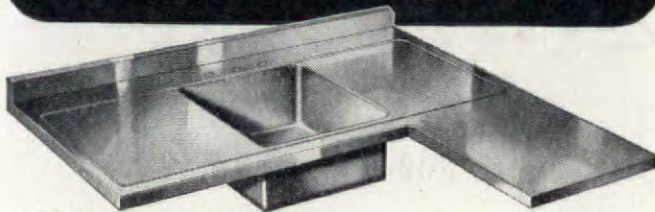


Westinghouse
PLANTS IN 25 CITIES... OFFICES EVERYWHERE

Better Homes Department
PITTSBURGH 30, PA.

ANNOUNCEMENTS

Radiiluxe means New Beauty and Efficiency in STAINLESS STEEL CABINET SINKS



- DOUBLE-PITCH DRAINBOARDS
- IN-BUILT ANTI-SPLASH RIM ON BOWLS

These latest Just Line developments provide beauty and utility in keeping with today's modern kitchens. Double-Pitch Drainboards give smooth, complete drainage—no channels to clean—no grooves to endanger fine glassware. A smooth, effective Anti-Splash Rim extends around entire perimeter of bowl.

NEW FREE BULLETIN describes Radiiluxe Sinks with single or double bowls, with or without drainboards; straight, "U" or "L" types ... standard sizes or custom-fabricated to your specifications. Also stainless steel counter and cabinet tops. Write today.



Stainless Steel
CABINET SINKS
CABINET TOPS
SCULLERY SINKS
SINK BOWLS
TOILET SHELVES
LAVATORIES
STRADDLE STANDS
and Special Units

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

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UNSEEN GUARDIAN
SYMBOL OF
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✓ **SISALKRAFT**
... waterproof reinforced
building paper

✓ **SISALATION**
... reflective insulation and
moisture-vapor barrier

✓ **COPPER ARMORED
SISALKRAFT**
... Sisalkraft plus pure elec-
tro deposit copper

THE **SISALKRAFT CO.**
CHICAGO, ILLINOIS

A. STEVENS LEWIS ASSOCIATES, INC. have opened an office at 316 North Laflin St., Chicago 7, Ill., for interior design and the fabrication of architectural scale models.

CHANGES OF ADDRESS

PALMER SABIN, architect, is now located at 1009 E. Green St., Pasadena 1, Calif.

HOLSMAN & HOLSMAN AND KLEKAMP, architects, have moved to the Dunham Building, 450 E. Ohio Street, Chicago 11, Ill.

FRED L. LIEBMANN, architect, has moved his office to 463 Lexington Avenue, New York 17, N. Y.

CHARLES BUTNER, AIA, is now located at 985 The Alameda, San Jose, Calif.

ANDREW P. RIBORI CONSTRUCTION Co., announce the removal of their offices to 327 LaSalle St., Chicago 4, Ill.

DIED

JULES GUERIN, 79, muralist and honorary member of the AIA, at Neptune, N. J. Mr. Guerin designed panels for Pennsylvania Station, New York City; Lincoln Memorial, Washington, D. C.; Illinois Merchants Bank, Civic Opera House and Merchandise Mart, Chicago; Federal Reserve Bank, San Francisco and the Louisiana State Capitol at Baton Rouge.

MICHAEL PATERNO, one of the four Paterno brothers, New York realtors and builders, at the age of 57. The Paternos specialized in building large cooperative apartment houses, and more recently in small homes for government projects.

CORRECTIONS

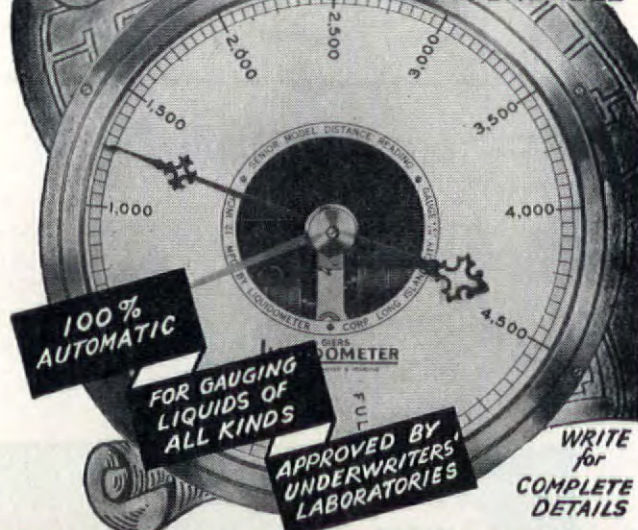
The one-story house designed by Carl Riesen (June issue p. 124-5) is located in Tucson, Ariz., not Denver, Colo.

The name of Raymond Puccinelli, West Coast sculptor, whose work was reviewed on p. 122 of the August FORUM, was misspelled in the article ("ch" instead of "cc").

IN PLANNING AN INSTALLATION FOR
STORING VALUABLE LIQUIDS—

Specify **LIQUIDOMETER**

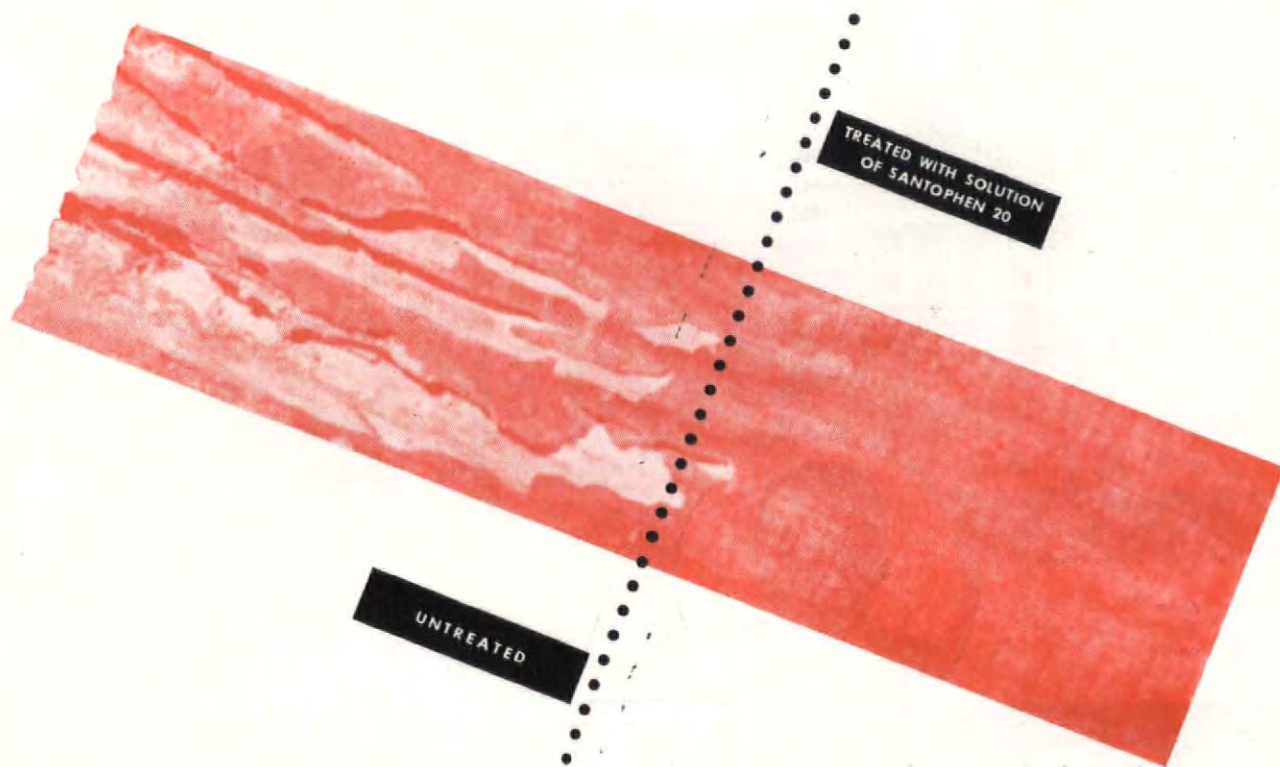
Tank Gauges
THEY'RE ALWAYS DEPENDABLE



"LIQUIDS WORTH STORING ARE WORTH MEASURING"

THE **LIQUIDOMETER** CORP.

36-30 SKILLMAN AVE., LONG ISLAND CITY, N. Y.



protect wood against insects and decay with SANTOPHEN 20

Santophen 20 possesses qualities which give it many outstanding advantages for use as a wood preservative

1. It is toxic to wood-rotting fungi, is toxic to termites and wood-boring insects and kills grass roots and other deleterious vegetation.
2. It is stable to light, to normal temperatures and to soil acids and alkalis.
3. It is not appreciably soluble in water — does not leach readily.
4. It is a chemical compound with fixed identity — chemically reproducible year after year without variation.
5. It can be determined analytically, which makes possible accurate control of solution strength.
6. It can be determined analytically in wood, thus enabling the determination of its distribution in the wood.
7. It makes possible a "clean" oil treatment.
8. It does not require redrying of the wood after treatment.
9. When properly formulated, it shows less tendency to bleed than other oil preservatives, thus facilitating handling and storage of the treated wood.
10. It is economical to use.

Wherever you specify or use wood, insure it against insects and decay, with proper formulations of Santophen 20,* Monsanto's pentachlorophenol, technical.

When correctly formulated and applied, Santophen 20 preserves lumber, heavy timbers, finished millwork, plywood, cellulose wall board and cellulose insulation... Santophen 20 is now recommended by leading Architects, Engineers and Builders for homes, industrial buildings, railway rolling stock and right-of-way, highway and public utility properties.

Whatever you build with wood, guard against the cost of avoidable repairs and replacements — standardize on Santophen 20 for all types of wood preservation... Further information will be supplied by MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri.



*Reg. U. S. Pat. Off.



Ames Aksila, developer of the Worcester projects.



Front and rear views of one of the 400 distinctive homes planned for "Knollwood" and "Salisbury Heights" development in Worcester, Massachusetts.

MODUFLOW

Selected FOR 400-HOME

COMMUNITY DEVELOPMENT

One of the country's ultra-modern postwar community projects has been designed by Ames Aksila, Worcester, Mass., Developer and Builder. Unusual features include ceiling panel heating of all first floor rooms. And each of the 400 homes will be equipped with a Moduflow control system, which is Minneapolis-Honeywell's latest contribution to heating comfort and efficiency.

Here is concrete evidence of the way Moduflow has "taken hold." It demonstrates how in modern housing developments, Moduflow is being used as a distinguishing sales feature—a feature that

commands a premium in the better homes and provides a powerful advantage whenever competitive selling is a factor.

But, regardless of any project's size, whether a single home, or 400, when Moduflow is specified your clients are assured of a new high standard of house heating comfort. Moduflow control systems are now available and their performance record has already been established in thousands of homes throughout the nation. Minneapolis-Honeywell Regulator Company, 2601 Fourth Avenue South, Minneapolis 8, Minnesota.

MODUFLOW means modulated heat with continuous flow. Since heat losses are continuous, heat supply should also be continuous but modulated to whatever temperature is required to offset the heat loss. Moduflow automatically maintains continuous balance between heat loss and heat supply.

MINNEAPOLIS
Honeywell
CONTROL SYSTEMS



SHEETROCK

FIREPROOF WALL AND CEILING PANELS

When 4,000,000 families desperately need housing . . . that calls for "production line" speed. When more new homes than ever before must be built and more existing buildings remodeled into additional dwelling units . . . that calls for faster methods and materials. That's why more and more architects and builders are using Sheetrock*. These big panels finish up to 48 sq. ft. at a time, are quickly cut and fitted. Then Perf-A-Tape* "welds" them

into smooth, trouble-free walls and ceilings. Or you can remodel even faster with Bevelled Edge Sheetrock. Important, too,

Sheetrock is made of gypsum which cannot burn. Because of this versatility, demand for Sheetrock still is greater than the supply. But more and more is being produced every month . . . breaking all production records is our goal. Write today for your free Sheetrock book to 300 West Adams Street, Chicago 6, Illinois.

*Reg. T. M.



United States Gypsum

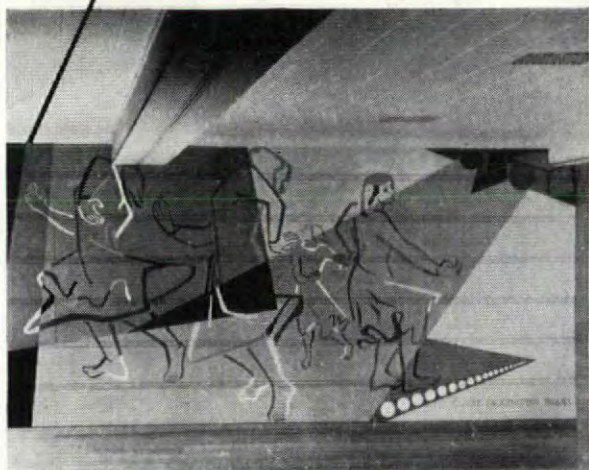
For Building • For Industry

Gypsum • Lime • Steel • Insulation • Roofing • Paint

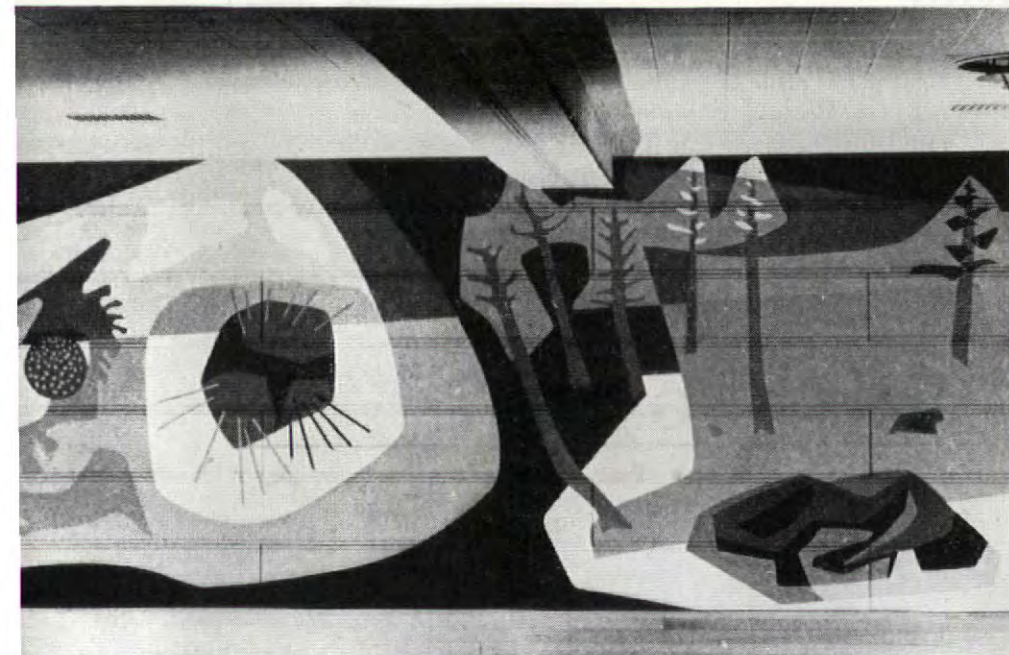
REVIEWS



LONG MURAL STRIPS HELP MODIFY SAD PROPORTIONS OF AUDITORIUM



SOLAR SYSTEM, PROTOZOA, LANDSCAPE DEPICT EARTH'S DEVELOPMENT



San Francisco Examiner



MURALIST FALKENSTEIN AT WORK

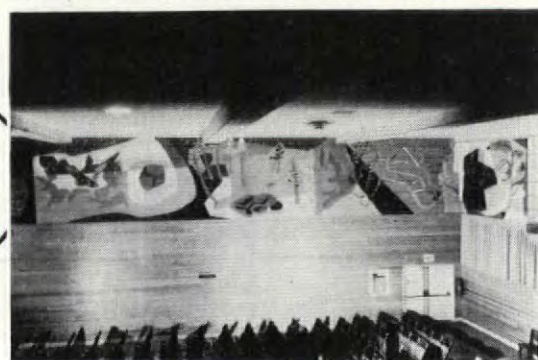
MURALS

With a war record of having contributed some 4,000 sq. ft. of murals to facilities for our armed forces, Claire Falkenstein still does not contemplate specializing in billboards. This set, done for the auditorium of the San Leandro Naval Hospital in California, introduces 39 ft. blocks of color and strong contrasts. It is no mere entertainment piece but an educational project designed to provoke thought and criticism on the part of G. I. audiences. For their benefit, the artist gave the following introduction: "These wall paintings may be considered from several points of view. As an architectural elaboration they should maintain the walls in an upright position. As a design they should be enjoyed simply as a stimulating experience comparable to the enjoyment derived from music. As an intellectual statement there is a theme to be understood. A continuous unravelling of subject matter occurs around the ideas of growth, of a scientific description of life and expression, of the development of the human sensibilities."

Miss Falkenstein's greatest reward was the human contact derived from her war jobs since her work touched thousands of service men, a good number of whom supervised and criticized her every move. Sophisticated though the murals may appear, none flatly rejected them. They did invoke a good deal of wonder and speculation as to why they are hung together as they are. Favorite among G. I.'s, probably for its realism, is the panel depicting hurdlers who represent matured man. Due to a subtle and yet unexplained connection in the soldier's mind between bare feet and Greek culture, the panel of dancers was fondly dubbed "The Acropolis Shuffle".

(Continued on page 154)

EXISTING LIGHTING FIXTURES WERE KEPT





OH·H·H·H it's **Firestone**
Velon* the wonder upholstery fabric

Velon makes smarter, lighter, brighter colors practical because it's soil-proof, practically wearproof, cannot fade or change color.

Velon wipes clean with a damp cloth. Dirt, grease, even ink can't cling to its non-porous threads.

Velon defies wear, abrasion, snagging, because each thread is a single fibre of giant strength. Can't bag or "grow" out of shape.

Velon is in production. Specify it for seating, wall-trim, drapes and lampshades. Ask your regular supplier or let Firestone send samples and information.

*TRADE MARK



AH·H·H it's **Firestone**
FOAMEX* the comfort cushioning material

Foamex floats folks in blissful relaxation on millions of tiny, buoyant, air-and-latex cushions.

Foamex is air-cooled, air-cleaned because these countless little cushion cells breathe constantly.

Foamex is lump-proof, sag-proof because it replaces springs and stuffing with a one-piece material.

Foamex improves seating design, eliminates bulk, permits sleek, modern construction. Write Firestone, Akron, for full color booklets on *Foamex* and *Velon*.

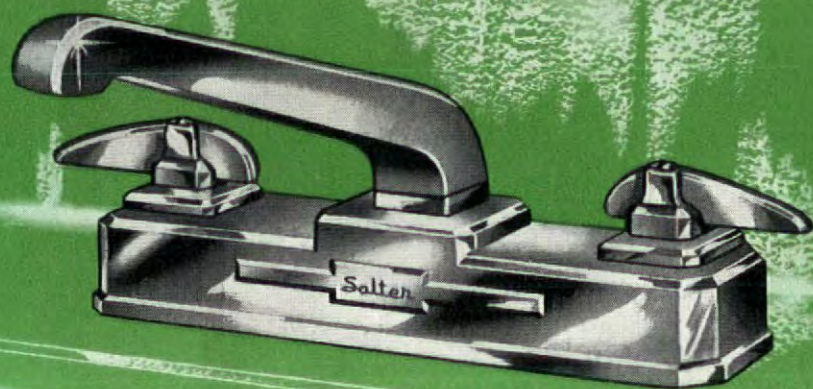


LISTEN TO THE VOICE OF FIRESTONE
 MONDAY EVENINGS OVER NBC

PATTERNS NOW BEING COMPLETED
PROVIDE A 1947 PREVIEW
OF NEW AND DISTINCTIVE

Salter

MASTERPIECE FIXTURES



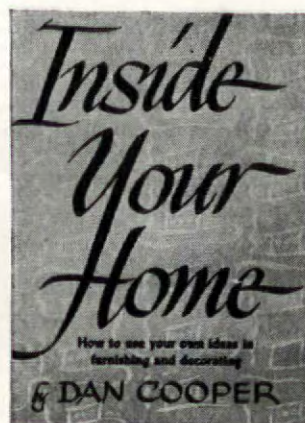
Progress both in design, construction and manufacturing is a Salter policy from which both you and your customers will benefit for years to come. While our current obligation is to furnish the greatest possible quantities of much needed essential

fixtures, we want you to know that by early 1947 you can expect many new and desirable improvements which will add still more to the prestige of Salter Glauber quality.

H. B. **Salter** MFG. CO.
MASTERPIECES IN BRASS
MARYSVILLE, OHIO

and division THE GLAUBER BRASS MFG. CO., Kinsman, Ohio

REVIEWS



INSIDE YOUR HOME. By Dan Cooper. Farrar, Straus & Co., New York. 122 pp. Illustrated. 7 x 10. \$3.95.

Let us hope that eventually the public will profit by the numerous potions of precaution being meted out this year by architects, designers and other authorities. Generally speaking, they all voice the same protests against—bric-a-brac, curlicues, moldings and cut glass doorknobs. Taking up the torch for interior designers, Dan Cooper devotes a great deal of space and energy to advocating the discard of non-functional items, then goes on to a very simple, basic set of principles for good living. Perhaps the best thing about this book is that the author has allowed no hint of differentiation between architecture and decorating to creep in, which is, of course, as it should be. Mr. Cooper, an individualist at heart, displays beguiling faith in the ability of American womanhood to think for itself. While the author's chivalry cannot be questioned, there remains some doubt as to his psychological discernment. However, if the book succeeds in arousing even a little flurry of feminine grey matter, more power to it. And perhaps nothing less than a flood of irate protests like his against backward and unprincipled manufacturers will produce the results we all hope for in the field of house furnishings.

For its sound reason, this book is one of the most commendable in some time, deserves to be read by all potential house owners and tenants. Apartment-dwellers, too, can get a lot out of it. Most of Mr. Cooper's main points are realistically anecdotal. It only seems a pity that the spontaneous wit he discloses in conversation has not carried over in the text, but since his book contains a good deal of vigorous debunking it is clearly a peek "inside Cooper." (FORUM, Mar. '44). M.S.

PAINTING AND PAINTERS—HOW TO LOOK AT A PICTURE
by Lionello Venturi, Charles Scribner's Sons, New York and London, 250 pp., 53 plates. 6 1/2 x 9 1/2. \$3.50.

With the inferiority complex in artistic matters typical of recent colonials, many Americans are still trying to learn "how to look at a picture;" and, no doubt, are considering the purchase of Lionello Venturi's latest book, for the suave European has long seemed master of the mysteries of art. Indeed, precocious Dr. Venturi does know a lot about art, and what's more, he knows what he likes. But, in common with many of his predecessors from across the Atlantic, he seems unable to inform us clearly and simply. For instance, he says: "Simone realizes his desire for perfection in externalizing his extreme preciousness, while Giotto realizes his perfection by

(Continued on page 158)



YOUR drawings and specifications "say when" as the skilled workmen of our completely equipped fabricating shop cut and fit Wheeling Expanded Metal exactly to meet your requirements.

Today hundreds of Architects are using Wheeling Expanded Metal to carry out new ideas and answer new problems.

Exceptionally strong, permitting both vision and ventilation, sanitary, and with a substantial and interesting texture, it has literally thousands of uses.

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- Wheeling Expanded Metal
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RICHMOND
ATLANTA
LOUISVILLE

MINNEAPOLIS
ST. LOUIS
KANSAS CITY
NEW ORLEANS



Who are the Men who'll **OK** the Plans for the GREAT NEW PLANTS of Tomorrow?



Here is the **DOW CHEMICAL COMPANY's** modern magnesium plant at Freeport, Texas—as pictured in **FORTUNE**. (Of Dow's decision-making officers and directors, 66.7% are **TIME** subscribers of record. The numbers on their subscriptions are: 15-75-ZH, 14-10-ZMH665-897, JL-8-12-45, 14-75-ZH, 9-50-ZDDHO-40-712, 13-75-HH712-615.)

PHOTO: LOFMAN-PIX AND FORTUNE

WHEN industry's new buildings start going up, not one but many higher-ups will decide what goes *into* them.

For in today's complex business set-up, the boss of just about any big U.S. organization has "bosses" of his own: managers, financiers, engineers, technicians, specialized executives of all kinds whose opinion is im-

portant in a big corporate move like a new plant or office building. You've got to sell this management *group* before you get a final okay for your plans and products.

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REVIEWS

rendering the structure of his fresco more and more intimate at the expense of its external appearance." Thus the reader may find it hard to agree with the closing sentence of the foreword—written, of all people, by the late Booth Tarkington—when it says, "For those who seek clarities, this book of Dr. Venturi's can be of high advantage."

In ten chapters the author illustrates his point of view by discussing representative works of selected "great masters" of Western painting from Giotto to Chagall. Dr. Venturi's theory of criticism is broad, and vague, enough to encompass such an eclectic range. He says, "To learn, and know, how to look at a painting does not mean to be bound by any rule, but to be free of all rules . . . What should be the object of our concern is the personality of the painter—his ability in expressing any content, provided it be his own form . . . To analyze all the

components is a necessary part of art criticism, but it is also necessary to look beyond what one sees—to look with the eyes of the mind into the painter's soul."

Perhaps the best portions of the book are those where the author sketches the life and background of a particular painter, and offers a summation of his art. Concluding a discussion of Botticelli's *Spring* is the penetrating comment: "The vision of a divine grace pervaded by the melancholy consciousness of its human decay, was the ideal of Botticelli and the very source of his imagination." The wide scholarship of Dr. Venturi also brings to the reader some revealing statements by contemporary artists. Matisse himself is quoted as saying with refreshing clarity and candor, "What I dream of is an art of balance, of purity and serenity devoid of troubling or depressing subject matter, an art which might be for every mental worker, be he a business man or writer, like an appealing influence, like a mental soother, something like a good armchair in which to rest from fatigue." And from John Marin an equally interesting remark is quoted: "It is the moving of me that I try to express, so that I may recall the spell I have been under and behold the expression of the different emotions that have been called into being."

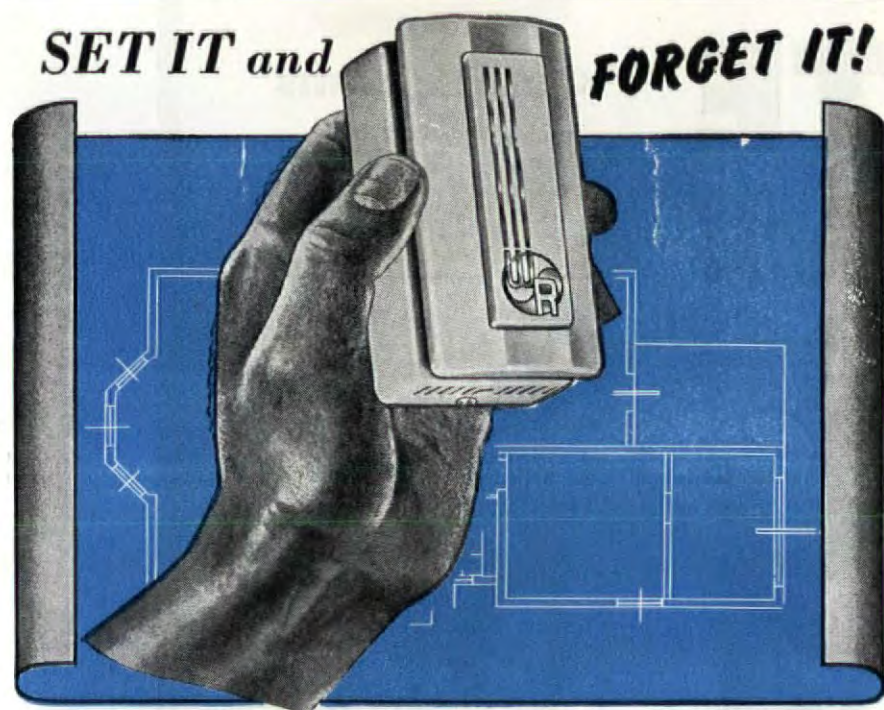
The book gives the impression of being a series of long-used, illustrated lectures, delivered in semi-darkness by a bearded gentleman with an Italian accent, and taken down in none-too-certain shorthand by an American stenographer. The reader would not be too surprised to find after some of the more obscure passages: "Next slide, please, and will someone ask that person in the third row to stop snoring . . ." L.C., Jr.

BOSTON AFTER BULLFINCH. By Walter H. Kilham. Harvard University Press, Cambridge, Mass. 104 pp. Illustrated. 6 x 9 1/2. \$3.50.

An intelligent revaluation of nineteenth century architecture in any American city would be eagerly looked for and is long overdue. Especially, one would like to see a thoroughly objective grappling with the latter periods—revival influences and the flamboyant amalgams whose academic excesses precipitated the revolt and concept of the "New Age". So far we have received only inconstant flutters of vogueish opinion relative to the wealth of instructive material that lies hidden in the sepia tapestry of the Victorian era. Mr. Kilham's book is again little more than such a flutter. At any rate, it falls far short of probing the full potential.

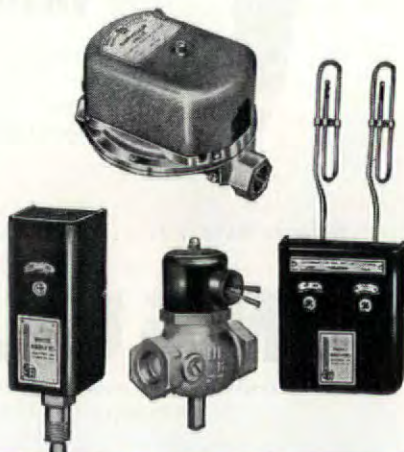
Attempting a project of such magnitude within the short range of 104 pages is not suggested and, indeed, would hardly be considered sane by the most ardent champions of brevity. Mr. Kilham does not undertake the task but merely wishes, as he states in the brief foreword, "to collect from widely scattered sources the story of the Boston buildings of [the] era and the architects who created them." This reviewer, however, is provoked beyond this original pose by the invective that follows hotly on its heels: "No matter what the period, the style was fixed then, as now, purely and simply by fashion and nothing else. No distinctly American style was ever in evidence and quite possibly none ever will be, for as long as people lack definite religious and political

(Continued on page 162)



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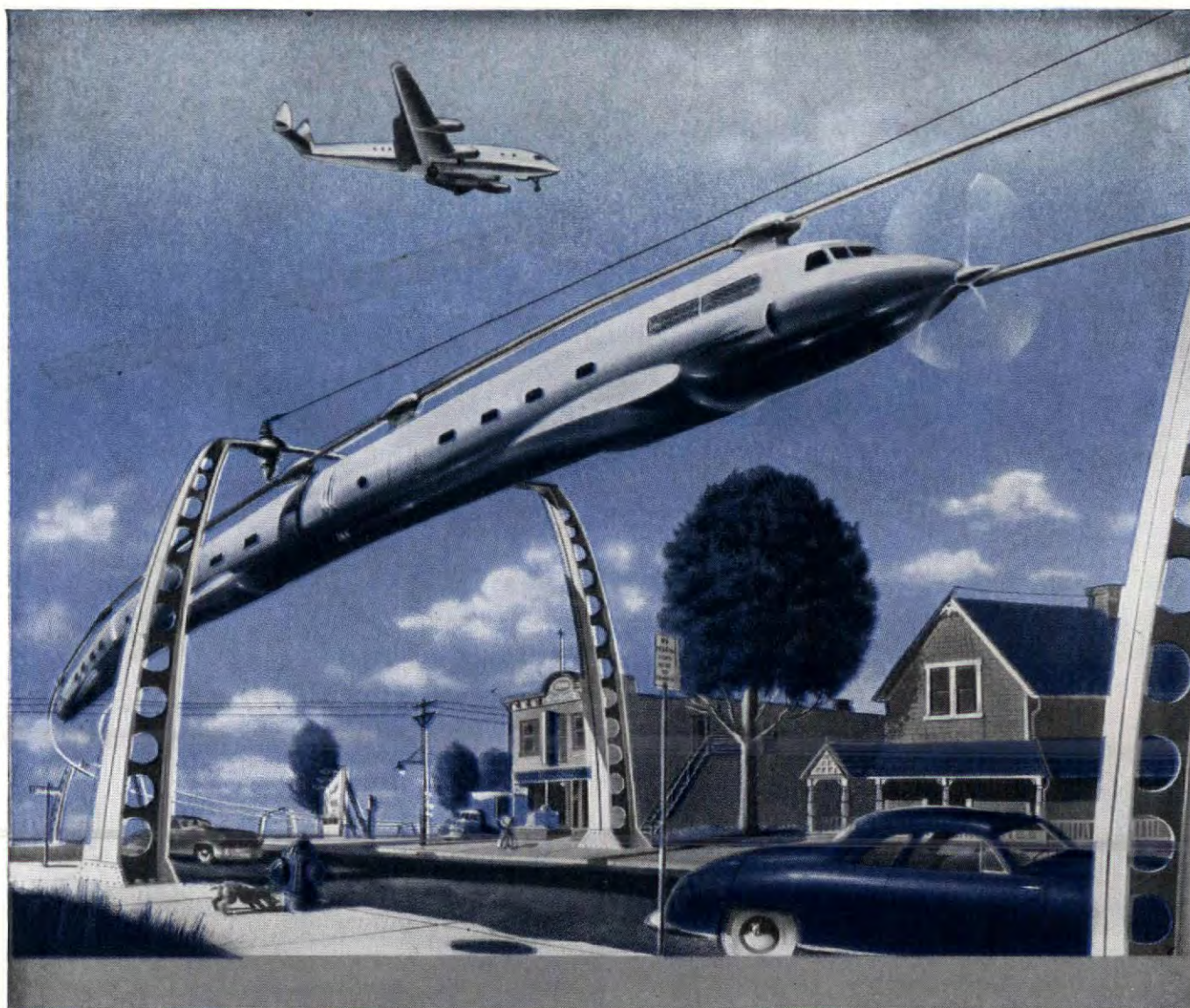
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convictions, and particularly as long as a lagging philosophy fails to catch up with runaway science, just so long will Americans be unable to create a style of their own as distinctive as the Grecian or the Gothic."

This is undoubtedly a strong stand but one which qualification would weaken. It's placement in the beginning of so unpretentious a work might easily alienate those who believe that insight into what genuine undulations there were, is what is needed most.

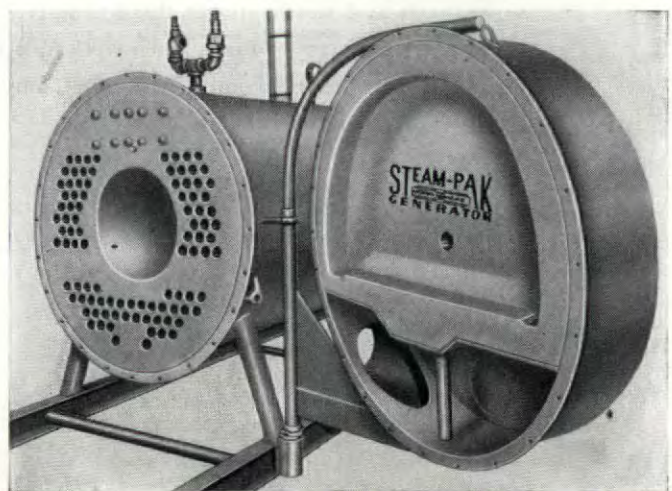
The book develops with the anachronistic detachment of a Baedeker tracing architectural happenings in the Hub from the anonymously-done State House to McKim's Public Library, which the author describes as glowing "with murals of Abbey, Sargent and Puvis de Chauvannes and the sculpture of Saint-Gaudens." Bracketed within the dates of these buildings is a full range of stylistic category: Greek Revival, the whole Gothic Revival, the Mansard mirrorings so characteristic of American adaptations, Romanesque Revival and finally, the rediscovery of the Renaissance—an event whose extensions were felt in our own century.

The lives of the nineteenth century architects represented are sympathetically anecdoted—beyond this there are the plates, J.L.

THE GEOMETRY OF ART AND LIFE by Matila Ghyka. Sheed and Ward, New York. 174 pp., LXXX plates. 6¼ x 9¼ in. \$4.00.

A scholarly production by an author who is obviously immersed in his subject, this book is another statement of a mathematical approach to esthetics. Like most works on the subject, it is at once rational in its language, metaphysical in its logic and almost grotesque in some of its conclusions.

(Continued on page 166)



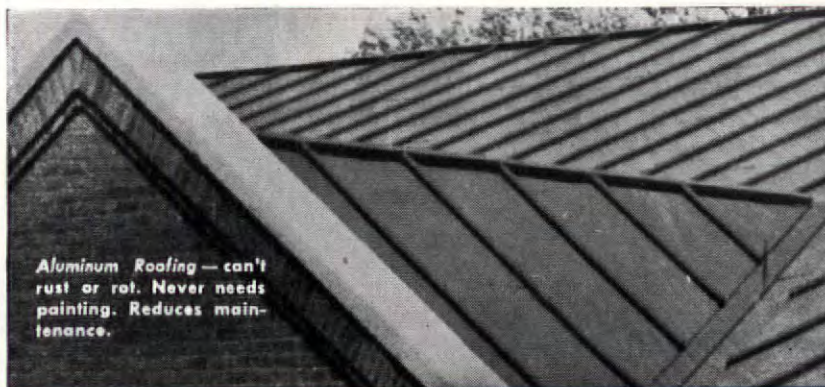
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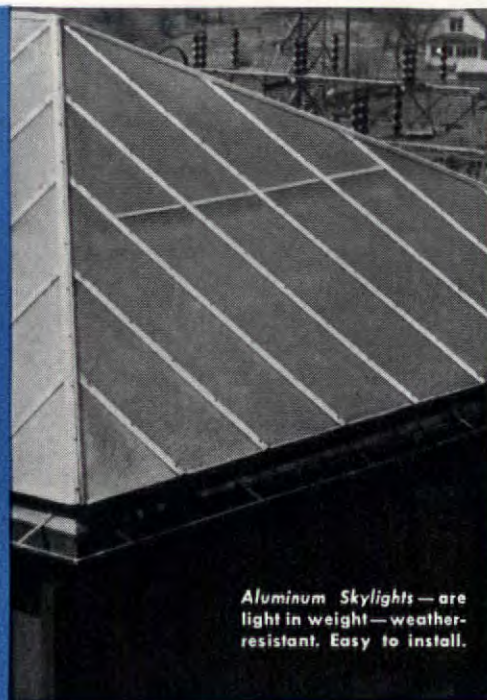


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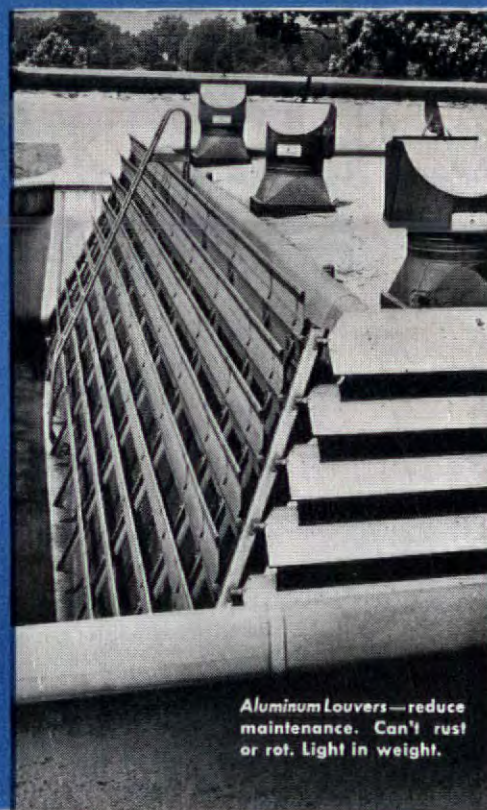
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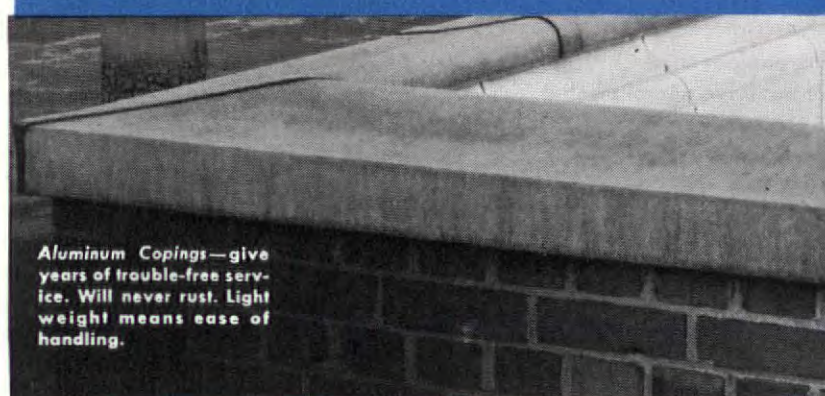
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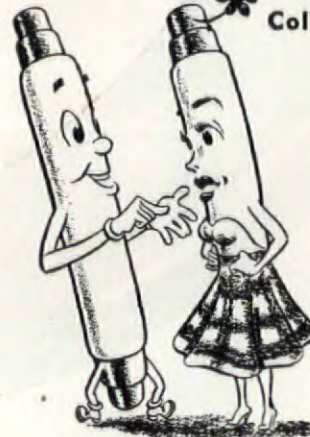
Since proportion can be easily expressed in numbers, it is obvious that any design can, by descriptive geometry, be analyzed mathematically. But to attach any esthetic significance to a special set of numbers, or to the special set of proportions which they represent, is to ignore the fact that different peoples at different times have had vastly different concepts of what constituted pleasing proportions. Mr. Ghyka's argument is at best circular: since most of the architects and artists whose work he analyzes consciously followed the rules of proportion he describes, it is hardly surprising that they may be subjected to a "harmonic analysis" based on the same rules. And sometimes—as when he observes that "amongst Miss Veronica Lakes' measurements given in an American magazine, I notice 34" for the chest contour, and 21" for the waist, both Fibonacci numbers having as ratio 1.619"—Mr. Ghyka's arguments become downright ludicrous.

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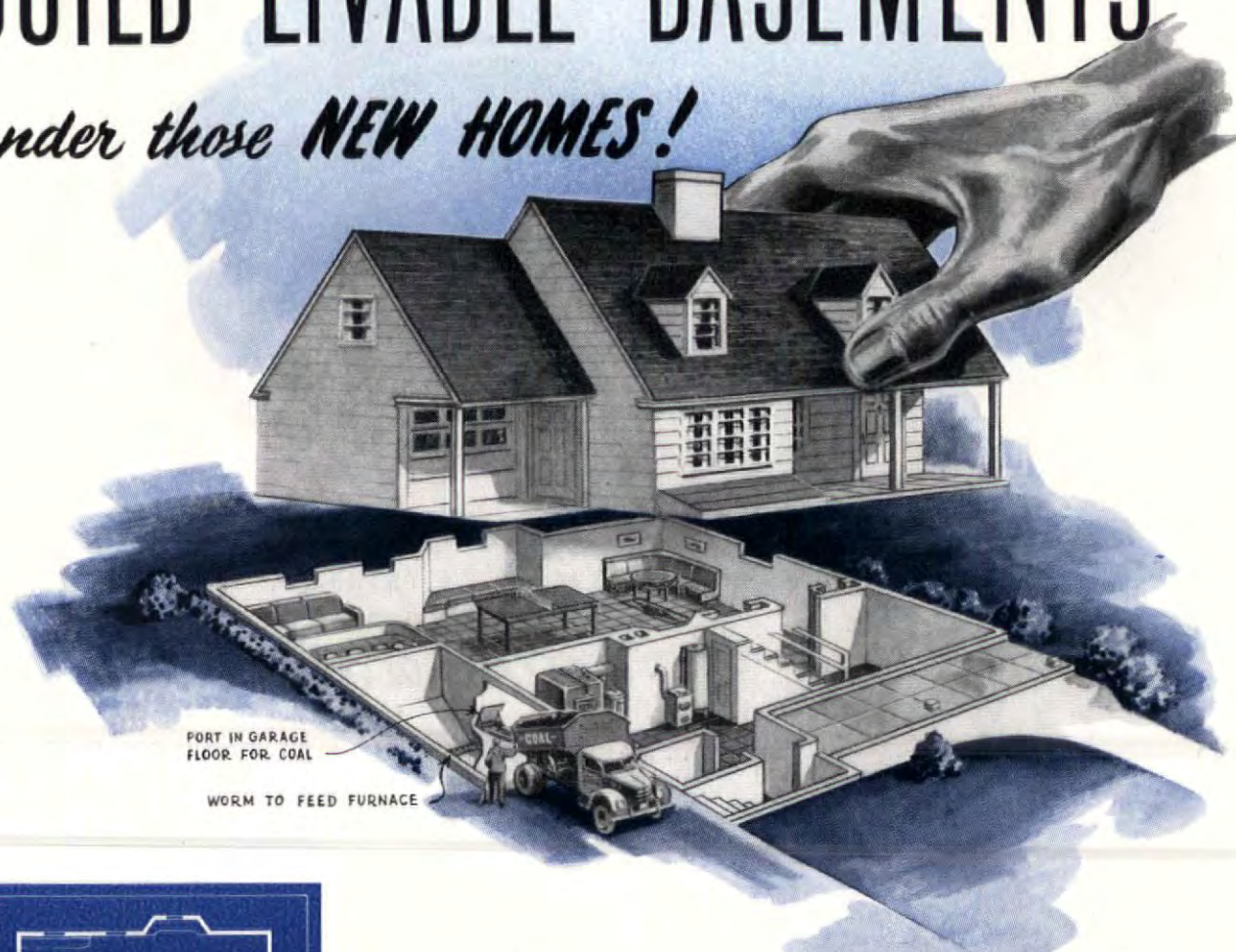
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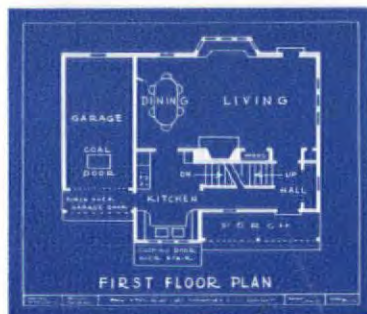
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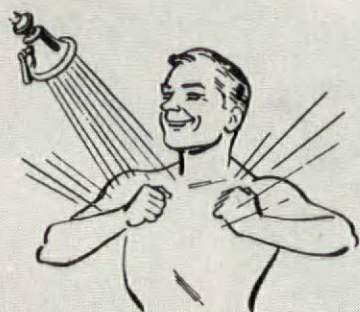
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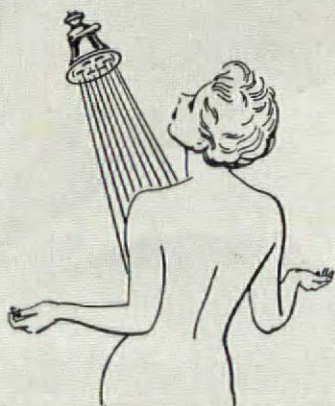
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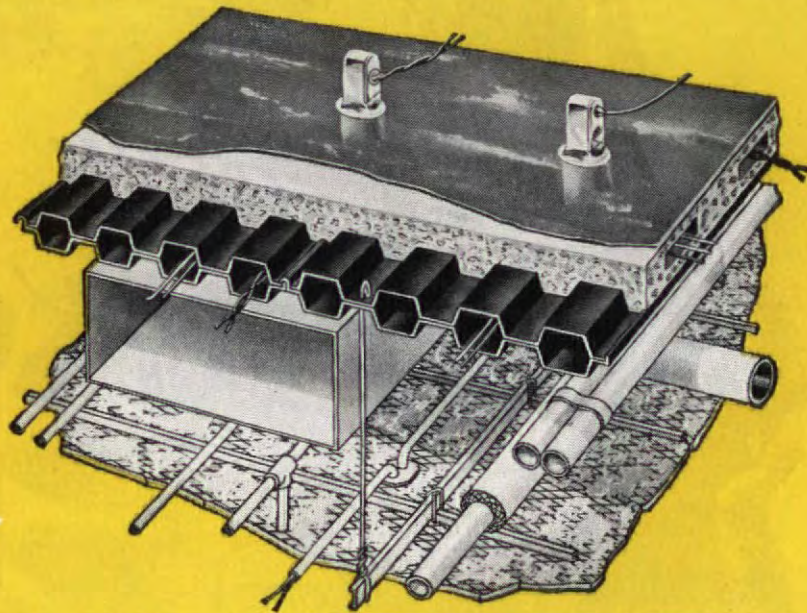
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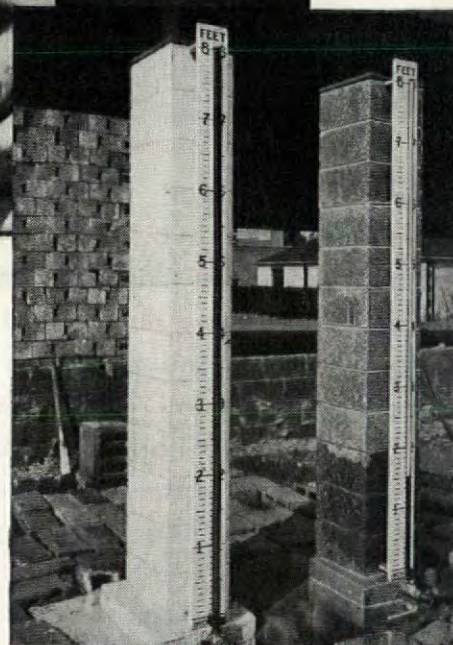
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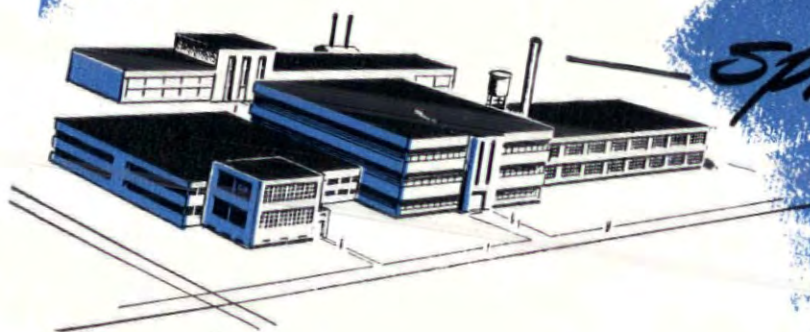
First, both of the columns you see here were tested in their natural state and showed that they had identical coefficients for permeability. After such tests, the column on the *left* was treated with Aquella, while the one on the *right* was not. The Aquellized column withstood the pressure of an 8-ft. head of water, equivalent to a hydrostatic pressure of approximately 500 lbs. per sq. ft. The untreated column could not be filled with water higher than 18", because the water seeped through the cinder blocks at the rate of 2 gallons per minute.

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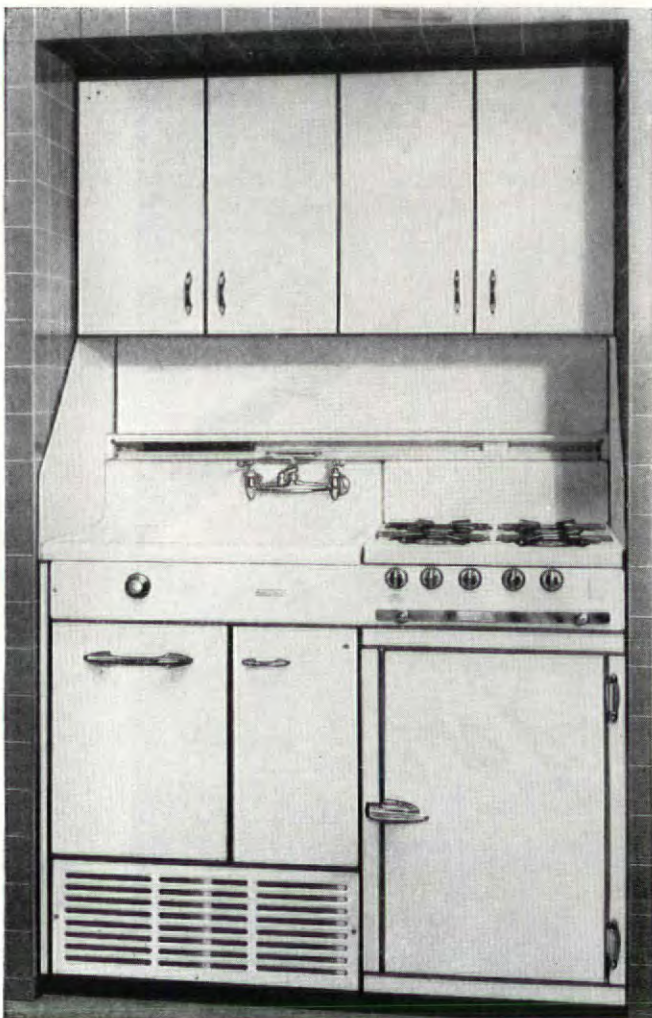
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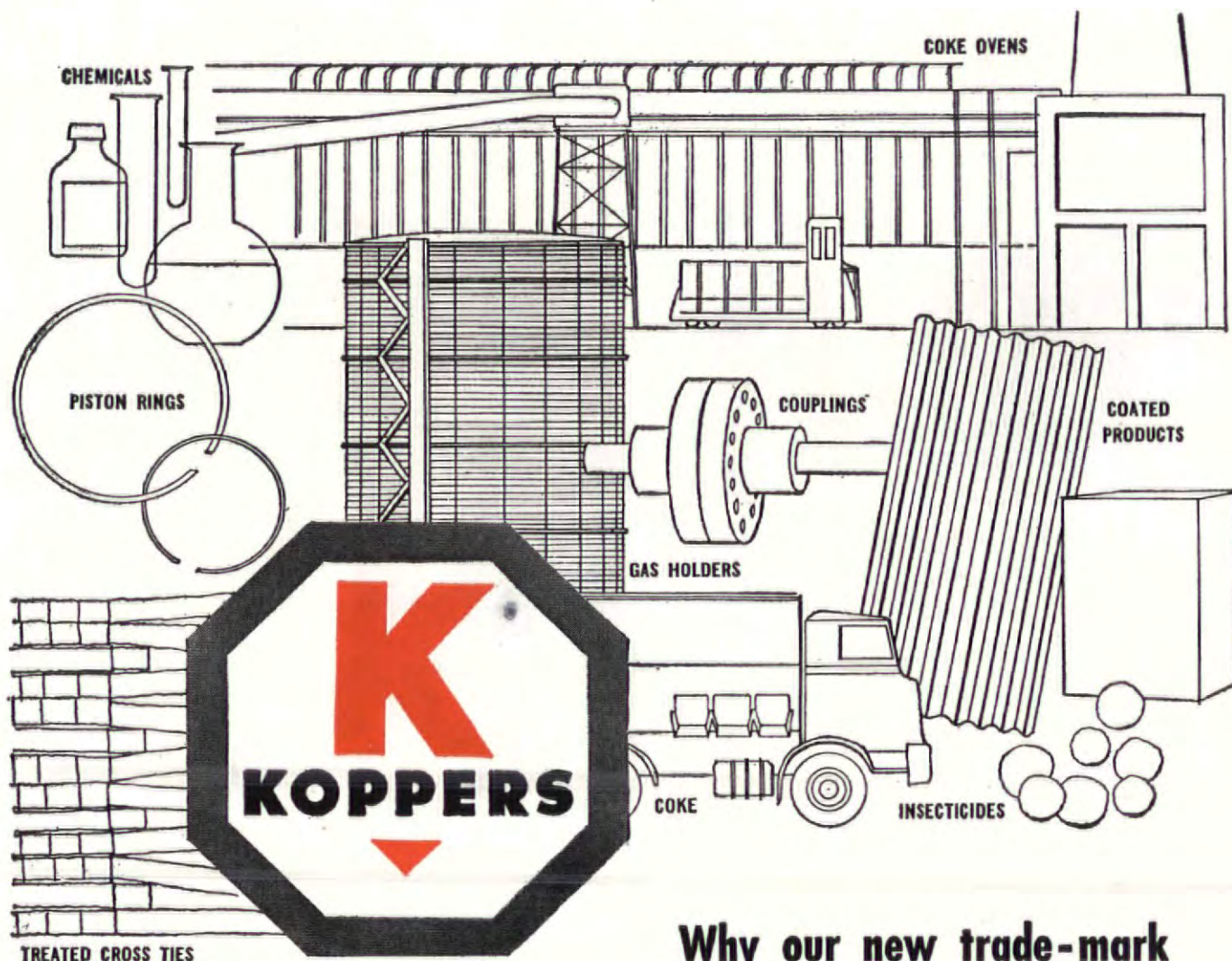
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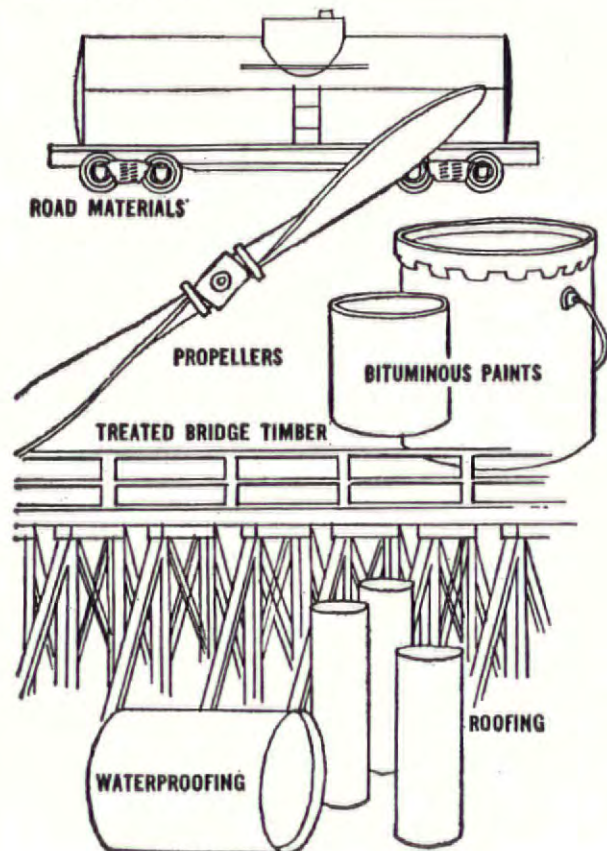
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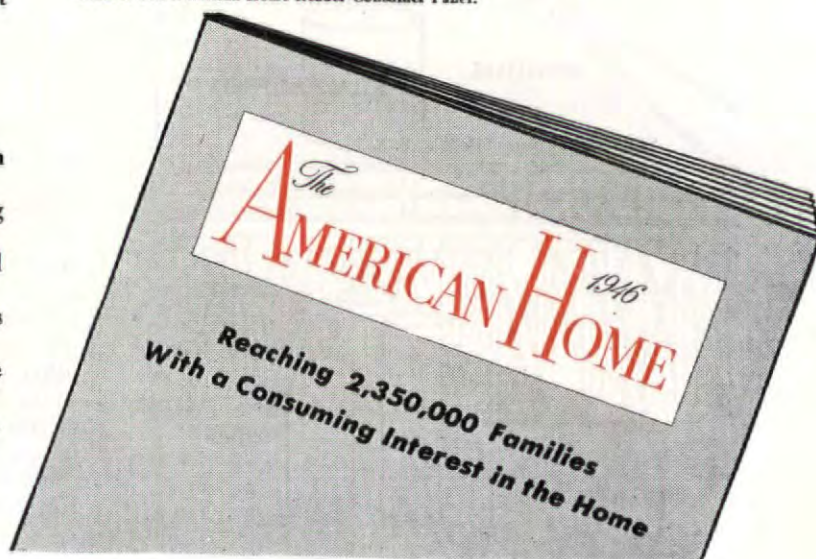
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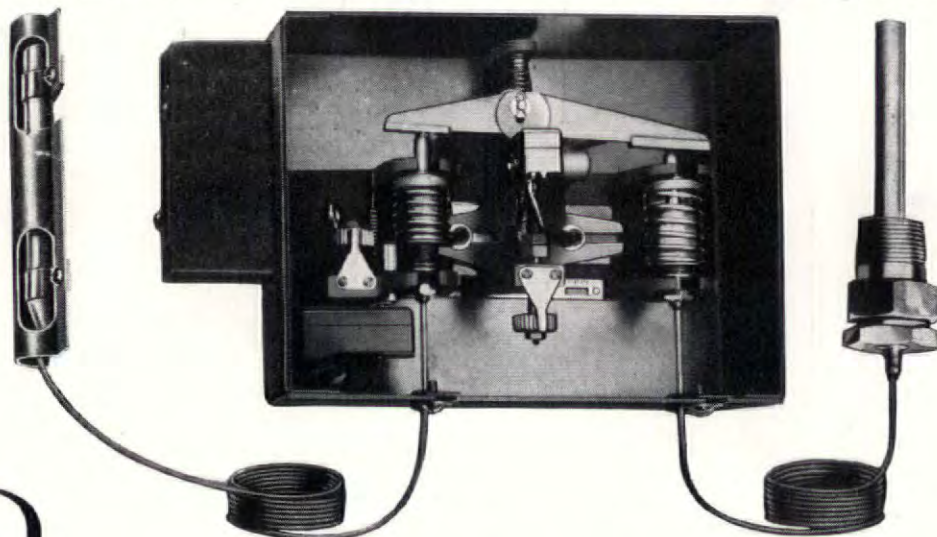
Right now—while they're reading *The American Home*—they're planning their new homes or deciding how to add that extra wing . . . what type of roofing will be best . . . whose paint they'll use. When the time comes for the actual construction to begin, these families are going to have a pretty definite idea of what they want.

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*Source: The American Home Reader-Consumer Panel.



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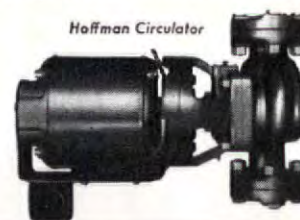
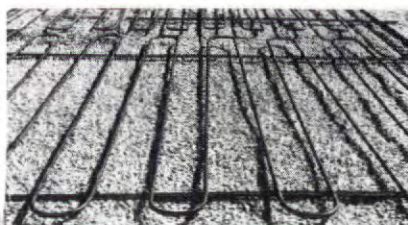
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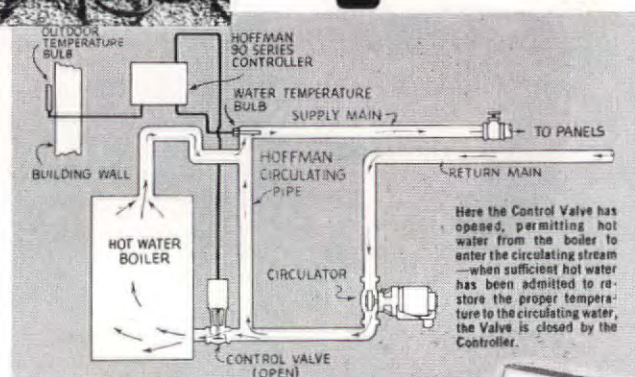
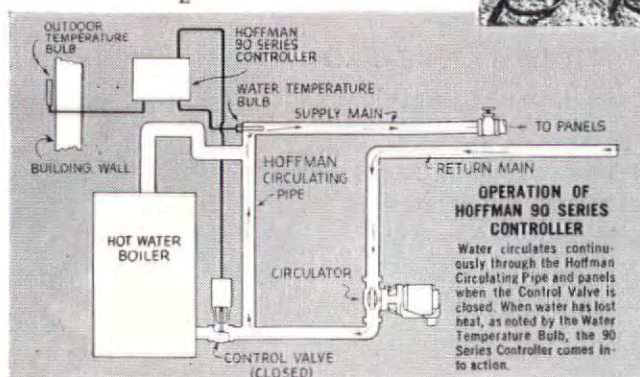


Hoffman Control Valve

Radiant panels require the smooth temperature modulation provided by the Hoffman 90 Series Controller



Hoffman Circulator

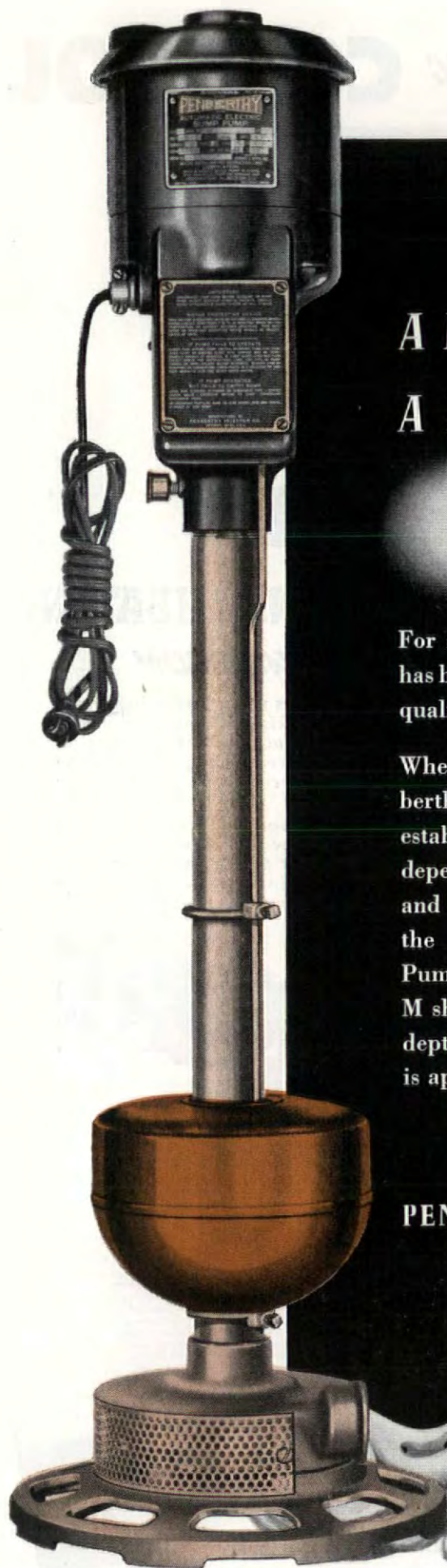


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PRODUCTS AND PRACTICE

IN-PLANT FEEDING

Architects and plant officials—pondering wartime experiences—agree on the close relationship between industrial efficiency and nutritious meals. A survey of current techniques and equipment.

American industry learned during the war that the old practice of building a new plant on some nice tract of land beyond the city limits had its drawbacks. It was risky to assume that outside initiative would provide supplementary facilities—shopping centers, housing, restaurants, etc. As often as not, they either didn't appear at all or were unsatisfactory when they did. This was nowhere clearer than in feeding facilities, lack of which showed up quickly as a personnel problem in the plant. Hence industrial architects began to pay serious attention to in-plant feeding. Results were tangible. In-plant feeding brought noticeable drops in employee fatigue and in tardiness around mealtimes. One large company found its new cafeteria helpful in drawing skilled personnel to out-of-town plants. Even where cafeterias operated at no profit general improvements in production justified their operation. These are some of the reasons why most new plants now projected are making provisions for in-plant feeding.

Industrial feeding facilities may be run either by the employers, or by concessionaires, or in a few instances, by the workers themselves. The chief advantage of the plant-operated cafeterias is that they may be run with no thought of profit, and theoretically, at least, at cheaper prices than the concession-operated unit. However, a concessionaire running a number of cafeterias in various plants has the benefits of economical buying and may offset and even better the plant-operated price scale. A further advantage of the concession is its adaptability to small plants, where owner management could run only at a loss; but even such mammoth firms as Republic Steel, (served by Factory Stores) and General Motors (served by F. B. Prophet Co.) have found it to their advantage to bring in outside concessions. Perhaps the only real disadvantage to the concession-operated cafeteria (ignoring the possible difference in cost of food), would be the lack of direct supervision by the management in a matter so affecting their help. Good working agreements with the concessionaires, however, can usually overcome this difficulty. About half of all industrial cafeterias are operated by concessions, the other half by the factory management.

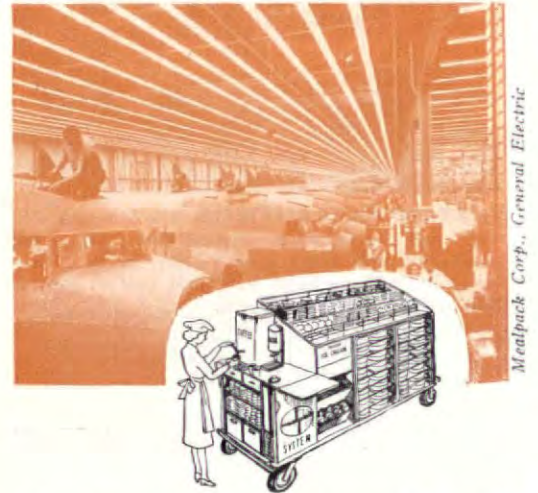
There are roughly five different types of in-plant eating facilities in use today, each with its own special advantages and disadvantages. For very large, rather spread-out plants, the *commissary* is used as a center for receiving, preparing, and distributing food to cafeterias, lunch counters, and mobile units about the plant. Also, in large plants the *central kitchen* is economical, operating as a commissary feeding subsidiary counters about

the plant, but with its own lunch counters and dining room also. The third type is the *cafeteria*, a self-contained preparation and service center; this is the most popular for the medium sized plant. The *lunch counter* is a smaller unit of service, generally receiving food from a commissary or distantly located kitchen, and merely distributing it at convenient locations about the plant. Finally, there are the *mobile units* which are rolled around to the workers at their jobs, with ready-to-serve food ranging from coffee to a complete meal.

For plants thinly spread over a large ground area, where it is impractical to expect the workers to come to some common meeting place to eat, the commissary has undeniable advantages. However, it is possible that few new plants will be of such size as to require this extremely specialized method of distribution. The central kitchen has been used where it can serve both the main dining room and a network of outlying counters, and this method was proven most successful with the large airplane manufacturers on the West Coast during the war. Under this arrangement, the main feeding unit is merely a large cafeteria with sufficient kitchen equipment to serve subsidiary counters and mobile units. The cafeteria is constantly gaining favor in industrial construction since the war. It is most adaptable for usual needs, and there is generally a better selection of food in this type of service, since hot dishes do not have to be transported over great distances as in the other methods. In fact, many industries which used lunch counters and mobile units during the war are now reconverting to cafeterias because of the increased satisfaction with this type.

Flexible facilities important

Lunch counters are used in conjunction with the commissaries and central kitchens described above. However, in small plants serving no more than two hundred at a time, lunch counters can be run by concessionaires catering from their own central kitchens away from the premises. With the increased production of frozen foods, the possibility of merely providing a counter for reheating and serving food might be considered for even smaller plants. While mobile units were popular during the war, when it was frequently impossible to provide more complete facilities, they will probably be used chiefly for cold snacks or coffee, in mid-morning and mid-afternoon rest periods. They are also useful in supplying workers who, due to the manufacturing process, or because of the time it would take to wash up and change for meals, can be best served near their place of work. There are, of course, some manufacturing processes which



From a small mobile canteen serving 48 packaged lunches . . .

. . . to this huge cafeteria serving thousands, in-plant feeding helps morale and efficiency.



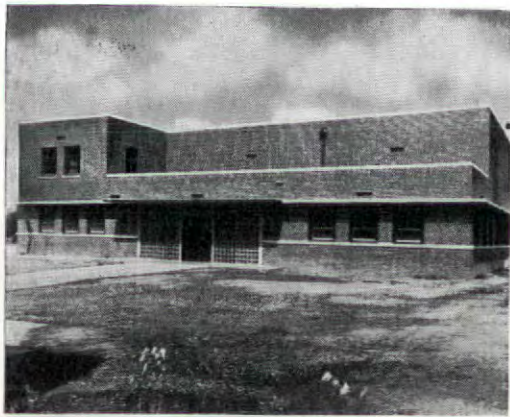
do not mix well with food: the Sperry Gyroscope Co., for instance, reports that they sometimes found cockroaches in the bombsights. Mobile units were also operated during the war by concessionaires; the tremendous improvement in insulated containers has made it practical to serve hot food to almost any point of a large factory.

In designing industrial feeding facilities, the first step is to determine who will operate the system and the best method of food preparation and distribution as described above. The next step is to determine the number of workers who will want to eat in, and from that, the size of the facilities required.

The percentage of workers who will eat in a factory cafeteria rather than go home or bring in lunchboxes varies, depending on the situation of the factory. In small mill towns, where the factory is close to home for many workers, the percentage of men who prefer to eat in the cafeteria will be very low. On the other hand, in a large city, where transportation facilities might make it difficult for the majority to return home, possibly 90

Mealpack Corp., General Electric

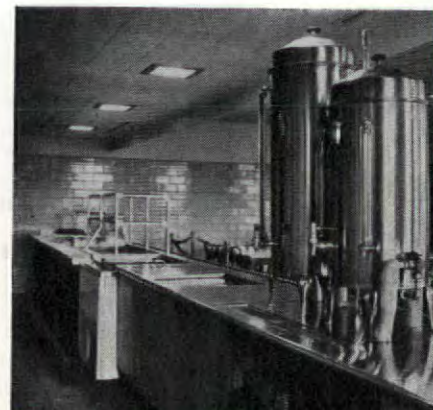
Courtesy Boeing Aircraft Co.



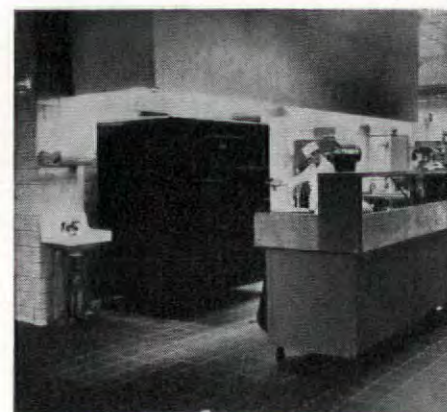
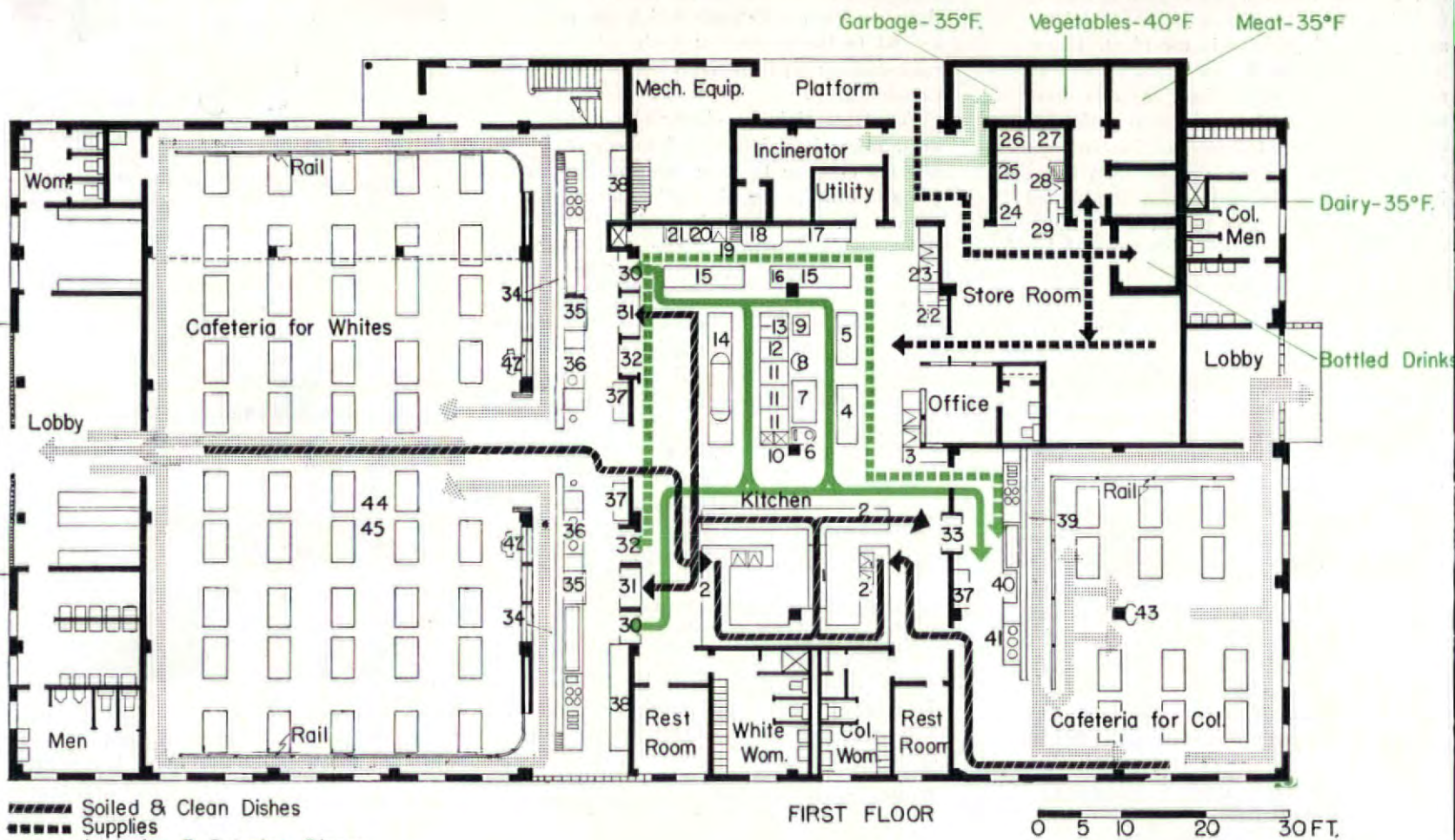
MAIN ENTRANCE TO CAFETERIA. The building, which is framed of reinforced concrete and steel, is faced externally with a red brick to harmonize with existing buildings around it. Total cost in 1945 was \$285,000, including equipment.



CAFETERIA NO. 1. has grey-green terrazzo floors, cream-glazed structural tile walls, off-white acoustical ceiling, grey-green enamelled trim. Note projection booth at right, which permits double use of cafeteria as auditorium.



CAFETERIA NO. 2, like the entire building conditioned. To isolate objectionable odors from the main system, there is an independent exhaust system over all steam tables, coffee and kitchen ranges.

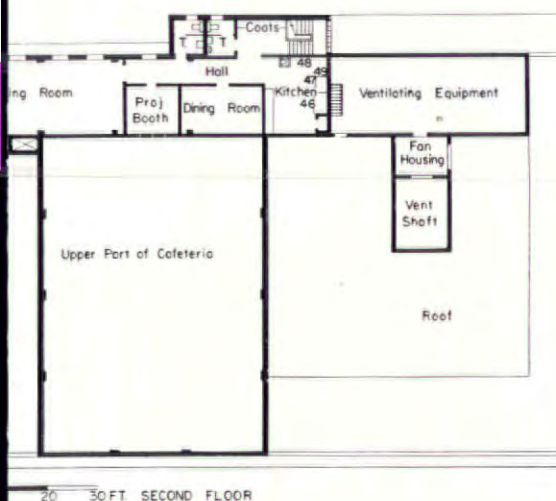


KITCHEN has own bakery unit, including ovens by the Blodgett Co. and dough mixer Hobart. Note that oven, like all cooking unit, independently-vented hood. Kitchen has quarter floor, glazed tile walls, acoustical ceiling.



Budd Anderson Photos

ERS ARE VENTED TO EXHAUST HEAT AND ODORS OF STEAM TABLES AND COFFEE URNS



PRIVATE DINING ROOM on second floor has red cedar walls, grey-green terrazzo floors, and grey-green plaster ceiling.



CAFETERIA for Ethyl Corp., Bodman and Murrell, Architects

This new, free-standing addition to the Ethyl plant at Baton Rouge, La., is an example of current trends in in-plant feeding facilities. Designed for office plant employees, it has a kitchen large enough to supply mobile units for those employees whose place of work is too far away from the site. The central kitchen core has a direct and sensible layout for food storage and preparation. However, the flow lines of the unit as a whole are complicated by racial segregation which introduces needless duplication of many facilities

(rest rooms, dishwashing, dining rooms, etc.) and somewhat confuses circulation.

The entire building is air conditioned, with an interesting secondary ventilating system which exhausts hot gases from all cooking and heating units to outdoors, thus reducing to a minimum the recirculation of food odors by the air conditioning system. The entire building, including the kitchen, is acoustically treated. Terrazzo and tile floor and wall surfaces make thorough cleaning an easy matter.

per cent of the men will eat in the plant. The trend is for more and more workers to rely on factory facilities, due to the greater public awareness of the benefits of the "hot lunch," the increased efficiency and therefore lower costs of the factory cafeteria, the greater centralization of our industries in urban communities, and the increased number of wives who would rather work than cook. The best way of determining how many workers will patronize a proposed cafeteria is to take a poll. If this is impractical, or if the plant has not yet been built, this average may be used: it has been found that, in large towns, about eighty per cent of the workers will eat in the plant—about one-fourth of whom will rely on plant facilities merely to supplement food brought from home.

After assuming the number of workers to be served, the next step is to determine what the peak load at any one time will be. Assuming that the average worker will require at least fifteen minutes solely for ingestion of food, the total length of his stay will be determined by the amount of time it takes to pick up his lunch, and dispose of the dishes afterwards, plus any additional time for relaxation and smoking after the meal. In the average well-run cafeteria it has been found that another fifteen minutes is sufficient for all these, making a total of thirty minutes in the dining room. By staggering the lunch hours at half hour intervals, it is possible to completely clear out the dining room and begin a whole new sitting. However, if a large dining room is used, the workers can come in at shorter staggered intervals—while those in the previous sitting are still eating—without increasing the serving load on the counter or cooking equipment.

Pleasant dining rooms important

At least fifteen to seventeen square feet per person should be allowed for the dining room: this includes aisles, waiting lines, serving counters and space behind them, as well as dining space. The arrangement of tables depends largely on the character of the people served. Highly-paid skilled workers, foremen, junior executives, etc. prefer small square tables, seating four each. Most industrial cafeterias however, seat six or eight to a table, this being economical of floor space without producing the barracks effect of long lines of tables. A very popular arrangement, because of its flexibility, is the use of small square tables pushed together to form any length of table desired. Furthermore, such tables are light and easily movable in case the dining room is also intended as recreational space at other times—a possibility which might be considered. Proximity to the serving counters and kitchen sometimes makes them ideal for dances, sales meetings, etc., where a light snack may be served. In this connection, a sound system either tied in to a plant-wide public address system or self-contained amplification unit for dance music, skits and speeches is often advisable. Properly designed, the dining room can provide very desirable recreational facilities at no extra cost.

A troublesome aspect in the design of dining rooms is the question of segregation. By and

large, segregation is as undesirable from a technical as from a social point of view. Under all circumstances, it complicates the flow lines of both kitchen and dining areas. Very often management personnel would prefer a separate dining space from the workers; yet if there is an obvious double standard because of the separation, the workers will always feel the distinction. One solution is to have the executives wait in the same line, obviating the complaint about "different" food, yet eat in a separate dining room. Another method is to provide a separate room where the same food will be served to tables as at the counters but with a small additional charge. The solution of these problems requires a close cooperation with management, and a careful study of the labor relationships involved.

The appearance, temperature, lighting and sound levels of the dining room are important factors in the enjoyment of the meal. Just as well-served food seems tastier, so the lighting, colors, and relative quiet of the dining space all make the lunch hour more relaxing for the worker. The lighting of dining rooms is presently undergoing some re-examination since it appears that certain colors in fluorescent lamps make foods appear very unappetizing. A white which approximates daylight is the best for this purpose. The wall colors used should be soft and light. Noise control is especially important in large dining spaces, and some form of acoustical correction is especially necessary where shape of the wall surfaces will produce echoes. It is important to isolate kitchen noise, as well as to deaden the sound of conversation and clatter of silverware in the dining room proper, since noise at all these frequencies at once is particularly distracting. The little study necessary to apply established principles of noise, color, and lighting design will more than repay itself in increased employee satisfaction.

Wash rooms are likewise an important aspect of satisfactory feeding facilities, especially where the manufacturing processes are dirty. Whether the dining room is part of a new plant or an addition to an existing one, it should be possible for employees to "wash up" before eating. This often leads to wash rooms immediately adjacent to the dining room. In any event, the industrial cafeteria should devote more space to such facilities than would be the case in an outside, independent restaurant.

Basic kitchen plans

Kitchen floor space per capita will vary inversely with number of persons to be fed—for a very large plant $2\frac{1}{2}$ sq. ft. per person will be adequate while a kitchen serving less than 200 will average about 5 sq. ft. per person. These figures are of course only good for preliminary space determinations, since arrangement of equipment, allowances for storage space, dishwashing facilities, etc., must all be individually determined. The best approach is to consider the basic plan type required for the number to be served, determine size and amount of equipment needed, and design the kitchen around the requirements.

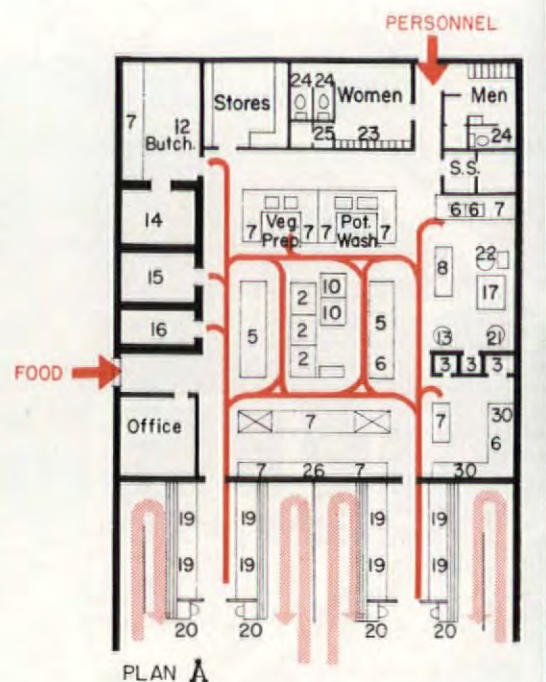
"Plan type A" for 400 persons and up is a compact kitchen, completely self-contained with direct circulation and fast serving counters. The core of the kitchen is its center, being fed from peripheral service units, each of which is a department within itself. This core must have its own clerestory light and ventilation, since it is in effect a central room, with particular problems of exhausting hot grease- and odor-laden gases. The arrangement of the counters is unusually good for speedy service, although they would require more cashiers during the serving period than the long straight type. The dishwashing unit is completely separate from the kitchen, where workers can deposit the soiled trays.

This plan type is adaptable for much larger installations, with modifications depending on the individual needs. In fact, with a rearrangement of the elements, it has been used to serve counters at either end of the kitchen, serving up to 1,000 persons at a time.

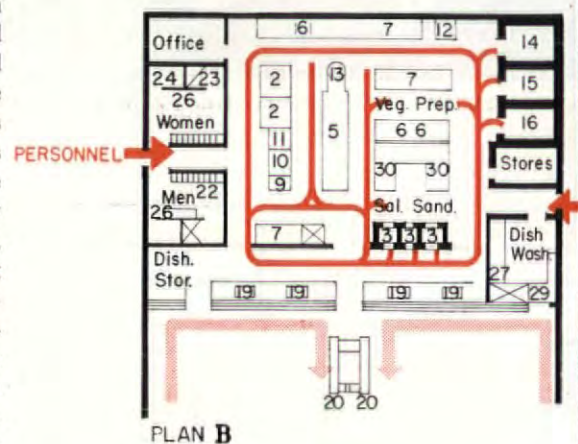
Plan "B" is a self-contained cafeteria kitchen (with the exception of baking) for 200-400 persons, and is so arranged that the serving counters are separated from the kitchen by a partition to minimize cooking odors and noise. The reach-in refrigerators can be opened both from the kitchen and from the counters, and the flow of food to the counters is simple and direct. Two separate serving counters are advisable for feeding this number as it has been found that short and straight counters speed serving during the rush period. The dishwashing unit is well-located for easy disposal of garbage to the delivery platform, although it would require bus boys to bring back the soiled dishes. The War Food Administration recommended entirely disassociating dishwashing from the kitchen by locating it where workers leaving the dining room could deposit their trays. However, this suggestion complicates the circulation because the clean dishes must be taken back to the kitchen and the garbage must be removed through the dining room. Combining the dishwashing with the kitchen is the more usual and—all things considered—the better way for this size feeding facility.

Plan "C" shows a lunch counter which is self-sufficient to the extent of making coffee, sandwiches, salads, and cold dishes. The hot dishes in insulated containers would be brought in from either a central kitchen or commissary. The counter is a minimum of fifteen feet long, depending on the number of workers to be served. This back-to-back arrangement of work space and counter is ideal for 100 to 150 workers and may be used for serving up to 200 at a meal, although a relatively larger allowance for storage facilities than that shown would be necessary. The arrangement of the dishwashing machine and clean and dirty dish tables depends on the dining room arrangement. In this case, it is assumed that the workers will carry their own trays and dishes back for washing. The cashier might well be the manager, since from his location he has good visual control over the kitchen as well as the cash.

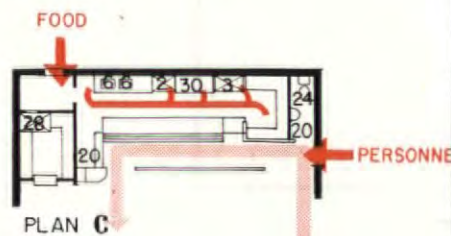
In detailing the kitchen, consideration must be given to regular maintenance problems



PLAN A



PLAN B



PLAN C

Food Distribution ———
Public Circulation ———

- | | |
|---------------------------------|------------------|
| 1. Bain Marie | 16. Dairy Refr. |
| 2. Range | 17. Coffee Urn |
| 3. Reach-in Refrigerator | 18. Oven |
| 4. Serving Counter | 19. Steam Tab. |
| 5. Cook's Table (Pot Rack Over) | 20. Cashier's S. |
| 6. Sink | 21. Trunnion H. |
| 7. Table | 22. Pastry Sto. |
| 8. Baker's Table | 23. Lockers |
| 9. Fryer | 24. Toilet |
| 10. Steamer (Potatoes, etc.) | 25. Shower |
| 11. Steam Kettles | 26. Hand Sink |
| 12. Meat Block | 27. Clean Dish |
| 13. Mixer | 28. Dishwasher |
| 14. Meat Refrigerator | 29. Dirty Dish |
| 15. Vegetable Refrigerator | 30. Sandwich |



THIS HANDSOME CANTEEN in Essex, England, serves 1,500 meals daily, doubles as recreation hall. Edward D. Mills, Architect

A free-standing building for a large industrial plant in England, this new cafeteria has a compact and efficient plan and an economical structural system. The kitchen equipment differs somewhat in nomenclature and function from that in this country. Also there are no display counters as in American cafeterias: a two-course meal is dished up in kitchen and served through pass windows. However, the general layout and flow patterns conform to the best of current American practice.

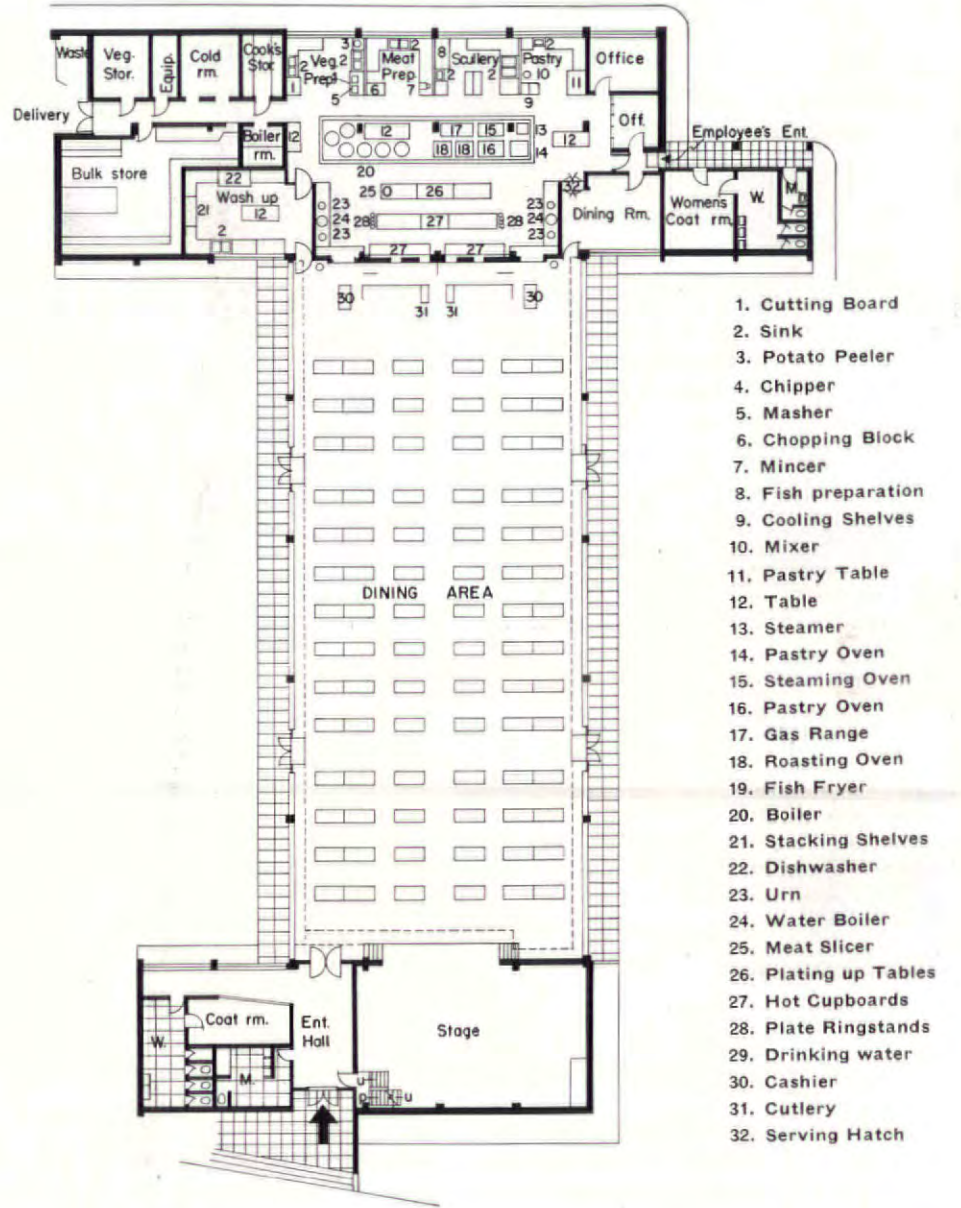
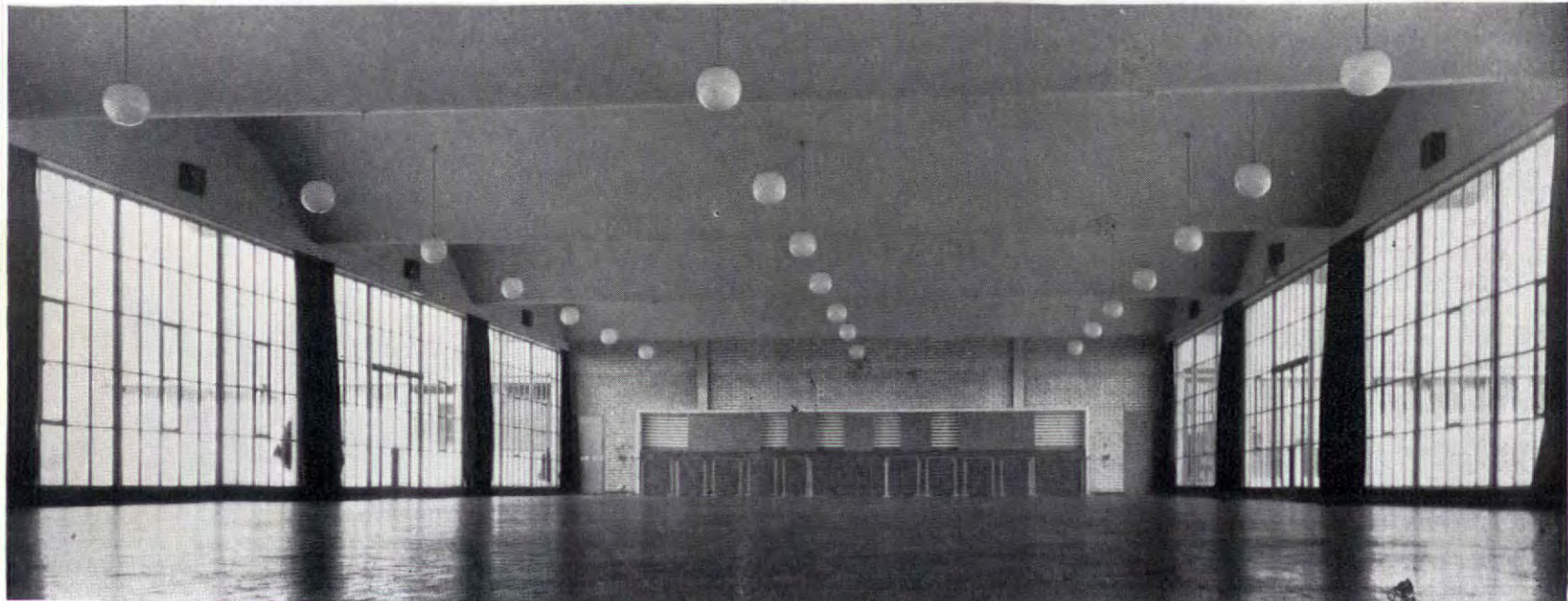


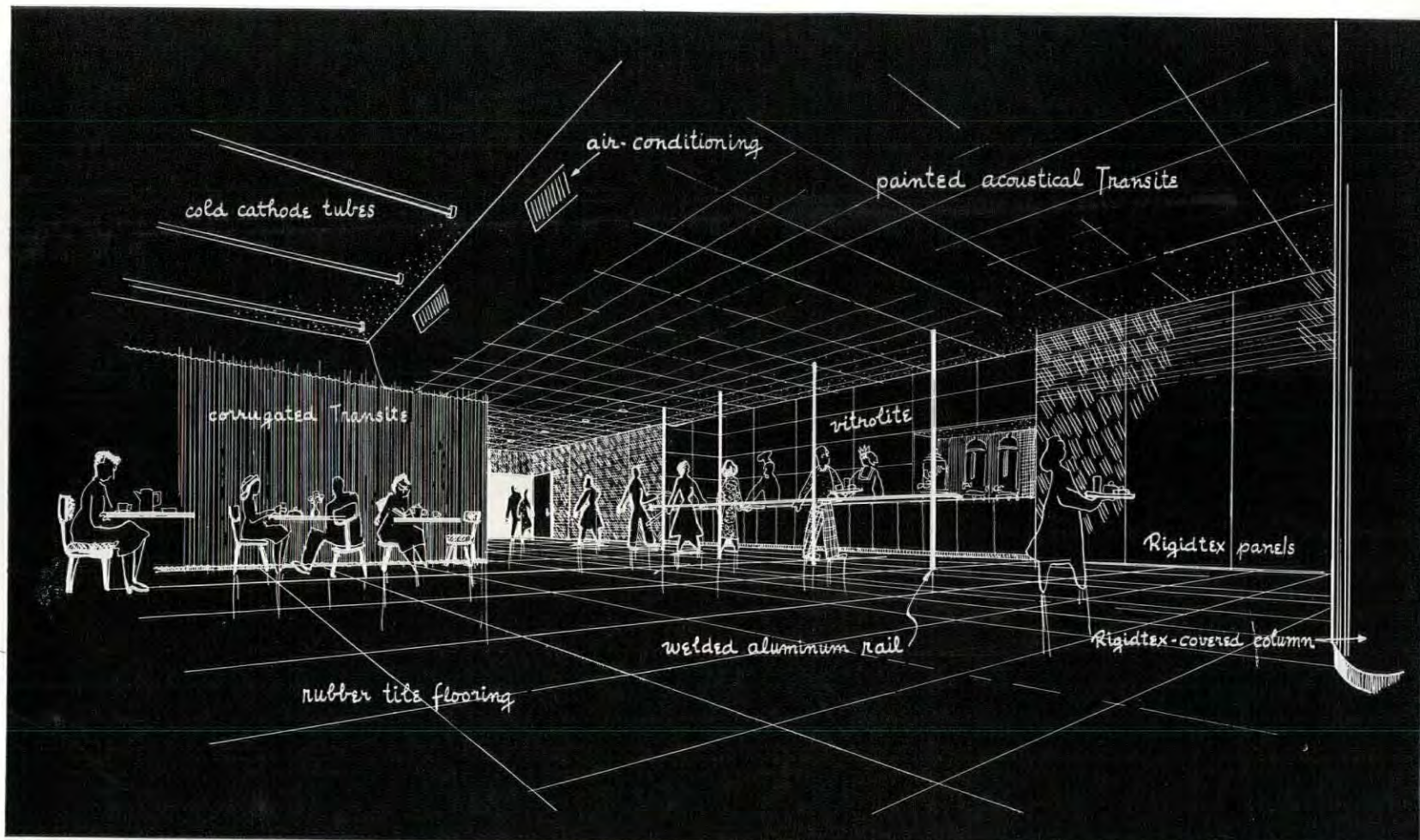
KITCHEN WITH FOOD PREPARATION BAYS AT LEFT



ENTRANCE BAY HOUSES STAGE, DRESSING ROOMS

FIVE THIN TRANSVERSE BARREL VAULTS, CARRIED ON TWELVE COLUMNS, GIVE HALL CLEAR SPAN, PLENTY OF LIGHT, GOOD ACOUSTICS





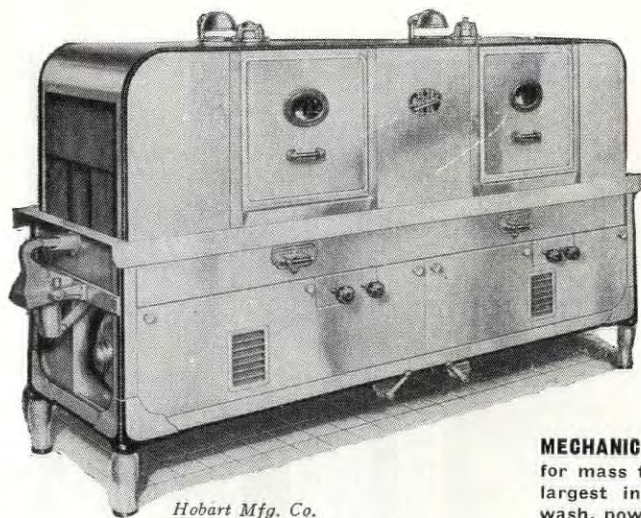
ARCHITECT ALEXANDER GIRARD IS CURRENTLY INSTALLING THIS CAFETERIA IN AN EXISTING BUILDING FOR FORD MOTOR IN DETROIT



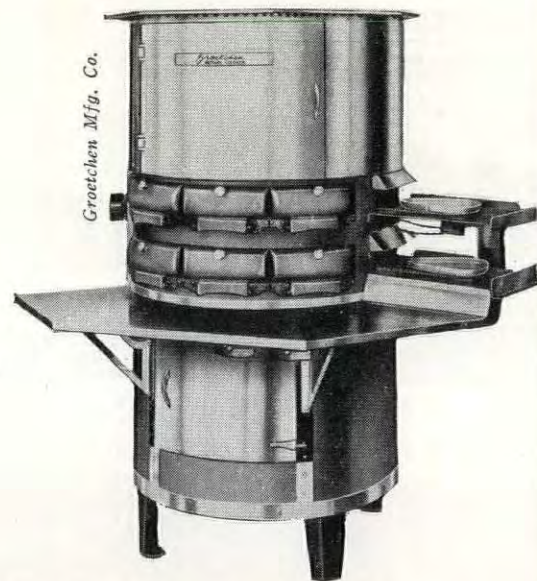
ULTRAVIOLET LAMPS, used over silver-, glass- and china-ware, are an important means of sterilizing, thereby reducing danger of infectious diseases such as trench mouth.



BURNER RADIANTS, fitting all types of gas burners, increase efficiency by focusing heat on utensil, reducing heat loss to surrounding surfaces. This one is made by Chicago Combustion Co.



MECHANICAL DISHWASHERS are almost imperative for mass feeding operations. This one, adaptable to largest installations, passes dishes through power wash, power rinse and final sterilizing rinse.



ROTARY COOKER is self-contained, insulated machine for simultaneous preparation of short-order dishes. Utilizing reflected heat, the machine automatically cooks meat in sealed casseroles to any desired degree—rare, medium or well-done.

which plague every kitchen. Cleanliness is important in any kitchen but in mass-feeding operations it is a major consideration. Too often an architect designs a well-equipped kitchen which cannot be kept immaculate because of difficult access to the trouble spots. Particular attention should be given to the evacuation of waste grease, whether in the form of dish water or of range fumes. Satisfactory grease traps are already available: the evacuation of air-borne grease is a much more difficult matter. Perhaps the best solution would be removable filters—located in the exhaust above the range hood—which could be periodically cleaned. These grease traps and filters must have cover plates, panels, or doors for easy access and inspection. Kitchen fires which appear to start spontaneously are often the result of grease collections which could not be removed. A little consideration beforehand will greatly reduce the effort needed to keep the kitchen spotless.

New developments in equipment

Practically every operation in the preparation, cooking and serving of food has been mechanized. In perhaps no other area is there such a wealth of specialized equipment available. Much of this is well-known, but the war produced some interesting new variants worthy of notice.

One of the most useful improvements for war plant feeding was in insulated mobile carriers. The trend toward single-story,

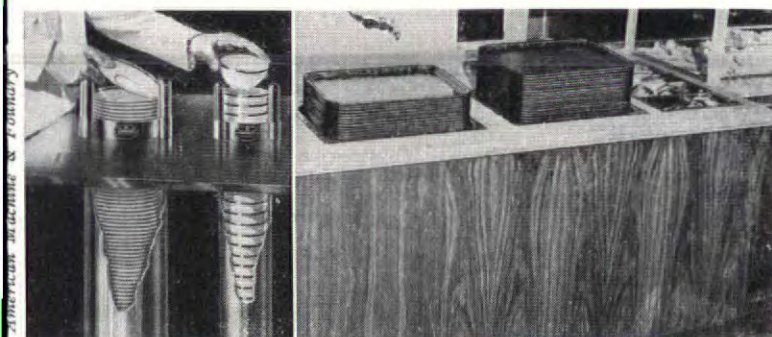
spread-out factories made it imperative that food be brought to the workers no matter how distant they were. One carrier brings an appetizing display of food with a choice of two hot dishes and hot coffee. Another company has developed smaller carriers for coffee and for individual portions of hot foods which is said to keep the contents warm for several hours at a time, by surrounding them with an almost perfect vacuum.

Another important improvement in industrial kitchens which has been under investigation a long time is the development of burner radiants. It has long been known that much of the heat from gas burners has been lost through conduction of the surrounding surfaces and the air. A composition material has been developed which when heated by the gas flame absorbs most of the heat and transmits it to the cooking container. Radiants are being made which will fit over existing burners and may be adapted for any gas flame in the kitchen—in range, dishwasher, coffee urn and water heater—for cheaper and faster cooking.

An even more recent product, and one particularly adaptable for industrial cafeterias, is a combined storage and dispensing unit for dishes, cups, saucers and trays. This is handy where space is limited and where the workers are expected to pick up their own implements on the serving line. It is sanitary inasmuch as the stock is protected from dirt as long as the utensil is covered between meals, and the dishes can be stored there between meals.

Another new invention which has been gaining favor in restaurants appears likely to change short order cooking radically. A rotary cooker has been developed which automatically cooks steaks, chops, fish and fowl either rare, medium, or well-done as desired. The food is put into a preheated casserole, sealed to preserve the natural juices and vitamins, and the casserole is placed in the cooker. The cooking is done by means of reflected heat for a determined length of time, after which it is automatically stopped. Perhaps the chief advantage of this cooker appears to be the absence of cooking odors, which make the preparation of food practicable right in the dining room, minimizing serving help and time.

The importance of good design in industrial feeding facilities can hardly be overemphasized. The difference between profit and loss may well depend on the relative ability of the kitchen to serve a maximum number of people with a minimum of help. The difference between comfortable surroundings and a disagreeable atmosphere is simply the application of a few well-known principles, frequently at but little extra cost. But beyond the actual accounting in dollars and cents lies a whole new field in labor relations. The far-sighted employer is today providing his employees with a restful, well-decorated place in which to eat nourishing, appetizing, moderately-priced food. And there is nothing better for a man's morale than a good square meal.



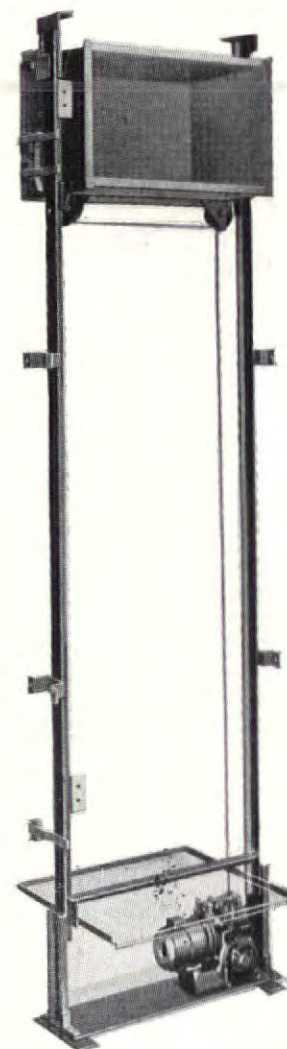
DISPENSERS for china and trays facilitate self-service in mass feeding operations. This model employs calibrated spring which holds top dish or tray at predetermined height, irrespective of number in stack. Loading of clean utensils is from top.



MOBILE FOOD CONVEYOR carries well-balanced meal of hot foods and soup, drinks, salads and desserts for 250 persons prepared in central kitchen. Various compartments are heavily insulated, electrically heated and cooled.



DUMBWAITERS are essential where entire layout is not on one floor. Illustrated model is suitable for movement of supplies or prepared foods from one floor to another. Other types employ regularly spaced lifts on continuously rotating belt.



ELECTRONIC AIR FILTRATION achieves economies in department store overhead.

Electronic air filtration, having found its way into the department store, appears to be achieving significant economies in overhead expense. The six year old installation in the Cain-Sloan Co. at Nashville, Tenn.—where a dense smog often blankets the entire business section of the city for hours—is one of many such installations. Electrically cleaning the air to remove dust, dirt, and small



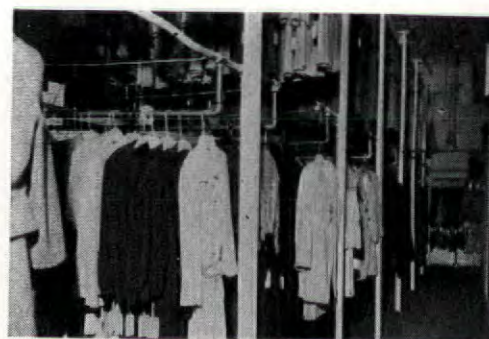
particles of soot and smoke, electronic air filters have greatly reduced Cain-Sloan's merchandise spoilage and eliminated the need for frequent redecoration.

In 1940, five sections (19 ft. wide by 14 ft. 4 in. high) of American Air Filter Company's fully automatic

Model C Electro-Matic self-cleaning electronic air filter were installed in the main duct of the air conditioning system, just behind the weather louvers in the outside air intake. Serving the entire store including stock rooms (an area of 100,000 sq. ft.) the installation has a capacity of 60,000 cfm..

All re-circulated air is also filtered to remove dust or lint coming from the merchandise, the return air duct entering the plenum chamber just ahead of the filter.

Prior to the installation, soot and smoke were such a problem the management found it economically feasible to maintain its own dry-cleaning plant in order to reduce the percentage of "mark downs." Soon after installation of the filters, however, merchandise spoilage was reduced to the point where the plant was no longer justified. Also it was no longer necessary for stock room personnel of the women's ready-to-wear to spend hours covering new merchandise to protect it from soilage. Damage to work in progress in the alteration rooms dropped sharply. Dust settling on expensive and fragile glassware in the gift shop was reduced appreciably, thus bringing about a reduction in cleaning time and breakage in handling. Covers used on merchandise tables remained clean for two weeks at a time. Finally, Cain-Sloan management found that, even after four years, several departments remained so clean that the cost of redecoration was not justified.



Women's clothing no longer needs covering to protect from soilage, (above) and expensive glassware in gift shop does not require frequent dusting since installation of electronic filters.



BUILDING REPORTER

WINDOW incorporating special hardware has removable sash for full ventilation and easy cleaning.



The new Ventair window, according to the manufacturer, eliminates sticking, binding and rattling and at the same time provides simplicity of construction, installation and operation. Incorporating a special leather-surfaced hardware unit which seats in the jamb groove, sashes move smoothly up and down and fasten securely in any intermediate position. A single set screw retains the unit and regulates tension. Each sash can be tilted inward a few inches to direct fresh air towards the ceiling and in this louvered position is rainproof. For full ventilation or cleaning, sash can be easily removed and replaced. Upper and lower sash close in line to present a trim, modern appearance and when closed are automatically locked. Deep seal weather-stripping around header, jamb and sill offer complete protection against weather. Ventairs are made of toxic-treated, western pine in stock sizes, 20 in. by 12 in. to 36 in. by 24 in., and take standard-sized screens and storm sash.

Manufacturer: The Hayman Window Co., 1980 Broadway, Denver 2, Colo.

PLASTIC FLOORING is virtually indestructible.

Koroseal flooring in square tile form, offers a permanent, attractive floor which requires a minimum of maintenance. Made of B. F. Goodrich's polyvinyl chloride plastic, Koroseal, which has proved itself in coating and sheet form as upholstery, shower curtains, etc., the flooring is claimed to be virtually indestructible. It is resistant to wear, stains and weather, and will not rot, buckle or crack when exposed to heat or cold, dryness or dampness. Oils, acids or alkalis do not affect it and soap and water washing is all that is needed for maintenance. It has great clarity of color and will not fade under direct rays of the sun. According to the manufacturer, Koroseal is a permanent flooring which retains its

resiliency better than rubber. It is available in a wide range of brilliant colors and is well suited for use in offices, hotels, hospitals, showrooms, and other places where traffic is heavy and appearance is desired.

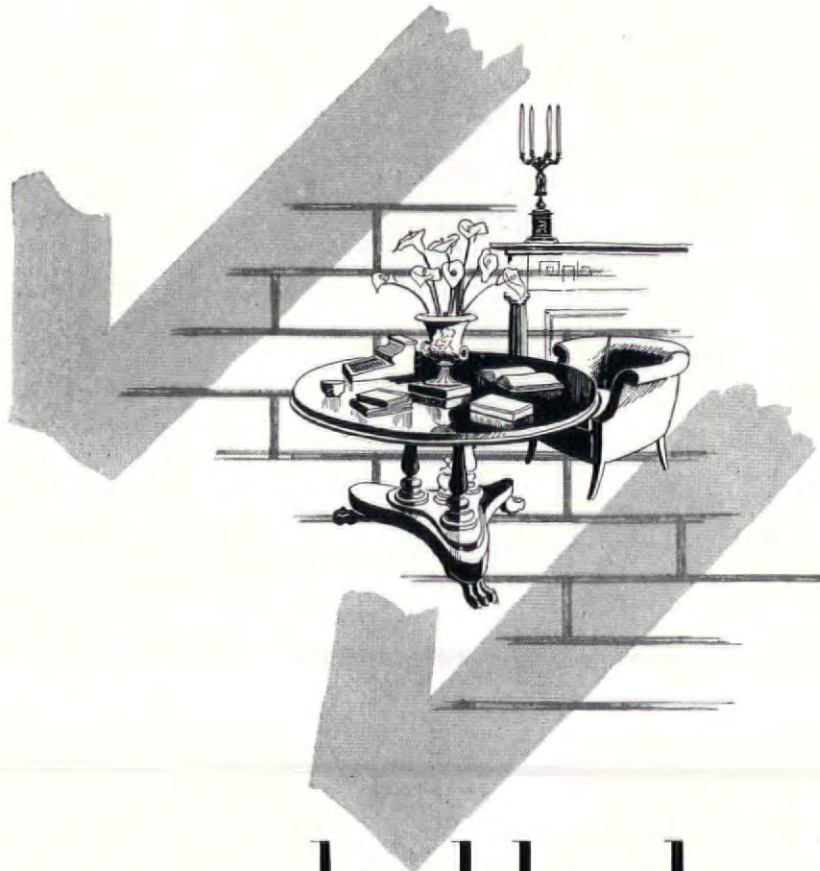
Manufacturer: Sloane-Blabon Corp., 295 Fifth Ave., New York, N. Y.

WALLPAPERS and ALLIED PLASTIC FLOORING feature unusual combination of color and design.

Well suited to modern interiors, and blending with conventional or period furnishings, Marbalia handmade wallpapers combine high quality paper, unusual colors and interesting patterns to give warmth and a sense of the third dimension. Movements are not repeated in pattern, and the 1,000 colors in the line provide numerous unusual color combinations. Marbalia is featured in three designs which are best described as a flowing movement, a fossil or jewel-like structure, and an abstract design which gives color without form. They are available with either a matte, egg-shell or semi-gloss, or plastic coated finish, and all papers are absolutely washable. There is also a Marbalia plastic wall covering which incorporates pigments as an integral part of the material. This has a wood pulp backing for binding the covering to the wall, is impervious to heat, water, etc. Marbalia comes in three size sheets, 26 in. by 40 in., 36 in. by 31 in., 36 in. by 40 in. A new plastic flooring, Lavernite, which will tie in with Marbalia will be available this fall. It will incorporate the patterns and colors of the wallpapers, introducing many unusual color combinations including metallics to the floor. Other unusual designs including baroques, stripes, etc., will be available. This flooring will be impervious to weather, wear, acids, etc., will be laid similar to linoleum and require no waxing or maintenance.

Manufacturer: Laverne Originals, 225 Fifth Avenue, New York, N. Y.

(Continued on page 188)



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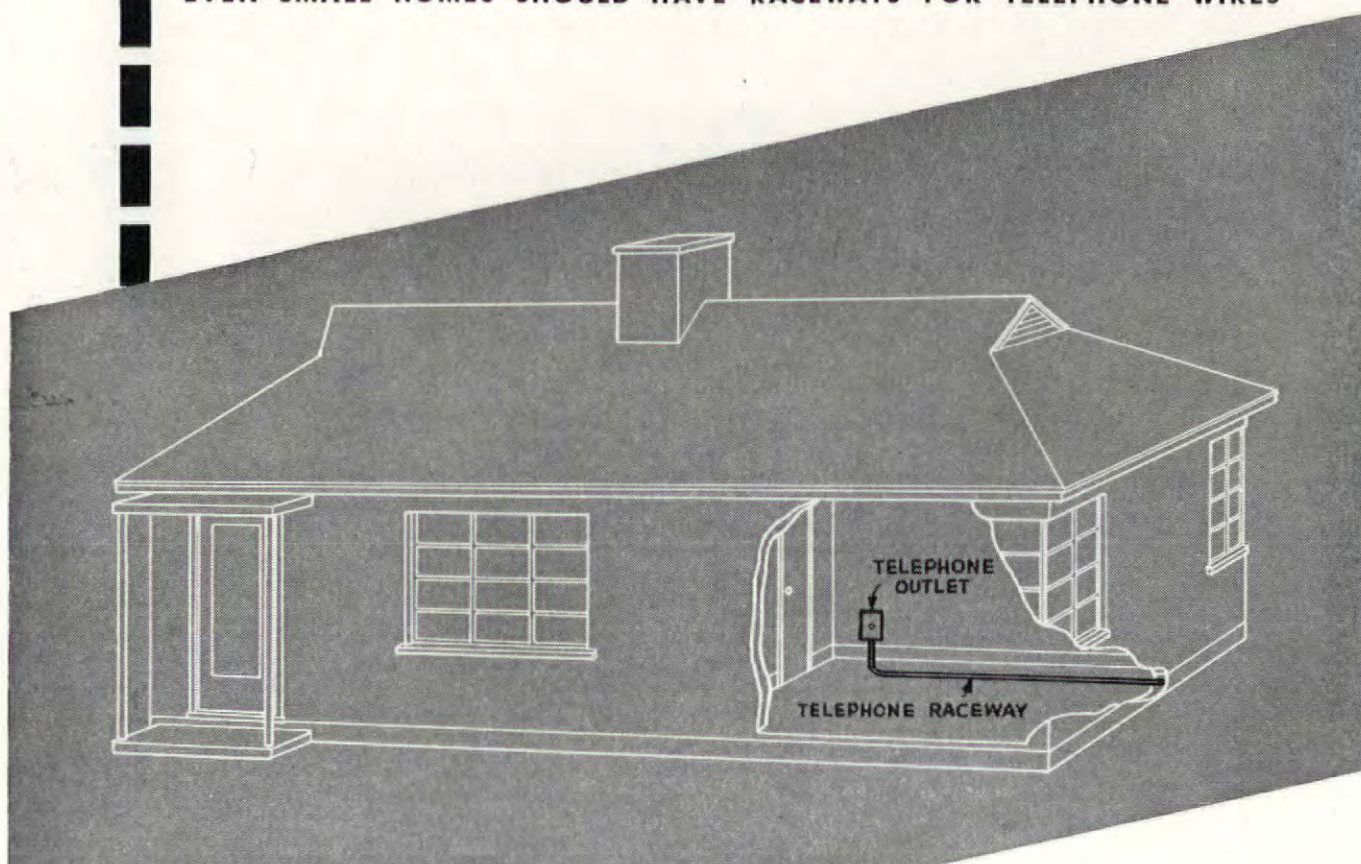
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*Survey made in May, 1946. Complete report available on request.

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Manufacturer: Safetee Glass Co., 4717 Stenton St., Philadelphia 44, Pa.

WIRE SIZE CALCULATOR for adequate electrical wiring.

The Copper Wire Selector is a handy slide-rule which gives the wire size to be used for any load (1 to 100 amp.), at any

distance from the fuse box (10 to 1,000 ft.), for 32, 110, 220 and 440 v. lines, according to the maximum voltage drop that can be tolerated in the particular installation. The back of the Calculator has tables of wire capacities, motor ratings, etc. Price is \$.50 each, three for \$1.00.

Manufacturer: Lawrence Engineering Service, 23 N. Wood Ave., Peru, Ind.

ELECTRIC RADIATOR gives radiated and convected

The Co-Z-Air line of electric radiators are suitable for places where permanent heating facilities are not where extra heat is required on chilly days, or for motels, shops, offices, etc. According to the manufacturer, a new principle of dual heating, giving radiated and convected heat. They incorporate heating elements and use no water or other liquid models are available in 5, 8 and 12 sections, 1,200 w., and 2,400 w. respectively. The 5 models are easily portable, plug-in type, of The 12 section model is a wired-in type, of **Manufacturer:** Henry J. Morton Associate Building, Detroit 2, Mich.

WARM AIR FURNACE for economical

The Thatcher "V" Series Comfortmaster, oil-fired air conditioning furnace, economical service, automatic heat, and clean filtered humidified air. Designed for easy maintenance and service, the oil burner is flange mounted. Large removable filters clean the air and the vaporizing humidifier adds the proper amount of moisture. The ceramic combustion chamber is designed to suit the requirements of the furnace. Flue passages provide a symmetrical flow of flue gases which insures longer life for the unit by preventing surfaces from overheating. The inner constructed that it controls the air flow the furnace thus causing efficient transfer stream. Two sizes, 90,000 BTU and 140, being manufactured.

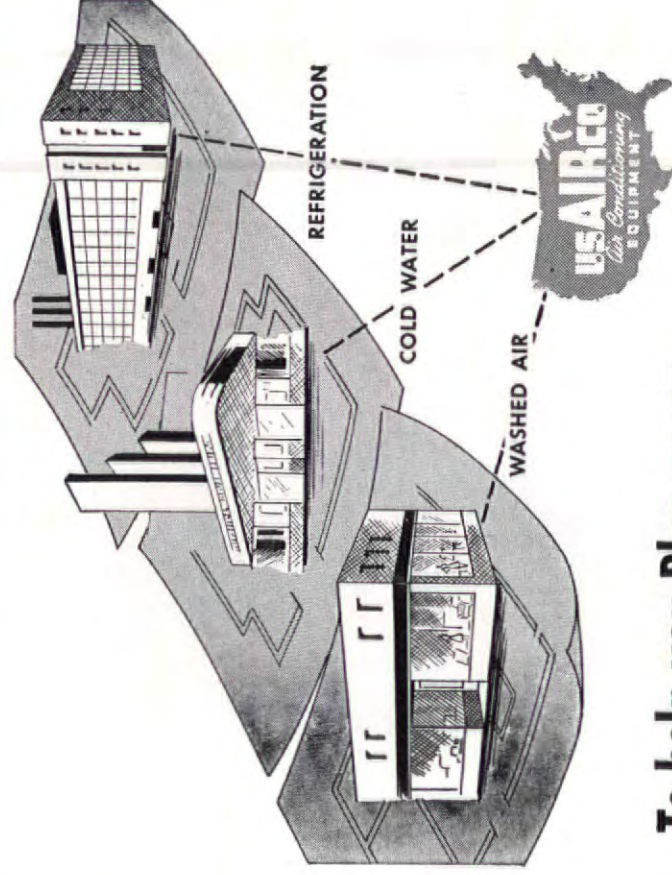
Manufacturer: Thatcher Furnace Co., Car

AUTOMATIC WASHER washes, rinses a clothes in continuous automatic cycle.

This new automatic washer is claimed by its manufacturer to be cleaner than any other household washer type. It employs a new principle of water action—whereby a full load of clothes is turbulently oscillated 144 times while submerged in wash water—and an exclusive hydraulic principle to remove soap and damp-dry the clothes. Thus wringers, spinners, etc., are eliminated and operation is vibrationless. The machine is loaded at the top and requires from 23 to 29 minutes for the continuous washing, rinsing and damp-drying cycles, depending on the load. Hot water consumption is low and it is claimed that the machine may be used fully automatic in homes which do not have a hot water heater. The washer is priced in Zone I at \$169.

Manufacturer: Barlow & Seelig Mfg. Co., Ripon, Wis.

(Continued on page 192)



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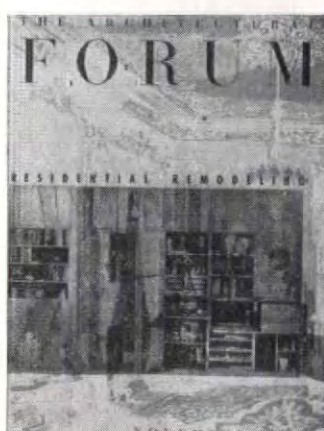
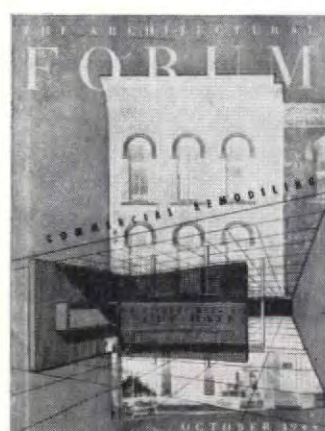
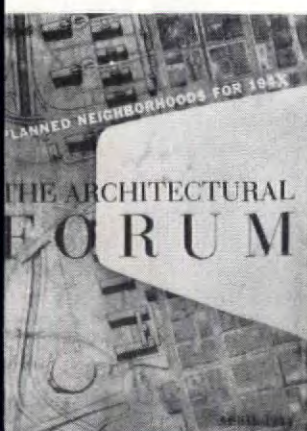
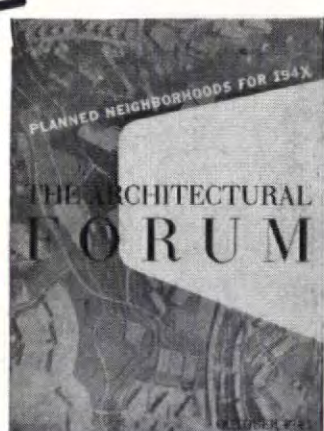
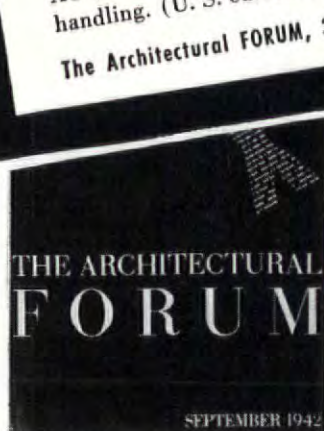
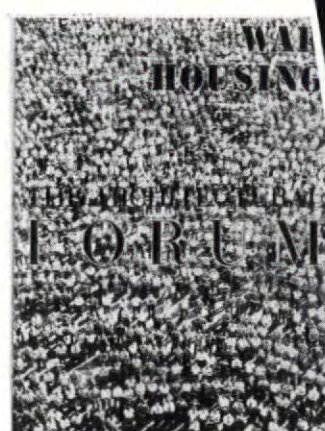
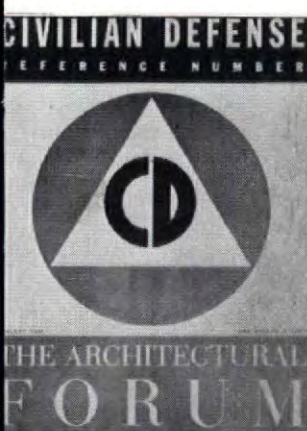
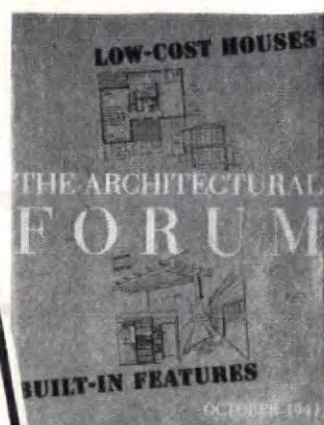
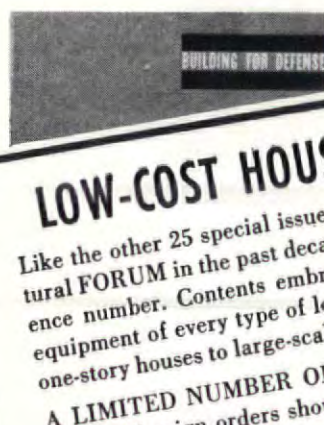
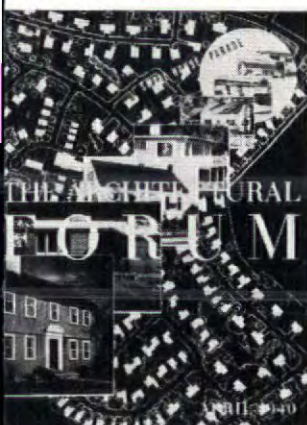
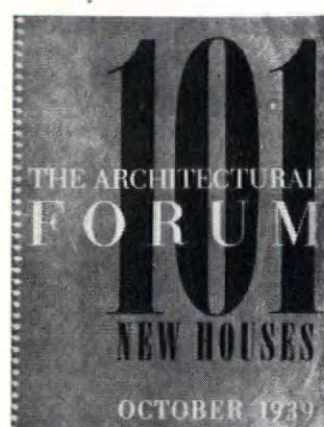
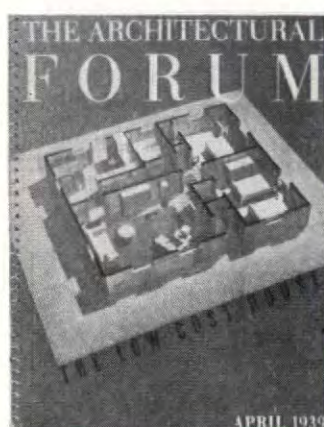
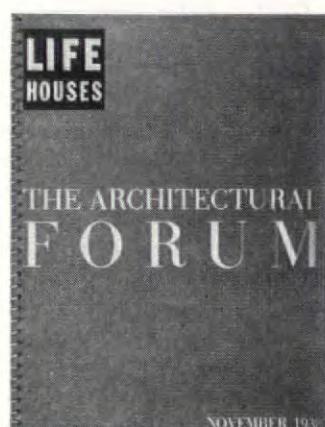
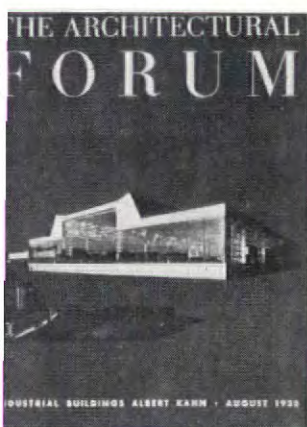
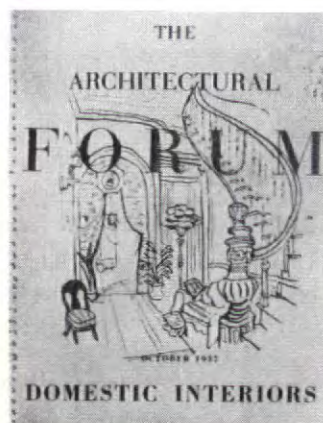
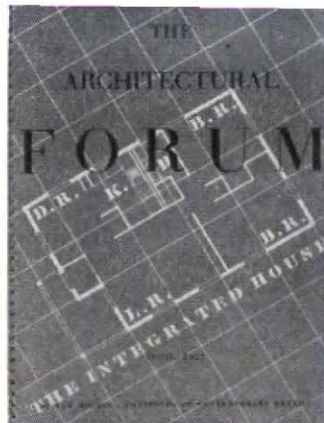
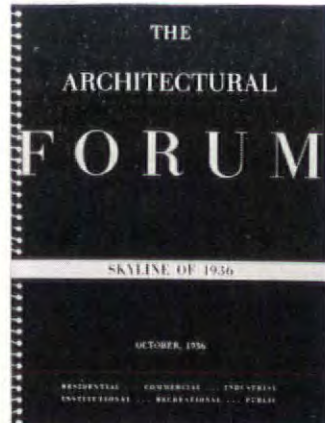
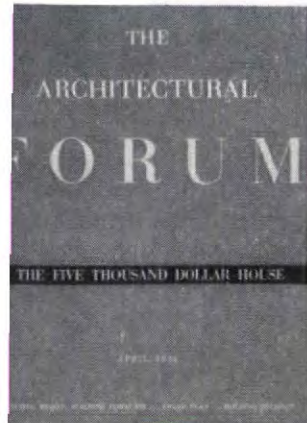
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IN NEW YORK:
395 Madison Avenue

IN CHICAGO:
1666 Merchandise Mart

IN PITTSBURGH:
907 Penn Avenue

AND IN HIGH POINT,
North Carolina



LOW-COST HOUSING MANUAL

Like the other 25 special issues published by the Architectural FORUM in the past decade, July's FORUM is a reference number. Contents embrace design, construction and equipment of every type of low-cost home, from expandable one-story houses to large-scale rental projects.

A LIMITED NUMBER OF COPIES ARE AVAILABLE AT \$1. Foreign orders should include 25¢ for postage and handling. (U. S. currency only, please)

The Architectural FORUM, 350 Fifth Ave., New York 1, N. Y.

GREASE INTERCEPTOR for restaurants.

This low-slung grease interceptor can be installed without recessing, with dishwashers that have low reservoirs and drain connections, or under low built counter or drainboard installations. It is designed for use on sink and dishwasher drainage lines in restaurants, cafeterias, etc., intercepting grease by the flotation principle. Perforated baffle-plates eliminate turbulence in the water as it enters the unit thus permitting the grease to separate from the water. Grease removal is simple as the intercepting chamber is readily removable for cleaning. Interceptors are made in cast iron or stainless steel, and can be furnished with anchorage flange or seepage pan. *Manufacturer: J. A. Zurn Mfg. Co., Erie, Pa.*



FIRMEST FOUNDATION for modern building!

Good water is basic! Architects and builders know that soft water is an essential factor in the planning of modern homes and buildings. For today, home-owners expect the convenience of softened water: easier, whiter washes; lightened housework; and rich, quick-cleansing suds.

When local water supplies are poor, you can provide soft, clear water with Permutit* Water Conditioning. Whether your plans call for private homes, hospitals, laundries, restaurants, or industrial plants, Permutit will supply good water all the time!

Write for information to The Permutit Company, Dept. AF9, 330 West 42nd Street, New York 18, N. Y., or Permutit Co. of Canada, Ltd., Montreal.

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PERMUTIT

WATER CONDITIONING HEADQUARTERS



ELECTRIC RANGE and COMBINATION COAL-WOOD-OIL and GAS RANGE offer convenience features.

The Carlton model of Kalamazoo's newly designed electric ranges, starts, controls, times and turns off food cooked in the oven and well cooker or any appliance plugged into the stove outlet. It has a constant temperature warming drawer for keeping foods at serving temperature, 7 cooking speeds for top units which provide degrees of heat from slow simmer to fast fry, and a 7 qt. economy cooker equipped with pan, trivet and fry basket. The double-purpose Savorseal oven, 17 in. wide, 19 1/4 in. deep and 16 1/2 in. high, has its vent concealed beneath one of the burners to prevent soiling the wall behind the stove. The combination coal-wood-oil and gas range has a coal-wood-oil section for warm wintertime cooking, a gas section for cool summer cooking and a combination oven that uses either fuel. The one-piece welded, 18 in. enameled oven, used with coal, wood or oil heat, utilizes the Kalamazoo "oven that floats in flame" principle—suspended in the midst of flues. Other features of the range include four automatic lighting top gas burners, large storage compartment, precision oven regulator, heat indicator on oven door, master-size firebox with extra heavy linings and grates, lift-up plate for firebox feeding, dustless shaking, big ash pan, and front flue cleanout door. *Manufacturer: Kalamazoo Stove & Furnace Co., Rochester Ave., Kalamazoo, Mich.*



DEEP LIP SAFETY STAIR TREAD for public buildings.

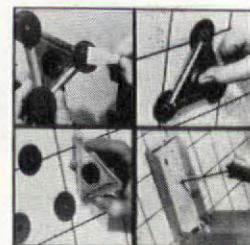
Orco Deep Lip Safety Treads, made of resilient semi-hard rubber containing abrasive alundum aggregate and reinforced with steel, provide a non-slip, long wearing surface. They may be installed directly on steel stairs by cementing in place thus eliminating the pan fill, and may be backed up with Orco rubber or any other 1/4 in. flooring material applied directly on the steel of the stair. Available in black, buff, red and gray, they are 1/4 in. thick, 3 in. wide, have a lip depth of 1 1/2 in., and come in any length up to 84 in.

Manufacturer: The Ohio Rubber Co., Willoughby, Ohio.

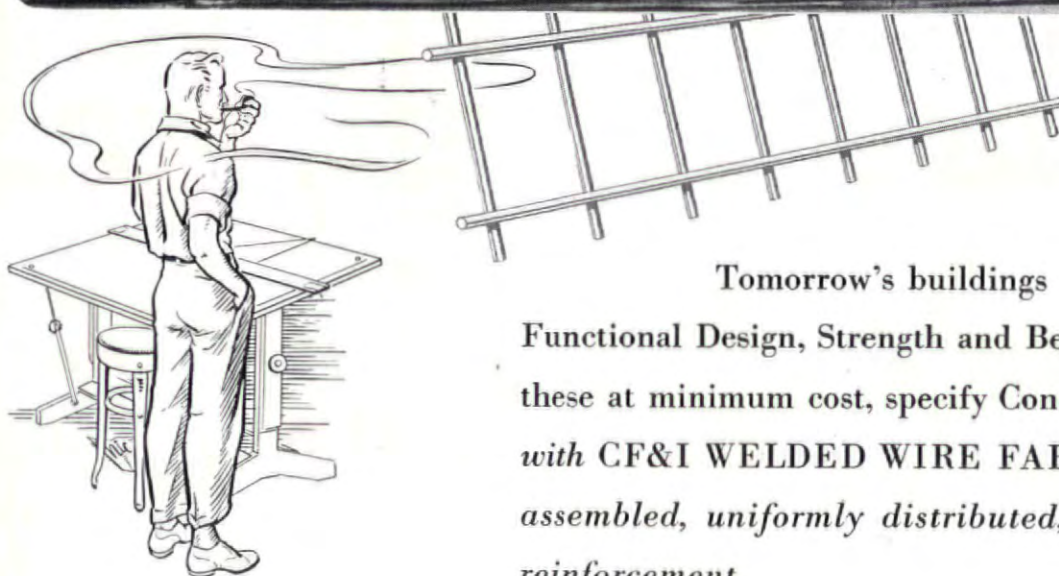
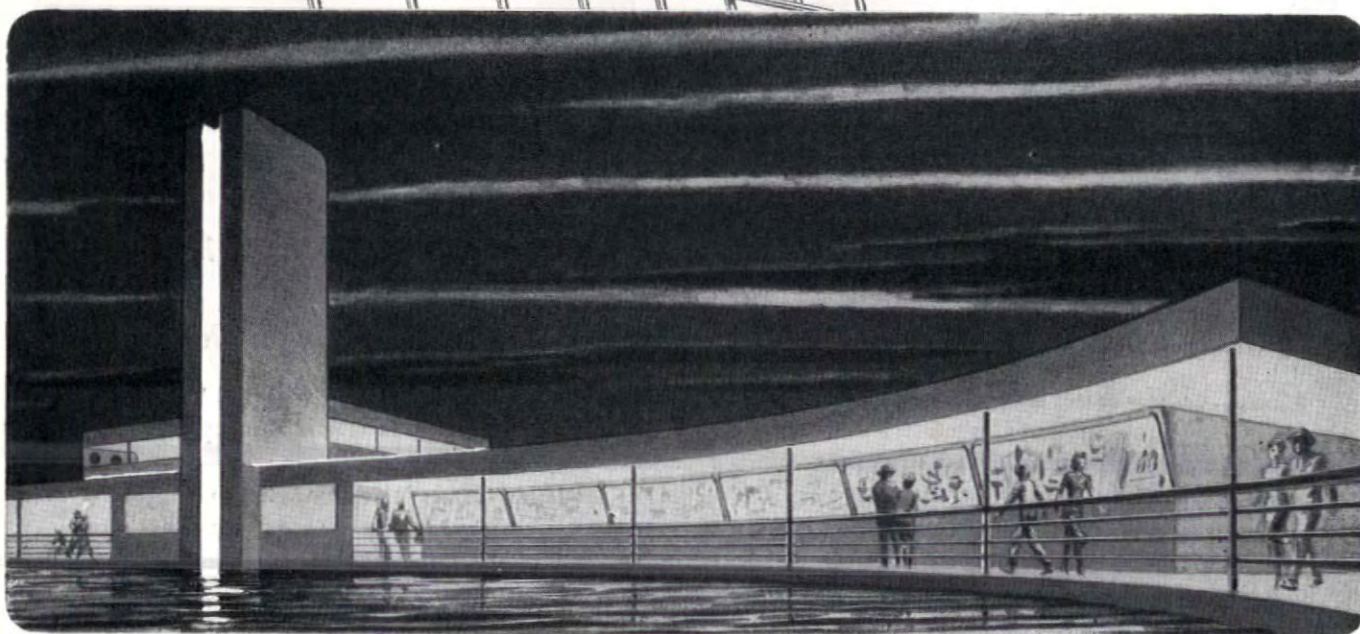
MOUNTING PLATES for attaching cabinets to smooth surfaced walls without drilling.

The Kitco Mounting Plate provides a method of firmly attaching cabinets or other appliances to walls of tile, glass, porcelain enamel or other smooth surfaces without drilling, thus eliminating the danger of cracking or marring wall surfaces. Consisting of a metal plate with a suction cup in the center, the mounting plate actually attaches threaded plastic disks to the wall and these in turn support the appliance. In applying disks, they are first bolted to the mounting plate and spread with adhesive. Placed in position on the wall, they are held securely by the suction cup and mounting plate until the adhesive is dry. The plate is then unbolted and the cabinet attached with the same bolts with which the disks were secured. Three size plates are available with ratings of 240 lbs. for 2 disk plate, 300 lbs. for 3 disk plate, 360 lbs. for 4 disk plate. Multiple installations can be made with one plate. *Manufacturer: The Kirch-Trumbell Corp., Alden, N. Y.*

(Technical Literature, page 198)



BUILDINGS OF **TOMORROW**



Tomorrow's buildings will incorporate Functional Design, Strength and Beauty. To obtain these at minimum cost, specify Concrete...reinforce with CF&I WELDED WIRE FABRIC...the pre-assembled, uniformly distributed, easy to place reinforcement.



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Announcing : new scope for your home planning with this NEW Curtis Woodwork!

• To give you greater scope in planning homes of distinction—to help you fill America's demand for beauty, utility at moderate cost—Curtis announces its new line of stock architectural woodwork.

Here is a wide variety of design to fit every taste and to meet every building budget. Here is authentic styling created by well-known architects,

adding distinguished beauty without "made-to-order" cost. And here is Curtis quality to make such beauty lasting!

Let this new Curtis Woodwork help put extra value, extra utility into the homes you plan and build—in modernization work, too. Mail the coupon for complete, illustrated literature.



Beauty at economical cost for moderately priced homes in Curtis Entrance C-1750. Cameron Clark, Architect.



Curtis Entrance C-1735 is a modern adaptation of an entrance found in early Colonial homes. Willis Irvin, Architect.



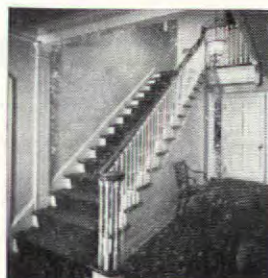
Curtis Entrance C-1730 recalls many fine doorways found in Connecticut and Massachusetts. Note the entablature with its bowed face, dentil course and pilaster beading. H. Roy Kelley, Architect.



Modernized Georgian in design—modern in feeling—this new Curtis mantel has simple ornaments applied on a bowed fascia. Design C-6043 is one of fifteen mantels in the Curtis line. George W. Stoddard, Architect.

Curtis Mantel Design C-6036, an adaptation of the Pennsylvania farm home type mantels often seen near Valley Forge. Willis Irvin, Architect.

This stairway, made up of stock parts, illustrates the delicacy and beauty which can be obtained from Curtis stairwork of various styles.



In Canada:
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Dept. AF-98, Curtis Building, Clinton, Iowa

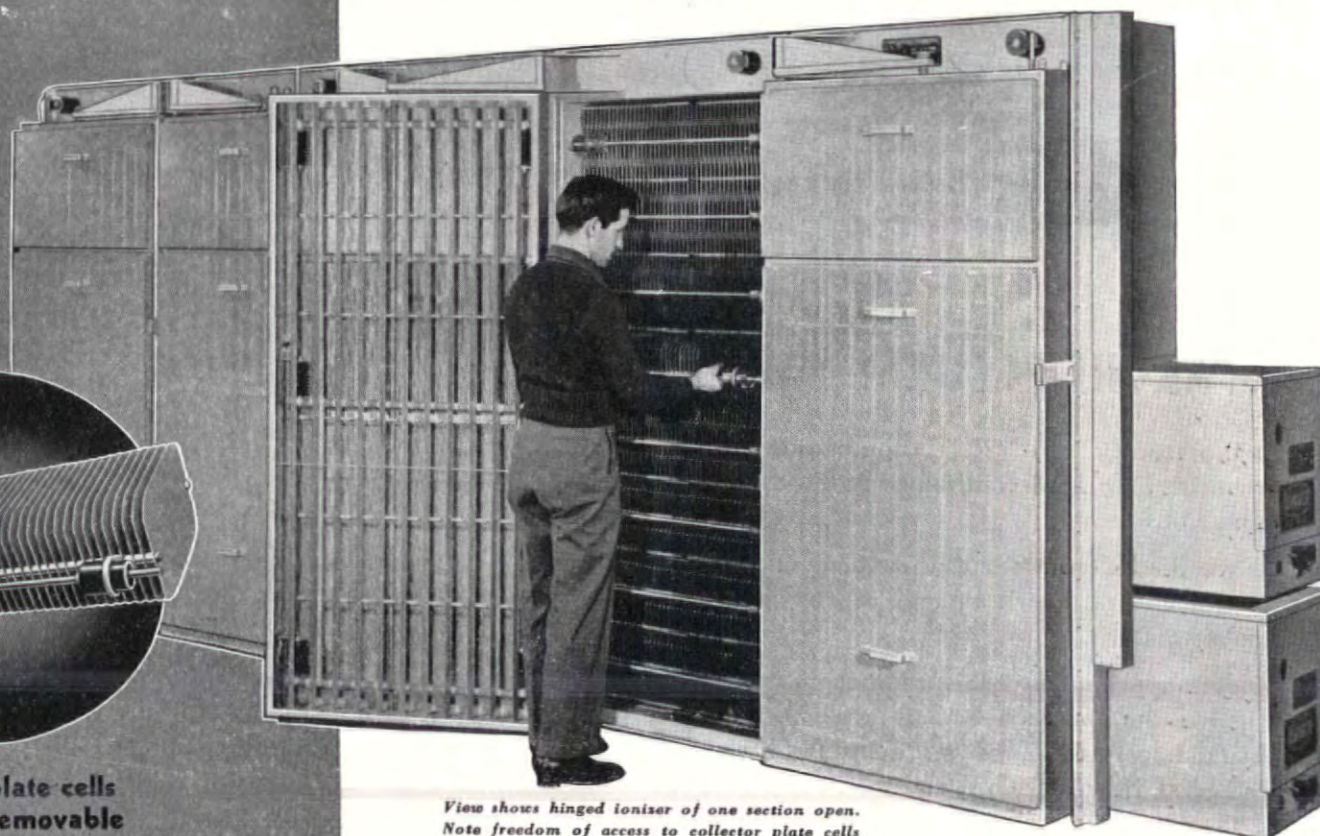
Gentlemen: Please send literature on the new Curtis Woodwork line and the name of the Curtis dealer in this locality.

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Electro-CELL

CELL TYPE Electronic PRECIPITATOR



Separable plate cells
completely removable
permit positive
maintenance.

*View shows hinged ionizer of one section open.
Note freedom of access to collector plate cells
for cleaning.*

HINGED, FULL HEIGHT IONIZERS

SEPARABLE COLLECTOR PLATES

SECTIONAL CONSTRUCTION

The Electro-Cell is an electronic air filter of new and unusual design that offers the advantages of sectional construction, removable collector plates, full-height hinged ionizers and totally enclosed high voltage wiring. These features, exclusive to the Electro-Cell, are developments of major importance because they simplify installation, improve performance, promote safety and offer a choice of maintenance methods.

The Electro-Cell filter is one of three electronic precipitators developed by this company to meet any requirement for super-clean air. Each type has distinctive advantages under certain operating conditions, and are the result of more than ten years of research and experimentation in the field of electronic dust control.

AMERICAN AIR FILTER COMPANY, INC.
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Bulletin 252
which gives
the complete
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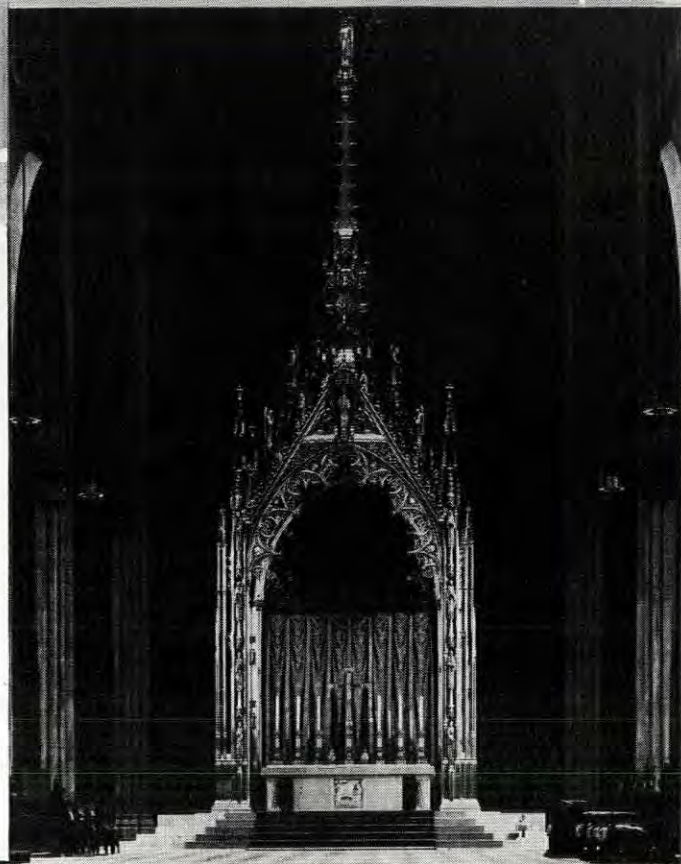
Lending Beauty and Dignity TO **HOUSES OF WORSHIP**

...ARCHITECTURAL METALS

In the tradition of Michelangelo and Bernini, architects long have contributed to the beauty and dignity of worship.

As you design today's houses of religious devotion, let architectural metals aid you in carrying on this noble work.

Modern applications of this traditional art are to be found in the fine architectural metal work of such outstanding items as the Baldachin in St. Patrick's Cathedral, New York City, and the Bishop's Throne in the Cathedral of The Immaculate Conception, St. Cloud, Minn., pictured on this page.



With architectural metals, both ferrous and non-ferrous, you can achieve almost any desired result. You have a wide variety in color, strength, quality and design characteristics to choose from.

As you plan new buildings — whether churches, homes, banks or other commercial structures — or design ornamental details for them, consult the manufacturers and fabricators of architectural metals. They are ready and anxious to be of every possible assistance.

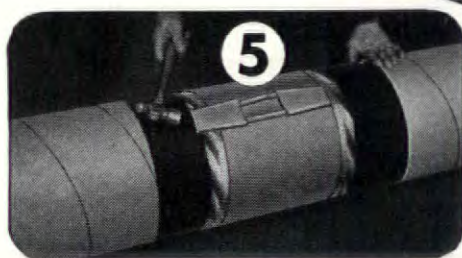
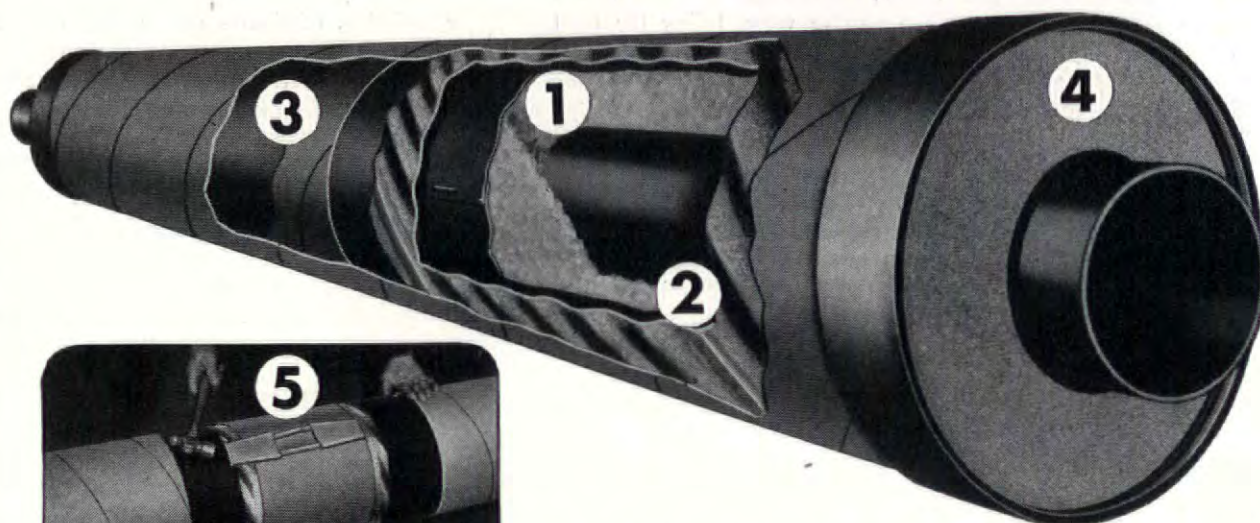
A new Handbook on Stairs and Railings is available to architects without charge through members of the Association. For a Directory of members write Dept. AF-9.

**NATIONAL ASSOCIATION OF
ORNAMENTAL METAL
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- 1** High-rating thermal insulation of required thickness applied to 21 ft. pipe—with sealed air space between insulation and housing.
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- 6** Full-welded conduit design and field-welded connections insure pressure-tight system. Air test may be applied before backfilling.

When specifying conduit for underground (or overhead) steam distribution lines insist on Ric-wil to obtain these features for the most efficient, maintenance free, permanent system.

All-welded construction means a pressure-tight conduit capable of meeting air-pressure test. Conduit casing is 16-gage corrugated iron, seam-welded and hot-dip galvanized after welding. Simplified connector is readily welded to smooth conduit ends, held in place by drive clamps . . . Ends of conduit are presealed at the factory with a heavy pre-cast cylinder to protect insulation during storage on the job and installation—regardless of water conditions encountered . . . Triple protection against the elements is insured by Ric-wil specifications for conduit covering. First, a thick coating of high melting-point asphalt is applied over casing. Second, asbestos felt

is tension wrapped around conduit before asphalt is set. Third, another coating of asphalt is applied, which is finally protected by spirally wrapped heavy kraft shipping paper . . . Installation is greatly simplified, saving time and money on the job. Prefabricated 21 ft. sections, also prefabricated accessories—including expansion loops, elbow, tee-branch and anchor units, are furnished with ends fitted for easy coupling in the field. Because of the conduit's inherent strength, only 18" of ground cover is required, even under trucking roads, minimizing excavation and back-fill. Pipes can be turned in conduit so that all pipe welding is done on top. Installation interferes little or none with other construction.

If you have not yet used the full-welded Ric-wil Prefabricated Insulated Pipe Units, specify them on your next job and be assured of the best. Descriptive Catalog on request.

RIC-WIL INSULATED PIPE CONDUIT SYSTEMS
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AGENTS IN PRINCIPAL CITIES

DATA BOOK FOR CIVIL ENGINEERS. Volume II. Specifications and Costs by Elwyn E. Seelye. John Wiley & Sons, Inc. 440 Fourth Ave., New York. 325 pp. 9½ in. by 11¾ in. Price \$6.75.

Divided into two parts, as the title infers, the first section of *Specifications and Costs* presents under eleven headings model specifications for any item of work. With this handbook as a guide, the practicing engineer may refer to these ready formulated guides and alter them to suit the job in hand, thus fulfilling the requirements for virtually any specifications he may be called upon to write. Sample specifications, written in an active rather than a passive voice, follow the most up-to-date practice in specification writing. The section on Costs is designed to assist the engineer in overcoming difficulties of price variables which may hamper his design operations. Standard costs have been collected and related to the Engineering News-Record Building, Construction and Material Indices and specific localities, so that a corrective factor is readily available for bringing preliminary estimates up to date. Break-downs of wage rates, costs of building per cu. ft., elements of structures, dock work, bridges, etc., are also covered. A complete glossary concludes the volume.

WELDING CODE. Standard Code for Arc and Gas Welding in Building Construction. American Welding Society, 33 West 39th St., New York. 68 pp. 5½ in. by 9 in. Price \$.50.

The 1946 edition of *Standard Code For Arc and Gas Welding in Building Construction* is suitable in language, form and coverage for adoption as administrative law for the regulation of welding in building construction. Replacing the 1941 tentative edition, it embodies revisions based on experience in recent applications of welding to structural fabrication and on research subsequent to 1941. The section on Design of Welded Connections provides for increased allowable weld unit stresses equal to those allowed for the steel being welded. Sections on filler metal, workmanship, inspection and qualifications of operators and procedure have also been revised.

GYPSUM SHEATHING. New Water-Repellent Gypsum Sheathing. Gypsum Assoc., 211 W. Wacker Drive, Chicago 6, Ill. 12 pp. 8½ in. by 11 in.

Advantages of the new water-repellent gypsum sheathing—its fire-resistance, water-repellence, structural strength, durability, economy, and wind-tightness—are covered in this brochure. Specifications for erection and details showing application of brick veneer; wood, asbestos, or cement siding; shingles or stucco over Gypsum Sheathing are included.

INSULATION. Insulation in the Home, Circular Series F 6.0. Small Homes Council, Mumford House, University of Illinois, Urbana, Ill. 8 pp. 8½ in. by 11 in.

The story of what insulation does for the home: types available, where and what type to use, how much, etc., is simply set forth in this pamphlet. A discussion of condensation and vapor barriers, insulation of pipes and ducts and tables illustrating fuel savings achieved with insulation are also included.

PAINT. Decorating Hints Folder. The Martin-Senour Co., 2520 South Quarry St., Chicago, Ill. 1 pp. 14 in. by 17 in.

Advice on the use of paint colors for interior and exterior home decorating is contained in this paint folder. Generously illustrated in color, it illustrates the use of color to reduce or enlarge apparent sizes and heights, rehabilitate or reduce the importance of uninteresting furnishings, etc. Also included is a reference chart of paints and varnishes to aid in selecting the proper finish for the surface to be painted.

RADIANT HEATING. A Graphical Design Procedure For Radiant Panel Heating by F. W. Hutchinson. Revere Copper and Brass Inc., 230 Park Ave., New York. 56 pp. 8½ in. by 11 in.

Graphical Design Procedure For Radiant Panel Heating is a working manual for designers of radiant panel heating systems. Data presented cover those ranges of conditions suitable for an economical radiant panel heating system, and calculated values lying outside of the ranges given indicate unsuitability of panel heating in the location under consideration. The 5 step design procedure involves only one arithmetical calculation, eliminates excess design time. The steps are: determination of the ventilation correction factor and of the geometry correction factor; determination of panel area and rating and of room air temperature; determination of size and spacing of copper tube within the panel; determination of flow rate; determination of mean radiant temperature and of boiler load. Text and procedure is divided into an introduction, design procedure, numerical example and conclusions. Graphical solutions include: geometry charts for 8 ft., 9 ft., 10 ft., 12 ft., 14 ft. ceiling heights, design charts for ceiling, wall and floor panels at several temperatures, flow rate chart, and mean water temperature tables for 85°, 100° and 120° F.

RADIANT HEATING. Radiant Heating. Copper & Brass Research Assoc., 420 Lexington Ave., New York. 20 pp. 8 in. by 10¼ in.

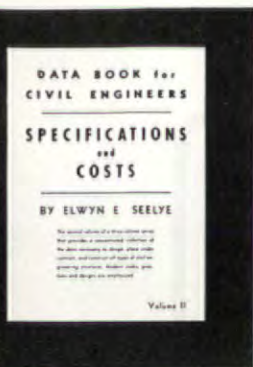
This non-technical booklet covering the use of copper tube in radiant heating systems, discusses the history, development and general advantages of radiant heating. Designed to give the architect, contractor and layman a comprehensive survey of this type of heat, and the role of copper tube in these systems, numerous installations employing copper tube with soldered fittings are cited and illustrated. Other subjects included are installation and operating costs, radiant cooling, sidewalk heating, tests and pressure ratings of soldered joints.

ACID-PROOF PIPES & FANS. Duriron Acid-Proof Equipment, Bulletin No. 702-D. The Duriron Co., Inc., 422 N. Findlay St., Dayton, Ohio. 12 pp. 8½ in. by 11 in.

Duriron acid-proof alloy, which is extremely resistant to nearly all kinds of corrosives and practically proof against all acid wastes, and Duriron equipment for handling corrosive liquids and fumes are covered in this booklet. Physical and chemical properties of the material are discussed. Advantages, installation, tests and specifications of Duriron pipe and information on Duriron fans and Durimet ducts are included. Uses and advantages of Duriron products—in such installations as testing laboratories, engraving plants, and for the disposal of commercial acids under low pressure, for kitchen wastes where food acids and grease-cleaning solutions cause deterioration of ordinary drain pipe materials—are described. Sizes and dimensions of pipe, pipe fittings, drains, traps, strainers, sinks and expansion joints are listed.

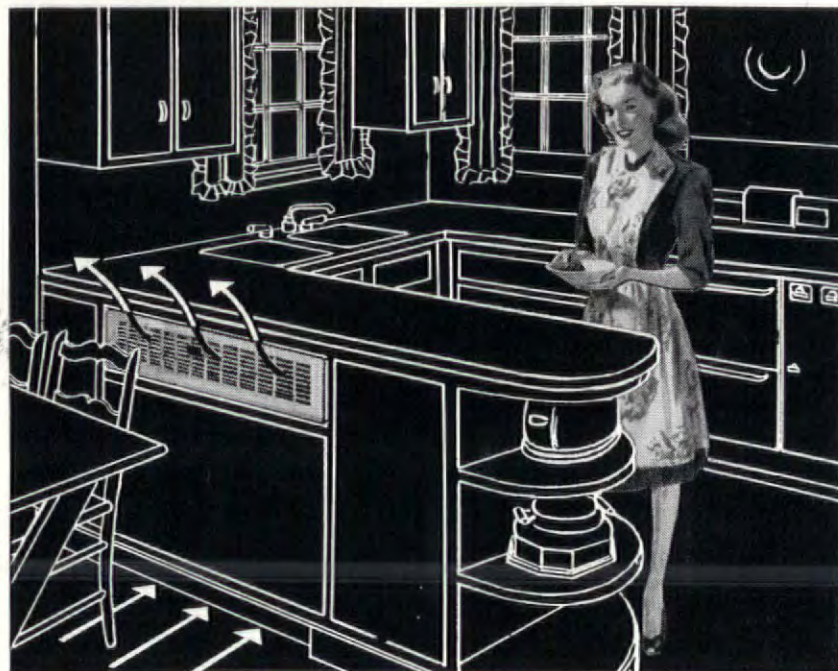
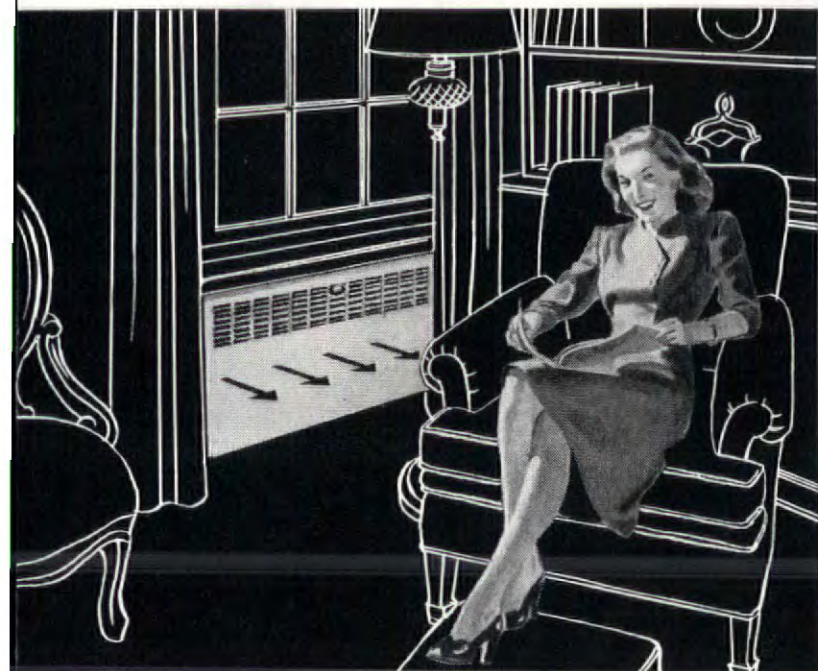
KITCHEN PLANNING. Case Histories of Successful Mass-Feeding Installations. G. S. Blodgett Co., Inc., 500 Lakeside Ave., Burlington, Vt. 36 pp. 8½ in. by 11 in.

Twenty-eight case histories depicting good kitchen design in institutions, hospitals, schools, industrial plants, restaurants, and hotels are featured in this brochure. Liberally illustrated with kitchen plans and installation photographs, and annotated with data on menus and services, this manual contains practical tested suggestions for those designing and specifying mass-feeding installations. A section devoted to the advantages of Blodgett Sectional Gas-Fired Ovens, two articles on kitchen planning, and answers to questions about mass-feeding complete the material. (Continued on page 202)



TWO GREAT HEATING PRINCIPLES BLENDED INTO ONE!

that's what Modine Convactor Radiation offers you!



1 RADIANT HEATING

Notice those arrows? That's radiant heat... mild radiant heat coming from that Modine Convactor panel in just enough quantity to offset heat loss from window areas. But we don't stop with just *radiant* heating. To it we add...

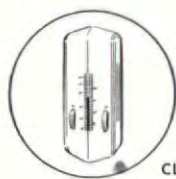
2 CONVECTION HEATING

Convection heating. The hot water or steam circulates through the copper heating unit, draws the cooler, floor-line air into the bottom of the convactor where it's warmed, rises, and is then gently circulated throughout the room.

RESULT: A modern, blended heating system for modern living! • A heating system that gives you *individual* room control, that responds almost instantaneously to sensitive automatic controls... that gives you gentle air circulation without the use of moving parts that wear out. • Yes... the dependable heating comfort, distinctive charm, space-saving, cleanliness and long service life of Modine Convactor Radiation is now available for moderate cost homes and apartments. Look for Modine's representative in the "Where to Buy it" section of your phone book. • Write for complete information and free descriptive literature, MODINE MANUFACTURING CO., 1701 Racine St., Racine, Wis.



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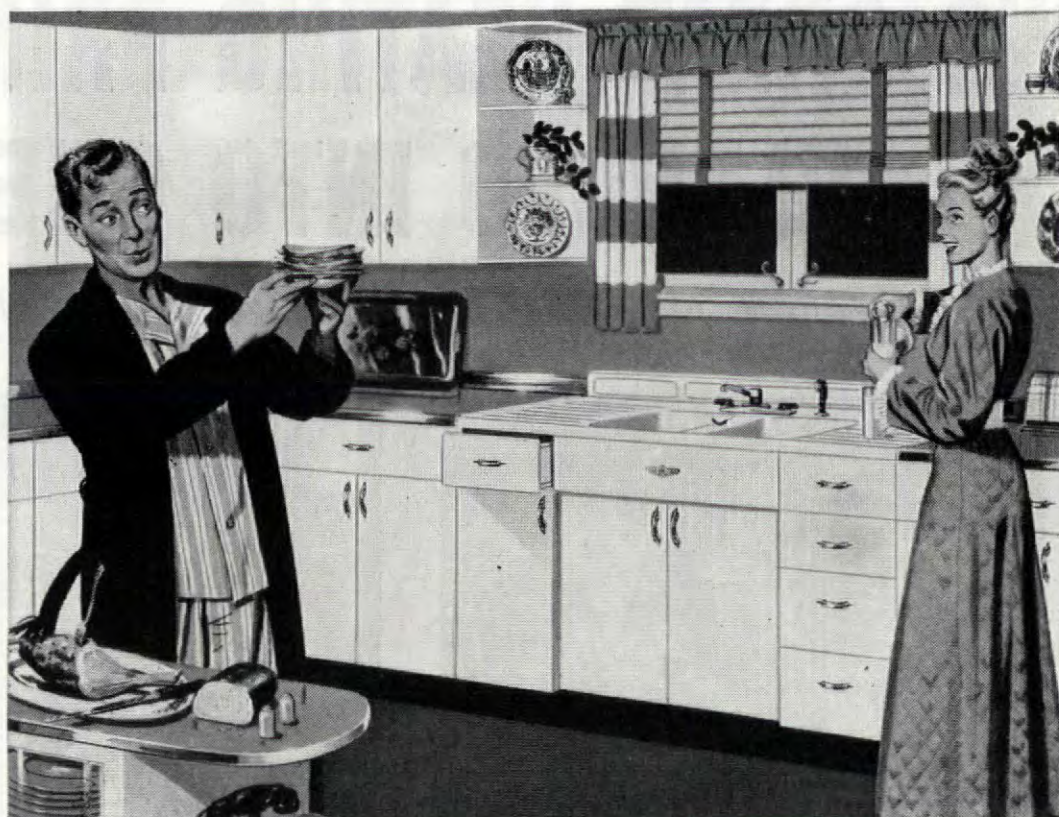
ADDS TO
LIVING SPACE



PRICED
FOR TODAY'S
HOMES AND
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Modine
CONVECTOR RADIATION
The Modern "proved by use" heating method

Every woman wants this Kitchen



Many prominent builders have installed thousands of Youngstown Kitchens because:

They Have Tremendous Appeal for Buyers...

These gleaming white enameled steel units make any kitchen modern, attractive and easy to work in. Every woman appreciates their advantages instantly.

They Save Time...

Almost any Youngstown arrangement can be installed, ready for use, in less than a day. Compare this with the time needed to make special cabinets of wood.

They Cut Costs...

All Youngstown equipment is shipped completely finished, painted with a durable enamel finish and with all hardware in place.

Labor costs, as well as installation costs, are substantially reduced.

You should have all the facts about this modern money-saving kitchen equipment that makes homes easier to sell.

Let us send you a booklet, "The Builder's Kitchen," that tells the whole story.

MULLINS MANUFACTURING CORPORATION

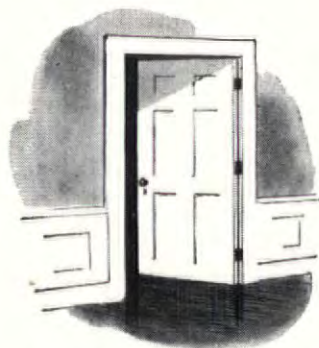
Warren, Ohio

Porcelain Enameled Products—Large Pressed Metal Parts—Design Engineering Service

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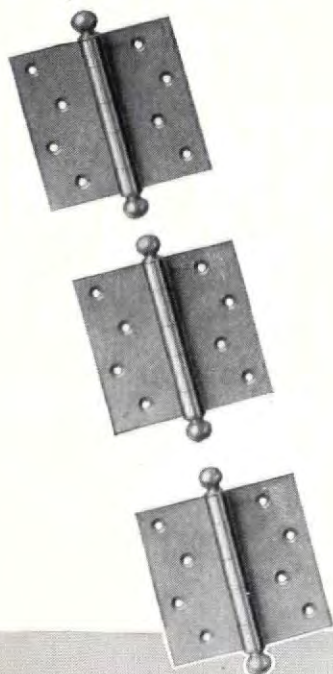
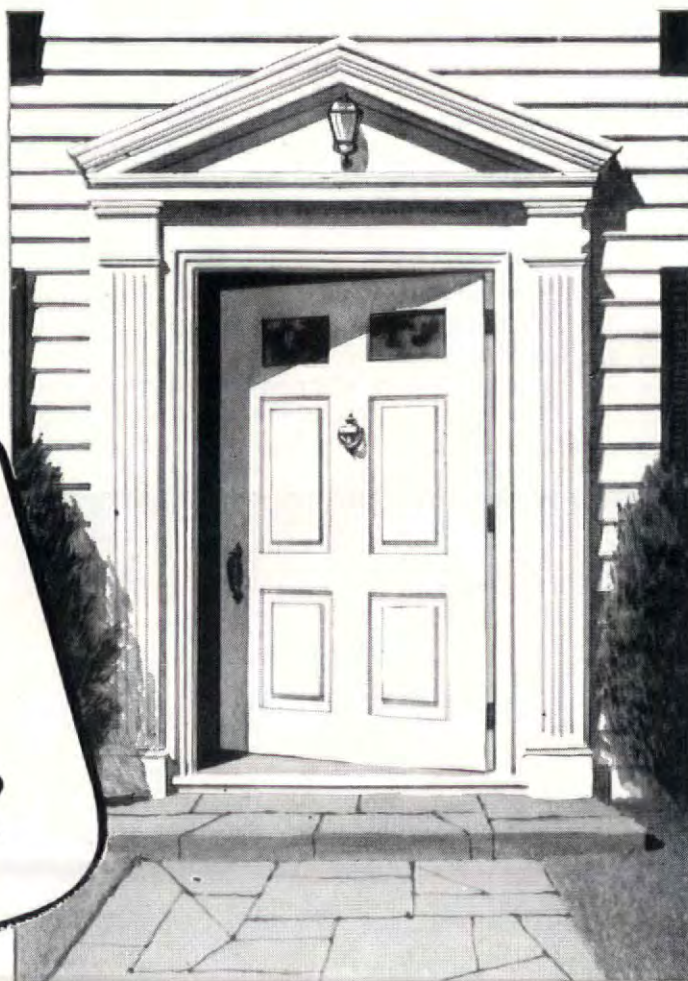


Youngstown Kitchens
BY MULLINS



SPECIFY

3 HINGES
ON EVERY DOOR



The value of three hinges on the front door is generally accepted, but good construction demands three hinges on *every* door – inside doors as well as outside doors.

The third hinge on a door helps prevent warping, keeps doors swinging free and true, and assures perfect fit of latch and lock. More important today than ever before!

In specifying the use of a third hinge your clients will appreciate your attention to detail. When plans call for three hinges on *every* door, you are specifying a visible mark of good construction.

Remember to specify triple-hinging . . . for better construction . . . for greater client satisfaction. The Stanley Works, New Britain, Connecticut.

STANLEY

Trade Mark

REMEMBER THREE HINGES TO A DOOR

STORE MODERNIZATION. *Modern Stores*, 1946. National Retail Furniture Assoc., 666 Lake Shore Drive, Chicago, Ill. 170 pp. 8 1/4 in. by 11 in. Price \$2.50.

Second edition of *Modern Stores* is a trade manual on modernization of retail store design, layout, display values and equipment. The result of a nationwide survey which revealed that furniture retailers plan a \$200-million modernization program for 1946-7, the manual is intended primarily for furniture stores but is applicable to any kind of retail mercantile establishment. It outlines basic ideas for store modernization and discusses the proper use of plywood, porcelain, steel, bronze, glass, tile and other materials in modernization work. It also includes many illustrated articles on such subjects as radiant heating, shopping centers, partitions, store fronts, glass inside and out, lighting, etc., contributed by leading commercial architects and designers.

REQUESTS FOR INFORMATION

JAK ATIAS, importer and agent, P. O. B. 405, Istanbul, Turkey, requests information on prefabricated houses, building supplies, bathrooms and linoleum.

BEACH HOUSING CORP., P. O. Box 717, Ft. Pierce, Fla., desires information on materials and equipment for small homes, store fronts and interiors.

COLORADO BUILDING CODE SERVICE, University of Colorado, 327 Norlin Library, Boulder, Colo., desires literature on building products to aid in solving local building code problems.

MISS J. MORTON EVANS, architect and city planner, 117 Ashley Road, Bristol 6, England, requests information on prefabricated construction.

JOSEPH P. FARLEY, City Investing Co., 25 Broad St., New York, N. Y., desires information on all types of building construction and products.

LESLIE O. JONES, architectural designer, Box 1928, San Benito, Tex., requests literature on church and school equipment.

CAMERON McINDOO LTD., industrial interiors, Small Arms Plant, Long Branch, Ont., requests information on office and store interiors.

QUEENS COUNTY SAVINGS BANK, Flushing, N. Y., would like booklets on radiant heating for homes.

CARL B. STOYE, 140 Forsyth St., New York, N. Y., desires literature on inexpensive unit heaters for installation in tenement flats.

H. J. WHITE, 504 French St., Fort Garry, Winnipeg, Canada, requests information on heating and lighting equipment and new building materials.

R. H. WOLCOTT, 905 Marine St., Boulder, Colo., desires information on pressure water systems, including filtration and purification methods, suitable for mountain resort.

REQUESTS FOR LITERATURE

J. A. ALTSCHULER, architect, 1006 N. Garden Ave., Clearwater, Fla.
EDWARD N. BROWN, HERBERT H. BUCK, construction drawing, 250 E. Garvey Ave., Monterey Park, Calif.

WALTER W. DE CHERRIE & ASSOC., architect-engineer, 180 W. Washington St., Chicago 2, Ill.

THE DESIGN LABORATORY, industrial designing, P. O. Box 846, Spokane 3, Wash.

JAMES C. GARDINER & ASSOC., Puget Sound Bank Building, Tacoma 2, Wash.

JOHN V. GOSSELIN, architectural engineer, 433 West Olive Ave., Redlands, Calif.

E. CARLETON GRANBERY, JR., architect, 34 Livingston St., New Haven 11, Conn.

HOWARD H. HALPERIN, architectural student, Store Planning Dept., Goldblatt Bros., Inc., 333 South State St., Chicago, Ill.

MATHEW LAPOTA & MARTIN MEYER, architects, 139 N. Clark St., Chicago, Ill.

FRED L. LIEBMANN, architect, 463 Lexington Ave., New York 17, N. Y.

ALBERT MELNIKER, 130 Bay St., Staten Island, N. Y.

F. A. MIGNIN, student, 17018 Kenyon Road, Shaker Heights 20, Ohio.

BERT J. MORRIS, JR., 2826 West Central Ave., Newport Beach, Calif.

C. HERBERT MULLEN, architect, Joplin National Bank Bldg., Joplin, Mo.

DAVID C. PERRETT, 3039 Humes Place, Seattle, Wash.

ROLAND PHILLIPS, student R.I.B.A., 75 Stanford Rd., Brighton, Sussex, England.

WALTER H. PLUMMER, architectural student, 214 East Melbourne Ave., Peoria 4, Ill.

JOSEPH W. STEPHENSON, landscape designer, 920 A St., Hayward, Calif.

STRUCTARS, architects, designers, & urban planners, 4415 Warwick Blvd., Kansas City, Mo.

ROBERT I. UPSHUR, architect, 4 Loring Place, Sumter, S. C.

VAN PELT & HARRISS, INC., landscape architects, Tamalpais Theatre Building, P. O. Box 338, San Anselmo, Calif.



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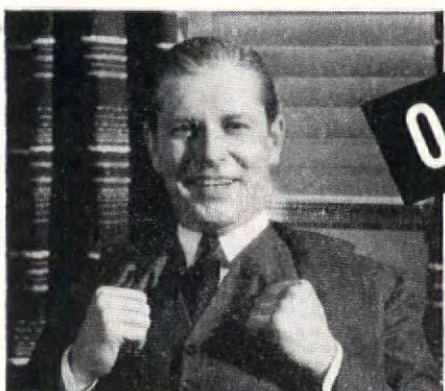
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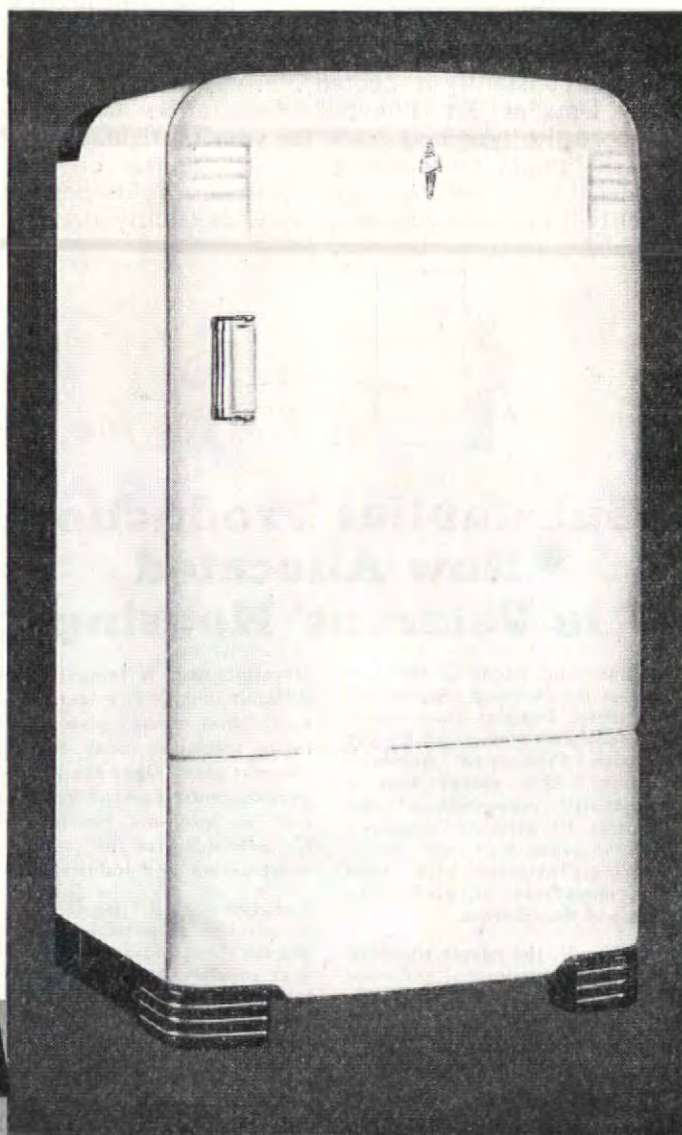
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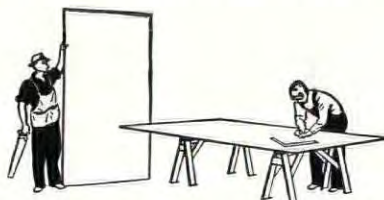


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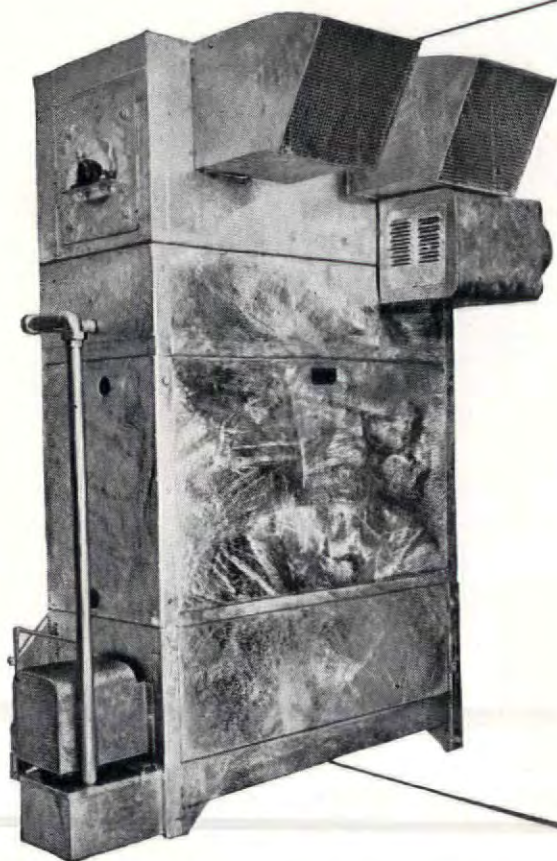
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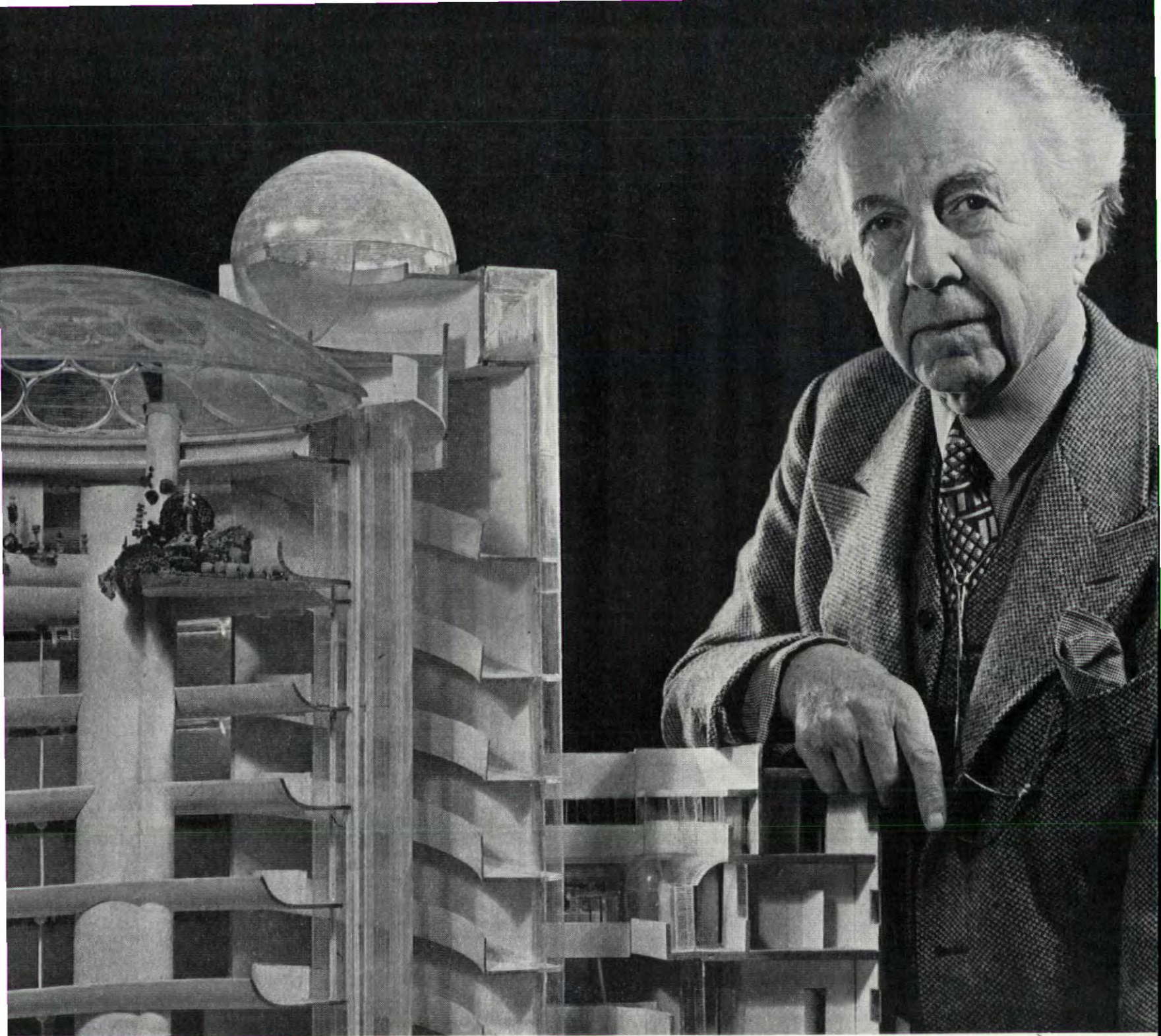
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*See "Wright's Houses," p. 116, FORTUNE, August, 1946

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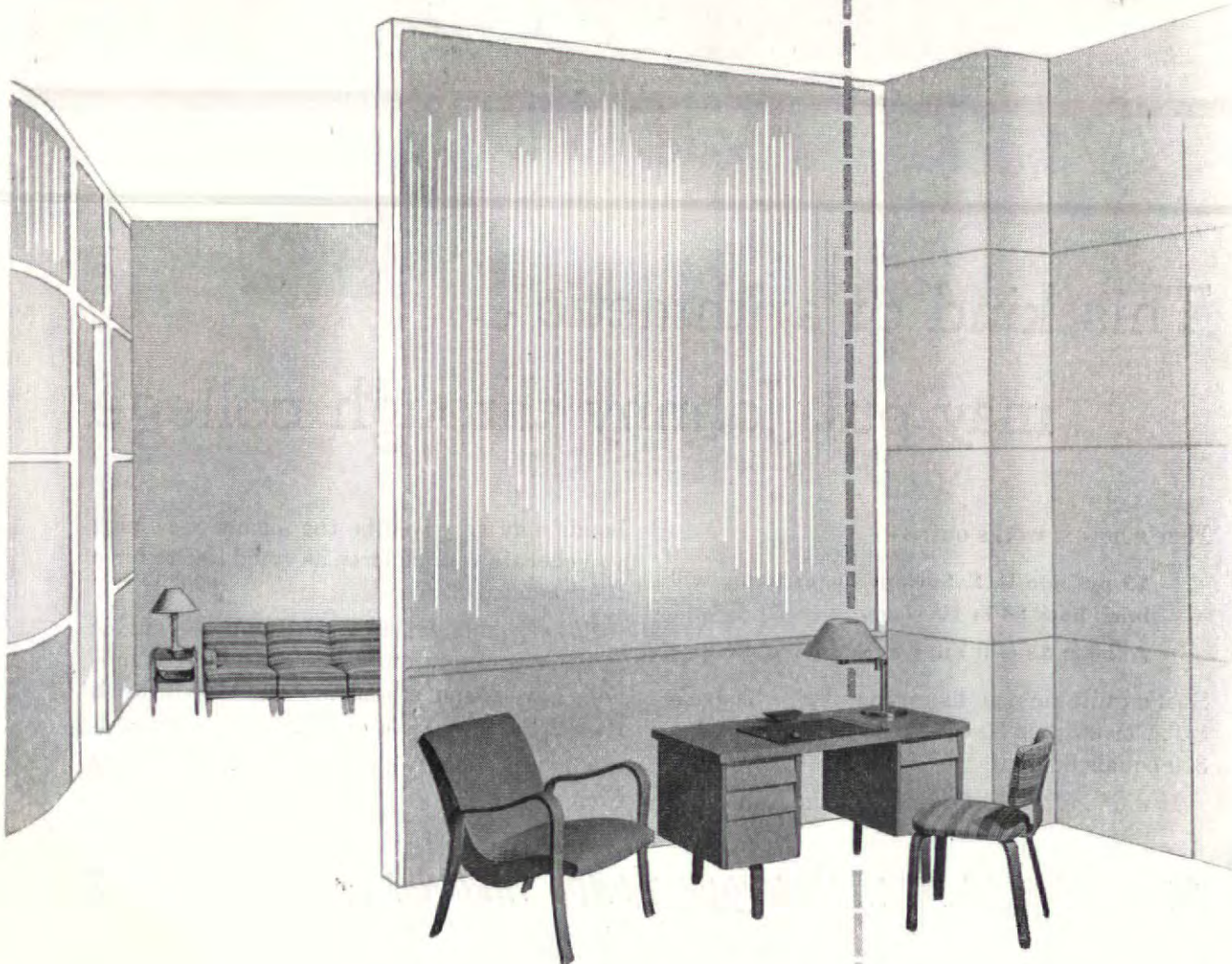


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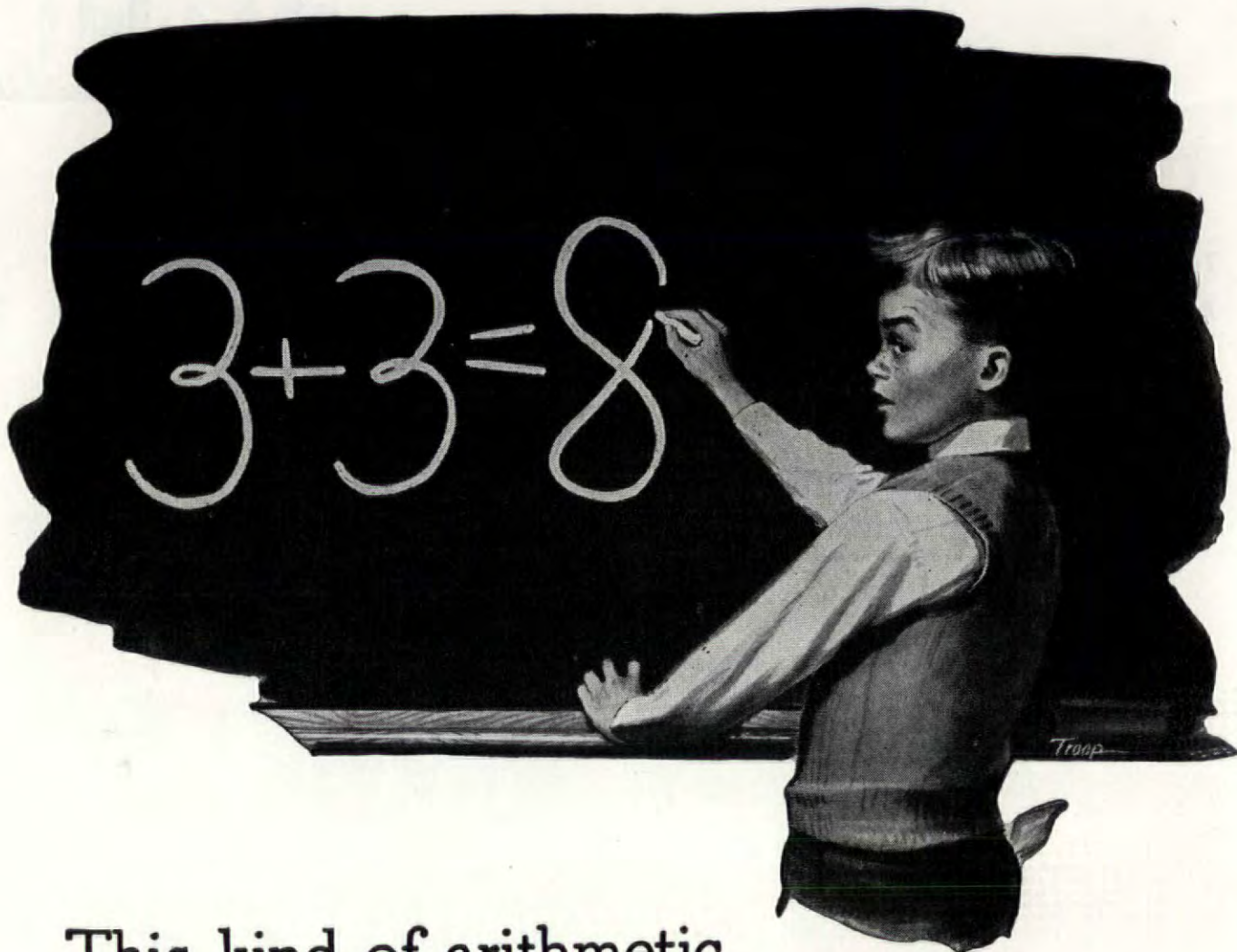
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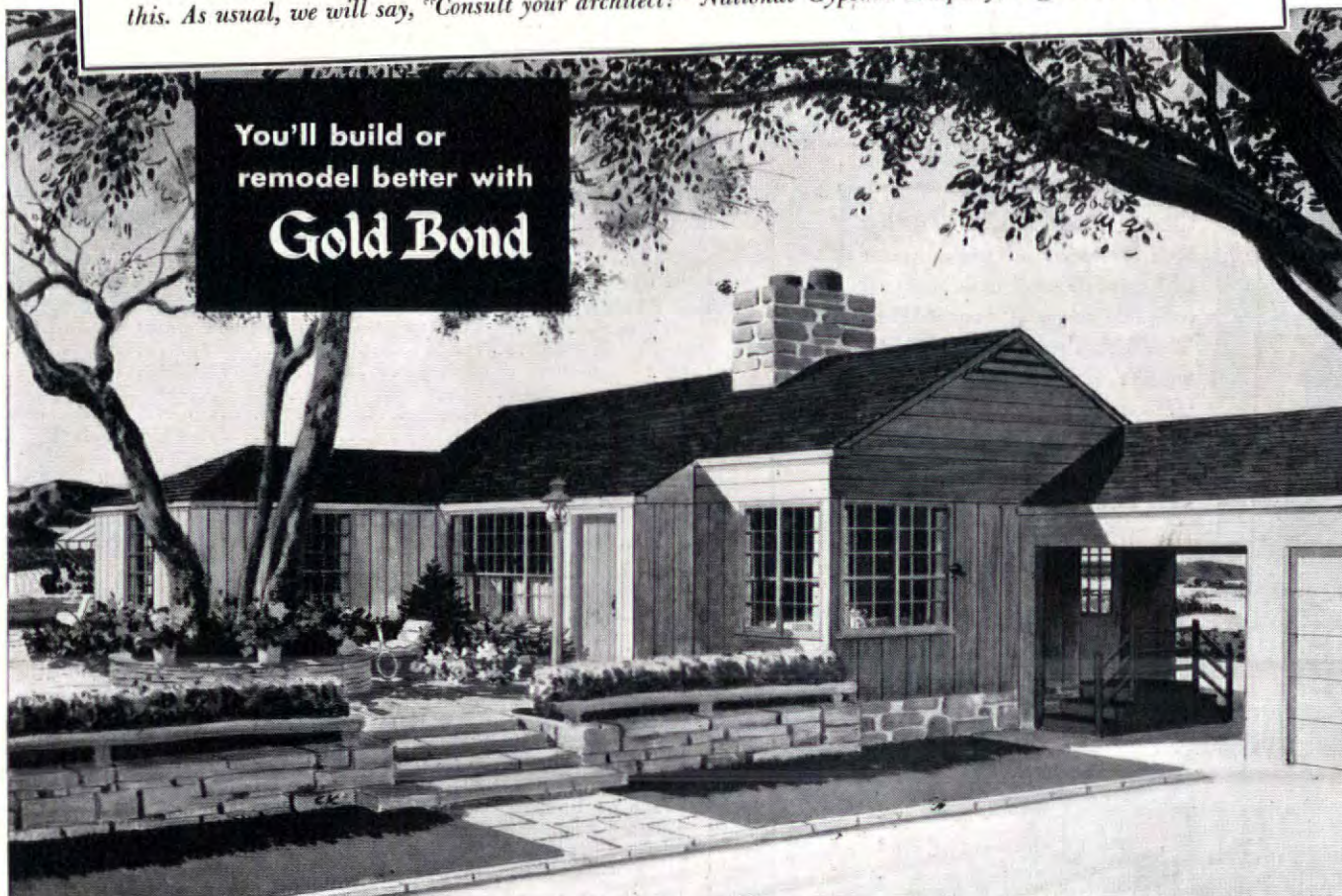
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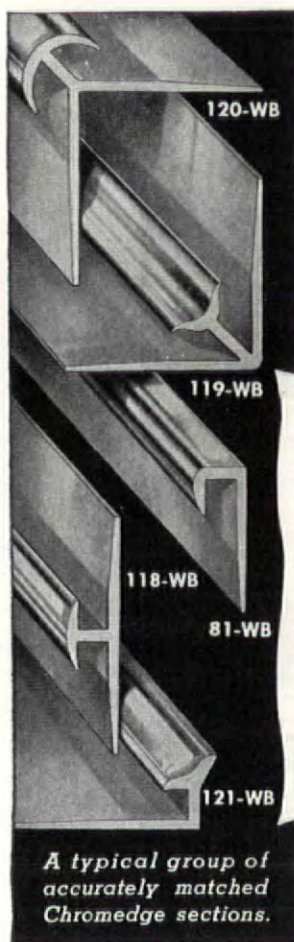
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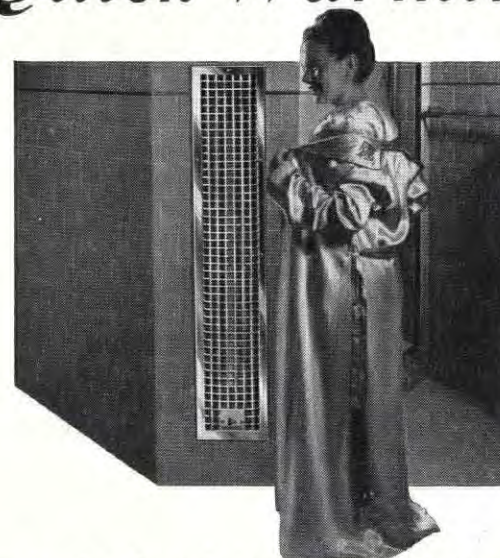
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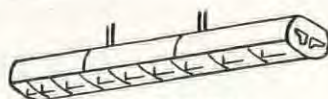
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And we think you'll find this new lighting system has it *over all* others when it comes to modern beauty, comfort and efficiency. Because Wakefield Over-ALL lighting is based on results where they count—at the *working plane*. Ask your local Wakefield distributor about the new Over-ALL lighting. Or write for our new Catalog No. 46 which gives full details on Wakefield equipment for "Over-ALL Lighting." The F. W. Wakefield Brass Company, Vermilion, Ohio.

Wakefield

LIGHTING EQUIPMENT FOR OFFICE, SCHOOL AND DRAFTING ROOM



THE GENERAL



THE GRENADE



THE COMMODORE



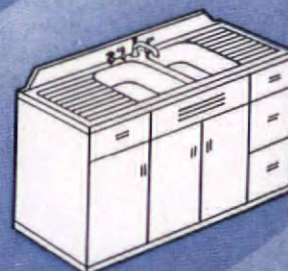
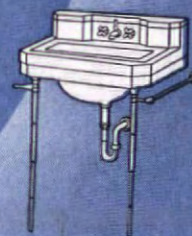
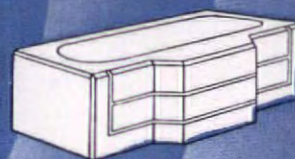
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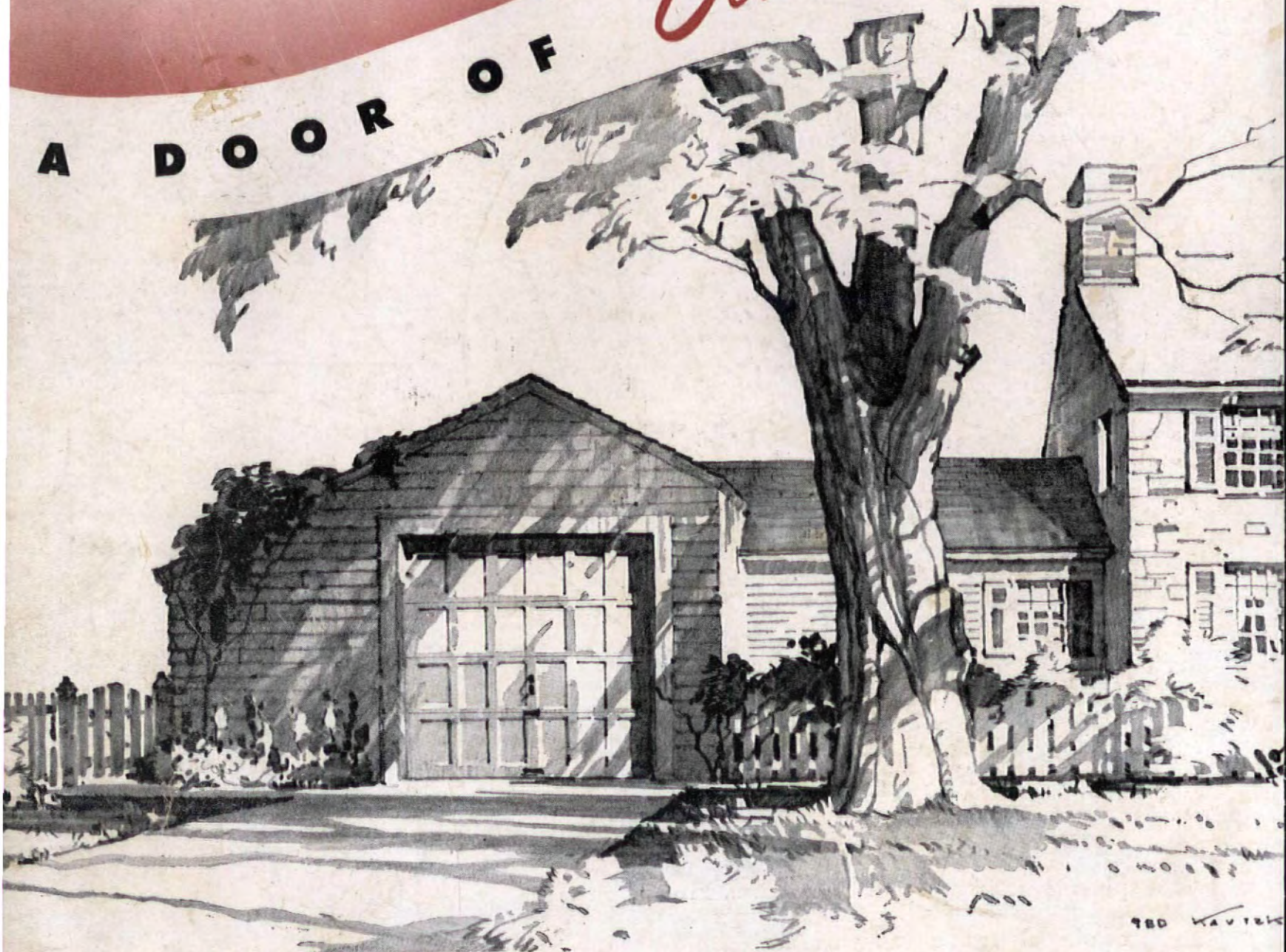
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