

THE ARCHITECTURAL FORUM



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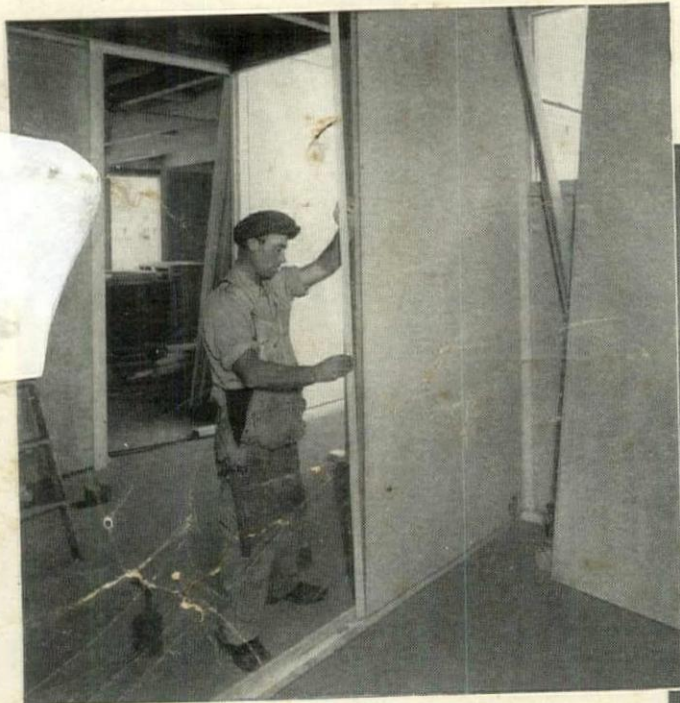
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SEPTEMBER 1917

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◀ At left: For interior wall partitions in this nursery school at The Herman Gardens Housing Project, Detroit, Mich., Cemesto wall unit is placed in floor and ceiling tracks. Spline is inserted to receive adjoining unit.



At right: Second Cemesto wall unit is quickly set into place, to form rigid, fire- and moisture-resistant interior partition with hard, smooth gray surface that requires no painting. ▶

This Multiple-Function Insulating Wall Unit Can Be Adapted to Almost Every Building Job

The remarkable versatility of Cemesto is graphically demonstrated by the recent Herman Gardens installation in Detroit, Mich.

The architect, recognizing the need for modern, high-speed construction, specified Cemesto wall units for interior partitions, as well as for exterior walls and roof deck. Cemesto—which is made of Celotex cane fibre insulation board sheathed on both sides with asbestos-cement, bonded with moisture-proof bituminous asphalt adhesive—gives *all five* of these major advantages:

1. Speed and economy of application!

The Cemesto wall unit incorporates in *one* material both structural wall *and* insulation. It can be pre-cut to needed sizes . . . used either vertically or horizontally.

2. Structural value!

Cemesto meets normal load requirements. It is rigid and permanent and saves on intermediate supporting members and materials.

3. Resistant surface!

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THE ARCHITECTURAL FORUM

SEPTEMBER

1945



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VOLUME 83, NUMBER 3

NEWS

LETTERS

WHOLESALE SHOWROOMS

A group of recent commercial installations showing outstanding excellence.

OKLAHOMA UNIVERSITY GOES MODERN

A small Mid-western institution takes a big step toward solving the dilemma of collegiate building: how to square contemporary needs with prior stylistic commitments.

HARRIS ARMSTRONG PORTFOLIO

Recent residential, commercial and institutional work by St. Louis' leading young modern architect.

PLANNING WITH YOU

Detroit expressway system designed by engineer W. Earl Andrews eliminates downtown congestion, speeds up traffic movement between widely separated districts.

SWITZERLAND

Her trim, communalized architecture of today is rooted in highly romantic Alpine landscape and tradition.

DESIGN ANALYSIS

Natural structural forms, under scientific analysis, reveal important lessons for building. Fred N. Severud shows their application to current problems.

ANNOUNCEMENTS

G. I. JOBS

BOOKS

Breakfast at the Hermitage . . . Contemporary Shops in the U. S. . . . Doelmatic Bouwen en Wonen . . . How to be Your Own Decorator.

PREFABRICATION

Wingfoot Homes Inc. offer mobility, efficiency and low cost to capture secondary and recreational house markets.

BUILDING REPORTER

Carbon dioxide fire extinguishing system . . . sound proofing by planning . . . new products . . . technical literature.

OCTOBER: Atom City . . . G. M. competition winners . . . publisher's office . . . Abbott Laboratories . . . L'Ouverture School . . . three recent factory buildings . . . houses . . . vehicular ramps.

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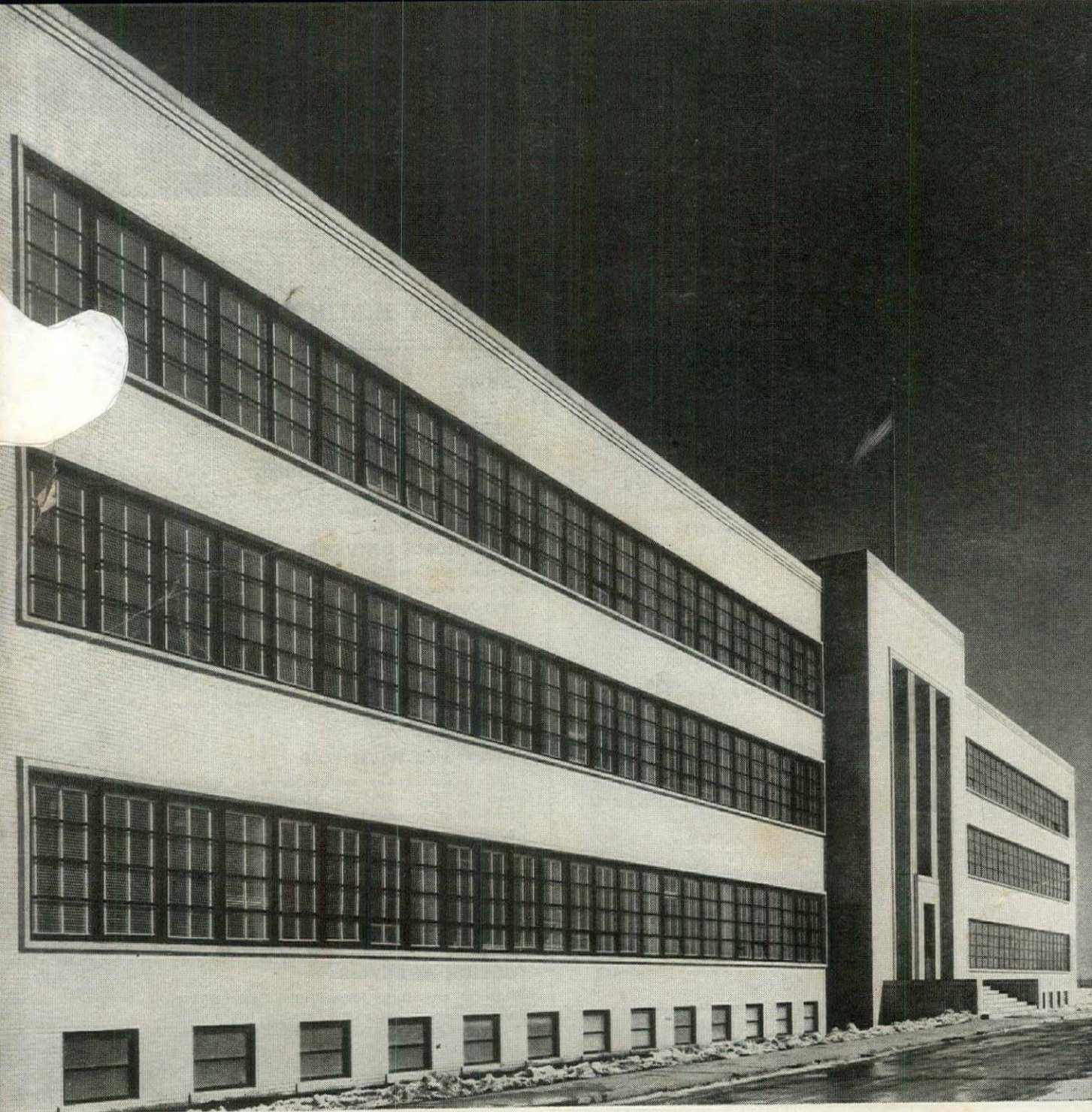
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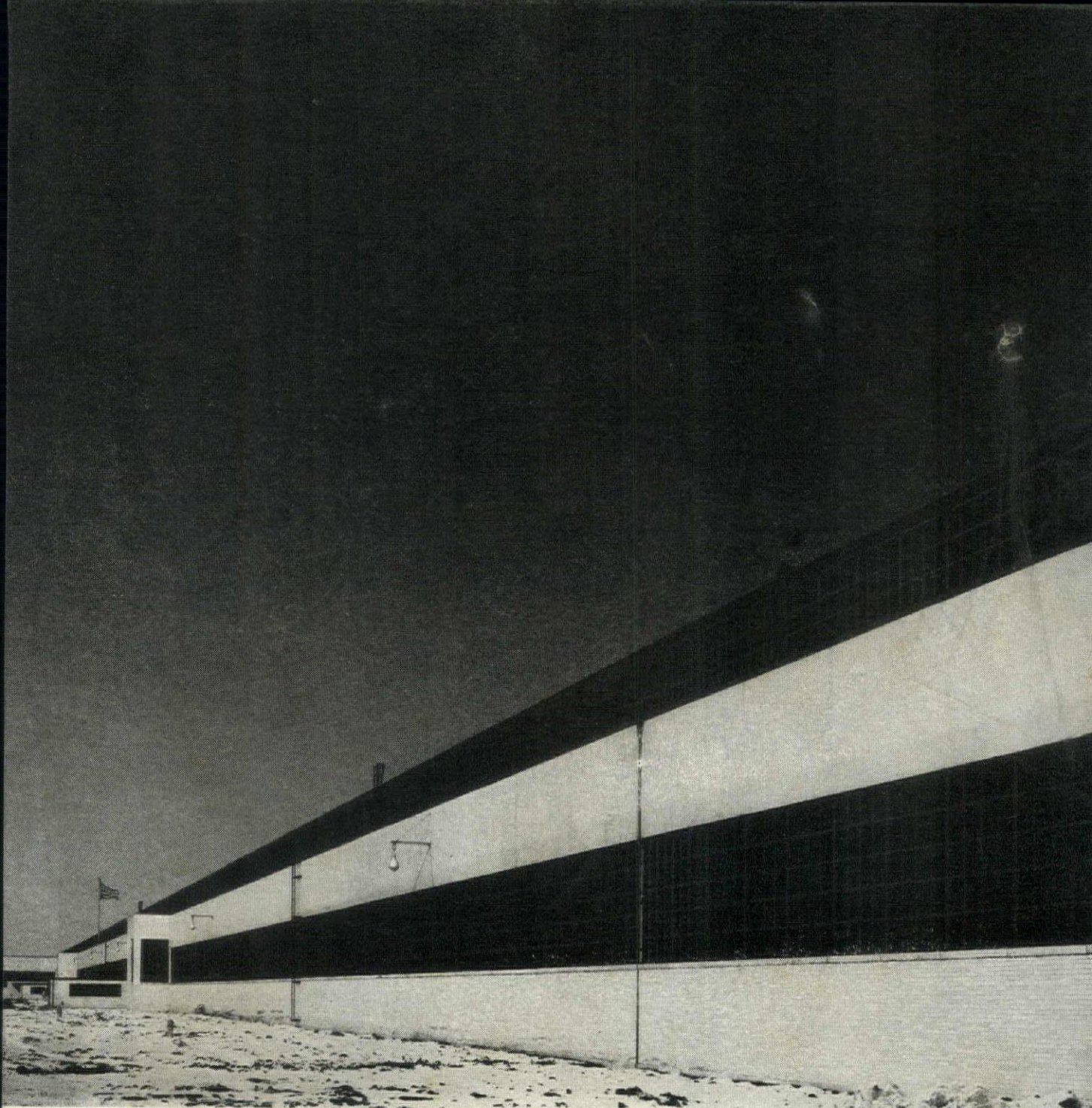
ucts and engineering skill have helped build among many others the sky high Golden Gate Bridge, the Bonneville Dam, the great Nebraska State Capitol, the mammoth Merchandise Mart in Chicago.

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UPSON



PACEMAKER IN CRACKPROOF PANELS

NEWS . . . V-B day due September 30 (page 6) . . . OPA holds rent control, seeks house price control (page 6) . . . Atom bomb town unveiled (page 7) . . . Wagner-Ellender housing bill wins Taft's backing (page 9) . . . Britain's Labor government faces test on housing (page 11) . . . FORUM survey find a half-million immediate house customers (page 12).

REVIEW

Even before the streets were clear of the last Victory paraders, Building men were out looking over block-fronts. Next day the long-coming peacetime building boom went into action. Across the expectant U. S. many a contractor happily checked bulldozer and jigs, many a customer reached for his penciled sketch of the floor plan he hoped soon to move into. Hundreds of lumberjacks walked out of West Coast shipyards, headed back to the woods. In the Ohio river valley, \$60 million worth of ordnance plants stopped in their tracks, and thousands of construction workers lined up at U. S. Employment offices in Columbus, Charlestown, Portsmouth. Carpenters put down their saws, walked off the site of halted war housing jobs. Encountering a sudden lull in briskly moving sales of older homes, real estate men dreamily eyed suburban plottages. And many an architect's sole glistened with shiny new thumb-tacks.

In New York Mayor Fiorello LaGuardia touted a \$2 billion (federal aid hoped for) bagful of public works, told his radio audience that his pet savings banks have added a \$5 million cooperative apartment to their building list. The New York Housing Authority said building would start immediately on a \$3,800,000 project, while the swank Lord & Taylor department store increased the building ferment with plans for a glass-walled skyscraper in which radar and television would double for salesgirls.

In Washington, municipal officials said construction would start in 60 days on their first peacetime building job—a \$4½ million Victory Bridge to span the Anacostia River. Detroit planners pushed four underground bus terminals—\$15 million worth of building—and charted the Chicago-Detroit expressway. In Chicago, Fritz Burns sat down with AFofL building tradesmen to talk about how to cut costs low enough to launch Henry Kaiser's promised \$5,000 house. In Fire Island, N. Y. Creta Garbo bought an estate, set off a local real estate boom.

Bridgeport, Conn. started government war housing toward the market. In Kansas City, the RFC belatedly offered

barrage balloons for sale to civilians as "excellent temporary shelter." Rochester N. Y. lined up veterans for an apprentice program that would yield several hundred master carpenters. In Montreal, eager customers eyed the first aluminum house to come out of an aircraft plant. Lexington, Ky. got ready to rebuild its famous trotting track, add a large park. The atom-splitting towns of Oak Ridge, Tenn. and Pasco, Wash. burst into headlines as the war's top building jobs.

U. S. Steel talked to unnamed builders, who showed blueprints for elevated steel and concrete airports, planned for every big city and designed like aircraft carriers. The automobile industry cleared plans for \$150 million worth of new plants, and Ohio and California welcomed the news that they would get a big slice. Sears-Roebuck and Montgomery Ward quietly completed specifications for dozens of farm stores. R. H. Macy & Co. took step one in its long-rumored expansion program, sought land in White Plains, N. Y.

While the big building jobs made the headlines, there was no U. S. town without building plans—and almost none without serious housing shortage. A real start on urban rebuilding was at last in sight as Congress sat down to work on the Wagner-Ellender housing bill, first step to enlist federal dollars, bring urban land prices within reach of private building enterprise. To everyone's surprise, Washington moved swiftly to end war controls. It was a fair bet that September would see all but rent ceilings dropped, that next spring would see a half-million houses underway. And by 1946 Building would be really moving toward its peacetime goal—\$15½ billion worth of construction every year. V-B day was here.

RECONVERSION

CONTROLS END

The outlook was better than most builders had dared hope. Building reconversion would not be handicapped by a hang-over of war controls. On that all



BUILDING'S RECONVERSION CHIEF Hugh Potter sits down for his first meeting with representatives of ten federal agencies who will have something to say about how fast building starts. They are (reading around the table from left): Maury Maverick, Smaller War Plants Corp.; J. D. Small, WPB; Robinson Newcomb, WPB; Ivan Carson, OPA rent director; Coleman Woodbury, NHA; John Blandford, NHA; Alvin Brown, Hugh Potter, Rita Roth, Miles Colean; Joseph Keenan, WPB; Amos Taylor and Morris Livingston, Commerce Department; Karl Mathiasen, head of OPA's building materials price division; Robert Goodwin, WMC; Daniel Tracy, Assistant Secretary of Labor.

Washington was finally in agreement. September 30 would be the day of Building's liberation. Slated to go:

The Controlled Materials Plan, under which the War Production Board kept a firm grip on all basic materials. This meant the long-awaited end of priorities. Only ratings to be retained: AAA for emergencies, MM for military needs, CC, a new civilian priority, to break reconversion bottlenecks. All of these, WPB said, would be used sparingly and require only a small percentage of materials now becoming plentiful. After four years of priority controls, builders will once more be able to bid for their materials in a free market.

The lumber control order, L-335, tightest of materials controls. In mid-August, the Army and Navy cut back their lumber requirements by one billion board feet—enough to build 100,000 houses. Immediately WPB said lumber dealers were free to sell any kind of lumber to any buyer, provided the sale does not interfere with priority orders. By the end of September, L-335 would be wiped off the books completely. WPB may extend "spot assistance" for lumber purchases in emergency cases.

The basic building limitation order, L-41, under which builders have been required to apply for permission to build and for priorities to buy supplies under the Controlled Materials Plan. With abandonment of CMP, building priori-

ties would become meaningless. A few federal officials pressed for continuation of the permit-to-build skeleton of L-41 as an indirect price control (see below), but majority opinion backed complete freedom. Reason: volume building is now imperatively needed not only to meet serious housing shortage but also to give jobs to the six million who face unemployment over the next six months. And on the job in Washington was Hugh Potter, whose assignment was to get building started again—and fast. Potter gave firm support to the industry's plea for an immediate end of all hampering war controls.

Industrial Construction. First building go-ahead came in mid-August when WPB opened the door wide to a \$4½ billion program for construction of plants to produce civilian goods. All industrial construction may now be undertaken without WPB authorization. To spearhead the mammoth industrial building program, WPB gave Joseph D. Keenan, one of its vice-chairmen, the job of stepping up production of scarce construction materials.

Materials. Only a few lingering shortages threatened to impede building's start. Most of them would disappear within 30 days. Even lumber would soon be in good supply. Recent price ceiling boosts would step-up production of gypsum lath, while war plant layoffs sent many workers back to the ma-

terials industry. Only the brick producers complained that they were missing the first wave of released workers, sought permission to offer increased wages.

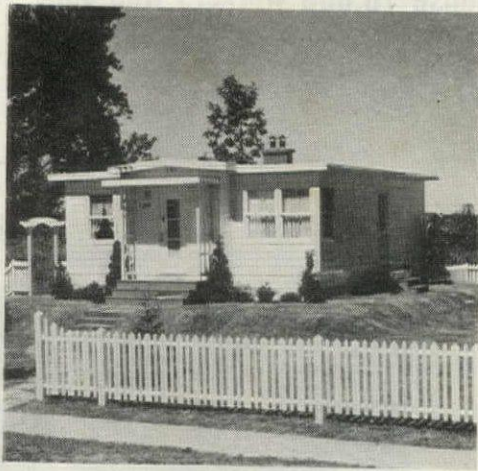
Wages. Construction workers are the only exception to the President's mid-August order permitting voluntary wage adjustments without War Labor Board approval, where wage increases will not boost product prices. Part of the program to hold the line against building inflation, exemption of construction workers from the wage boost was voted unanimously by WLB's wage adjustment board, whose membership includes labor.

PRICES

While L-41 will soon be only a wartime memory, price control of rents and of building materials will stick for some months to come. Price Administration Chester Bowles hastened to assure the nation that rent ceilings will not be lifted "until tenants have the opportunity to bargain with their landlords as they did before the war." The Office of Price Administration had already moved to shore up its shaky price ceilings on building materials, soon to feel the stress of a hungry market (see page 20). Bowles made it clear that tightened ceilings on mounting building costs would, like rent ceilings, be among the last war controls to go. Said he: "Our forthcoming program of dollar-and-cent prices on many building materials and services will help landlords to maintain and build dwellings at costs that will keep present rentals profitable."

But in Washington and in the industry, opinion was sharply split. Construction expediter Hugh Potter argued that new rental units will not be produced so long as rent control covers new building. In New York, big apartment builder Robert Dowling underlined Potter's stand. Dowling said his company can start a substantial amount of building within 30 days after government controls on new rentals become "more reasonable." But OPA held stubbornly to rent control as a major brake on post-war inflation, looked hard for ways to extend control to the prices of houses for sale.

With lifting of L-41, housebuilding becomes the only basic industry whose product is not covered by reconversion price controls. L-41 limited house prices to a flat \$6,000, with a recent boost to \$8,000 in a few areas. While OPA has the power to control the prices of all the materials and services that go into



AIRCRAFT HOUSE

First house to come out of a warplane factory emerged from the Fairchild Aircraft plant in Montreal. Made mostly from surplus aluminum and with the very machines (some of them unchanged) that had produced Curtis Helldiver bombers, the house is a 27 by 28 ft. bungalow. Six men can set it up in a day. Cost: \$3,300. The Canadian government has already placed an order for 500 Fairchild houses.

a house, it has never had the power to regulate the price to the customer. Last month Bowles, NH Administrator John Blandford and William H. Davis, head of the Office of Economic Stabilization, joined in an effort to check mounting house prices. Before the Potter inter-agency committee was a proposal to use credit control as a curb.

Under the plan now being discussed, housebuilders would be required to obtain a permit to build. For houses in the luxury class (probably over \$12,000), permits would be given with the requirement of a 35 per cent down payment. For the under-\$12,000 house, a 35 per cent down payment would be imposed if a check of plans and specifications indicated that the house is worth less than its selling price. Presumably the work of inspection would be undertaken by the National Housing Agency.

Few thought the plan would work, few thought it would even be tried. Veteran housebuilder Potter spoke for the industry: only volume house production can ease the nation's acute housing shortage, end inflationary rents and selling prices.

WAR HOUSING END

Twelve hours after the Japanese surrender offer all government war housebuilding came to a full stop. Halted by a telegraphed order from the Federal Public Housing Authority were contract awards that would have produced another \$50 million worth of temporary construction. Cancelled, too, was many a just-awarded contract, while here and there builders quietly picked up their shovels and walked off the job-site. The biggest, fastest housing job in U. S. history was finished, and the job of disposing of 490,000 government-owned homes was underway. The bulk of these—320,000 temporary units—must be removed within two years. The remaining 170,000 units must be sold to private owners, or—with approval from Congress—converted to low-rent housing.

Biggest uncertainty on the federal

housing front: would FPHA be able to use the \$50 million it has saved on war housing to provide homes for veterans? Congress had already quietly given FPHA the authority to supply housing for veterans in the same way it has provided housing for war workers (FORUM, July, '45). But so far no money has been earmarked for this kind of building. Whether or not FPHA could and would dip into its margin to build new units for veterans was a question that the next few months would answer. Meantime, with no war workers left in the nation, a sure prospect was that veterans would fill up scattered vacancies in the public war projects. But, as fast as new houses become available, FPHA hopes to persuade tenants to move.

War-boomed Bridgeport, Conn. was the first city to get started on war housing disposal. Some 1,200 of the 4,055 public war housing units built in Bridgeport are one- and two-family homes. Under the plan framed by a joint conference of federal and local officials last month, Lincoln Village, with 150 houses, will be the first project to go on sale. Occupants will get first choice as buyers, veterans will come next. If no buyers appear who want to purchase homes for residence, they will be offered to corporations.

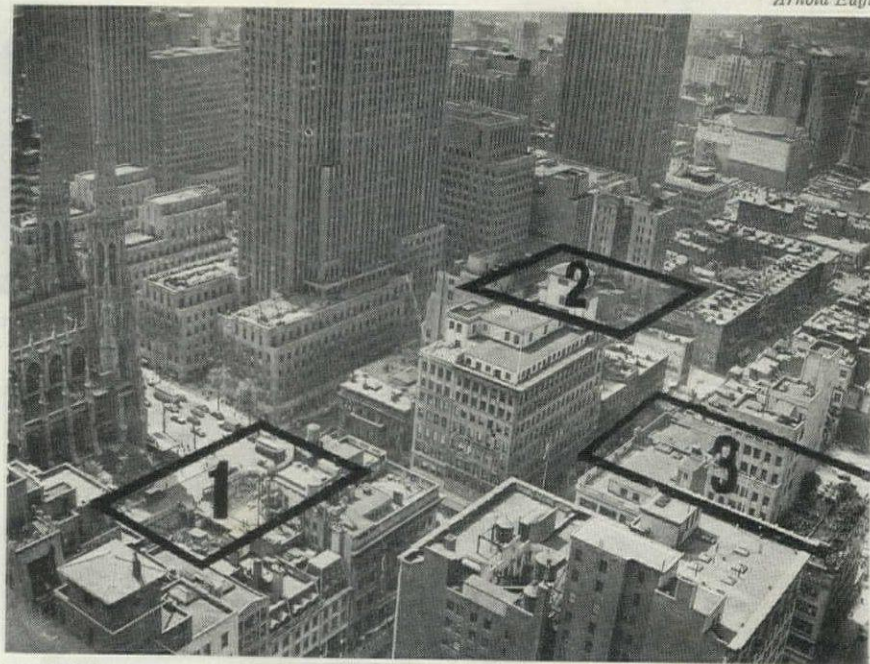
Bridgeport, like every other city, had more than war housing sale to worry about. An estimated 50 to 70 per cent of all tenants will be unemployed within the next few months. If tenants are unable to pay rent, the local welfare department will have to pay federal rent collectors. The Federal Public Housing Authority had no plans for a rent moratorium.

JOBS

ATOM TOWN

In February 1943 Skidmore, Owings & Merrill, who had just finished their never-used plans for Willow Run housing, got a rush call from the Army. Bundled into a plane, architect John Merrill stepped out in a 58,000-acre waste of scrub forest, ridges and chiggers. In this isolated Tennessee valley, 18 miles from Knoxville, the Army

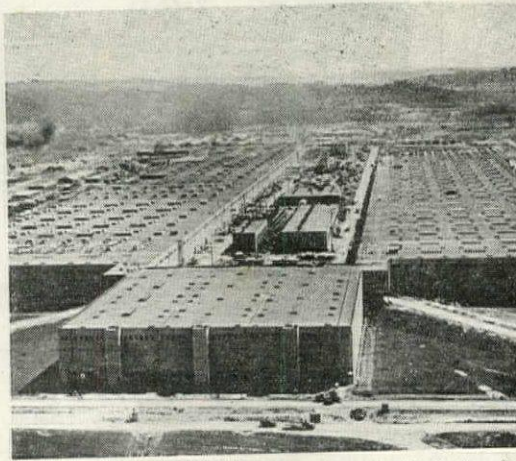
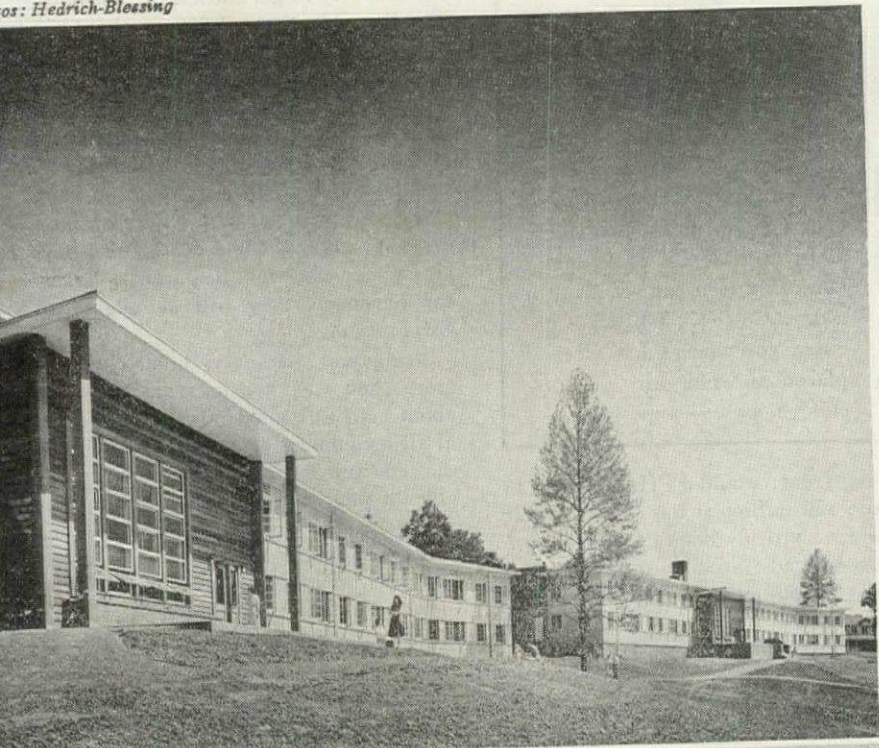
Arnold Eagle



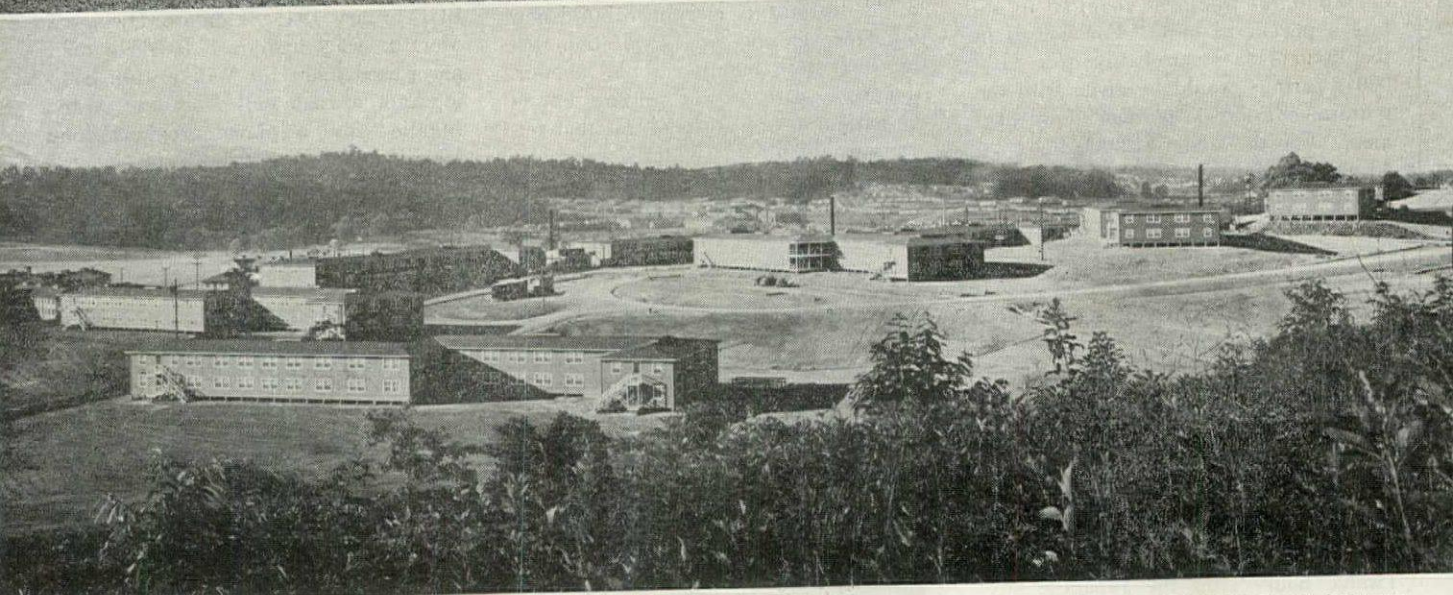
BIG SLICE of Building's hoped-for \$15½ billion yearly output will soon start in New York. Razing already underway in Manhattan's mid-town section spotted two big building jobs: 1) 12-story department store, fronting on Fifth Avenue at 51st Street, to be built by Best & Co.; 2) extension of Rockefeller Center to house Standard Oil of N. J., which will run through from 51st to 52nd. The Fifth Avenue block front 3) between 52nd and 53rd was purchased last month by Lord & Taylor, department store, who will move up from 38th Street. Lord & Taylor planned a 29-story skyscraper with landscaped terraces, subterranean parking, roof-top hangars, radar-operated doors and television shopping facilities.

OAK RIDGE, TENN. was planned and built in one year to house 78,000 workers who split the atom

os: Hedrich-Blessing



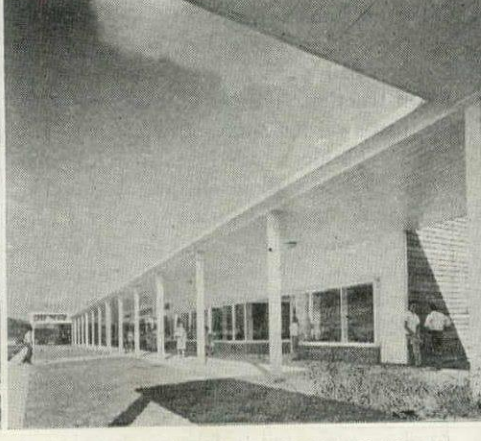
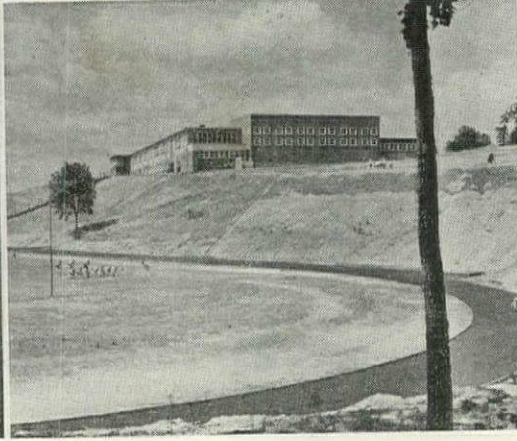
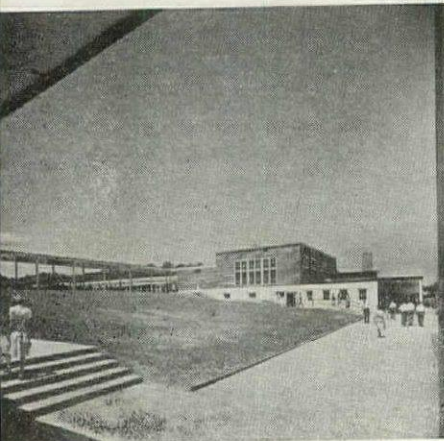
WINDOWLESS WALLS enclose the great grey plaza which was isolated from the city as a restricted area. Temporary multi-family units designed by Skidmore, Owings & Merrill housed 3,000 families (left).



TO THE ORIGINAL PLAN, calling for 3,000 single-family houses, temporary units

hailed in from cut-back ordnance plants and dormitories (above) were added. Town

stretched as a mile-wide finger between 6-lane highway and steep ridges.



TWIN COMMUNITY centers provided all shopping and service facilities

plus plenty of recreation space. High school (above) was part of complete school system

built. Covered plaza connects all shopping units, fitted exactly to population.

wanted to build a city of 12,000 people. Most of the residents would be technically trained professionals used to living well, the Army said. They would need houses as pleasant as the emergency would permit, schools and complete facilities for shopping, service, recreation. Streets were to be planned for a bus service to take workers to an adjoining plant. The job was top priority and called for top speed. Other than that, the Army had nothing to say, and Skidmore, Owings & Merrill were politely advised to ask no questions.

Last month Oak Ridge, fifth largest city in Tennessee, hit headlines across the country as the town that tore the atom apart. The architects' original plan for 3,000 permanent-built houses had been hastily expanded to housing for a population of 78,000. Added were 3,000 temporary multi-family units, 3,000 TVA-type prefabs, 1,000 demountables hauled in from cut-back ordnance plants, 85 big dormitories. In the twin community centers there were banks, post offices, bus terminals, clothing store, ten-cent store, movies, supermarket, bowling alleys and a football field. The small country road that wound through the valley had become a six-lane highway.

Skidmore, Owings & Merrill assembled a staff of 550 to plan Oak Ridge. The land, broken with ridges and gullies, made precise paper planning impossible, and surveyors were sent to check and re-stake plans on the site. Location of each house was a specialized operation, since many units had to be turned a few degrees to fit on ridge shoulders, and building along the gullies meant special drainage problems. Principal planning problem was a precision estimate of community facilities needed to take care of the population. Skidmore, Owings & Merrill worked this out to a point where they can tell you exactly how many barber chairs and shoe repairmen are needed per 1,000 population.

WASHINGTON

HOUSING BILL

Whether five million workers have jobs a year from now, whether the U. S. will be busy building 1,250,000 houses, whether private enterprise makes a start at cleaning up blighted city neighborhoods—all these questions are now up to Congress. What may be the first legislation to enlist federal dollars back of private enterprise rebuilding and large-scale rental housing had been plumped into the Senate just before members left for their vacation.

There would be plenty of argument and tinkering before the bill (S. 1342) made its way through Congress. But there was nowhere any doubt that Con-

gress would back the major objectives outlined by sponsors Senator Robert Wagner (Dem., N. Y.) and Senator Allen Ellender (Dem., La.) to open a new chapter in housebuilding history. Best evidence that partisan politics would not block action for rebuilding came from Ohio's staunch Republican Senator Robert Taft, who has never been accused of a starry-eyed approach to housing matters. Winding up the year-long studies of his Committee on Housing and Urban Redevelopment (FORUM, Feb., '45), Senator Taft offered Congress a report which put him solidly on record for the objectives of the Wagner-Ellender bill. Senator Taft



ELLENDER

hoped to incorporate amendments that would enlarge existing Federal Home Loan Bank and Federal Housing Administration mechanisms for assisting private enterprise. Said the Senator decisively: "If these amendments and additions can be satisfactory agreed upon—and I have no doubt they can be—I shall be very glad to join in the sponsorship of the bill."

AFofL endorsement was quickly given, and CIO support was assured whenever housing officers agree on the amendments they will present at Senate Banking and Currency Committee hearings opening this month. AFofL president William Green called the bill "the most important step yet taken in Congress toward the positive assurance of full employment after the war." He said that the "sound, forward-looking proposals . . . place the primary



GREEN

responsibility for post-war housing squarely upon private enterprise and local initiative, with the essential minimum of government aid and guidance."

But the National Association of Home Builders, focusing with its customary myopia on the public housing provisions of the bill, seemed intent on cutting off its own nose to spite its face. To NAHB's executive head, Frank Cortright, the bill was a "masterpiece of deception." Cortright told his followers: "The impression is given that the bill's primary purpose is to assist private enterprise in providing housing for farmers, veterans and slum



WAGNER

dwellers. Actually, its primary objective is the production of more than 500,000 public housing units."

The bill's objective were plainly written. Briefly, they were:

Permanent NHA. Wartime consolidation of all government housing functions under the National Housing Agency would be continued.

Research. The National Housing Agency would make studies of the local housing market, undertake technical research in the industry and stimulate such research by private enterprise.

Urban Redevelopment. While a half-dozen states have empowered cities to acquire blighted land and sell or lease it for private rebuilding, only New York City has taken tangible steps to start such redevelopment projects. Everywhere high land costs block city rebuilding, and few municipal budgets are able to absorb the difference between present land prices and new use values. The bill attacks this obstacle by proposing:

1) \$50 million worth of federal loans a year (\$250 million over a five-year period) to assist "local public agencies" in acquiring the land for private and public redevelopment. Loans would bear interest at the "going federal rate" and be repaid in 20 years.

2) Annual federal contributions amounting to \$4 million yearly over a five-year period. Such contributions would cover the difference between rebuilding cost and new use proceeds up to a maximum of two-thirds of the total cost of acquiring land and preparing it for rebuilding. Federal contribution contracts would cover a 45-year period and would be used as security for local borrowing, generating private financing estimated at about \$500 million. This plus the \$250 million federal loan total means that the U. S. would clear about \$700 million worth of slum land over the next five years.

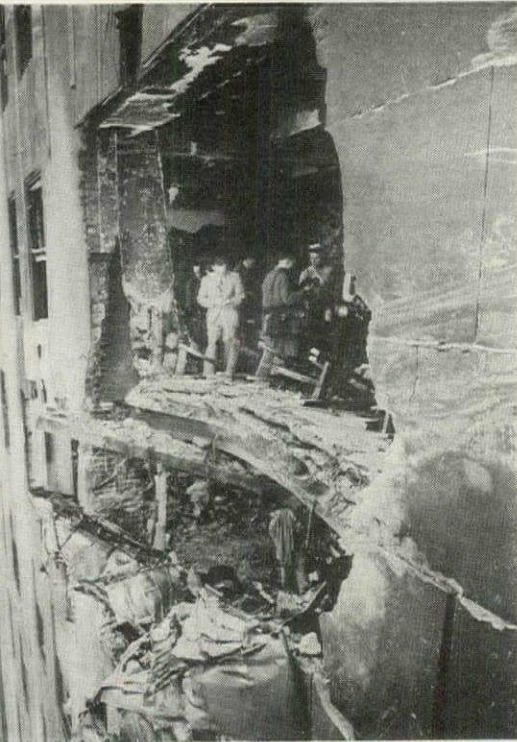
Municipalities would be required to match federal contributions on a dollar-for-dollar basis, but local participation might be through installation of streets, utilities, playgrounds, etc. Both federal loan and contribution contracts carry the prevailing wage clause, ensuring employment of union labor on all projects.

Private Low-Rent Housing. Investors in large-scale, low rent housing would be guaranteed, under a new FHA insurance fund, an annual return after depreciation and operating expenses of 2¾ per cent. Expected to draw billions of dollars of institutional and insurance funds into housebuilding and to provide rental units at costs 25 to 40 per cent below prevailing levels, yield insurance would be limited to projects serving in-

(Continued on page 10, column 3)



CORTRIGHT



EMPIRE STATE CAN TAKE IT

At month's end insurance companies were still puzzling over the unprecedented claim of the Empire State building. Was the damage left in the wake of the crashing bomber fire or collision damage? In Washington the War Damage Corp., whose funds have been almost untouched, doubted that the only big domestic war disaster was a legal claim under its coverage. Reason: the bomber was not resisting, or protecting against, enemy attack.

Sight-seers in the Empire's tower observatory heard the zoom of the big B-25 as it thundered past Rockefeller Center. Fifteen seconds later the 10-ton plane tore into the world's tallest building at a speed of 225 m.p.h. Almost everybody in the building that morning (including several members of the FORUM staff) was willing to testify that Empire State had swayed more than its estimated 5 in. arc of deflection.

Only damage to the skyscrapers' frame: one brick pier knocked out, one horizontal steel beam dislodged and several bent. No steel columns were damaged. Designers Shreve, Lamb & Harmon and builders Starrett Bros. & Eken congratulated each other. The two elevator cables sheared by one heavy engine into a macaroni-like mass are the toughest replacement job. So far, Otis Elevator has found no steel company who can promise a delivery date. Guide rails were also damaged.

INS, AP



Striking the 78th and 79th floors, the plane tore out masonry. One motor pierced the entire building.



Only a few steel beams were damaged; plants on the window-sill of an adjoining office were unharmed.



Wheels and undercarriage smashed through the 78th floor. One motor fell down elevator shaft.



Tower-high flames ran through upper floors, were quickly put out. Electric feeders and fire tower were damaged.

(Continued from page 9)

come groups which unassisted private investment cannot reach.

Public Low-Rent Housing. Annual federal contributions of \$22 million (about half the amount paid over the country for rent relief in 1932) would be made to assist local housing authorities in building low-rent housing. The contribution period would be reduced from 60 to 45 years. A four-year building program, amounting to 500,000 housing units, is anticipated. Federal loans, provided under the United States Housing Act, would be eliminated, since local housing can now readily get private financing. (Since the time when the federal government loaned 90 per cent of project cost, tax-exempt housing bonds have climbed steadily in the market. The New York Housing Authority recently got 100 per cent private financing on a 400-family project, with six syndicates competing for a \$1,995,000 issue.)

To eliminate any possible competition with private building enterprise, a 20 per cent margin would be required in both rents and income between public and private housing in any locality. Rehabilitation of older housing to provide low-rent units would be added to the public housing job.

Farm Housing. There are two plans:

- 1) The Secretary of Agriculture would make housing loans at 3 per cent to low-income farm families. Payments might vary as farm income fluctuates.
- 2) Annual federal contributions of \$5 million over a five-year period would be provided to launch a low-rent rural housing program, which include provision for eventual home ownership.

GREENDALE FOR SALE

Close to the market for the second time in their history, the three famous greenbelt towns built by the Resettlement Administration in the mid-thirties are again looking for takers. The Federal Public Housing Authority, which now operates the projects, will sample present market interest by putting 64 building lots on sale at Greendale, Wis.

FPHA is working on a plan to interest private investors in undertaking large-scale expansion of Greendale and of the other two projects—Greenbelt, Md. and Greenhills, O. All three communities have enough utilities, roads, stores and land to take care of a population three times their present size.

While the 64 building lots now going on the market will be sold to individuals (with veterans to get preference), hope is that the bulk of the land can be sold or leased to a syndicate able to undertake large-scale development.

OVERSEAS

HOUSING START

First major test of Britain's new Labor government will come at home—which is something that two out of every three British families now lack. Whatever his enthusiasm for the long-term policies on which the Laborites won their overwhelming mandate, the average British voter is likely to measure the effectiveness of the new government in terms of how fast it is able to get a roof over his head.

The restless pre-election period had brought plenty of signs that Britishers are determined to spend the winter in something more substantial than benignant official promises of "homes for all." Public opinion had backed the ex-chimney sweep and his house-snatching vigilantes, whose method of direct appropriation of unoccupied quarters was finally legally adopted by a number of local authorities. So hotly united was the electorate's temper on the matter, that there had been no discernible difference in the housing platforms offered by the two major parties. Not even die-hard Conservatives had dared to oppose a building program of 1¼ million houses, to be financed largely by the government. Labor's first domestic job will be to get action on the program for emergency housing and permanent building to which all parties are committed.

Within a week of taking office, the new government had taken one decisive step in this direction. Planning to give its top housing expert Arthur Greenwood, Lord Privy Seal, over-all charge of housing, Labor started to clear the

underbrush of entwined Ministerial responsibilities that has hampered rapid action in the past. But Atlee & Co., anything but giddy with their new power, have made it clear that there will be no sharp reversal of existing national policies anywhere along the line. Indicative of their confidence in a slow transition to new directions is the establishment of a joint committee through which all the Ministries concerned with housing will work together until authority can be centralized.

Minister of Health in the last Labor government, Greenwood is a housing

How far the Labor government expects to reshape the British industrial pattern may be first apparent in the steps these Ministers take to control and regulate building materials supply. In direct contrast to U. S. reconversion policy, the British will retain controls of both production and distribution of materials, may also retain control of labor. But this cannot be considered purely a Labor policy. The Coalition government had placed large orders for postwar household equipment, and impressive stocks of fittings, kitchen units and plumbing equipment are already

British Combine, Life, Acme



BRITAIN'S BUILDING MEN: (l. to r.) Greenwood, Tomlinson, Bevan, Silkin, Buchanan.

veteran. Sharing with him the responsibility for turning housebuilding promises into steel, aluminum and brick reality are:

▶ Minister of Health Aneurin Bevan, a far-leftist, ex-miner.

▶ Minister of Works George Tomlinson, who established a solid, plugging record as Undersecretary, while several Coalition Works Ministers stumbled on emergency housing.

▶ Minister of Town and Country Planning Lewis Silkin, thoughtful practical chairman of the London County Council Housing Committee and an energetic backer of the Council's famous London Plan (FORUM, Aug., '43).

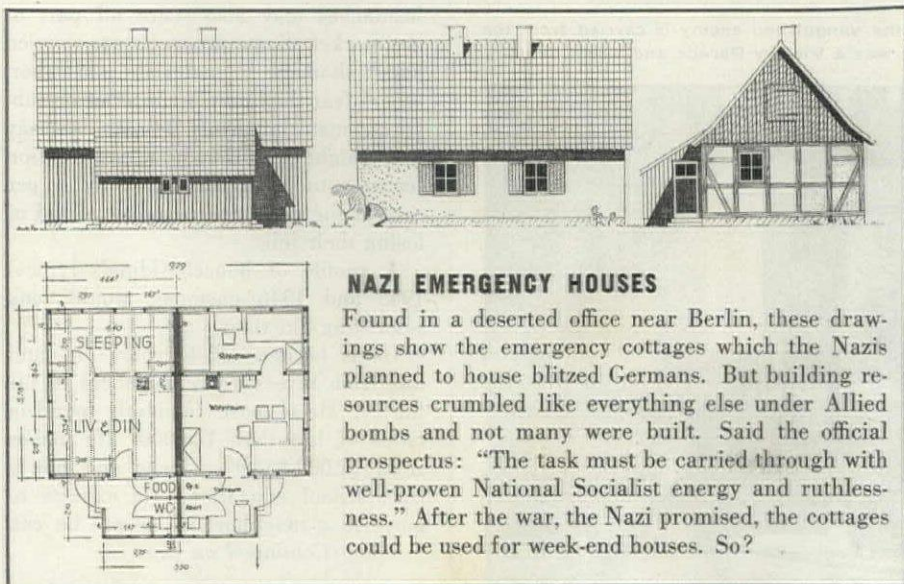
▶ Undersecretary of State for Scotland George Buchanan, a long-time student of Scottish housing problems.

piled up awaiting delivery. Next step is to establish regional distribution centers. Standardization of building equipment will be implemented by government purchases.

The Labor government has announced a policy of directing private investment, and private funds will be channeled into rebuilding. First step in this direction will be launching of a national housing loan, to be merchandised like a war loan at low interest rates.

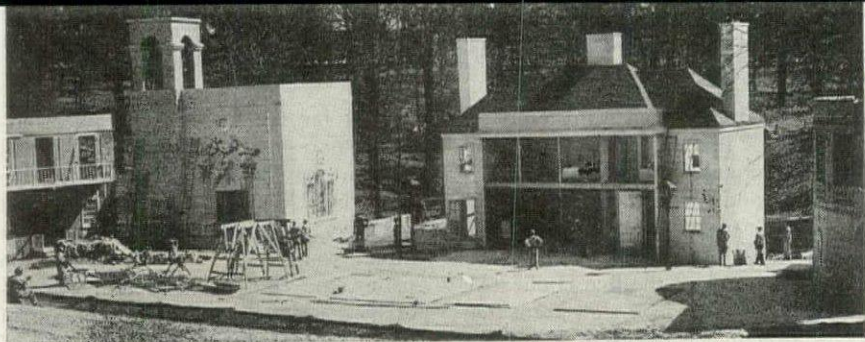
While the Labor party is committed to land nationalization, little has been heard about this old plank since the party climbed securely on its electoral platform. Urgent housing will not wait for the lengthy process of revising controversial land acquisition legislation, and it is probable that rebuilding will go ahead under the Town and Country Planning Act passed last year by Parliament (FORUM, Aug., '44). This Act gives local authorities power to acquire bomb-damaged and slum areas at 30 per cent above 1939 prices and prescribes national financing aid. Whether Labor will revive the Uthwatt recommendations for public control of all future land development (FORUM, Nov., '42, Aug., '43) depends on how effective the present Planning Act proves to be in operation.

The hand of the new government will probably show first in legislation to regulate industrial location. The Distribution of Industry Bill, fought down by the Tories in the last Parliamentary session, will probably be reintroduced. The bill would give the Board of Trade authority to regulate location of all but the smallest factories (FORUM, May, '45).



NAZI EMERGENCY HOUSES

Found in a deserted office near Berlin, these drawings show the emergency cottages which the Nazis planned to house blitzed Germans. But building resources crumbled like everything else under Allied bombs and not many were built. Said the official prospectus: "The task must be carried through with well-proven National Socialist energy and ruthlessness." After the war, the Nazi promised, the cottages could be used for week-end houses. So?



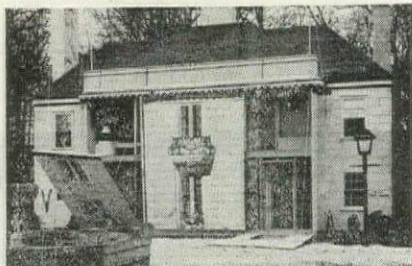
MOCKED-UP VILLAGE SQUARE fronted on bleachers where soldier audience watched attacking troops practice taking a town. Other soldiers acted as German defenders.

TRAINING TOWN

Just released by the Army are these views of a mocked-up village, designed by Major William Pahlman who was formerly Lord & Taylor's top interior decorator. Built at Jefferson Barracks, Mo. to give training troops the feeling of what lay ahead of them in France, the village was complete with furnishings in authentic period style—behind them, booby traps! Several realistic French and German villages were built at U. S. camps, where soldiers rehearsed the tactics they were later to use so successfully in Europe.



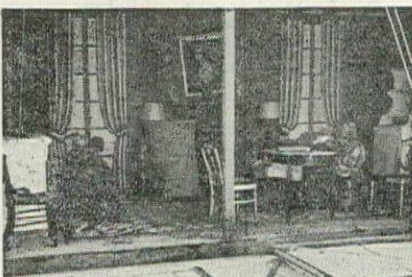
Chief designer Major William Pahlman and crew relax in front of town hall.



Pulleys lower facade of manor house for view when attackers fight inside.

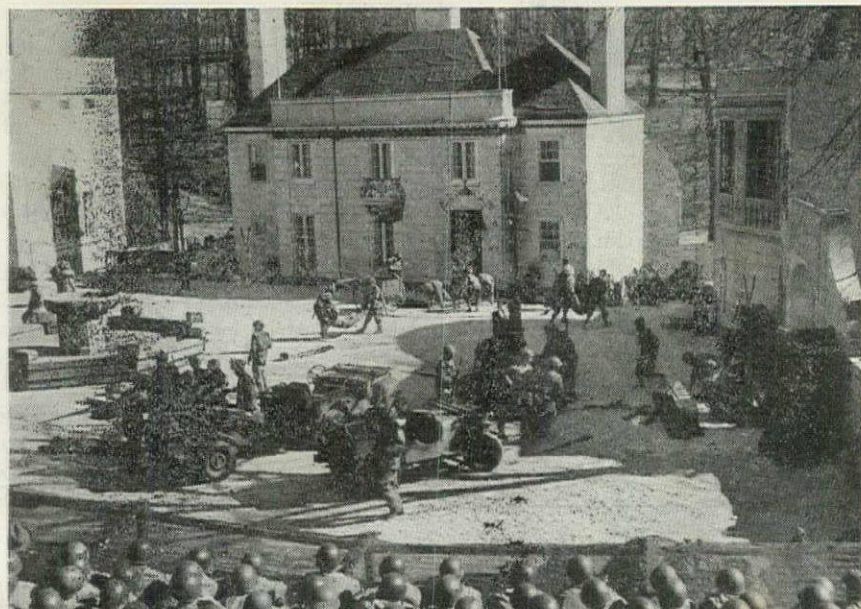


Training troops rush to attack past town hall as enemies fall. No battles were lost.



Lavishly furnished interior conceals booby traps which troops were trained to detect.

Audience watches as squad cars arrive and the vanquished enemy is carried from the scene, with all buildings intact. Later there was a Victory Parade and street dancing.



MARKET

FORUM-CROSSLEY SURVEY

By the next building season, when war controls are only a memory, when materials are in good supply, housebuilding output will be limited only by market demand. Every sign—long-repressed building activity, accumulated housing shortage, record wartime savings, dozens of market surveys—points to the biggest market housebuilding has ever seen. Will this long-anticipated market appear in volume this year or next year? How many house customers are ready to put cash on the line? What will cause them to delay or accelerate their buying decisions?

Making the first survey to filter out the part of the market prepared for immediate home ownership, the FORUM finds that 2,778,000 U. S. families can be considered good prospects over the next two or three years. Conducted for the FORUM by Crossley, Inc., the survey covered a representative sample of 8,052 families, all of whom were personally interviewed. One out of every three families hopes to become a home owner sometime, the survey shows. But only 1.5 per cent of U. S. families (555,600) can be counted on as sure prospects in the immediate market. An additional 6 per cent (2,222,400) have taken specific steps toward home ownership—but may delay their purchase. About 73 per cent of the prospects hope to buy new houses. Half of them expect to pay less than \$6,000. More than 20 per cent expect to pay all cash, while more than 50 per cent plan to make down payments larger than FHA requirements.

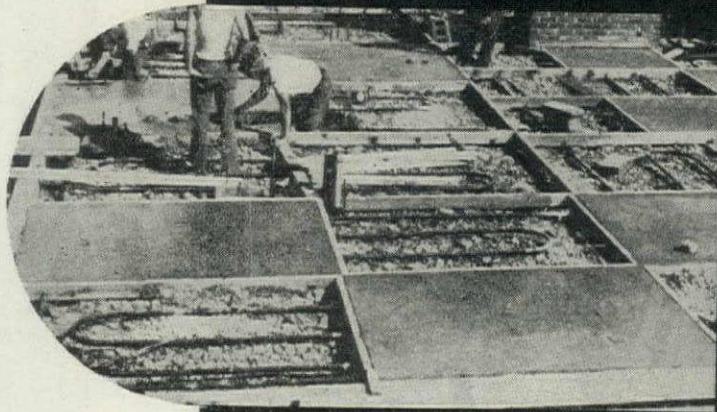
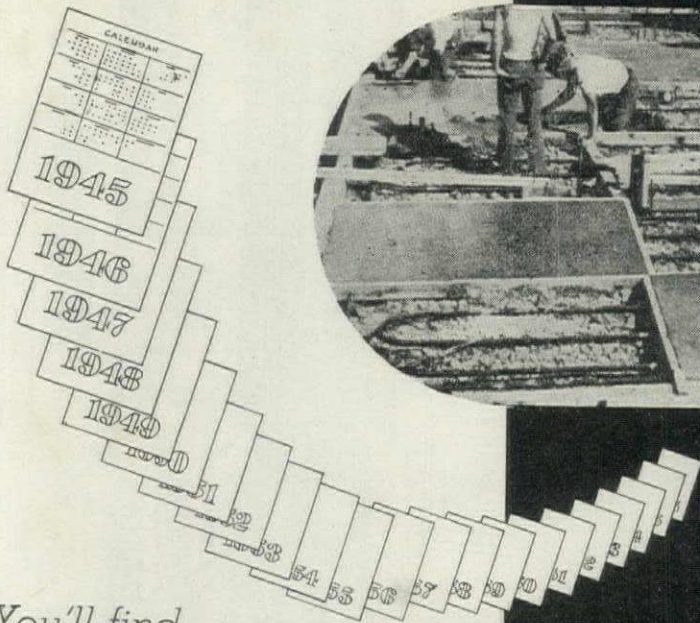
Biggest worry among good prospects, the survey shows, is the threat of inflationary price rises. If the house they want costs \$1,000 more than they now plan, half the customers say they will defer purchase. Building's reconversion headaches may also scare off part of the market. Some prospects are worried about shortage of materials and labor, others fear they may get inferior or substitute material, while 14 per cent say they might wait for new construction features to be available. Only 4 per cent of the good prospects are afraid of losing their jobs.

A profile of housebuilding's typical 1945 and 1946 customer would look something like this:

He is between 30-44 years old, and has from three to five members in his family. He is most frequently found in cities of less than 100,000. He makes from \$2,000-\$3,999 a year and has a high school education. He expects to move to a neighborhood where he can

(Continued on page 16)

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It is precisely because durability *is* so important that the designers of existing systems have almost without exception used wrought iron for the pipe coils. Good engineering not only provides for the present, but anticipates the future. In piping where present or future corrosion is even a remote possibility, the use of the best material is not only the soundest engineering, but the soundest investment.

The basis for the choice of wrought iron is revealed when the record of the material is reviewed. Complete case histories are on file of hundreds of Byers Radiant Heating installations that have been in service up to 18 years, without a single instance of pipe failure due to corrosion reported to date. This record is impressive in itself . . . but it does not exhaust the evidence by any means, for the designers of the earliest systems had plenty of examples of the durability of wrought iron under similar service conditions to guide them in selecting materials.

Questions about the performance of wrought iron when buried in masonry, for instance, were completely answered by the records of some famous

skating rinks. Here coils embedded in concrete carried brine, which is actively and aggressively corrosive. After experiences with ordinary materials which lasted only a few years, these rinks standardized on wrought iron which justified the choice by many years of trouble-free service.

The reason for wrought iron's durability is found in its unique structure. Tiny fibers of glass-like silicate slag are threaded through the body of high-purity iron. The fibers halt and diffuse corrosive attack, discouraging pitting. They also anchor the initial protective film, which shields the underlying metal. In addition, of course, wrought iron has high heat emission, expands and contracts at almost identical rates with concrete and plaster, and is readily fabricated.

You will find a detailed discussion of the question of pipe selection for durability in our bulletin, "Byers Wrought Iron for Radiant Heating." Ask for a copy.

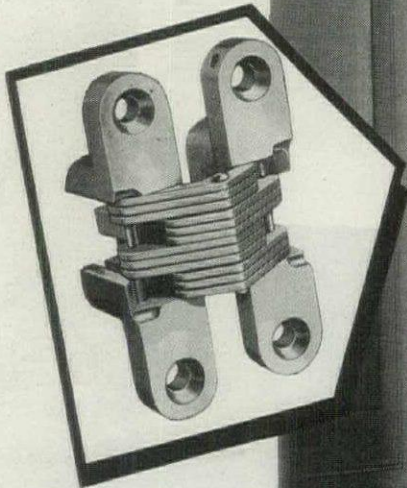
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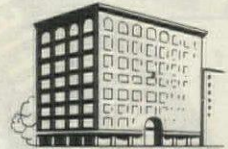
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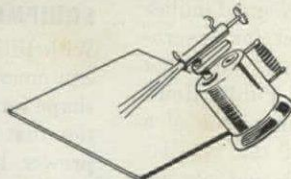
HOSPITALS



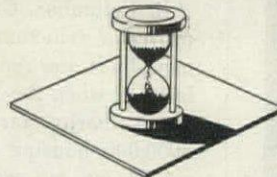
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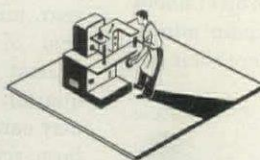
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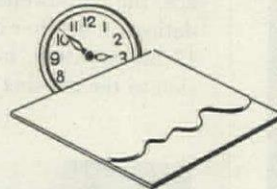
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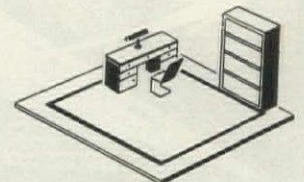
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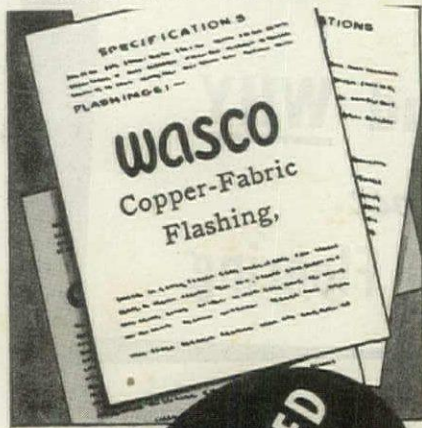
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MONTH IN BUILDING: NEWS

(Continued from page 12)

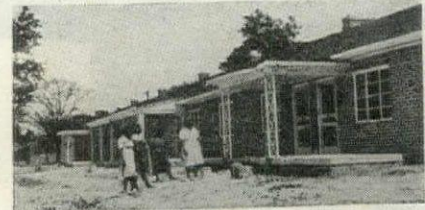
have more land. He has already looked at houses or lots, and probably drawn up plans. He hopes to have a house specially designed and built for his needs. A six-room, one-story house with a good heating system and a well-equipped modern kitchen will suit him very well.

DILEMMAS

One part of the housing market covered by no survey of next year's customers was the little mining town of Force, Pa. where 350 miners quit work last month to protest their living conditions. The underhoused miners were a market that private enterprise could not reach.

When Dr. Elizabeth Hayes resigned as company physician because the Shawmut Mining Co. refused to provide sanitary drinking water and sewage disposal, the miners went out on strike. Although the State Board of Health backed the miners' demands, the mining company, which has been in receivership since 1905, said it had no money to lay pipe-lines, clean up the sewage-filled ditches that line Force's muddy streets.

In Columbus, Ga., 40 Negro families proved a reluctant market for government-built low-rent housing. Uprooted last fall when the Federal Public Housing Authority started construction of a \$900,000 housing project, the families moved into a near-by lot and put up tents. Facing eviction as a health menace, the tent-dwellers refused accommodations in another housing project about 12 blocks away, hoping to gain admission to the housing built where their old



GEORGIA NEGRO FAMILIES displaced by government housing project (above) cling to their tent city, where they pay only \$3.50 per month for space.



shanties used to stand. The Wagner-Ellender bill now before Congress (see page 9) would avoid dilemmas like this by requiring local housing authorities to find quarters for all families displaced by low-rent and slum clearance projects.

MATERIALS

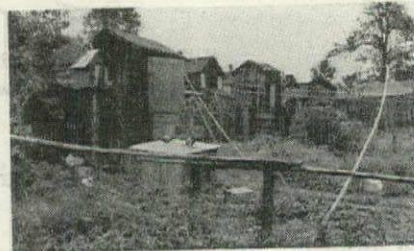
EQUIPMENT ROLLS

With lifting of all production controls, equipment manufacturers were in good shape for an immediate boost in production that will take them somewhere near prewar levels. Biggest lingering material shortage—sheet steel—vanished as military demand for steel plummeted 90 per cent. In the last quarter of this year, military needs will take only 4 per cent of the nation's steel supply as against 50 per cent in the second quarter. Shortage of tin for soldering may continue as a retarding factor, since large-scale supplies from the Far East cannot be expected for another full year.

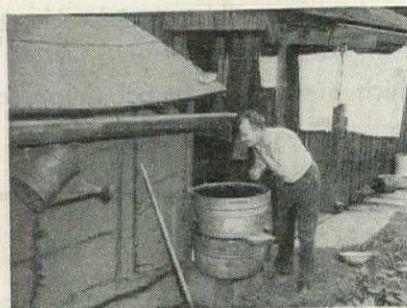
By the year's end, WPB estimated, 825,000 mechanical refrigerators, 550,000 washing machines and 135,000 electric ranges will have rolled off production lines. First war casualty, electric refrigerators were the first major reconversion token, coming off assembly lines several weeks before war's end. Vying with each other for a quick pick-up, the major appliance manufacturers stepped up production schedules.

General Electric said it would have ranges, water heaters, washers and rotary ironers in production by September. "To speed our output of electrical appliances," G-E said, "we have gone back to slightly modified 1942 models which do not require new machine tools, fixtures and facilities." G-E hopes to be on the market soon with the first model of a complete new line of home and farm

(Continued on page 20)



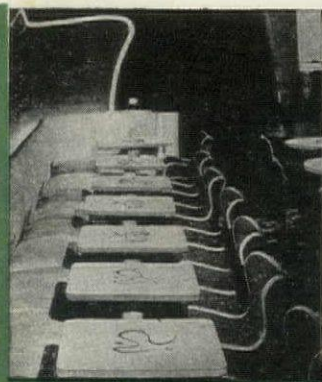
PENNSYLVANIA MINERS, whose houses lack even running water, wash in back yard. Outhouses contaminate gardens (above) and well drinking water.



AP Photo



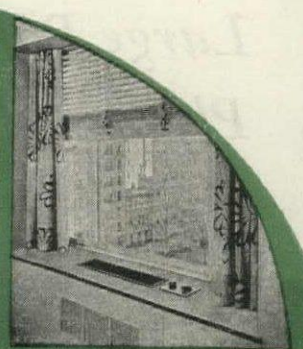
BATHROOM



COCKTAIL TABLE TOPS



BAR TOPS AND PANELING



WINDOW SILLS

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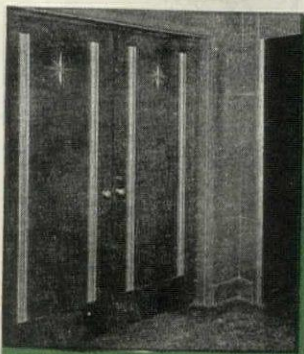
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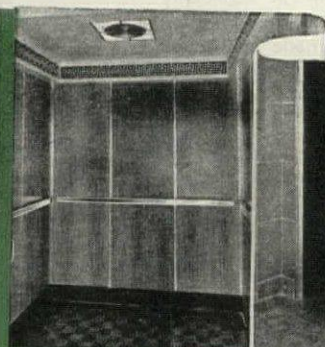
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- Public Telephone Booths
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- Coat Room Shelving
- Writing Table Tops
- Registry Desk Tops and Paneling
- Lobby Paneling
- Bathroom Walls
- Restaurant Table Tops
- Column Covering
- Plates about Elevator Buttons
- Bedroom Furniture Tops
- Window Sills



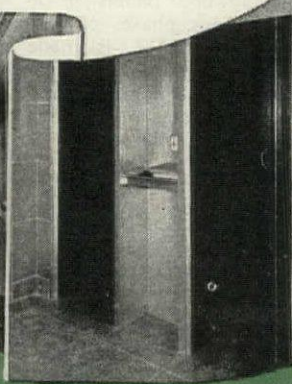
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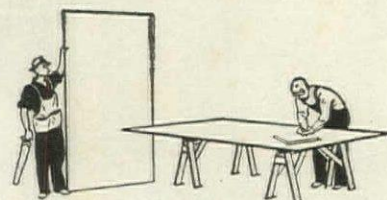


ELEVATOR INTERIORS

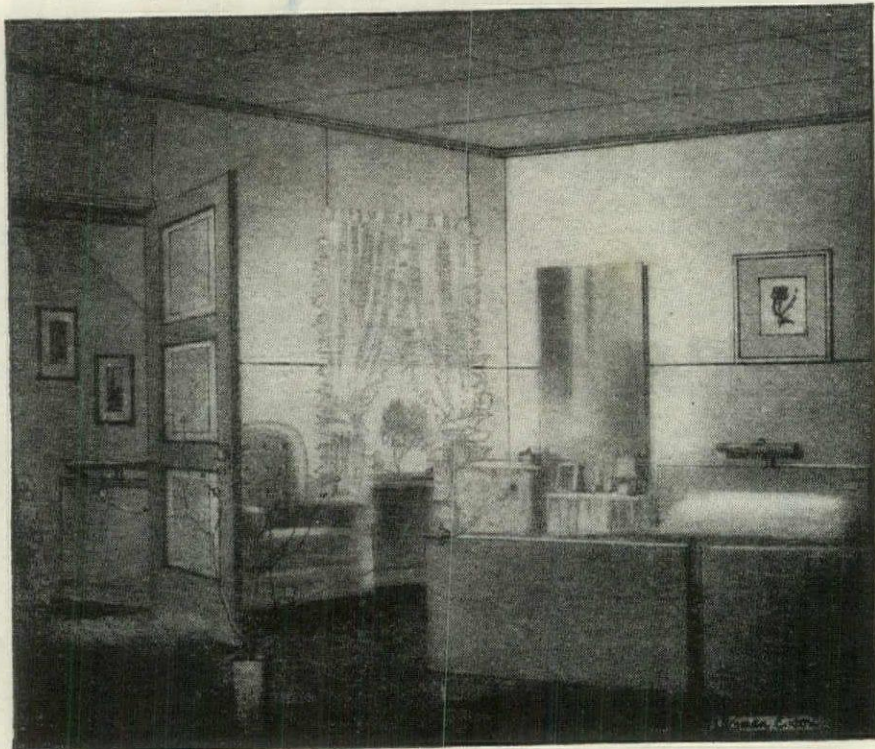


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Follow these Simple Suggestions in Planning Wall Designs with Large, Durable Plywood Panels!

No. 5 of a Series

Large, light, durable, kick-proof panels of Douglas fir plywood offer scores of possibilities for attractive and unusual wall designs. The bedroom illustrated above shows one architect's application of the suggested treatment detailed at the right. A two-panel treatment is used, with panels placed in horizontal arrangement.

IN PLANNING, WORK FROM THE OPENINGS:

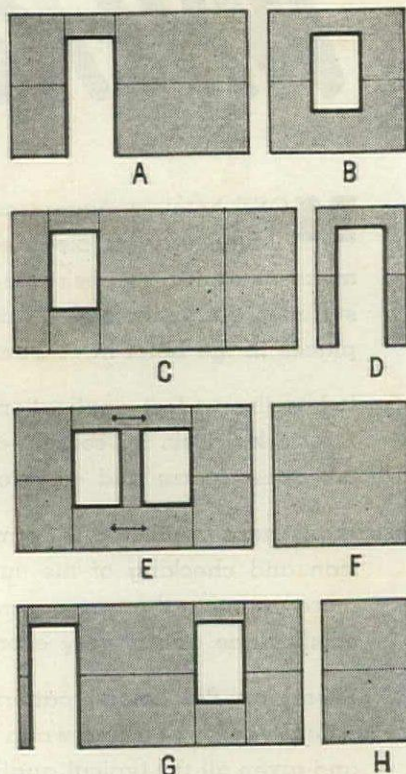
In planning a plywood wall treatment, start at the openings with vertical joints and divide the plain wall spaces in an orderly pattern for the most pleasing effect. Vertical joints should be used at each side of the top of doors and at top and bottom of windows, as in Figures A, C and G. If the width of the wall is 10 feet or less, however, panels may be run horizontally with openings cut out, as in Figures B and E.

SUGGESTIONS FOR SPECIAL PATTERNS:

Where special patterns or patterns made up of small panels are desired, the recommended method is to sheath with 5/16" or 3/8" Plyscord placed horizontally, then apply the finish panels (Plypanel or Plywall) as designed. For additional technical data, see Sweet's File for Architects or write the Douglas Fir Plywood Association.

There are three grades of Douglas fir plywood panels made especially for various phases of wall construction. **PLYWALL** is made especially for standard wallboard use; **PLYPANEL** is a premium panel used for quality interior work where both sides are to be exposed as in built-ins; **PLYSCORD** is a utility panel made for subflooring or sheathing walls and roofs, or for interior walls which are to be covered with sanded plywood, acoustical materials, tile or linoleum.

Simple Suggestions For An Attractive Wall Design With Plywood



CAN PLYWOOD BE SPECIFIED NOW FOR POSTWAR USES?

The increased capacity of the industry will make **MORE** Douglas fir plywood available for civilian consumption **THAN EVER BEFORE**, as soon as the needs of the armed services lessen or war restrictions are lifted. There will be no reconversion delays; the same types and grades of Douglas fir plywood that are now being made can flow immediately into peace-time building and construction.

DOUGLAS FIR PLYWOOD ASSOCIATION
Tacoma 2, Washington

In the past year

A QUARTER OF A MILLION PEOPLE

requested and received
this ELJER book



During the past year 250,000 people wrote in for a book of bathroom and kitchen ideas prepared by ELJER. The requests for it are still pouring in . . . and being filled.

This high degree of interest in ELJER vitreous china and enameled cast-iron plumbing fixtures, means clients of both architect and builder will recognize and prefer this quality ware.

Specifying ELJER and building with ELJER plumbing fixtures assure complete and lasting satisfaction. Write for information on the complete ELJER line.

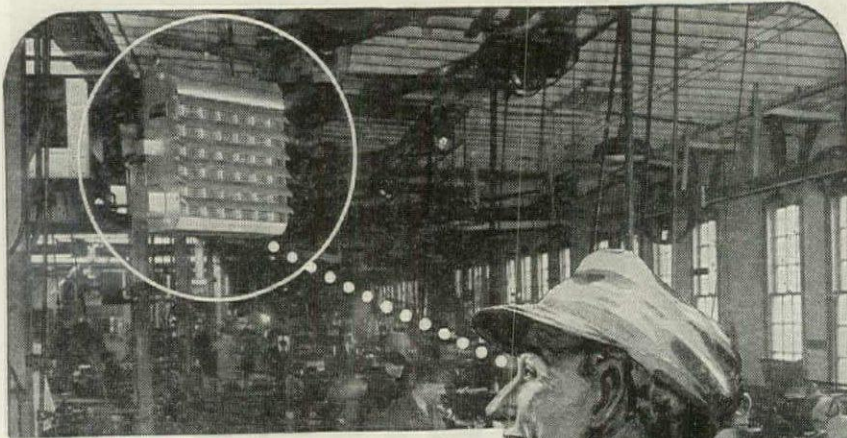
ELJER CO.

FORD CITY, PA. SALEM, OHIO LOS ANGELES, CAL.

SINCE 1907 MAKERS OF FINE PLUMBING FIXTURES

(Continued from page 16)

PREPARE FOR COLD WEATHER NOW with *Electric Unit Heaters*



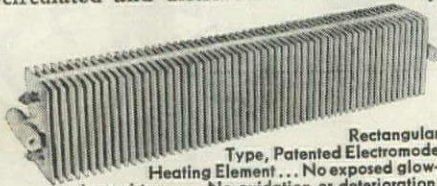
**IT ISN'T
TOO EARLY!**

Electromode illustrated above, in models 10 to 60 KW sizes, is for ceiling or wall suspension only. Smaller models, 1.5 to 7.5 KW sizes, may be suspended or used as portable Unit Heaters.

Now is the time to figure your cold weather heating requirements in order to be prepared when the need arises. Be ready to have heat-in-a-minute, anywhere, conveniently supplied by Electromode Electric Unit Heaters. Factory rooms, exposed areas, isolated buildings, watchman houses, hard-to-heat areas or departments—are but a few places where you can safely and easily install Electromodes.

Users have found that installation is as simple as hanging an electrical fixture, with no maintenance of piping and fittings. Electromodes furnish heat quickly, efficiently and economically, at any location where wires can be run, with no transmission heat losses en route to heater—no consumption whatever when not "ON". Electrical energy is converted 100 per cent into heat, and the warmed air is fan-circulated and distributed downward by adjustable deflectors.

Electromodes owe their great efficiency, long life, and freedom from fire or explosion hazard to the patented heating element. This is a one-piece, finned, aluminum encased heating element. Since the fins are an integral part of the casting, there are no dead air spaces to hinder efficient radiation. Because of this exclusive design and large convection surface, Electromodes have great B.T.U. output (from 5122 to 204,900) at a safe, low operating temperature. Electromode Unit Heaters are made in a wide range of standard capacities and all can be automatically controlled by thermostat if desired.



Rectangular Type, Patented Electromode Heating Element... No exposed glowing resistors... No oxidation or deterioration.

HOW TO ESTIMATE FOR PROPER SIZE ELECTROMODE

The "Watts Per Cu. Ft." method for roughly estimating the heat loss for rooms of average construction and from 0° F to 70° F.

DESCRIPTION	WATTS
1. Interior room, little or no outside exposure.....	1.25
2. Average room, moderate windows and doors.....	1.50 to 1.75
3. Rooms with severe exposure, great window, door space.....	2 to 4
4. Isolated rooms, cabins, watch houses, similar buildings.....	3 to 6

EXAMPLE FOR ROOM OF AVERAGE EXPOSURE
(Use factor 1.75)
12 x 13 x 10 = 1560 cu. ft.
1560 x 1.75 = 2730 watts (2.73 KW)
Use 3 KW Heater (Electromode AN-30)

EXAMPLE FOR ROOM WITH SEVERE EXPOSURE
(Use factor 4)
10 x 13 x 9 = 1170 cu. ft.
1170 x 4 = 4680 watts (4.68 KW)
Use 5 KW Heater (Electromode BN-50)

NOTE TO ARCHITECTS: War restrictions have been eased. Production of Bilt-In type Electromodes, for home heating, will soon be resumed. For complete dimensions and data, write today for Bulletin 45-U and Heating Survey Form. **ELECTROMODE CORPORATION**, Division of American Foundry Equipment Co., 442 South Byrkit Street, Mishawaka, Indiana.

ELECTROMODE *Electric Unit Heaters*



freezers—a 4 cu. ft., top-opening cabinet fitted with three wire baskets and powered by the standard refrigerator mechanisms.

Moving up rapidly in the air conditioning field, Westinghouse Electric acquired the oldest US manufacturer of air handling equipment B. F. Sturtevant Co., Boston. Founded in 1860 with the invention of an exhaust fan to draw off shavings in New England shoe factories, the Sturtevant Co. engineered the first industrial air conditioning system for a Boston chocolate manufacturer in 1906, also built the ventilating equipment for the United States Capitol and for the Holland tunnel.

Keeping one eye firmly fixed on the home appliance market, Westinghouse said it would bring out an improved \$100 dishwasher intended to take this product out of the luxury class and into almost everybody's kitchen. Redesign of racks will give the machine one-third more capacity than the Westinghouse prewar model.

NEW PRICE CEILINGS

How much building costs have soared above prewar levels is pretty much a matter of where you are building. In Atlanta, it costs a whopping 52 per cent more to build a house than it did in 1939. In New York, costs are up about 29 per cent. The Office of Price Administration dourly reminded that building cost added 30 per cent to their World War I increase after the Armistice.

While Washington debated whether price controls would be more of a help than a hindrance to building reconversion (see page 7), OPA moved to tighten its gangling network of price ceilings on building materials and services. First sign was the pilot lumber order scheduled to go into effect next month in Chicago. From now on, lumber offered in the Chicago market will be sold under dollar-and-cent ceiling prices. The new plan is no attempt to cut-back or increase prices. It is an attempt to set ceilings that will be easy to read, easy to enforce and uniform for all dealers in the same marketing area.

Under the old lumber price ceilings still effective everywhere else, most customers would have to hire a cost accountant to be sure they are buying within the legal price. This is because dealers use a complex formula to compute maximum prices, totaling up f.o.b. mill price, transportation charge, handling charge, and percentage mark-ups ranging from 30 to 50 per cent. Formulas like this have been used to compute ceiling prices for almost all building materials. Under

(Continued on page 24)

It's the Moth and the Flame

all over Again



SHEETROCK *Fireproof WALL and CEILING PANELS*

Many people play the game of the moth and the flame. When their house burns, they find out too late that it lacked fire protection. That is why progressive architects and builders constantly seek safer building materials.

One safer way to build is with Sheetrock* wall and ceiling panels. For Sheetrock is made of gypsum, a mineral which cannot burn. In actual fire conditions, it has proved its worth again and again, confining the flame till help could arrive.

Sheetrock rivals the beauty of any wall material. Smooth surfaces, sweeping curves, decorative paneled effects . . . all can easily be had with Sheetrock.

Or, if you want wood-grained effects, choose from Sheetrock's faithful reproductions of knotty pine, bleached mahogany and walnut. This versatility is the reason why Sheetrock has been chosen for more wallboard jobs than any other gypsum wallboard in the world.

*Reg. T. M.



United States Gypsum

For Building • For Industry

Gypsum • Lime • Steel • Insulation • Roofing • Paint



BEFORE



AFTER

APPLYING THE PRINCIPLE OF COLUMNAR STRENGTH

THIS is the case of a gutter that was lined with 16 oz. soft copper. The metal buckled and eventually fractured in many places because it did not have sufficient columnar strength to transfer the forces of expansion and contraction to the expansion joint. As a temporary expedient, roofing cement was smeared over the cracks.

To make a lasting repair, the cracks were properly sealed, and three stiffener members, made of 16 oz. cold rolled copper, were continuously soldered to the lining and the old expansion joints were revamped. This repaired gutter now has given a longer period of trouble-free service than did the original installation, and it is still in good condition.

Thus the principle of columnar strength once again proves its value. Revere has reduced this

principle to a matter of engineering design with the assurance of satisfactory performance. Details will be given in a new booklet now in preparation. Ask to have your name placed on our list to receive a complimentary copy. For aid on difficult problems, call on the Revere Technical Advisory Service, Architectural.

REVERE

COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

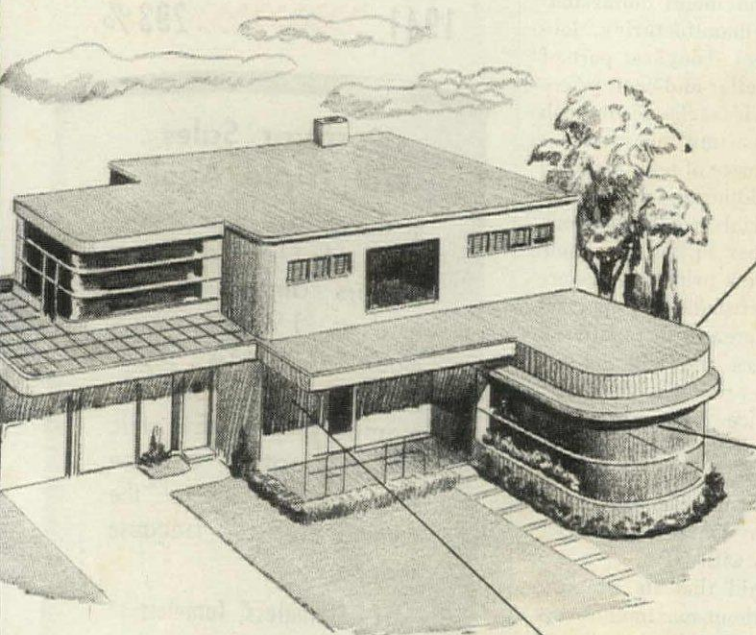
Executive Offices: 230 Park Ave., New York 17, N.Y.

Mills: Baltimore, Md.; Chicago, Ill.; Detroit, Mich.; New Bedford, Mass.; Rome, N. Y.—Sales Offices in principal cities.

Listen to the Human Adventure on the Mutual Network every Wednesday evening, 10 to 10:30 p. m., EWT

design for lasting appreciation with Dow plastics

the finishing touch

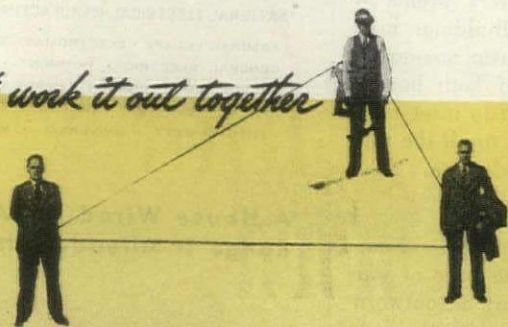


"START with the finishing touches," might be a cue to the proper use of plastics. These materials offer possibilities in design and decoration that may change your whole concept of a plan. Rainbow colors, modern patterns, new textures—all this means more than a dab of decoration. It means the finishing touch that is felt throughout the design and character of a building.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago
St. Louis • Houston • San Francisco • Los Angeles • Seattle

Let's work it out together



At Dow feel that the successful use of plastics in architecture is not one-man nor even a one-industry job. It calls for the combined skill and experience of architect plus fabricator plus raw materials producer. Working together, this team saves time and money and puts plastics to work successfully. Call us—we'll do our part.

ETHOCEL

Tough trimming material that absorbs hard knocks—takes rough handling. It's available in many attractive colors—transparent or translucent. Ethocel trim lends color and protection to corners, tables, and drainboards.



SARAN

Resistance to corrosion has won definite popular favor for screen made from Saran. Saran simply can't rust. There's no stain to mar painted areas. Colorful Saran fabrics also offer possibilities for interior decoration in built-in units.



STYRON

Low priced plastic available in beautiful colors—clear, opaque or translucent. Styron is light in weight, yet dimensionally stable. Beautifully adaptable to modern designs in lighting fixtures and similar applications.



PLASTICS

STYRON • STYRALOY • ETHOCEL • ETHOCEL SHEETING
SARAN • SARAN FILM • STRIPCOAT

(Continued from page 20)

A NEW AIRPORT

IS ALWAYS VITALLY INTERESTED IN ITS RUNWAYS for this is acknowledged to be of great importance.

Expert Engineers always work for a smooth continuous and unbroken surface as an assurance of safety.

Servicised Para-Plastic

And SMOOTH SAFE EXPANSION JOINTS are inseparably related!

This strong, elastic, waterproof sealing compound makes smooth and continuous structural units out of the separate concrete slabs in

AIRPORT RUNWAYS,
CONCRETE ROADS
AND HIGHWAYS.

Servicised PREMOLDED EXPANSION & CONTRACTION JOINTS

FELT-SIDED ASPHALT JOINT,
STANDARD CORK JOINT,
FIBER EXPANSION JOINT.

Other forms to meet various needs such as the new Servicised—

PREFORMED Para-Plastic "ADHESIVE STRIP" for VERTICAL JOINTS in TUNNELS, SUBWAYS & RETAINING WALLS.



Send information on Expansion Joints for Airports Highways Tunnels or Subways

Name

Street

City

SERVICISED PRODUCTS CORP.

6051 W. 65th St.

Chicago 38, Ill.

the new plan, dollar-and-cent ceilings, like grocery store prices, will be established for most commonly sold items, and any customer can check them by looking at a posted price list.

Up to OPA's field offices is the gargantuan job of bringing almost all building materials and many building services under similar dollar-and-cent price ceilings. Plumbing and heating equipment and hardware will probably be ticketed with maximum dollar-and-cent prices at the manufacturing, jobbing, and retail level. Toughest part of the job is fixing dollar-and-cent prices on contractors' services. To accomplish this, OPA aims for a unit measurement that will lump the price of both material and service. Thus, dollar-and-cent prices for installed materials would be computed at so much per sq. yd., per thousand bd. ft., etc. Such price ceilings are expected to be particularly important in checking cost increases in repair and maintenance services and will get top priority in OPA's repricing drive. Where dollar-and-cent price ceilings on services are not feasible (as in the case of the over-all service rendered by the housebuilder), a flat margin will be set, and contractors may be required to register their margins with OPA.

OPA frankly said that its program could not work without maximum cooperation from the building industry. Many producers wondered if it would work at all. One large manufacturer reported that he was obliged to turn down an order for 2,700 doors for a Hawaiian hospital, because present price ceilings are below production cost. Others pointed to the disappearance of low-end items from the price-controlled market. Example: recent shut-down in production of gypsum lathe because manufacturers found it more profitable to make and sell gypsum board. OPA said that incentive price increases for low-end items had already been granted, promised more. Volume production, OPA added, should more than up manufacturers' profits to 1942 levels. But many Buildings men argued hotly that the basic answer to inflation is production of both houses and materials big enough to meet market demand—and an end to all the war controls that impede production.

CODE PROGRESS

Spearheaded by over-riding federal emergency specifications, the pace of war building cut through many an outworn local building code. But with the federal government's exit as No. 1 customer, Building can no longer by-pass ob-

(Continued on page 28)

PREWAR SALES point the trend

1935	▶▶▶	100%
1938	▶▶▶▶	142%
1941	▶▶▶▶▶▶▶▶	293%

Postwar Sales Will Triple Again

In the 6 pre-war years, sales of Electric Water Heaters almost tripled. And a 1944 survey made for NEMA* shows that three times as many women want Electric Water Heaters as now have them! They're "the coming thing," because they're:

SAFE—Flameless, fumeless

CLEAN—Smokeless, sootless

ADAPTABLE—Permits short hot water lines—Requires 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

ADMIRAL • CLARK • ELECTROMASTER • FRIGIDAIRE • GENERAL ELECTRIC • HOTPOINT • HOTSTREAM • KELVINATOR • MONARCH • NORGE • PEMCO • REX • RHEEM • SELECTRIC • SMITHWAY • THERMOGRAY • THERMO-WATT • UNIVERSAL • WESTINGHOUSE

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

Electric WATER HEATER!



All signs point in the Same Direction!

Wire Your Homes For Electric Ranges; Survey After Survey Shows That's What Women Want!

THERE'S no doubt about it, women prefer the convenience, cleanliness, dependability and economy of *modern* electric cooking. And *you* can cash in on this preference by wiring your homes for Electric Ranges. Here's proof of the overwhelming trend toward electric cooking.

- 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.
- HOUSEHOLD MAGAZINE survey indicates that 3 times as many women want Electric Ranges as now have them.
- SUCCESSFUL FARMING survey shows that nearly twice as many REA consumers will own an Electric Range *after first two postwar years* as now have one.
- COUNTRY GENTLEMAN survey shows that among the upper two-thirds of white farmers, the Electric Range is the 2-to-1 choice!

And prewar sales figures further emphasize the trend: between 1933 and 1941, sales of Electric Ranges increased over 900%!

Cash in on this growing demand. Wire your postwar homes for Electric Ranges. Built-in, the cost of such wiring is negligible—the selling power tremendous.

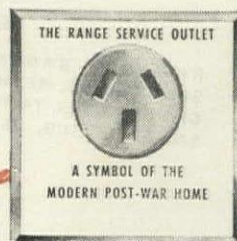
Electric Range Section
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION



A-B STOVES • ADMIRAL • ELECTROMASTER • ESTATE HEATROLA • FRIGIDAIRE • GENERAL ELECTRIC • GIBSON • HOTPOINT
• KELVINATOR • MONARCH • NORGE • QUALITY • UNIVERSAL • WESTINGHOUSE

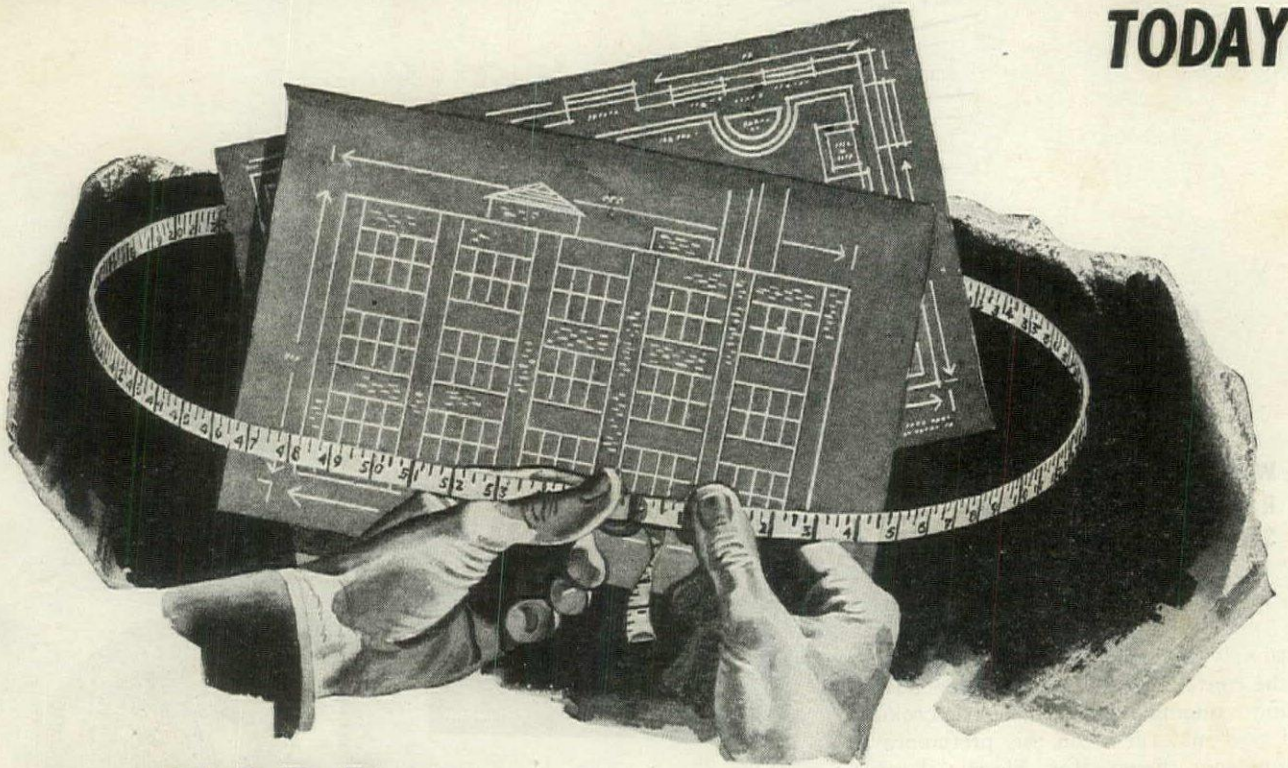
FOR EASIER SALES

Wire your houses
FOR ELECTRIC RANGES



REDUCE THAT POWER "WASTE-LINE"

TODAY!



WITH TODD—THE BURNER OF TOMORROW!

Buildings now taking shape on your drawing boards are more than physical structures—they are economic units as well. To combat tomorrow's competition, every last element must be planned with an eye to low cost efficiency.

Combustion equipment that wastes power or heat potential must be guarded against. As an excessive waistline is detrimental to the working efficiency of the individual—a burner with an expensive fuel appetite harms the operating efficiency of the plant set-up.

When you specify modern Todd automatic oil

or gas burners for commercial, industrial or institutional buildings, you lay a solid foundation for power economy.

Todd Burners streamline the power budget by whittling down steam production costs up to 10% or more, stepping up power capacity, and reducing maintenance costs.

Before selecting burners for your new or remodeled buildings, consult Todd.

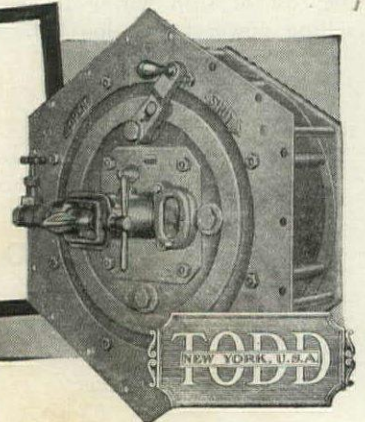
Wise in the ways of liquid and gaseous combustion, a Todd engineer will be glad to show you how to trim that power "waste-line".



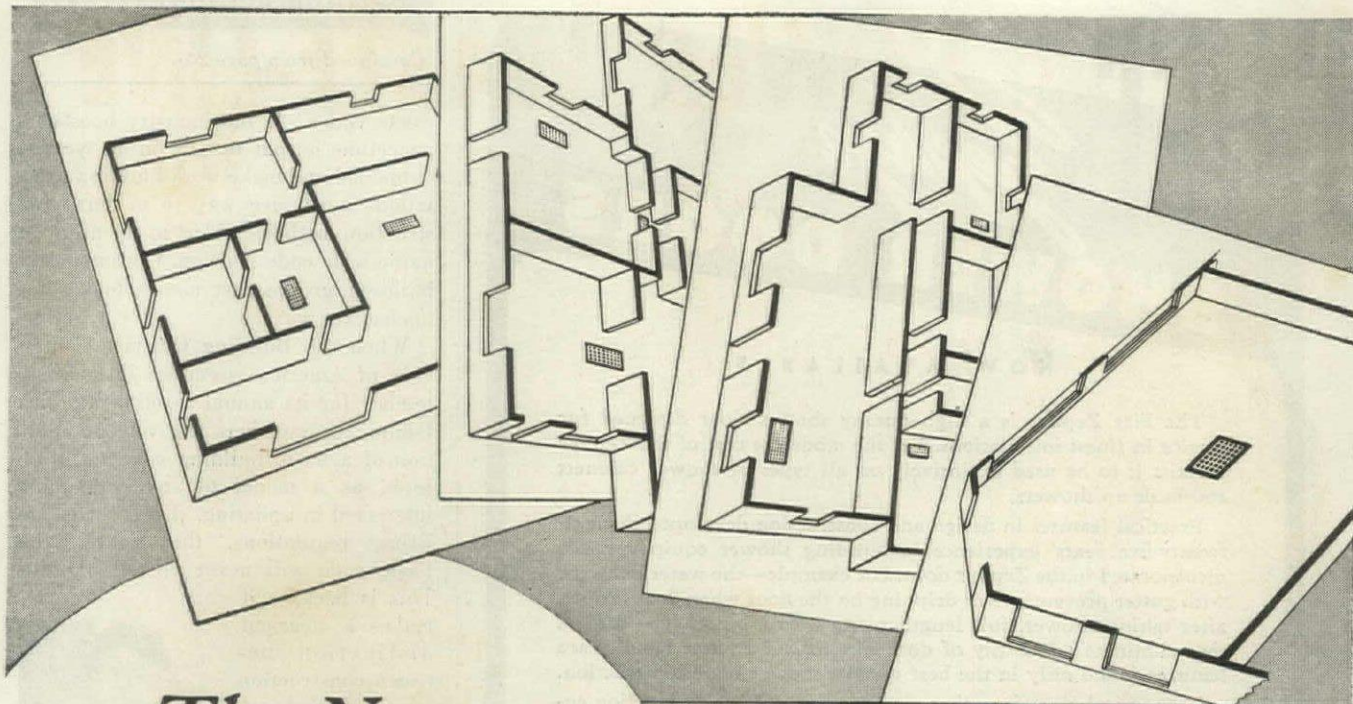
COMBUSTION EQUIPMENT DIVISION TODD SHIPYARDS CORPORATION

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SO. PORTLAND, ME., BOSTON, SPRINGFIELD, MASS., BALTIMORE, WASHINGTON, CHICAGO,
GRAND RAPIDS, TAMPA, GALVESTON, HOUSTON, MOBILE, NEW ORLEANS, LOS ANGELES,
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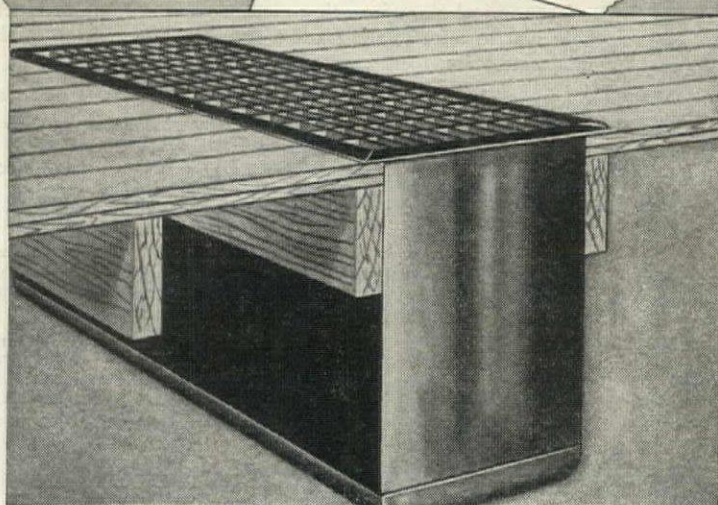
The New

TEMCO

Gas Floor Furnaces

Solve Heating Problems

in homes... stores... offices



AFTER THE WAR, you'll be able to offer your clients economical, *automatic* gas heat in any of your structures, whether it has or has not a basement.

This new heating plant—about half the size of a refrigerator—is the TEMCO Gas FLOOR FURNACE.

Suspended just beneath the floor, nothing shows but a decorative metal grill. No need for excavation or for large furnaces to burn coal, wood or gas.

The TEMCO Gas FLOOR FURNACE, re-engineered to include new features developed in wartime experimentation, is among the first to gain American Gas Association

approval, under their new and stricter specifications. The TEMCO FLOOR FURNACE burns all fuel gases with equal efficiency and economy. Its control is fully automatic, and its safety devices assure 100% protection under all circumstances.

SEND FOR COMPLETE DESCRIPTION, SPECIFICATIONS

For architects and builders we have prepared complete technical information on TEMCO Gas FLOOR FURNACES . . . including a set of perspective drawings, showing the most effective location of TEMCO FLOOR FURNACES in a number of typical layouts.

Write for your copy today.



FOUR  AWARDS

TENNESSEE ENAMEL MFG. CO.
Nashville, Tenn.

(Continued from page 24)

FIAT Zephyr SHOWER DOORS

NOW AVAILABLE

The Fiat Zephyr is a high quality shower door designed for service in finest installations. Yet the moderate cost of the Zephyr permits it to be used extensively on all types of shower cabinets and built up showers.

Practical features in design and construction developed through twenty-five years' experience in building shower equipment are incorporated in the Zephyr door. For example—the water deflector with gutter prevents water dripping on the floor when door is open after taking shower, full length piano hinge, bullet type catches that eliminate possibility of door binding, and offset handles are features found only in the best type of shower door construction.

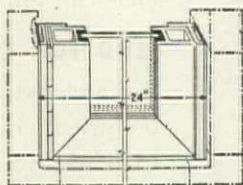
Economical manufacturing methods and volume production enable Fiat to offer to the trade a shower door of high quality at a moderate price.

CONSTRUCTION FEATURES

- Frame:** One-piece heavy aluminum alloy.
- Jamb:** Heavy aluminum alloy.
- Hinge:** Specially constructed, continuous aluminum piano hinge.
- Lock:** Two bullet catches, prevent door binding.
- Glass:** Clear glass, set into a heavy rubber "U" channel.
- Handles:** Special offset design on both sides of door.
- Water Deflector:** Made of heavy aluminum alloy with gutter to prevent water from dripping on the floor when the door is opened after taking shower.
- Grille Vent:** Horizontal aluminum bar.
- Finish:** Satin "Alumilite."

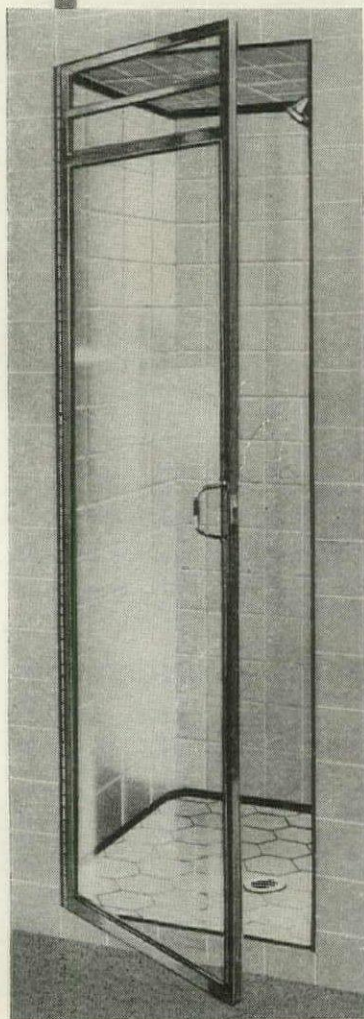
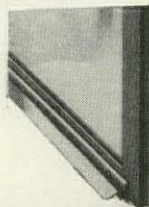
STANDARD SIZE

- The standard size (24" x 72") door is built to fit an exact opening 24 inches wide by 72 inches high. All other opening sizes require a specially built door. When ordering a door, state the size of the opening, model, hinging (either right or left when facing), and whether for tile, structural glass, marble or FIAT shower cabinet.



CONSTRUCTION DETAILS

The water deflector with gutter prevents water dripping on the floor when door is opened.



FIAT METAL MANUFACTURING COMPANY

1205 Roscoe St., Chicago 13, Illinois
21-45 Borden Ave., Long Island City 1, New York
32 S. Gabriel Blvd., Pasadena 8, California

solete codes. If the industry boosts its peacetime output to \$15 billion yearly, outmoded and make-work building regulations must give way to modern construction methods. Alert to the need for nationwide code revision, two important building groups last month took steps to clear the way.

When the Building Officials Conference of America assembles in mid-September for its annual meeting at Rock Island, Ill., members will vote on adoption of a basic building code to be offered as a model to any community interested in updating. Unlike most existing regulations, the Conference's basic code will never be out of date.

This is because it makes a clear-cut distinction between construction standards and construction methods. Like codes recently adopted in New York, Pittsburgh, Cincinnati and Boston, the Conference plan calls for: 1) a basic code setting performance standards intended to protect life, health and property and 2) a weekly supplement reporting in detail on all new materials, equipments, and techniques which have been approved as meeting these standards. Such a service, offered free-of-charge to all Conference membership, would remove one big reason why building regulations soon turn into technological handcuffs. Few cities can afford either the personnel or equipment to test new construction methods, and many a building invention has knocked vainly at a busy building inspector's door.

In addition to this basic all-round code, the Conference hopes to offer a simplified code meeting the needs of towns of 3,500 or less. The small-town code will drop complex sections dealing with elevators, escalators, tall scaffolds, handling of crowds, etc., cover only construction problems likely to occur in a small community. Both codes are the result of nation-wide studies conducted by the Conference's basic building code committee, headed by Albert H. Baum, St. Louis building commissioner.

Another step ahead came from the American Standards Association, which was winding up six years of work on what soon may be the American Standard Plumbing Code. Expected to replace hundreds of conflicting plumbing codes now in use, the standardized and

(Continued on page 32)



CHAIRMAN BAUM

AVAILABLE WITHOUT PRIORITY !



Only ILG Unit Heaters Have Self-Cooled
Motors That Never "Slow-Roast"

Now you can specify ILG Unit Heaters for *all* types of applications! These quiet, powerful, efficient, money-saving units have stood up under the grind of continuous 3-shift operation in war plants—are now ready to heat the "Vital Zone" wherever people work, shop or play. Popular sizes of horizontal, vertical or low ceiling types for steam or hot water now in production, also electric units. All backed

by "ONE-NAME-PLATE" Guarantee. Write us or phone nearby Branch Office (consult classified directory) for latest specifications.



UNIT HEATERS AND VENTILATION

WRITE OR PHONE
FOR CATALOG

Find out how ILG
Unit Heaters save
eight ways on fuel,
floor space, power.



WANTED: GRADUATE ENGINEERS!

for ILG Branch Offices, Research, and Engineering Departments. Exceptional opportunities now and past-war for graduates of accredited technical schools. Send details on education, experience, health, age, and marital status.

ILG ELECTRIC VENTILATING CO., 2899 N. Crawford Ave., Chicago 41, Ill.
Offices in 40 Principal Cities

“INSULITE
is a ‘closed specification’
with me! . . .



says Hugh T. Millar of Detroit, Michigan



Residence designed by Mr. Millar—built with the Insulite Wall of Protection.

MR. MILLAR, prominent architect of Detroit, usually specifies the Approved Insulite Wall of Protection.

“Every architect should sell his client the fact that the architect is working only for the client’s good and insist that specifications be carried out to the last detail,” Mr. Hugh Millar, prominent Detroit architect says. “I always insist on that.

“I invariably specify the Approved Insulite Wall of Protection and have designed countless homes with it. Any development in construction that takes away the grief of plaster cracks and paint failures is a welcome advance—that’s part of the reason why I invariably specify Insulite.”

We shall be happy to send you complete technical data for your files on the Approved Insulite Wall of Protection. The coupon will bring it by return mail.

DOUBLE INSULATION plus VAPOR CONTROL

That’s What the Approved Insulite Wall of Protection Gives You



• On outer-walls, Insulite Bildrite Sheathing builds a wind-proofed, weather-tight wall of high insulation efficiency, superior bracing strength, a wall free from open cracks and knot-holes.

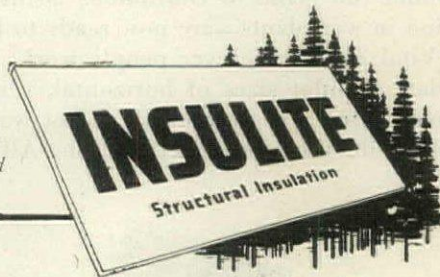


• On inner-walls, Insulite Sealed Lok-Joint Lath builds a second wall of insulation, a rigid plastering surface. Lath marks are eliminated, plaster cracks reduced to a minimum.



• Lok-Joint Lath, with asphalt barrier against the studs, retards vapor travel. Bildrite Sheathing, being permeable to vapor, permits what vapor escapes the barrier to pass toward the outside.

Made Exclusively From Wood



INSULITE, Dept. AF95, Minneapolis 2, Minn.

Please send me your free booklet, “Scientific Facts.”



Name

Address

City State

A Future Design!

The accumulation of new technical data, along with the great developments in the aluminum and magnesium fields, promise many new things for a post-war world. Among these is the building on a quantity production basis of motor launches in beautiful, intriguing and useful designs. Light alloys provide both sales appeal and great operating economy. If your product uses—or can use—aluminum or magnesium, the Bohn organization would be glad to discuss their many advantages with you.

BOHN ALUMINUM & BRASS CORPORATION

GENERAL OFFICES—LAFAYETTE BLDG. • DETROIT 26, MICH.

Designers and Fabricators

ALUMINUM • MAGNESIUM • BRASS • AIRCRAFT-TYPE BEARINGS



BOHN



(Continued from page 28)



[NUMBER THREE OF A SERIES]

Standards of Merchandising

TO CREATE new and profitable markets for Electric Door Chimes, Rittenhouse has been developing new sales ideas built upon tried standards of merchandising, for its radically new door chimes soon to be announced.

► In association with one of the country's leading marketing research organizations, Rittenhouse devoted several months to procuring practical, up-to-the-minute sales facts for future merchandising plans. This Rittenhouse-sponsored, coast-to-coast survey among wholesalers, dealers and consumers will enable Rittenhouse to provide an array of powerful, hard-hitting, sales promotion factors designed to make Rittenhouse Chimes the fastest-selling, profit line in the country.

Rittenhouse Promotion and Merchandising Plans Include:

1. A clearly defined sales procedure for distributors and dealers based upon facts obtained from its national surveys.
2. Famous Norman Bel Geddes chime designs combined with new chime mechanisms never before available.
3. Unexcelled tone richness, in models to meet every consumer budget.
4. Artistic and compelling Chime Display Boards that will stop prospects on sight. *New in construction—new in display beauty and appeal—new in demonstration effectiveness.*
5. Expertly created full-color Window and Counter Displays.
6. Illustrated, color Dealer-Consumer Literature.
7. The largest national magazine and Sunday newspaper magazine advertising support ever put behind the sales promotion of door chimes. And it's *double-barrelled in action!* Big-circulation Sunday Newspaper Magazines for immediate sales volume in heavily populated centers—plus an imposing group of top-ranking National Magazines to tell the story of Rittenhouse superiority to millions—wherever they live.

► These are just a few of the reasons why it will pay the far-sighted wholesaler and retailer to *Plan Profitably with Rittenhouse.*

Rittenhouse

Tomorrow's Better Door Chimes

THE A. E. RITTENHOUSE COMPANY, INC., HONEOYE FALLS, N. Y.

simplified code will be submitted for the approval of ASA's Standard Council at its September meeting. Preparation of the model code was sponsored by the American Public Health Association and the American Society of Mechanical Engineers, who organized a study committee representing engineers and licensed plumbers, plumbing manufacturers, federal, state and municipal enforcement officials and the general public.

LABOR

APPRENTICE SHORTAGE

Listening for the flash that meant war's end, many a battle-weary soldier last month also heard some advice from the War Manpower Commission about what to do next. From high-powered short wave stations in New York and San Francisco, WMC beamed a boost for apprenticeship training. Relayed through 450 outlets of the Armed Forces Radio Service, WMC's message said:

"Apprenticeship is the only recognized way to learn a skilled trade . . . To be a true craftsman, to be able to perform all the work of a craft, is one of the best guarantees a man can have of reasonably continuous employment. Thoroughly trained men are the workers the employers want."

Through the GI Bill of Rights, WMC reminded, a serviceman can expect to get a federal subsidy that will supplement his apprenticeship earnings in trades where the apprentice scale does not amount to a living wage.

First to set up an apprentice program especially planned to meet the needs of veterans, the Carpenters and Joiners District Council in Rochester, N. Y. looked forward to an enrollment of more than 200, including 45 apprentices whose training was interrupted by the war. Combining practical job experience with classroom instruction offered through the public school system, the program calls for four years of study leading to full status as journeymen carpenters.

WMC warned that there are not enough skilled workers for expected building needs. The WMC committee on construction apprenticeship said: "In 1940 there were 2,016,435 craftsmen and 25,269 apprentices in the construction industry. To maintain this number of craftsmen, we must train not 25,000 or 30,000, but at least two or three times that number of apprentices so that 40,000 will complete their training each year and take their places in the trades as all-round skilled workers."

Now... **RUSCO** All-Metal "Lifetime" Venetian Awnings



End Awning Trouble Forever *Permanent! Fireproof! Troublefree!*

THE DIFFERENCE in *permanence* between all-metal and cloth is only *one* of the differences between RUSCO Metal Awnings and conventional canvas! Efficient, modern RUSCO Awnings are permanently installed for *year-round* service, protection and building improvement! They eliminate the big seasonal maintenance jobs of repairing, putting up, taking down and storing awnings!

RUSCO Venetian Awnings combine *all* the *best* features and advantages of canvas awnings and regulation Venetian blinds—with none of the disadvantages! They give year-round sun protection with full ventilation, visibility and light control! They substantially reduce operating cost of summer air-conditioning systems! Their fire-proof feature alone

recommends them as first choice for hospitals, hotels, institutions and industries! In addition they are adjustable to any desired degree of light or shade protection—these awnings permit you to take full advantage of daylight and afford visibility at all times. Adaptable to all types of windows and doors—they harmonize with any style of architecture.

Made of rust-resisting galvanized and Bonderized steel, RUSCO Awnings are finished with two coats of finest baked-on enamel in many popular colors. Plan now to protect and increase the value and safety of your properties with RUSCO All-Metal Awnings! For name of nearest distributor, write F. C. Russell Company, 1836-AF, Euclid Avenue, Cleveland, Ohio.

RUSCO Venetian Awnings, over a continuous glazed area, not only insure a year-round comfort within, but provide ideal light control in winter as well as summer.



This typical interior view illustrates the pleasing appearance of Rusco Venetian Awnings. Note that the use of drapes and other interior decorations are not affected.



A simple crank operator, neat in appearance, permits easy adjustment from the inside—to any degree of shade or light. From full visibility to effective shade in a few seconds!

RUSCO All-Metal Venetian Awnings

Product of THE F. C. RUSSELL COMPANY, 1836-AF Euclid Ave., Cleveland, Ohio

IN THE MODERN SCHOOL

Every room
should be flexible

... TO MEET
EVER-CHANGING
EDUCATIONAL NEEDS

That's the great new advantage of
Johns-Manville Unit Construction
for Schools . . . durable, attractive,
easily rearranged



THINK OF IT! . . . the entire interior of a school *completely flexible*, yet having all the qualities of permanent and solid construction!

Think what that means in terms of economy alone . . . when you want to expand or subdivide units, or convert a building from academic to vocational, or from grade school to junior high!

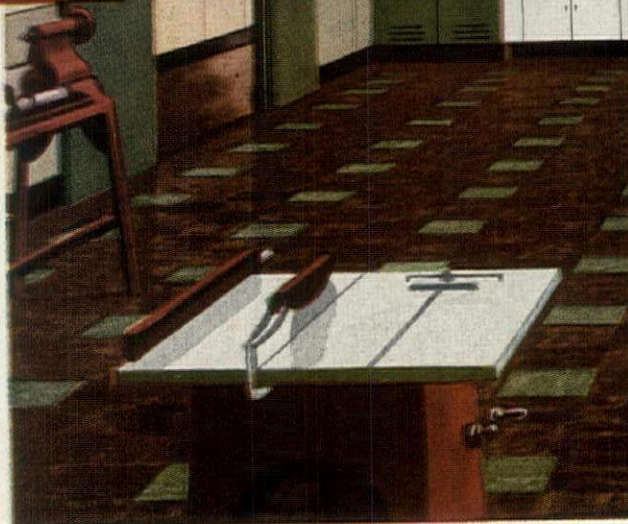
Three Johns-Manville materials make this revolutionary development possible . . . permit *Unit Construction* of walls, ceilings, and floors under a single specification, a single manufacturer's responsibility:

1. **Movable Walls** . . . 100% salvageable. Made of Transite sheets—difficult to mar, highly resistant to shock and abuse.
2. **Acoustical Ceilings** . . . reduce distracting noise, increase classroom efficiency. Demountable units can be taken down and relocated as desired.
3. **Colorful, Resilient Floors** . . . quiet to walk on; easy to clean; stand up under heavy traffic. Small units permit easy extension of the floor to meet changing conditions.

Through the flexibility of those three elements, school rooms can be altered or rearranged at will to keep pace with community growth or educational progress.

The constituent parts of Johns-Manville Unit Construction are built to last as an integral part of the structure. They're hard-to-mar . . . shock-proof . . . economical to maintain. And their modern attractiveness inspires genuine pride on the part of students, teachers, and parents.

Before planning a new school or converting an old one, write for the complete details of this important step forward in school design. Johns-Manville, 22 East 40th Street, New York 16, N. Y.



J-M Walls, Ceilings, and Floors

1 MOVABLE WALLS—The keystone of flexibility in Unit Construction is the J-M Transite Wall. It can be disassembled and relocated as educational needs require. One-unit rooms, for instance, can be speedily converted into two-unit rooms, or vice versa. Made of fireproof asbestos and cement, practically indestructible materials, the movable panels are used to form rigid, double-faced partitions, 4" thick. They can also be used to finish the interior of the outside walls as well. The Transite base is easily removable for access to wiring, etc.

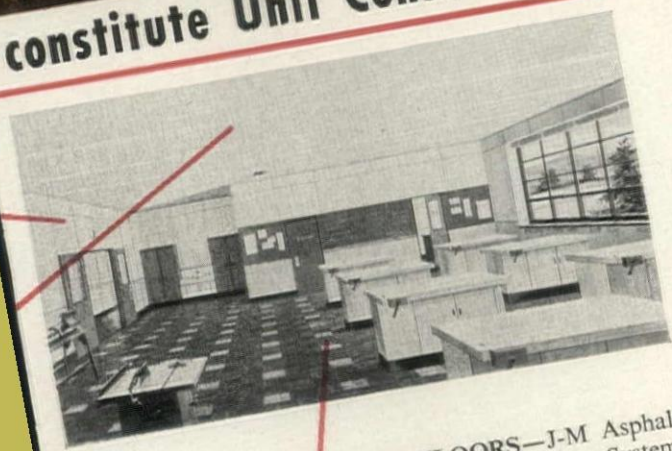


2 ACOUSTICAL CEILINGS—Important factor in helping to overcome the handicap of distracting noise, Johns-Manville Acoustical Ceilings are beneficial both to teacher and student alike. They give the desired degree of quiet for effective teaching, eliminate frequent causes of nervousness, and are proved aids to concentration. An exclusive Johns-Manville patented construction system permits interchangeability of flush-type fluorescent lighting and acoustical ceiling units, which are readily demountable.





constitute Unit Construction



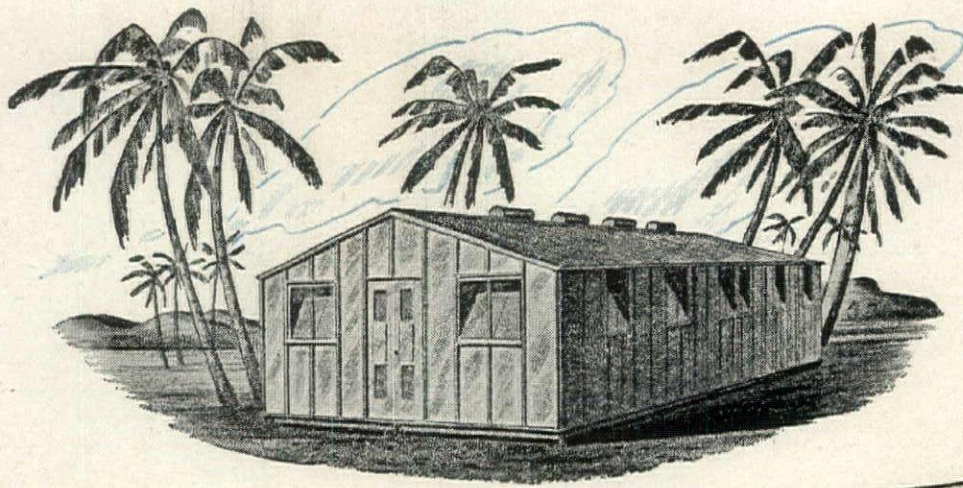
3 COLORFUL, RESILIENT FLOORS—J-M Asphalt Tile Flooring completes the Unit Construction System. Made of asbestos and asphalt, the units will withstand the kind of hard wear and abuse that must be expected in any school building. Not only durable, J-M Asphalt Tile Floors are pleasantly comfortable and quiet underfoot, thereby reducing the disturbing effects of noisy footsteps in corridors, gymnasiums, etc. Individual units permit easy alterations or extension of patterns. Made in a wide variety of plain and marbled colors.



Incredible as it may seem, this beautiful and solidly-built Vocational Room can easily be expanded, subdivided, or converted to an ordinary classroom—thanks to the flexibility of Johns-Manville Unit Construction. Note the projection-free lines of the movable, hard-to-maintain Transite. And note the Acoustical Ceiling (with fluorescent lighting), which down noise and reverberations that would otherwise distract students and teachers in other rooms. The colorful floor is Asphalt Tile, easily and highly resistant to scuffing, yet resilient underfoot.

**Johns-Manville
Unit Construction
for Schools**

WALLS • CEILINGS • FLOORS
combining permanence with flexibility



44 MILLION POUNDS OF ALCOA ALUMINUM FOR PACIFIC BASES!!

Government Using Aluminum Sheet for Portable Buildings

nd the ... he laid ... Under ... circu
 own the law about ... for ... would be fo ... not
 assure this ... the ... self of the advice
 w you're boxe ... in, faced with ... the ... Yao
 arna' ve of a s ... yo, r ... has been ...
 "por ... me, or a pa ...
 ttage stry with ...

Orders have been placed for 44 million pounds of Alcoa Aluminum sheet for roofing and siding on various military buildings in the Pacific area. Alcoa is supplying this sheet to a number of manufacturers making squad shelters, portable barracks and warehouses.

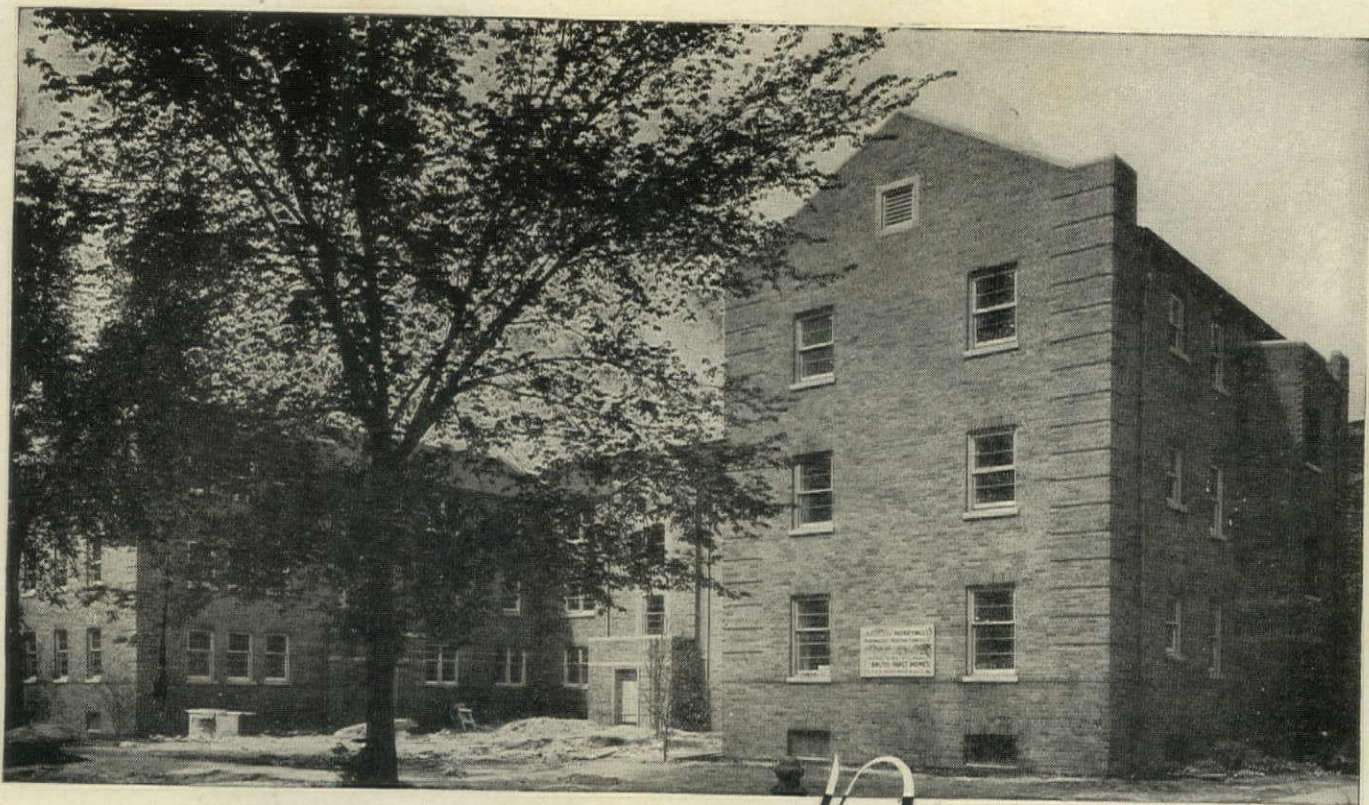
Because of its light weight, workability, resistance to corrosion, and the fact that it requires no painting, Alcoa Aluminum sheet offers great advantages for industrial, residential and farm buildings.

ALUMINUM COMPANY OF AMERICA,
2166 Gulf Building, Pittsburgh 19, Pa.

ALCOA FIRST IN ALUMINUM



Reg. U.S. Pat. Off.



HONEYWELL *Personalized* HEATING CONTROLS

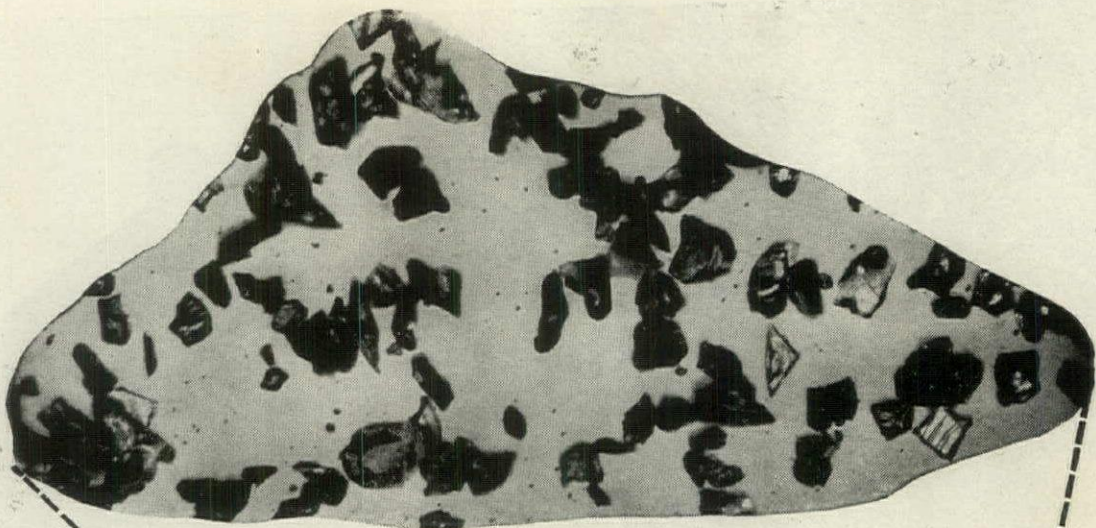
Chosen for
NEW BERWYN APARTMENT

Tenants of the new Bonie-Marie Apartments, now being completed at Berwyn, Illinois, will enjoy the comfort and advantages of Honeywell Personalized Heating Control. An F. H. A. project, this building has 21 three and four room apartments. Each apartment has its own pneumatic thermostat controlling radiator valves so that tenants can regulate temperature to suit their individual needs. Different temperatures can be obtained in each separate apartment, and overheating with waste of fuel will be eliminated. Honeywell Per-

sonalized Heating Control is available for every apartment building, old or new, large or small. Its cost is surprisingly low. If you are not familiar with Honeywell Personalized Heating Control write for complete information or call our branch in or near your city.

Owner of the Bonie-Marie Apartments is Walter S. Baltis, of Baltis Built Homes. Architect is Carl J. Kastrup and the heating contractor is Edw. F. Tupa. Minneapolis-Honeywell Regulator Co., 2740 Fourth Avenue South, Minneapolis 8, Minnesota.

MINNEAPOLIS
Honeywell
CONTROL SYSTEMS



did you ever see **DIRT** before?



THIS is what it looks like, magnified 100 times. Sharp flint-like, often germ-laden.

Unfortunately, your products, machinery, merchandise or even customers and workers find dirt harmful—and without the help of a microscope.

Wherever people, machinery, materials and processes are exposed to air, they are subject to the effects of air-borne dirt—infection, abrasion, contamination and the like.

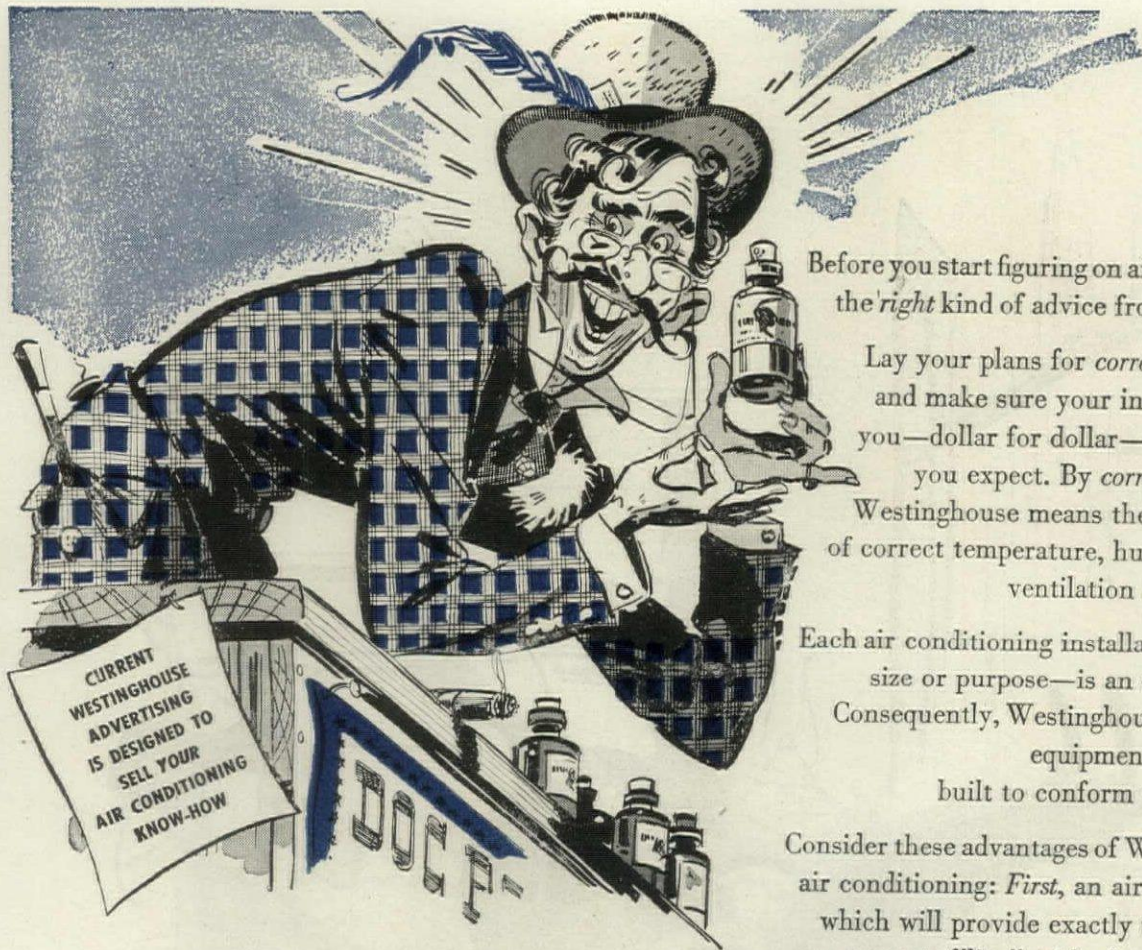
Separating dirt from air is the job on which Air-Maze has specialized for nearly 20 years. Take advantage of this experience. Send your problems to us, or consult the yellow pages of your telephone directory for your nearest Air-Maze representative. Air-Maze Corporation, Cleveland 5, Ohio. *Representatives in principal cities. In Canada: Williams & Wilson, Ltd., Montreal, Quebec, Toronto, Windsor; Fleck Bros., Ltd., Vancouver, B. C.*

IF IT USES AIR... USE

AIR-MAZE

ENGINEERED AIR FILTRATION

- Oil bath type filters and filter-silencers
- Oil-wetted type filters and filter-silencers
- Exhaust spark arresters
- Gear case, crankcase and tank vent breathers
- Oil-separators for engine crankcases
- Full-flow type cleanable oil filters
- Cleanable filter panels for air-borne dirt, oil, grease and liquids



Before you start figuring on air conditioning—get the *right* kind of advice from *qualified* experts!

Lay your plans for *correct* air conditioning, and make sure your investment will repay you—dollar for dollar—with the “remedy” you expect. By *correct* air conditioning Westinghouse means the scientific blending of correct temperature, humidity, circulation, ventilation and air cleanliness.

Each air conditioning installation—regardless of size or purpose—is an *individual* problem. Consequently, Westinghouse air conditioning equipment is engineered and built to conform with this principle.

Consider these advantages of Westinghouse *correct* air conditioning: *First*, an air conditioning plant which will provide exactly the conditioned air you want to “live” with. *Second*, an installation which can be depended upon to give continued trouble-free, economical service. *Third*, correctly engineered equipment resulting from Westinghouse know-how.

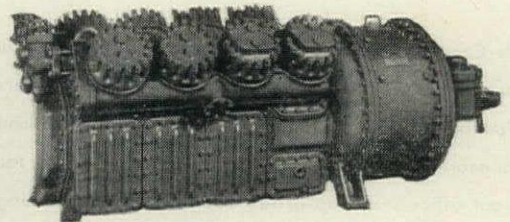
If you're thinking about air conditioning, send for your copy of “How to Plan Correct Air Conditioning.”

Call your nearest Westinghouse Office, or write Westinghouse Electric Corporation, 150 Pacific Avenue, Jersey City 4, New Jersey.

BROTHER...
 you can't
 buy it this way!

The Heart of Correct Air Conditioning
WESTINGHOUSE HERMETICALLY SEALED COMPRESSOR

The entire mechanism of the Westinghouse Hermetically Sealed Compressor—including its motor—is sealed gas-tight. This feature means sealed-in power and sealed-out trouble... has been service-proved in thousands of Westinghouse installations. Compact and lightweight for easy installation. Low operating costs.



Westinghouse presents John Charles Thomas—Sunday, 2:30 E.W.T., N.B.C. Tune in Ted Malone, Monday through Friday, 11:45 A.M., E.W.T., Blue Network.

Westinghouse
 PLANTS IN 25 CITIES OFFICES EVERYWHERE

CORRECT

Air Conditioning



**"Let the phone, lights and office supplies wait . . .
order some Columbia window shades first"**

While Columbia shades may not be the most burningly urgent item for a new office, a lot of people seem to think they are. For true serviceability, it's hard to beat a sturdy, well-made Columbia shade.

For nearly sixty years, Columbia has made shades for tough day-in, day-out office use. Top-grade fabrics...smooth-turning rollers...

good, non-fading colors that filter the sun to the best working light.

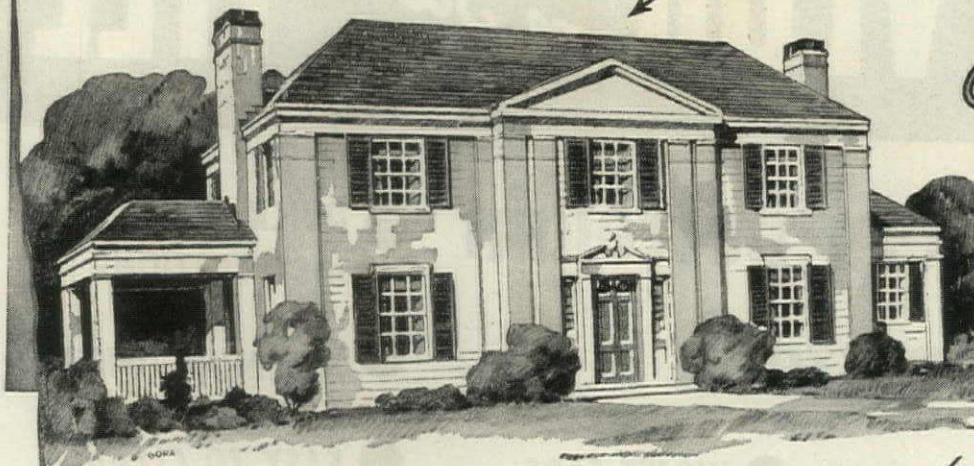
Today our civilian shades must take second place to our war-work. But when the government no longer needs us, or the materials from which we make shades, you can look forward to a wide selection of shades...and to our famous speedy service.

See Sweet's Architectural Catalogue for more complete information on Columbia products.

**Columbia WINDOW SHADES
AND VENETIAN BLINDS**

THE COLUMBIA MILLS, INC. • 225 FIFTH AVENUE, NEW YORK 10, N. Y.

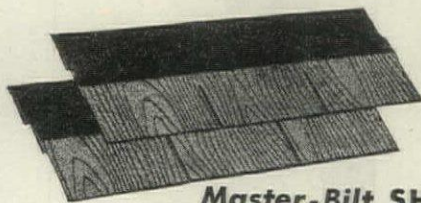
This climate calls for Extra-Durable roof...



Notes for
Tomorrow's
Homes

(better specify Bird Master-Bilt Shingles)

Explanation: Extra detail of design, materials and manufacture assures extraordinary durability of Bird Master-Bilt asphalt shingles. Thick butts at point of greatest wear; deeply embedded mineral granules, heavy felt base, thoroughly saturated with specially-refined asphalt, under Bird's exclusive method of Controlled Production — all make for durability and freedom from repair. Master-Bilt roofs have desirable massive appearance, with deep shadow lines and sparkling color high-lights. Adds up to roof beauty that endures and preserves the attractiveness of the home.



Master-Bilt SHINGLES

These shingles, in a wide range of colors and blends, meet all FHA requirements and are approved as fire-resistant by Underwriters' Laboratories, Inc. For full details consult Sweet's File, Architectural, catalog 8 b/1, or write for descriptive folder to Bird & Son, inc., East Walpole, Mass. Dept. CD-59.

P. S. Bird makes many quality products for building, repairing or modernizing homes and industrial structures. Consult Sweet's File, Architectural, 8 a/3 for data on Bird Built-Up Roofs, or 9 b/1 for Bird Neponset Black Building Paper, used as vapor barrier with insulation.

TIME-SAVING SPECIFICATION DETAILS FOR BIRD Master-Bilt ROOFS — Hip and Ridge Construction



Plan courses so nails at ridge are covered by at least 1" of overlying ridge shingle. Last course of roof shingles may be turned over or trimmed even with ridge. Shingles at hips should be trimmed even with hip line. For cover shingles on ridges and hips, use Master-Bilt cut in thirds and trimmed to edges of "cut-outs". Lay with butts exposed 5" to weather. Place nails 1 1/2" from each side, not over 6" from butts. On ridges always expose opposite prevailing wind direction.

SINCE  1795

*Men who know
the best know*

BIRD

1795 — OUR 150th ANNIVERSARY — 1945

ASPHALT SHINGLES • INSULATED SIDINGS • INSULATION BOARDS
FLOOR COVERINGS • WALLBOARDS • BUILDING PAPERS
RUBBERLIKE FLOOR RUNNERS • INDEX PRESSBOARDS • SHIPPING CONTAINERS
SHOE CARTONS • BUILT-UP ROOFS • BIRD-FIBRE WOOD FRAME CASES

BIRD & SON, inc., East Walpole, Mass. • NEW YORK • SHREVEPORT, LA. • CHICAGO, ILL.

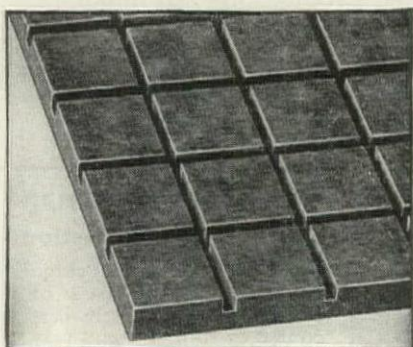
MANY FAMOUS
ARCHITECTS
AGREE THAT

VEOS *Porcelain on Steel* TILE

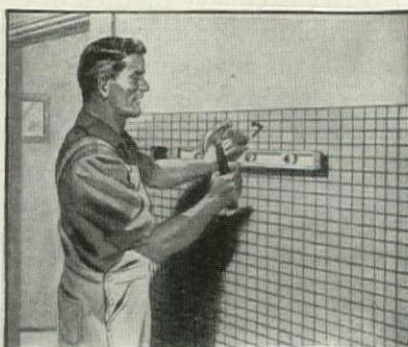
It's modern porcelain on steel

- WON'T CRACK
- WON'T CRAZE
- WON'T LOOSEN
- WON'T FADE
- MODERN SIZES
- LIGHT WEIGHT
- QUICK INSTALLATIONS
- MINIMUM UPKEEP
- EASY TO CLEAN
- GUARANTEED FOR LIFE OF BUILDING

Simple..easy..quick..installs in half the time



Exclusive patent-protected foundation sheet assures rigid, accurate assembly . . . perfect tile alignment. Waterproofed. Verminproofed.



Installation over existing walls requires merely truing-up. Special wall preparation is eliminated. No fuss or muss.



Waterproof adhesive applied to back of the tile insures life-time bond with foundation.



Formed edges of tile fit foundation sheet grooves which are designed to take all tile sizes.



Rapid-setting waterproof white or colored cement grout fills the joints between the tiles.



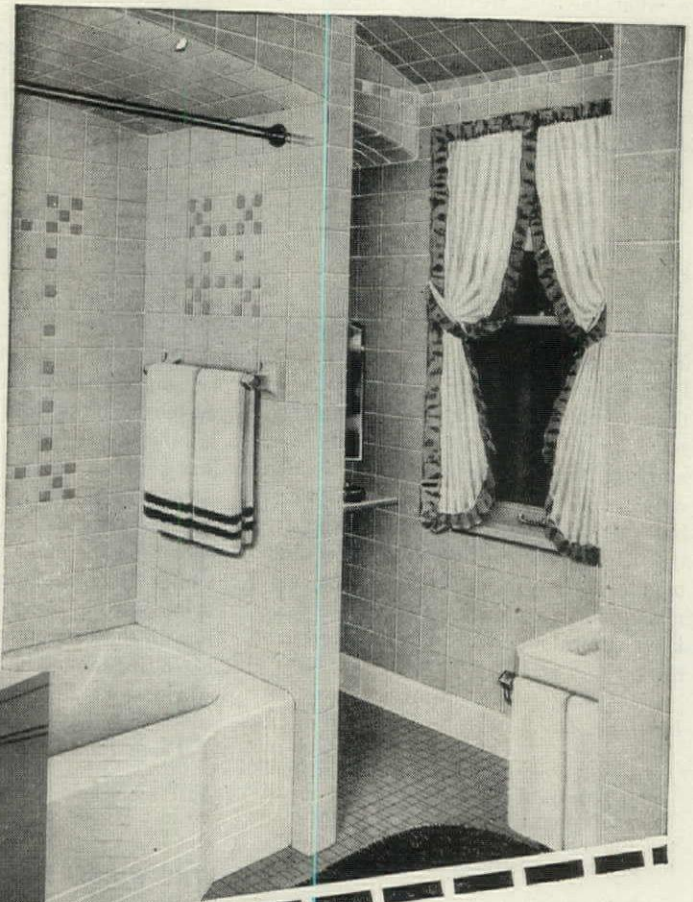
Squeegee removes excess grout; joints are pointed; tiles cleaned with sponge and fine steel wool.

CLYDE PORCELAIN STEEL CORP.

has 10 big advantages!

**Prewar proved
in more than 80,000
installations**

More than 20 of the leading American oil companies have installed Veos Porcelain On Steel Tile in 15 THOUSAND of their finest filling station rest rooms. These companies naturally employ able architects. Their united opinion is praise indeed. Everybody likes Veos Tile. It is quickly installed, means little or no interruption whether in the home or public building. Light weight permits use right over old walls, even old ceilings. No periodic refinishing expense . . . no servicing but simple washing.



A FULL RANGE of architecturally-favored SIZES provides almost limitless opportunity for distinctive tile-size groupings . . . smart effects never possible before. Standard stock SHAPES—corners, edges, curves and special pieces—meet instantly every condition of new work or remodeling. 12 ideal colors—colored tile furnished at same price as black or white. And Veos Tile is GUARANTEED against cracking, crazing, or color-fading FOR THE LIFE OF THE BUILDING!

FREE

Clyde Porcelain Steel Corporation
Dept. 19, Clyde, Ohio
Please send FREE the Veos Porcelain On Steel Tile full-color book showing a wide variety of installations.

Firm
By
Position
Address
City Zone State

... CLYDE, OHIO

June cover-up . . . Brazilian National Stadium Competition . . . The last word on Puerto Rico
 . . . Air cooling systems for small homes . . . Letter from Algiers.

RED FLAGS

Forum:

There has been some discussion as to what the red rectangles in the design on the June cover of THE ARCHITECTURAL FORUM are supposed to mean. We have wondered whether these were to cover up flags or whether they were a modern design or what. . . .

NATHAN E. JACOBS

Chicago, Ill.

Forum:

I have been studying the cover of the June issue of THE ARCHITECTURAL FORUM and neither I nor other people I have shown it to can explain some of the symbolism. I understand that the left side of the cover represents war and the right side peace, and I also notice the flags of the five big powers, but what are the red flags and why are the flags arranged in such a peculiar manner? If you can take a few moments and explain this to me, it will keep several of us from dying of curiosity.

ROBERT C. SMITH

Portland, Ore.

Apparently FORUM's symbolism got snafued in June. Instead of showing flags of the 50 United Nations, we showed only those of the Big Five, arranged in a brick pattern to suggest reconstruction.—Ed.

OUT OF THIS WORLD

Forum:

A roof is intended as a protection from the elements. These include rain, snow and cold, as well as intense heat. A dead level roof with water lying on it may act as protection against the last of these. How does it function against the others? As far as my experience has gone, no flat roof drains adequately, with the result that constant and expensive maintenance is necessary to make it perform. Lower first-cost on the Keck-Green house (ARCH FORUM, July '45) may prove a man-trap lined with continuous later maintenance outlay. With a pitched roof of proper slope, maintenance costs are low, and there is an attic underneath. This is no boost of mine for Cape Code—just for attics. The most ingenious architect

in the world cannot think of all the odd things people want to store. . . .

If we really want big families, we'd better have attics—and basements too. Let's give credit where it's due: a one-floor house has all the conveniences you say it has. But isn't a two-floor house cheaper, for a given amount of space? Again, I am no apologist for doing things grandpa's way. By all means put the laundry next to the kitchen. But can't we have a home workshop or a recreation room or a potting room in the basement? Do we poor devils who like to work around the home have to put up a shed in our back yards for these things?

"Not only does the floor act as a heating panel in the winter, but the masonry units in contact with the ground conduct the earth's temperature and act as a cooling agent in summer." (ARCH FORUM, July '45, p. 140). Warmer bodies always lose heat to cooler bodies and the earth is colder in winter than in summer. You'll spend a lot of your fancy radiant heat warming up the dirt under your house. Keck is so ingenious he's right out of this world.

MRS. RAMSAY WOOD

Takoma Park, Md.

Flat roofs hold more water than many of Reader Wood's arguments.—Ed.

THE WINNERS

Forum:

Having read in your magazine (June '45) an article regarding a National Stadium and School of Physical Culture in Rio de Janeiro, it became necessary to give the following explanation.

A public competition was held for the preparation of the project and the works presented were judged by a commission of special technicians. Out of the works presented, the project of architects Pedro Paulo Bernardes Bastos and Antonio Augusto Dias Carneiro was chosen. No politics whatsoever will have to decide a matter which has already been decided upon by the judging commission appointed by the Government. The Ministry for Education and Public Health was particularly interested in the author of the project published by you, although his design was contrary to the sound public moral

which has always guided the acts of the President of the Republic . . .

PEDRO PAUL BERNARDES BASTOS
 ANTONIO AUGUSTO DIAS CARNEIRO
 Rio de Janeiro, Brazil

Scallions to our South American correspondent, purveyor of misinformation.—Ed.

FOREIGN SCHOLARSHIPS

Forum:

I was graduated from Harvard College in February 1944, and after obtaining my commission was sent to the Pacific in the amphibious forces. . . .

What I am interested in specifically is this: a scholarship or grant-in-aid in architecture at a foreign university. I am particularly interested in France, Russia or England . . . with a possibility of work on the side of a practical nature. I should appreciate it very much if you could advise me in this matter.

ENSIGN CHARLES T. EGLI
 c/o F.P.O., San Francisco, Calif.

There has been some talk of extending the G.I. Bill of Rights to cover foreign universities, but at present it is limited to colleges within the U.S. Exchange scholarships can sometimes be arranged after matriculating at a school in this country. Best source of information is the college itself.—Ed.

TODARO TEMPEST

Forum:

My copy of the May issue was received a few hours before "shipping out" to another "warm spot" in the Pacific.

After reading Tony Todaro's letter about a Pearl Harbor Memorial, I wanted to stop over and see him on my way "out" but maybe I shall see him after V-J Day.

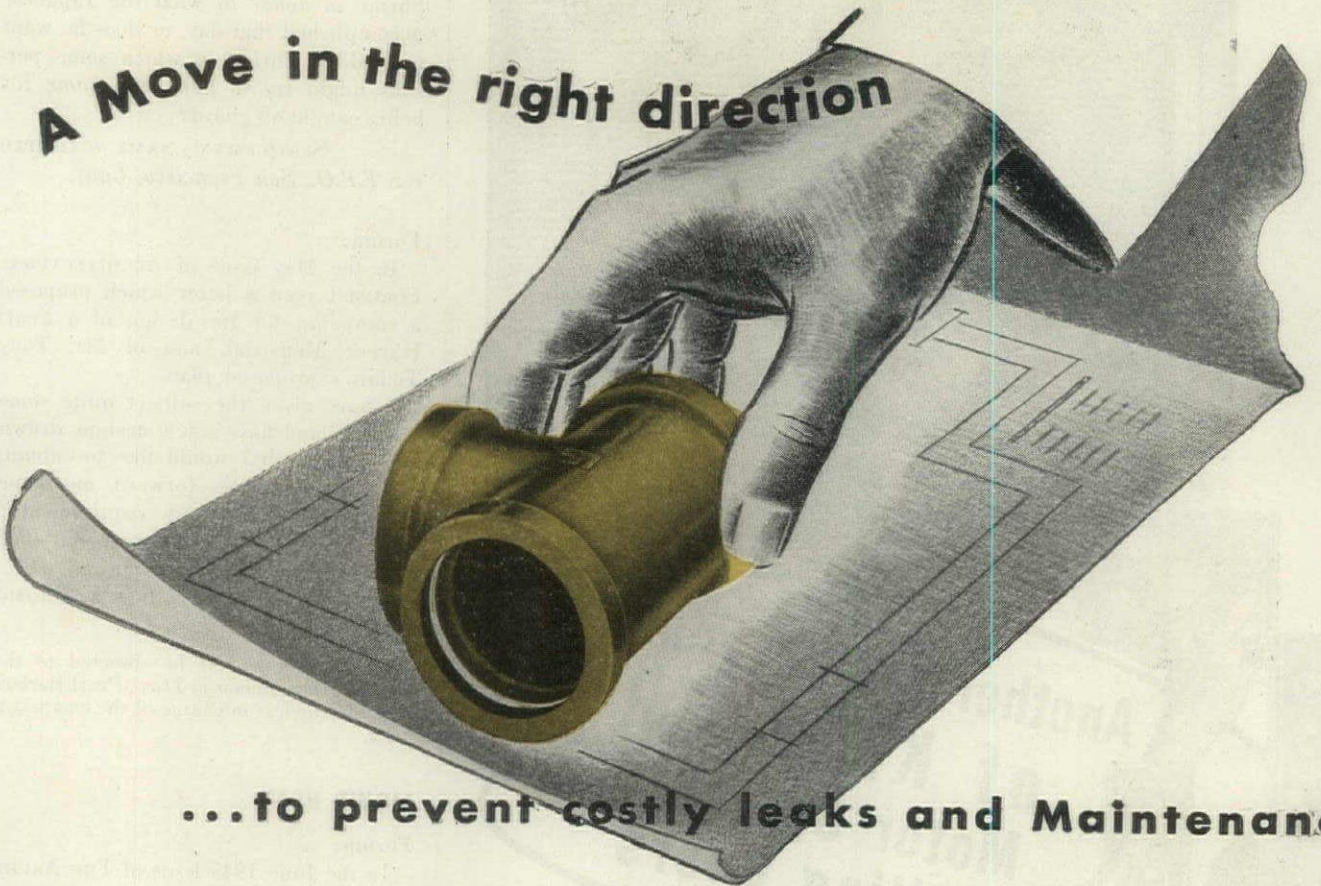
In the meantime: how can one justify a Shrine of Pearl Harbor when the general conditions of December 7, 1941, are considered?

Of course, for those killed at the time, some recognition may be given, but *why* were they killed?

At present there is some investigation being made of the conditions prevailing December 7, 1941, and, until that investigation has been completed and a satisfactory explanation given for what seems to have been a rotten

(Continued on page 42)

A Move in the right direction



...to prevent costly leaks and Maintenance

Now you can specify fittings that literally join with I.P.S. copper tubing and brass pipe to form a one-piece pipe line — a connection that is permanent . . . leakproof . . . that withstands excessive vibration, even at high temperatures.

Remember the name — Flaggseal Fittings.

Flaggseal fittings are performance proved in thousands of installations ranging from battleships to better-class homes. They are easy to install, and their top feature consists of a silver brazing alloy incorporated in each connection port. When

heated with the oxyacetylene torch, this brazing alloy flows out and makes a permanent brazed connection — a connection that is stronger than the pipe itself — or the fitting.

Plan on Flaggseal fittings for future copper or brass plumbing, heating, gas, oil or process pipe lines. You will find them the safest, the strongest, and by far the least expensive for your clients in the long run. For full price, size and other pertinent data, write for a free copy of Catalog. Address: Stanley G. Flagg & Company, Inc., 1421 Chestnut Street, Philadelphia 2, Penna.



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FLANGE UNIONS • FLANGES • GROUND JOINT UNIONS • RED BRONZE FITTINGS
FLAGGSEAL BRONZE FITTINGS • SPECIALTIES AND CASTINGS

(Continued from page 40)

failure, no attempt should be made to build, or even promote, any Shrine.

Does Tony Todaro want to build the Shrine in honor of what the Japanese accomplished that day, or does he want to build a Shrine in which some persons might try to hide our shame for being caught off guard?

SERVICEMAN'S NAME WITHHELD
c/o F.P.O., San Francisco, Calif.

Forum:

In the May issue of ARCHITECTURAL FORUM I read a letter which proposed a campaign for the design of a Pearl Harbor Memorial, and of Mr. Tony Todaro's proposed plan.

I have given the subject quite some thought, and have a few designs drawn to scale which I would like to submit.

Can you please forward me some more particulars and requirements? And can I as a serviceman stationed overseas enter the campaign? . . .

SGT. LOUIS A. CUOMO
c/o Postmaster, Miami, Fla.

All questions should be directed to the Pearl Harbor Memorial Trust, Pearl Harbor, Hawaii, which is in charge of the campaign.
—Ed.

LIQUID HEAT

Forum:

In the June 1945 issue of THE ARCHITECTURAL FORUM (p. 190), in describing "liquid heat," a statement is made that the process was invented and developed by Orion O. Oakes of the John B. Pierce Foundation. The illustrations of the apparatus shown on this page were developed under my direction while I was Director of Research of the John B. Pierce Foundation, before Mr. Oakes was employed to work on this project under my direction.

The statement that the process was invented by Orion O. Oakes is therefore in error.

ROBERT L. DAVISON

New York, N. Y.

Researcher Davison's quarrel is not with the FORUM, but with the John B. Pierce Foundation whose press releases credit Oakes with the invention of "liquid heat."—Ed.

NEUTRA REBUTTAL

Forum:

Recent issues of your magazine show that one letter provokes another and I am now provoked to write you. After reading your Puerto Rico story (ARCH FORUM, Mar. '45), I still feel that there was indeed good and over-all truth in it: an example was held out of a young

(Continued on page 46)

PUSH BUTTON CONTROL!



Another "PLUS" Feature of KINNEAR Motor Operated Rolling Doors

KINNEAR push button operation assures added savings in manpower, heating and air conditioning costs, and in time. With a touch of the finger on the Control Switch, KINNEAR Motor Operated Rolling Doors can be opened and closed or stopped and reversed at any point in their travel.

OPERATE KINNEAR DOORS FROM MANY POINTS

KINNEAR Motor Operated Rolling Doors can be instantly and completely controlled from various convenient points, such as guard houses, checking stations, the Traffic Manager's desk or other locations. Also any number of doors can be controlled from a single point. Other features of KINNEAR Motor Operated Rolling Doors include — Rugged, flexible steel slat curtain that coils upward out of the way . . . Helical spring counterbalance . . . Kinnear "tough" all-steel construction that stands up under hard usage . . . Full use of wall, floor and ceiling space around the door . . . Many others. Write today for complete information! The KINNEAR Mfg. Co., Factories: 1640-60 Fields Ave., Columbus 16, Ohio; 1742 Yosemite Ave., San Francisco 24, Calif.

Offices and Agents in Principal Cities.

SAVING WAYS
IN DOORWAYS

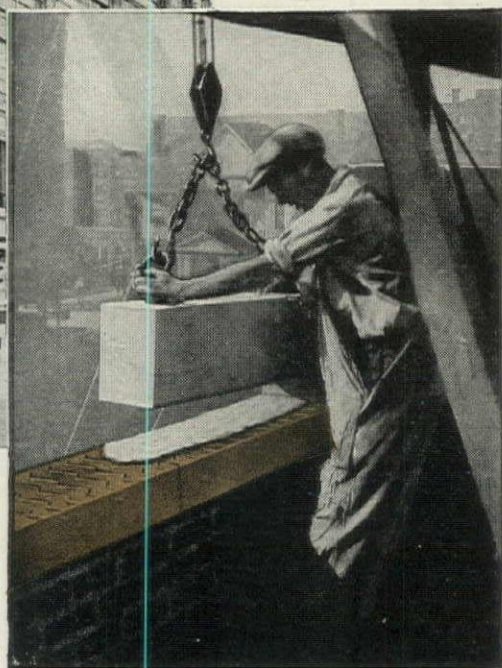
KINNEAR

ROLLING DOORS

Brick and Terra-cotta Protected with *FLASHING THAT DRAINS ITSELF DRY...*



Automotive branch plant, in which 6,000 lb. of Anaconda Through-Wall Flashing were installed by Mandel Roofing Company, Pittsburgh, Pa.



Anaconda Through-Wall Flashing is readily adapted to almost any brick or masonry condition.

Auto Manufacturer's construction engineers select **ANACONDA THROUGH-WALL FLASHING**

COMPANY ENGINEERS who designed the above building specified the "flashing that drains itself dry"... *Anaconda.*

The installation was made by Mandel Roofing Company of Pittsburgh, using 6,000 pounds of flashing. It was installed underneath the coping to prevent seepage between the terra-cotta and the brick.

In addition to the positive drainage provided by its die-stamped dam and corrugations, Anaconda Through-Wall Flashing offers three other important advantages:

1. Because of the flat selvage, sharp bends for counter-flashing, or for locking to adjacent metal, are easily made... without distorting the flashing.

2. Merely by nesting one or two corrugations, Anaconda Through-Wall Flashing is readily locked endwise to form thoroughly *water-tight* joints.

3. Because of design of the dam, the edge can be placed within $\frac{1}{4}$ inch of face of wall... and still allow for pointing of mortar joint.

For complete description and suggested specifications, write for Publication C-28, "Anaconda Through-Wall Flashing".

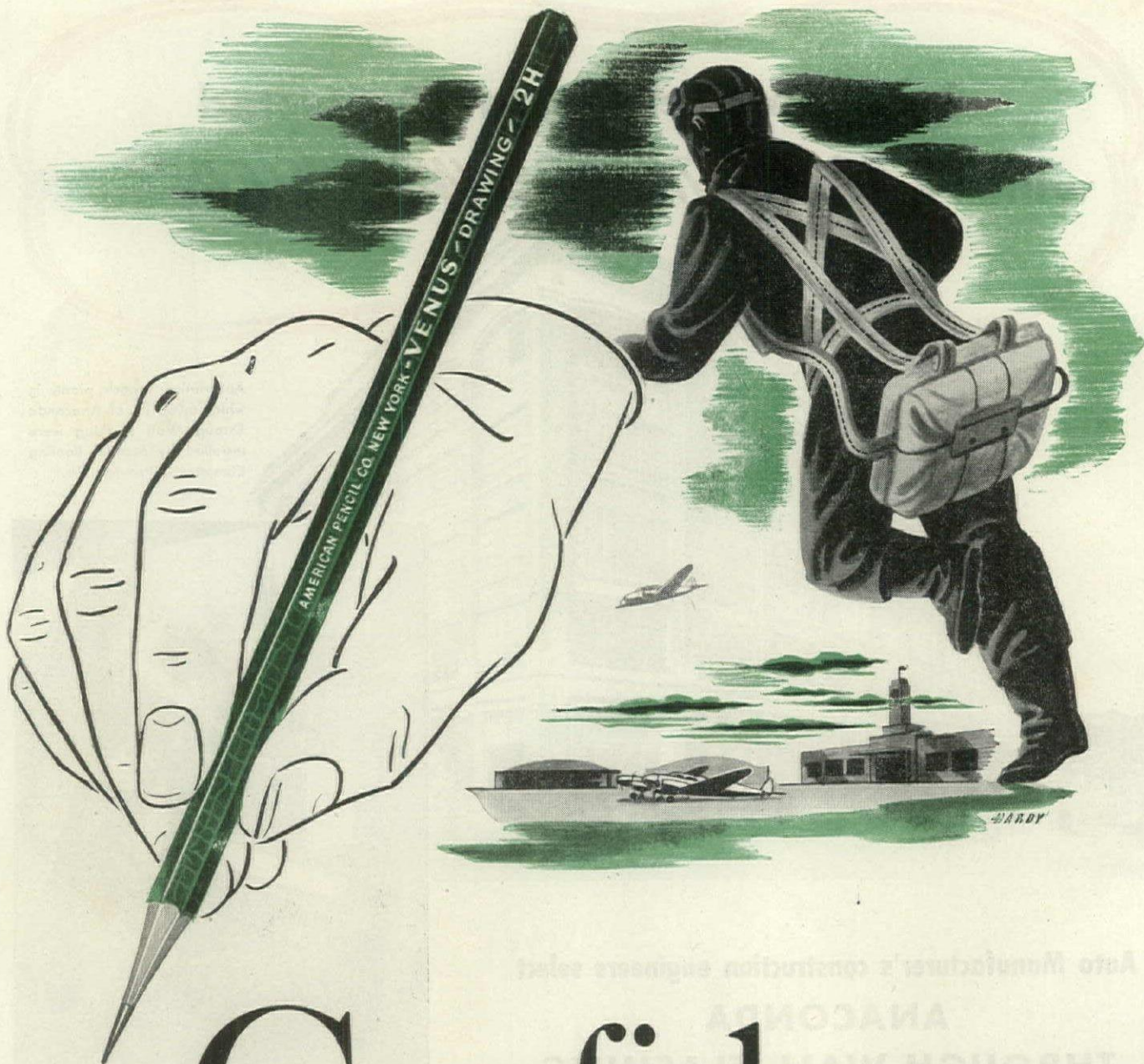
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Confidence

PERHAPS the first step in undertaking a new project is to insure confidence—in the idea *and* in the tools employed. No more needed tool is there than the pencil which translates ideas into working form and thence into reality.

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For instance, when you suggest Flintkote Asbestos Sidings you are recommending products that actually grow stronger with the years. They have the enduring permanence of stone. To our knowledge, Flintkote Asbestos Sidings have never worn out.

In addition they offer the greatest freedom of architectural expression... interesting broken lines... the waveline effect... the rugged, tapered scheme, with its distinctive shadowing... the mottled arrangement.

And they afford *low cost* protection against fire—an advantage you should consider carefully when selecting any siding.

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Flintkote Asbestos Sidings are manufactured in four general styles... Tapertex... Waveline... Shake... Straight Edge... and in smooth finish, as well as the popular wood grain texture.

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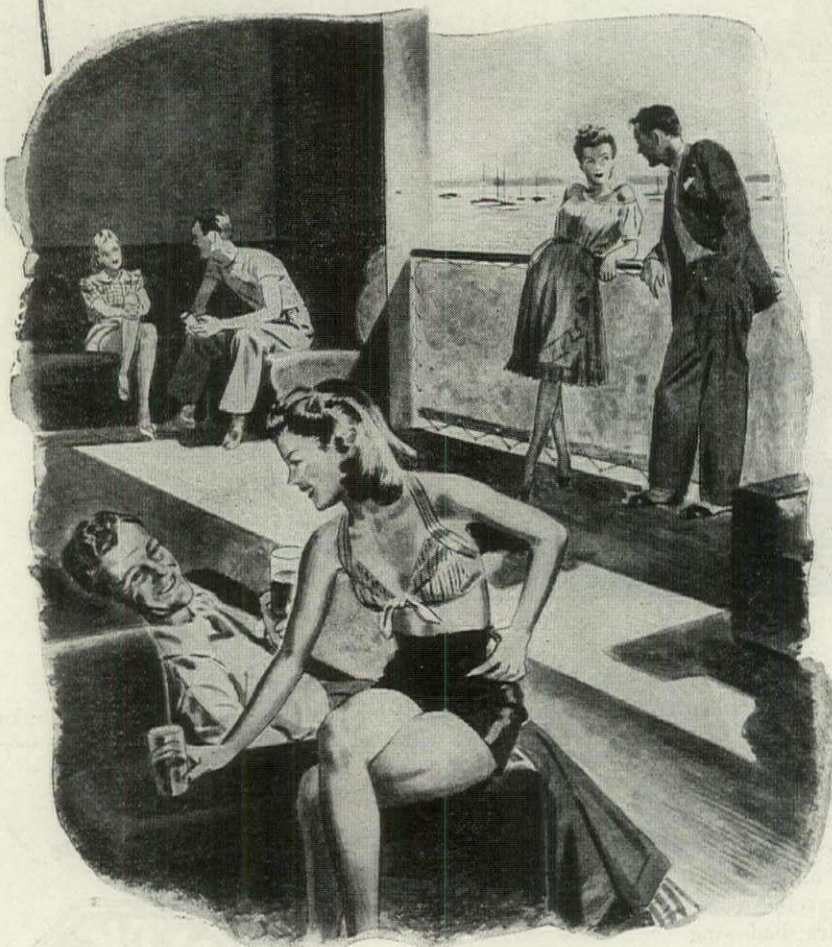
For Color, Quality and Texture that Can't
Be Sweated Out ... Look Forward to
Perspiration Immune

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REG. U. S. PAT. OFF.
upholstery

The coming "U.S." Naugahyde will have no rival in beauty of color and grain—in resistance to the wear and tear of a continuous flow of customers—in adaptability for both seat upholstery and scuff-resistant decorative wall and bar-front panelling.

And, no matter how long drawn out or severe the hot spell, "U.S." Naugahyde is *immune* to perspiration, and does not stain, mold or "brittelize" from continued exposure to it.

Flameproof "U. S." Naugahyde does not support combustion, and gives maximum protection from accidentally dropped matches or lighted cigarettes.



Soon, we hope, "U.S." Naugahyde will again be available. At present all our facilities are occupied in coating millions of yards of rayon, nylon and glass cloth for the Armed Forces.



UNITED STATES RUBBER COMPANY

Serving Through Science • COATED FABRICS DIVISION, MISHAWAKA, INDIANA

LETTERS

(Continued from page 42)

and progressive government in an unexpected and troubled corner of the world which has taken the lead, tried to put aside bureaucratic difficulties and with courage employed talent wherever it could be found.

... Apart from other criticisms, however, a specific attempt was made by these letters to becloud my status as architect on the hospital work in Puerto Rico. According to an agreement drawn up by the government, it is clear that the district hospital projects were indeed assigned to me. Moreover, during a period of twelve months, the projects published by the FORUM have all been duly approved and compensated to me.

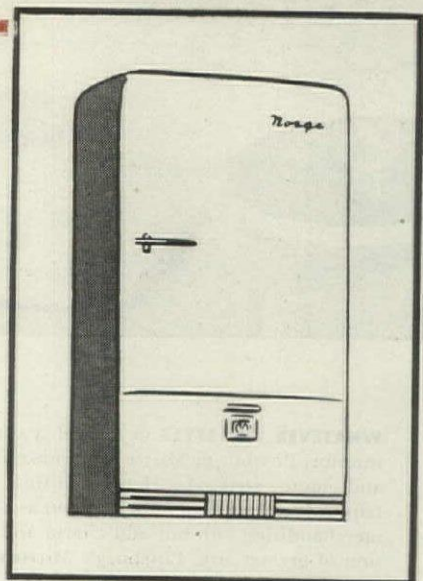
I met the writer of your letter of corrections (ARCH FORUM, July '45, p. 34) when visiting the chief architect of the New York Public Works Department. Mr. Blumenkranz favorably impressed me by his competent discussion of hospital matters and by his expressed desire to leave his job for Latin America. Upon my inquiry for a draftsman with good hospital experience, he recommended his friend, Mr. Frank Beck, for many years a draftsman in the office of Charles B. Meyer, architect. I warmly introduced these two men to the government of Puerto Rico and they were hired on terms which I tried to make as favorable as possible.

I continued working on the hospital projects up to the conclusion of my contract in February, 1945, six months after Mr. Blumenkranz unfortunately had to leave Puerto Rico due to illness. Mr. Beck for reasons insufficiently known to him, as he told me, was relieved of his charge of working drawings and Puerto Rican architects Osvaldo Toro and Publi Reichard continued instead. Up to that date, immediately before FORUM publication in March, we were in the process of work and, with my official approval, daily incorporating and discarding features, as this is common with large projects under the direction of an architect where many parts are given into the care of trusted assistants.

The implied statement that Mr. Beck designed the interiors of the hospitals creates a false impression. I have his design for the main lobby of the Ponce hospital which I improved on radically in my own way. Undoubtedly I was, by my commission, obligated either to try the improvement or formally approve it as it was done by the staff according to my outline.

Practically all of the material published in your March issue was indeed

(Continued on page 50)

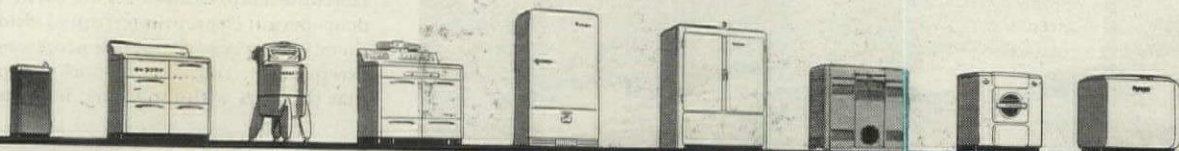


PARKFAIRFAX, a two- and three-story, multiple-type dwelling unit development in variously styled buildings, assures its tenants trouble-free food preservation and safe food storage by equipping with 1,750 Norge Rollator refrigerators. Parkfairfax is at Alexandria, Virginia. Owner: Metropolitan Life Insurance Company. Architect: Leonard Schultz & Associates. Builder: Starrett Brothers & Eken, Inc.

See NORGE Before You Buy

NORGE DIVISION, BORG-WARNER CORPORATION, DETROIT 26, MICH.

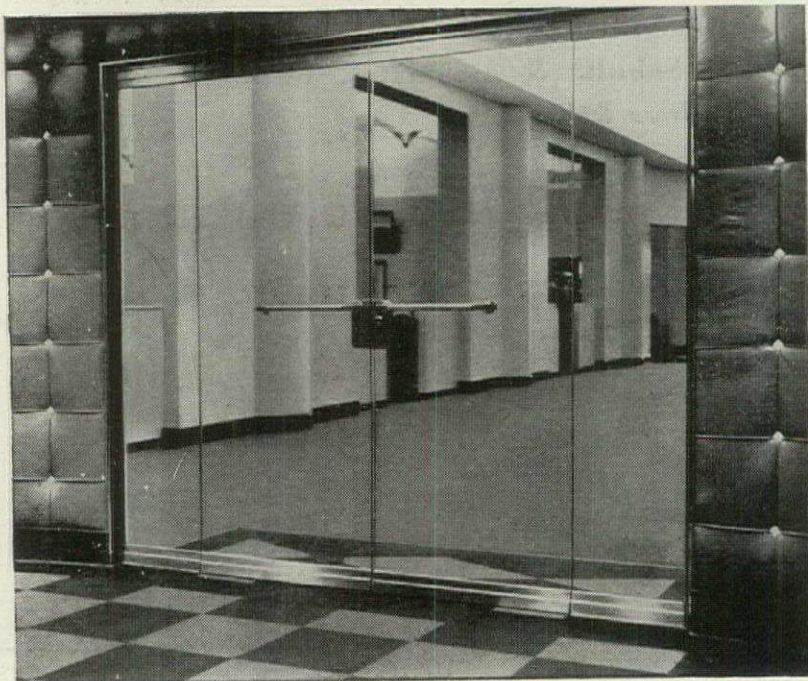
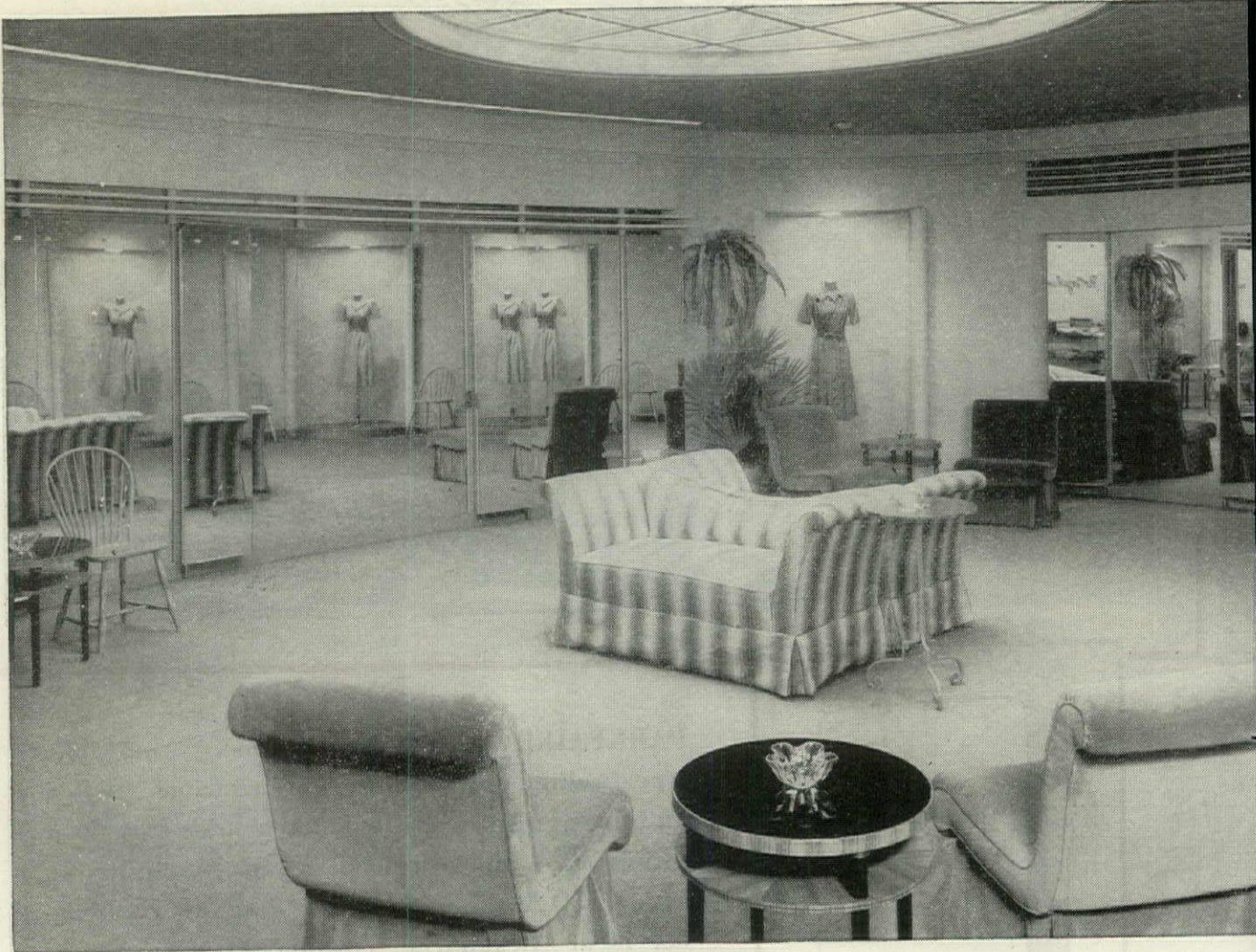
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DISTINCTIVE USES OF

Glass

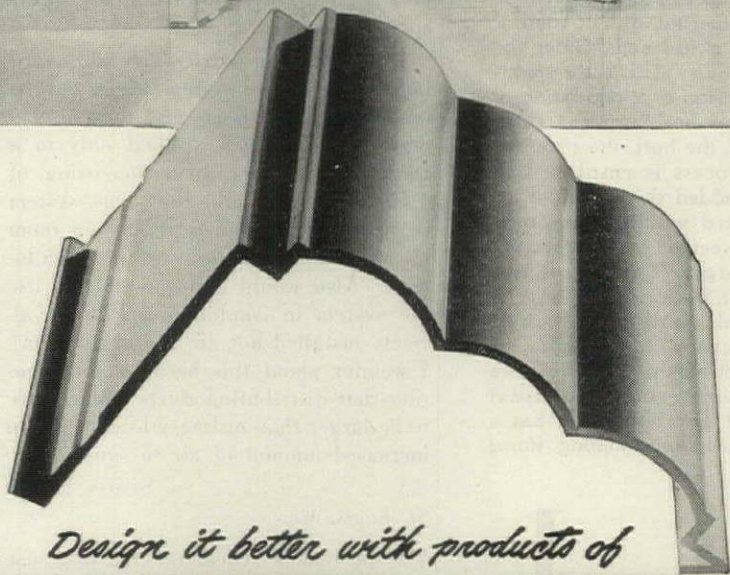
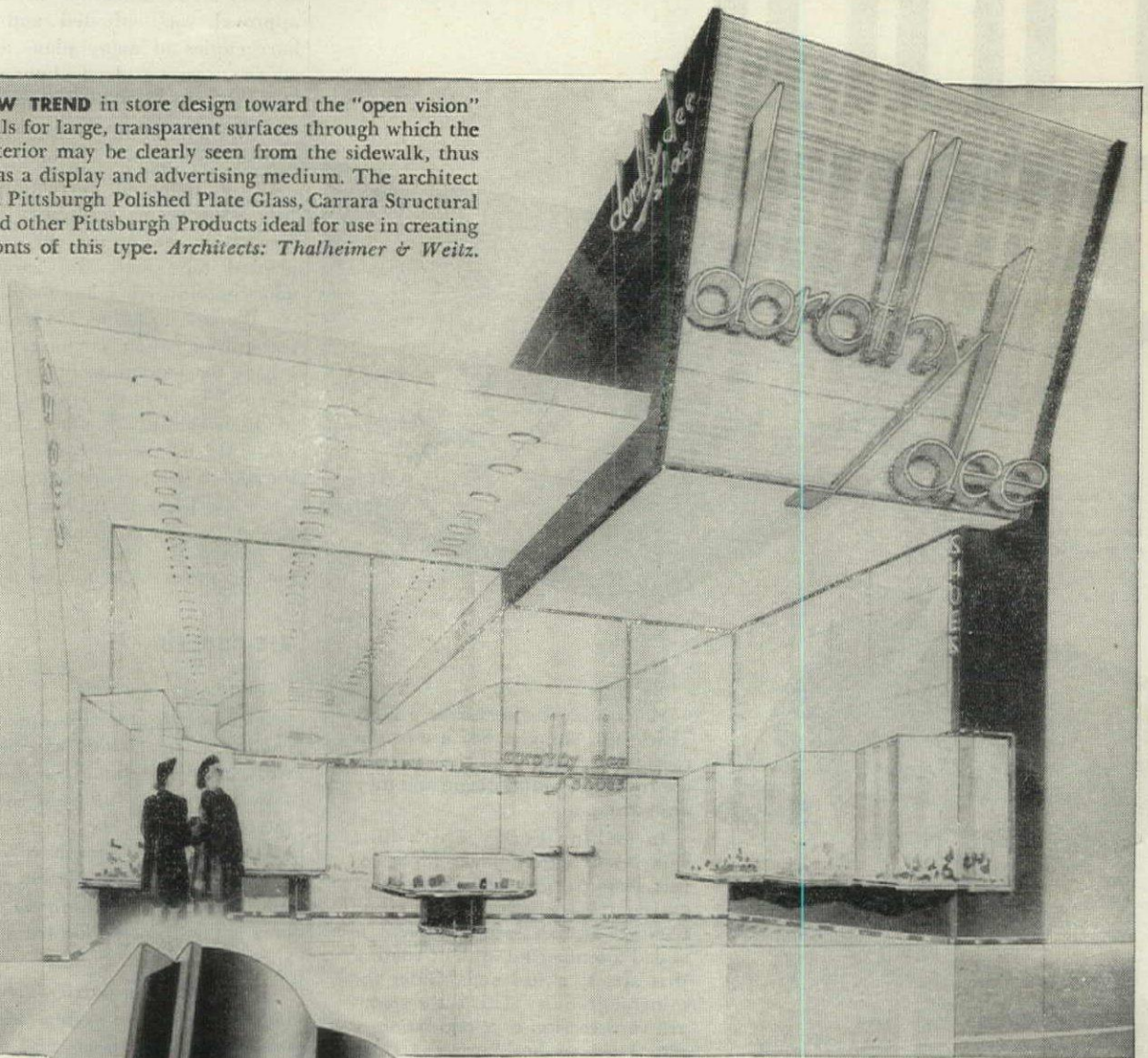


WHATEVER THE STYLE or size of a commercial interior, Pittsburgh Mirrors can make it smarter and more striking. Here, skillfully-designed triplicate mirrors not only function as a practical merchandising aid, but add charm and the illusion of greater size. Pittsburgh Mirrors are now available made from flesh-tinted, blue, green or regular Plate Glass, with silver, gold or gun-metal backings—giving the architect wide latitude in design. (Note attractive glass skylight which helps to achieve good lighting.) *Architect: Harry E. Davidson & Son—G. Leslie Rice, Associate.*

INTERIOR CONNECTING DOORS, or building entrances, take on distinction and beauty when Herculite Plate Glass doors are used. These glass doors permit clear, uninterrupted vision through them. Yet a special tempering process makes them exceptionally resistant to shock and impact—so that they can withstand long, hard usage.

IN COMMERCIAL BUILDINGS

THE NEW TREND in store design toward the "open vision" front calls for large, transparent surfaces through which the store interior may be clearly seen from the sidewalk, thus serving as a display and advertising medium. The architect will find Pittsburgh Polished Plate Glass, Carrara Structural Glass and other Pittsburgh Products ideal for use in creating store fronts of this type. *Architects: Thalheimer & Weitz.*



THE ARCHITECT who wishes to bestow outstanding beauty and quality upon the stores he designs, will find in the two Pittco Store Front Metal lines a metal construction for every need. Pittco DeLuxe and Pittco Premier Store Front Metals were deliberately designed as complete lines, and both possess grace, strength, and fine styling to a superlative degree. The member shown is a Pittco DeLuxe moulding.

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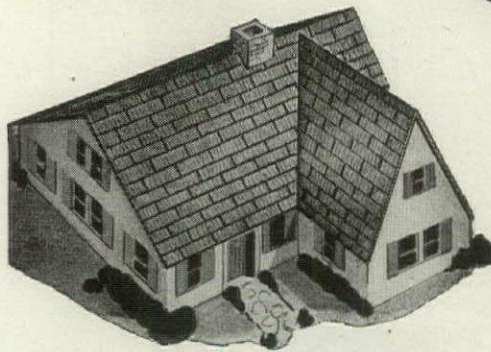
Address.....

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

FORD THICK-BUTT SHINGLES

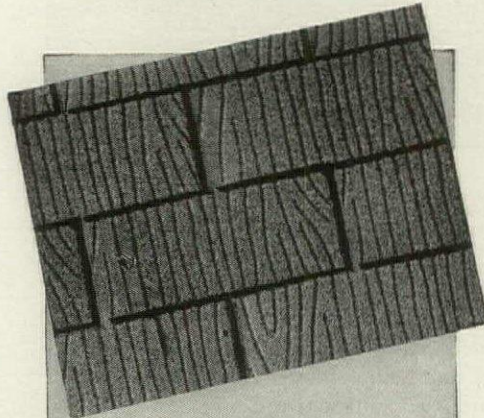


• Thick butts, virtually the thickness of two shingles, give extra weather protection.



Many home owners choose Ford Thick-Butt shingles because of the reassuring ruggedness they give to the roof. They look strong and they are strong.

In making Ford's Thick-Butt shingles a bottom layer of heavy felt is impregnated with about twice its weight of resilient blended asphalt saturant. Next is added a tempering asphalt coating that acts as a seal and binder for mineral granules. This is the standard construction of a regular shingle. Then to build up the extra thickness of the butt, the patented overlay process is employed to spread an added thick coat of asphalt, covered with granules over the lower weather exposed section of the shingle. Thus the name Thick-Butt because the butt is actually built up to virtually twice normal thickness. It is easy to see how this double thick butt makes a massive sturdy roof of unusual beauty and durability that has a popular acceptance among home owners.



• The beauty of Thick-Butt color blends is emphasized by the heavy embossed wood grain textured weather surface. The soft toned shades of these blends offer a wide range of roof tone effects. Ford Thick-Butt shingles are recommended for both new roofs and re-roofing over old roofs.

FORD ROOFING PRODUCTS CO
Makers of America's finest roofing products
since 1865
Chicago 2, Ill. York, Pa. Vandalia, Ill.



ASPHALT ROOFINGS • SHINGLES • SIDINGS • FORD-V-NEER

LETTERS

(Continued from page 46)

worked over by myself and the staff, and for all modifications my advice and approval was solicited and given. I have copies of many plans and details which were evolved later than the sketches the FORUM editors happened to select for general representation of our activity.

If the letter of corrections in your July issue seems written in a sense of frustration at seeing his own name printed too small and another man's name capitalized, I am deeply sorry for it. We all do hope for a measure of recognition when we have devoted our labors to something. To the men who in good faith have worked to the best of their ability I am indeed deeply grateful; it was a true cause to work for and a complicated one.

RICHARD J. NEUTRA, *architect*
Los Angeles, Calif.

Mr. Neutra gets the last word.—Ed.

AIR-COOLED

Forum:

Your article describing a summer air-cooling system which can be combined with a conventional heating system (ARCH FORUM, July '45) was of great interest to me. The excessive costs of most cooling systems have consistently prevented their installation in anything but commercial buildings. This new idea is the first step toward a more widespread use of air conditioning.

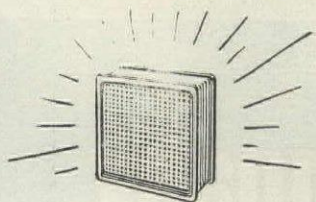
However, I am particularly interested in an inexpensive system which can be used in my own home and the one you described has been applied only to a large apartment project consisting of 1,479 rooms. Would the same system be practical if applied to a seven room house or would initial cost be prohibitive? Also would it be possible to use the system in combination with an already installed hot air heating system? I wonder about this because you mention that distributing ducts would have to be larger than ordinary to care for an increased amount of air in summer.

SIMON LASKY

St. Louis, Mo.

The air cooling system referred to is not basically different from conventional air conditioning, but is unique in its use of a central plant to service many houses. Another major innovation is the dual use of ducts. If the existing duct system in a small home were the correct size it could be used for air cooling, but the duct size should be checked by a local engineer. Major initial cost would be the installation of a refrigeration system.—Ed.

(Continued on page 54)



SOLVED - AT LAST ?

The daylighting problem in office buildings



Night view of the Sperry Gyroscope Company's three-story administration building, designed by Nembhard N. Culin. This photograph shows dramatically how clear glass and prismatic glass block have been combined to distribute daylight and prevent glare.

Read what the editors of **Architectural Forum** say—

LIGHT entering a window high above ground tends to produce glare because of the contrast between sky and interior walls . . .

“ . . . but people do want to see out of tall buildings. Clear glass is needed for at least a narrow vision panel extending from column to column, and from a reasonable sill-height to somewhat above eye-level.

“Clear glass above this point is a source of glare. Instead prismatic glass might be used to redirect the light and substantially improve illumination.

“The new Sperry Gyroscope Company's administration building attacks this question with peculiar insight. A frankly horizontal design, it uses prismatic glass block above a continuous panel.

“ . . . its functional approach to window treatment is eminently suitable to higher buildings and points the way toward a less superficial solution to a fundamental architectural problem.”

* * *

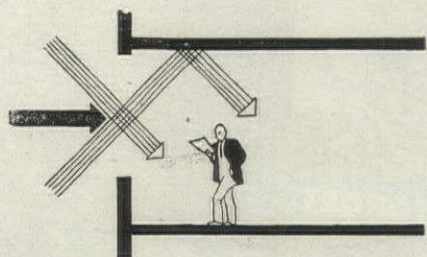
This is a new solution of window treatment — a step forward in the right direction. Insulux supplied prismatic glass block for the new Sperry Gyroscope Company's administration building.

For technical data, specifications, and installation details, see our section in Sweet's Architectural Catalog, or write: Insulux Products Division, Dept. B-24, Owens-Illinois Glass Company, Toledo, Ohio.

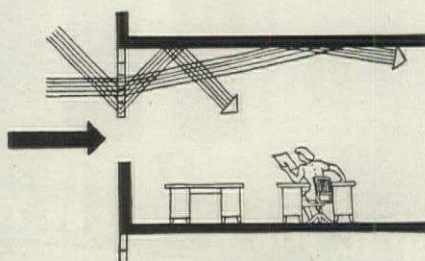
OWENS - ILLINOIS

INSULUX

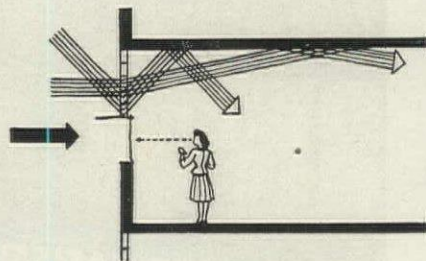
GLASS BLOCK



“Through ordinary windows, light entering from above is wasted except near outer wall. In high buildings light also enters horizontally, producing glare.”



“Use of prismatic glass block above a narrow vision panel reduces glare from horizontal light, bending it upward to provide illumination deeper in room. Down-slanted light is also redirected.”



“With this scheme, a flexible curtain gives occupant choice of enjoying view or eliminating glare. Horizontal hood at top of panel shuts out direct rays of sun — is important on southern exposures.”

Caspers Tin Plate Company

CHICAGO, ILLINOIS

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THE EASIEST THING FOR A BUILDER TO FORGET..

Floors are what a building is for!

built with **Q** • FLOORS because..

THEY GAVE A. EPSTEIN, ENGINEER

Continuously changeable floor plans

THIS IS 1 SQ. FT. OF Q FLOOR



Q-Floors wipe out the architect's and engineer's problem of locating electrical outlets.

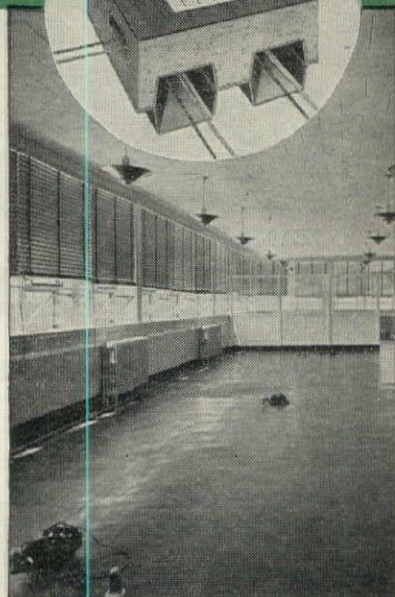
Every six-inch area of floor can be tapped for electricity. This means that your client can decide, *after he moves in*, where he wants lights, partitions and outlets. One of the worst griefs in the business vanishes with Q-Floors. It doesn't matter how much electrical equipment he wants—or how much he will add over the years.

The steel cells of Q-Floors are interrelated by crossover raceways. An electrician need only drill; in a matter of minutes—literally minutes—he has a new outlet without the woe and mess of digging trenches.

When you specify Q-Floors, you specify continuously changeable floor plans, ready for any new mechanical requirements. Your building stays electrically modern. And your client stays satisfied.

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Saved time and trouble

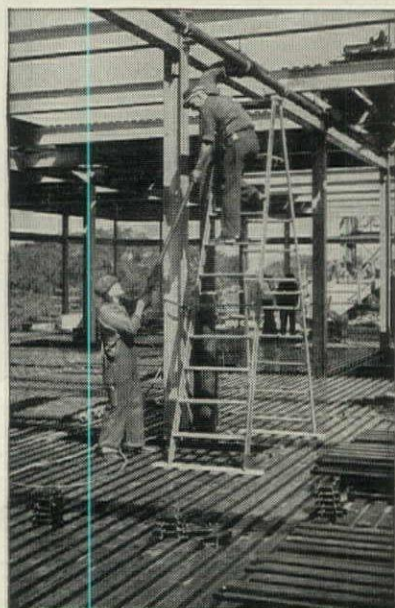


A large part of any building now comes to the site, pre-engineered. It makes for quick construction. Steel Q-Floors are a logical parallel to modern steel framework. They are light in weight, shipped to the job cut to fit. Two men lay 32 sq. ft. in half a minute. A Q-Floor immediately becomes a clean, uncluttered, dry, fireproof platform for all other trades.

Q-Floors reduce construction time from 20 to 30%. This time is measurable in money saved and earned. From your client's point of view,

return on his investment starts sooner, with Q-Floors.

You can write quick construction and continuous electrical availability with the one word—Q-Floors. And the cost is right in line. You don't have to soft pedal cost. For details call a Robertson representative, who can give you facts compiled from thousands of installations, or write for Q-Floor literature. Q-Floor Fittings are available at General Electric construction materials distributors.



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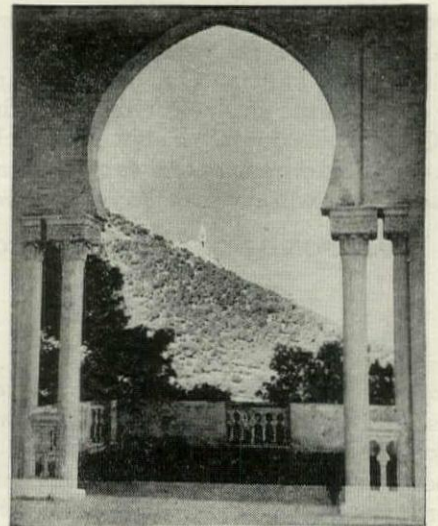
*(Continued from page 50)***LETTER FROM ALGIERS**

A Signal Corps photographer stationed for many months in North Africa sent us this description of prevailing architectural types.

Forum:

Architecture in Algeria, as in other countries, is the result of climate, topography, availability of materials, artistic talent and wealth of inhabitants plus the customs brought into the country by invaders and colonists.

Africa is a rugged country and Algeria is no exception. There are none of the green lawns, hedges and stone walls which have made England famous. The rocky Atlas mountains are high and without vegetation. The cli-

**PAST:** Traditional mosque

mate is fairly good. By that I mean there is practically no snow in winter. From March to November every day is bright, but hot and dusty, the nights cool. Now and then the sirocco winds come in at night and it seems as if someone had turned on a gigantic fan in front of a huge hot oven. The soil is well adapted for any fruit or vegetable requiring little or no water. Grapes can grow under these conditions and Algeria produces a tremendous amount of the world's wine.

North Africa, predominately an agricultural Arab country, has always been considered the "bread basket" of Europe and for this reason several nations in past history have invaded it. The Romans and Spanish had some success and traces of their architectural ideas remain. However, since 1831, the French have been the dominant influence in Algeria. In the years before the present war great wine plantations grew up and shops with the latest Paris fashions made millions of dollars.

(Continued on page 58)

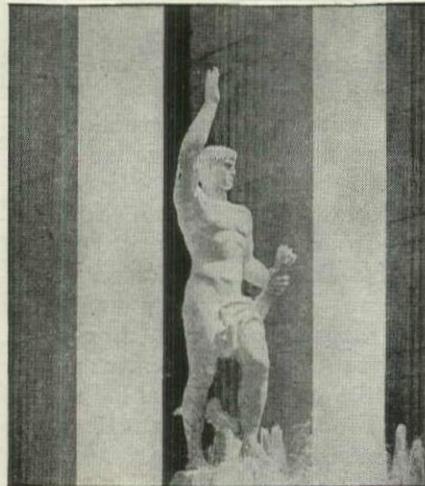
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for impressive structures

IS AVAILABLE NOW!

Georgia marble has been selected for many of America's finest and most beautiful buildings and pieces of sculpture. Production facilities are being substantially increased, and we have no reconversion problem.

In order to render better service to architects and designers, new sales offices have been opened in Boston, Philadelphia, Washington and Cleveland.



Dauphin County Court House, Harrisburg, Pa., built of Georgia Marble; Laurie & Green, architects; C.P. Jennewein, sculptor.

THE GEORGIA MARBLE COMPANY, Tate, Georgia

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"The Marble with the Sparkling Crystal"



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III XTENSIONDUCT—2 WIRES



333 METAL MOLDING—4 WIRES



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“PLUG-IN” STRIP



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4 X 4 WIREWA



BUSWAY



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In post-war building and remodeling, critical customers will look for electrical products of the highest quality and best performance. They will expect the promises of a great, new electrical age to be fulfilled. Architects who rely on the National Electric System of raceways, wires and cables will more than fulfill these expectations. And the user will find in National Electric products greater serviceability, longer life, and precise adaptability to specific requirements.

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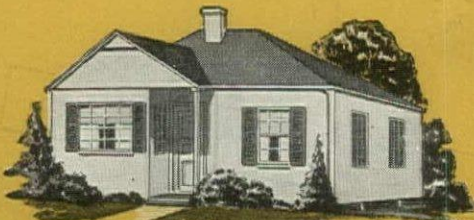
Year round Viking Air Conditioning (heating and cooling) is a postwar goal of many home-owners.



A Viking boiler, for steam, hot water or vapor, can provide this home with fully automatic heating.



The Viking "Utility Room" automatic furnace with forced air circulation is ideal for homes without basements.



An automatic Viking floor furnace will keep this small home economically and cozily warm.

**Offer Bigger VALUE
In Your Postwar Homes**

Clean, fresh, properly humidified air of the desired indoor temperature — winter and summer — will tremendously increase the value of the homes you build.

Progressive builders, who make it a practice to build maximum comfort and extra value into their houses, will welcome the practical economy available in modern Viking equipment. It raises the value to the buyer far beyond the small extra initial cost for fully automatic indoor climate control.

Automatic Heating and Cooling will be within the reach of most home buyers postwar if Viking equipment is included in your plans.

**GIVE INDOOR COMFORT
PRIORITY IN YOUR PLANS**

The time to get the facts on Viking automatic heating, mechanical cooling and year 'round air conditioning equipment is now, *before* you put your plans in blueprint form.

No matter whether you plan to use coal, gas or oil, — or whether you favor warm air, steam or hot water, — Viking can provide ideal indoor comfort.

The complete Viking catalog is available, without charge, to help you achieve extra value in your postwar homes. Write for it today.



VIKING MFG. CORPORATION

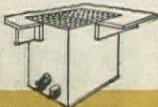
1603 U. B. BLDG., DAYTON 2, OHIO

For remodeled or new homes,

these Viking products bring you sales throughout the year.



Year 'round Air Conditioners



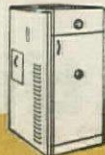
Floor Furnaces



Furnaces



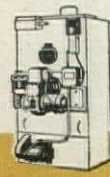
Space Heaters



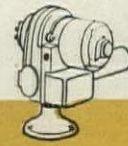
Boilers



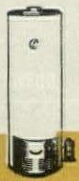
Room Coolers



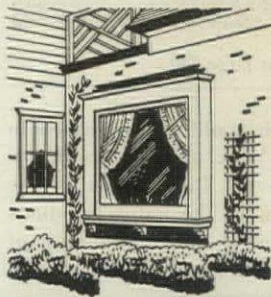
Utility Room Furnaces



Conversion Burners

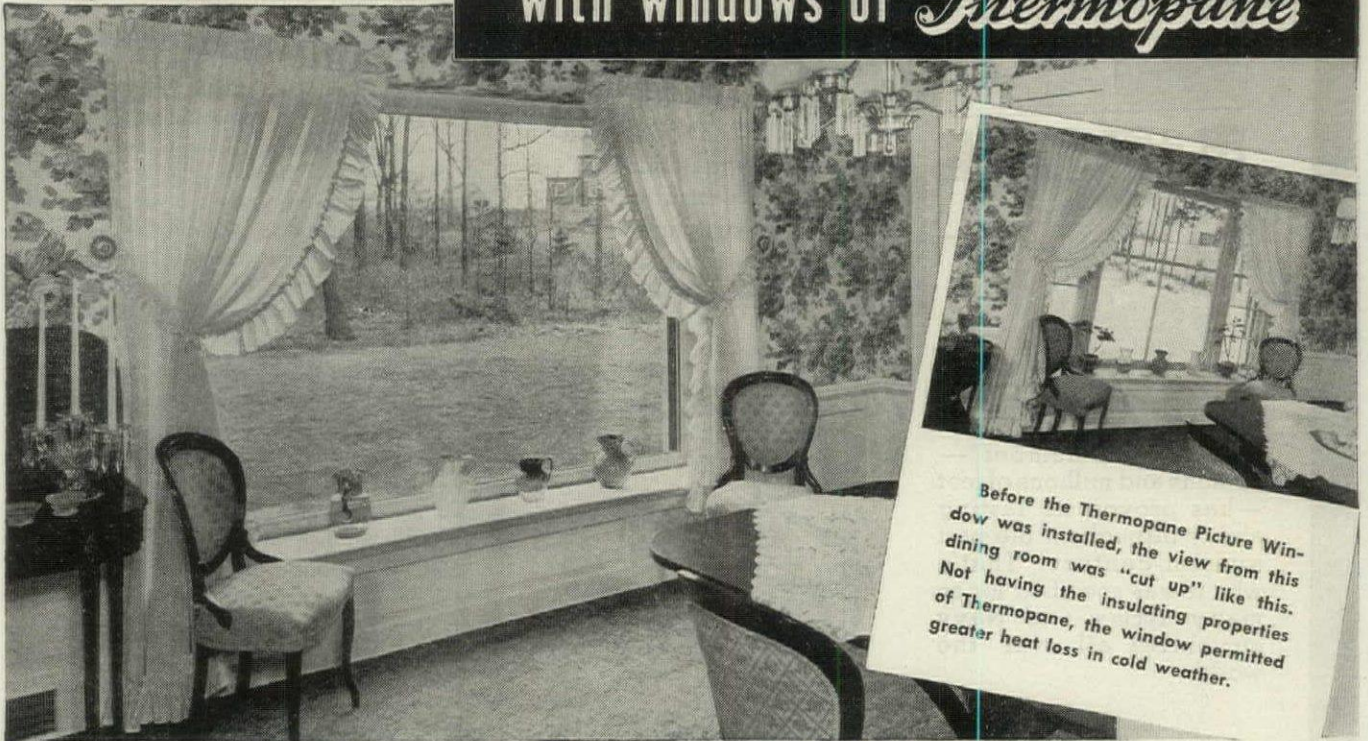


Water Heaters



Give your houses *transparent insulation*

with windows of *Thermopane*



Before the Thermopane Picture Window was installed, the view from this dining room was "cut up" like this. Not having the insulating properties of Thermopane, the window permitted greater heat loss in cold weather.

Architect: Walter A. Domann, Elm Grove, Wisconsin.

The "before" and "after" pictures above reveal how a room takes on extra personality with a cheery big window that presents a broad view of the outdoors.

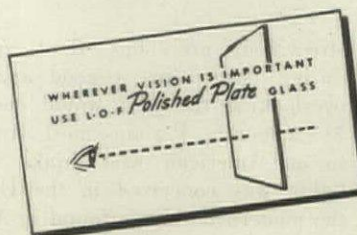
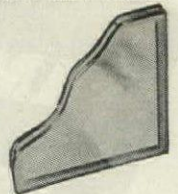
Rooms can be given this individuality without excessive heat losses if window areas are glazed with Thermopane, the L·O·F windowpane that insulates. Thermopane consists of two panes of glass with a dead-air space hermetically sealed between them by L·O·F's patented Bondermetic Seal.

Thus, Thermopane enables you to offer the well-known benefits of Daylight Engineering, *plus* greater year-round comfort and heat savings. Together they win ready acceptance from prospects. And they promise better-satisfied homeowners and more lasting property values.

For additional information about Thermopane, write for our illustrated Thermopane Booklet and for Data Sheets by Don Graf. Libbey-Owens-Ford Glass Company, 1595 Nicholas Building, Toledo 3, Ohio.

Thermopane ... the windowpane that insulates makes big windows practical in any climate

An insulating layer of dehydrated air is hermetically sealed between the panes of glass in a Thermopane unit. Thanks to the Bondermetic Seal, used to prevent dirt and moisture infiltration, there are only two surfaces to clean. Thermopane stays in all year ... there's no extra glass to put up or take down.



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

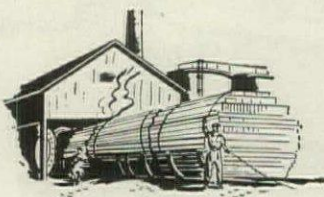
(Continued from page 54)

A GOOD BRIDGE TO CROSS*Before you Build*

Head off the hazards of decay and termite attack. Pressure-treat wood with Wolman Salts* preservative before you build. That's excellent life insurance for all wood structures—this bridge, for example.

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Wolmanized Lumber*—millions and millions of feet—has proved its lasting ability throughout the past quarter-century. That's why it was specified for so many Army and Navy structures all over the world.

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There'll be an abundance of wood for all construction. Even now, lumber and timber are available for rated construction projects. Retain these advantages by building with wood—low cost, faster erection, high insulating value, light weight, resilience—and add long life. Specify Wolmanized Lumber.

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WOLMANIZING

FLAMEPROOFING

CREOSOTING

1647 McCORMICK BUILDING, CHICAGO 4, ILLINOIS

Anything which could be purchased in London, New York or Paris could be found in Algeria. In addition to the imports there were the native products which, because of an abundance of labor and leisure time, showed exquisite hand workmanship.

One architectural example is the mosque or church which is built by donations from all the Arabs in a town and is in the traditional style with arches, domes, spires and intricate handwork. Because the Arabs are so poor, however, their own homes are usually a cave, a tent, or a pile of brush stacked against a wall. Such shelter is not too uncomfortable because of the warm climate which works to the advantage of the poor man.

In direct opposition to the mosques built by the Arabs are the luxurious plantation villas, which, however, also employ the Persian arch and intricate masonry. Surrounded by hundreds of acres of vineyards, they are comfortable to live in and provide a country club setting with fireplaces, murals of hunting scenes, and saddle horses for benches.

Since concrete and tile are easily manufactured in Algeria and wood is scarce, most building is done in these materials. Such construction is cool in summer, easy to maintain and, because of the scarcity of rain for many months during a year, fanciful designs painted on the cement and tile are quite practical.

In large cities such as Oran and Algiers, there are almost no single houses. About 90 per cent of the population lives in apartment buildings whose

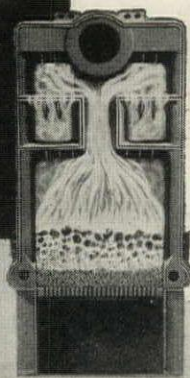
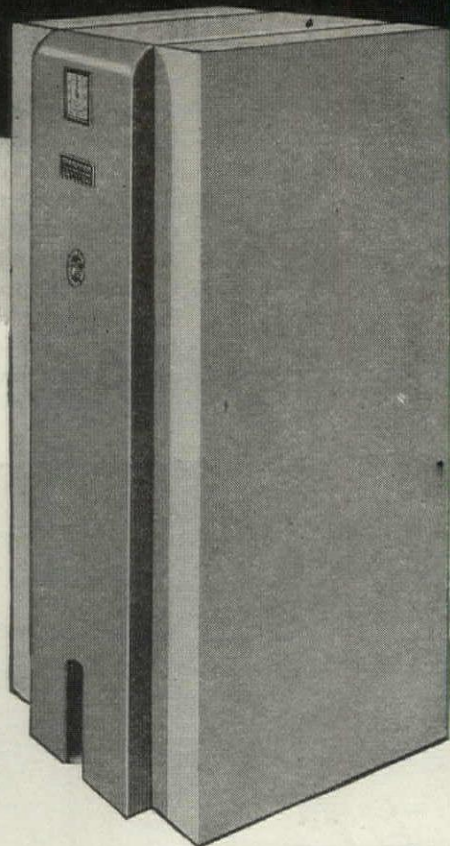
**PRESENT: Modern apartments**

street floors are shops. Rents are low: during peace time a good apartment overlooking the port would cost only \$15 a month. Perhaps most surprising to an American who thinks streamlining was conceived in the U.S. are the modern buildings found in Algeria,

(Continued on page 62)

When You Sell YELLO-JACKET You Sell Peak Performance and Satisfaction

For maximum comfort and economical trouble-free service, nothing surpasses this ALL-FUEL Burnham Yello-Jacket Boiler.



The exclusive Burnham DOUBLE COMBUSTION Chamber makes the Yello-Jacket Boiler a marvel of efficiency. It materially increases the area of the direct heating surface so that more heat is delivered to the water in the boiler from the fuel burned.



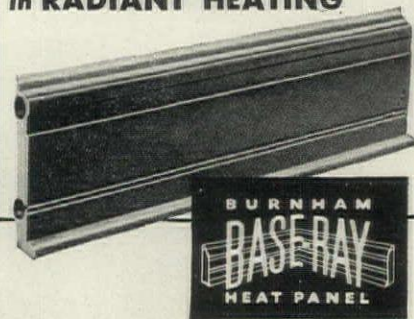
The Burnham Yello-Jacket Boiler takes either the Built-In Taco Tankless Hot Water Heater or the Built-In Taco for use with Storage Tank. Either method provides an economical and unfailing source of hot water.

The Burnham YELLO-JACKET is a *quality* boiler with many outstanding features and advantages. It's the type of modern, streamlined unit a Heating Contractor can build business and a reputation on — the kind that really gives you *something* to sell.

YELLO-JACKET is an All-Fuel boiler — burns coal, oil or gas with but minor changes. In light of the painful experiences so many of your customers have had with War-Time Fuel Shortages, this is today — and will for many years continue to be — a most effective selling point.

And remember, every YELLO-JACKET Boiler is backed by the Burnham name and Burnham guarantee. Burnham's reputation for *quality* is second to none . . . with the Buying Public . . . with Heating Engineers . . . and with leading Heating Contractors throughout the country.

Burnham's Latest Development in RADIANT HEATING



Everybody is talking about Burnham's new BASE-RAY Heat Panel. Heats rooms more comfortably and attractively than ever before by *radiant rays* from a hollow, cast iron "baseboard" which extends along outside walls and is only 7" deep and 1 3/4" wide. It's the BIG NEWS in America's Post-War plans for heating new homes and modernizing old ones!

Burnham Boiler Corporation

IRVINGTON, N. Y., Dept. J95

Export Department

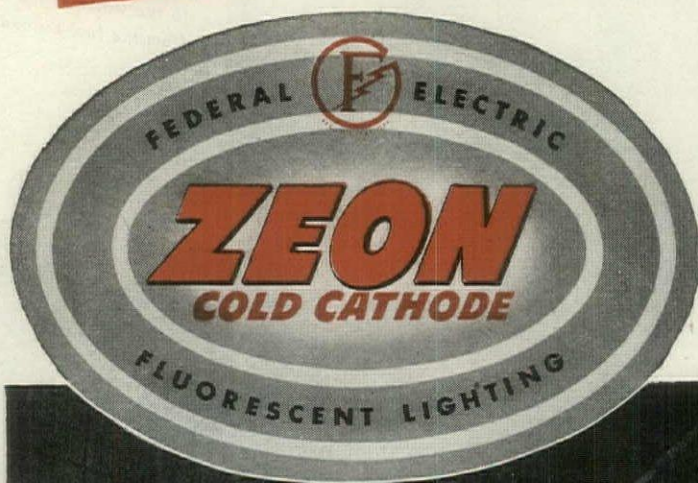
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2 things to do...to get

More Effective

1 Use Zeon Cold Cathode Fluorescent Lamps



There are two kinds of fluorescent lighting. "Hot Cathode" is the common heater filament type of fluorescent lamp; "Cold Cathode" is the improved, shell electrode type, of which Zeon is the outstanding example. Long life, lower maintenance cost, and greater flexibility are some advantages of Zeon Cold Cathode lighting. Lamps start instantly, without flicker; electrodes last indefinitely—far beyond the 10,000-hour life rating of Zeon lamps. Minimum replacement saves time, saves money.



Lighting Information Service planned this installation of Zeon Cold Cathode Fluorescent Lighting in the Hotel Adolphus, Dallas, Texas. The same service is available to planners of all types of industrial and commercial installations.

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2 Get Lighting Information Service

Through Lighting Information Service, Federal Electric Company, Inc., now offers expert assistance in planning fluorescent lighting installations. This service makes available to you engineering counsel that is based on 15 years experience in manufacturing gaseous discharge lamps, and in planning fluorescent lighting installations.

Laying out an extensive lighting installation is a complicated job. To get the most effective results involves the consideration of factors often incompletely understood, at times not even recognized.

This is equally true of fluorescent lighting. It is important to Federal Electric Company, Inc., and to the whole lighting industry, that the many new installations of fluorescent lighting are planned so that the user enjoys the full benefit of the glareless illumination, flexibility, and economy of fluorescent lighting.

Therefore Federal Electric urges you, your architect, consulting engineer, and electrical contractor to take advantage of Lighting Information Service, without charge or obligation.

Lighting Information Service—How it Works

Lighting Information Service is simply specialized advice to your architect, consulting engineer, or electrical contractor, and to you. It does not replace their services.

Our lighting engineers will study your problem and recommend type, color, size, number of lamps; type, spacing, height of fixtures; loads, wiring, transformers required.

Lighting Information Service—How to Get It

Simply fill in the form at the right, pin to your business letterhead, and mail to Federal Electric Company, Inc., at any of the addresses given below.

Or, if you prefer, give this information in a letter, fully describing the details of your problem. If possible, send a photograph of the space to be lighted. This will be valuable.

There is no obligation, other than your cooperation in giving us the fullest possible information, so that we can give you the best possible recommendation.

FREE LIGHTING INFORMATION SERVICE REQUEST FORM

Lighting Engineering Staff

FEDERAL ELECTRIC COMPANY, Inc., 8700 S. State St., Chicago 19, Ill.

Gentlemen: The following information is given you to help solve my lighting problem. I understand there will be no charge or obligation for this service. (Please check or fill in proper spaces below) (Send photograph if possible)


Space To Be Lighted		Size	Colors, Walls, etc.		
Shop..... <input type="checkbox"/>	Lobby.. <input type="checkbox"/>	Height_____ft.	Ceilings: Light... <input type="checkbox"/>	Medium... <input type="checkbox"/>	Dark... <input type="checkbox"/>
Store..... <input type="checkbox"/>	Halls... <input type="checkbox"/>	Length_____ft.	Walls: Light... <input type="checkbox"/>	Medium... <input type="checkbox"/>	Dark... <input type="checkbox"/>
Auditorium... <input type="checkbox"/>	Factory <input type="checkbox"/>	Width_____ft.	Floor: Linoleum <input type="checkbox"/>	Carpeting <input type="checkbox"/>	Wood <input type="checkbox"/>
Office..... <input type="checkbox"/>			Concrete <input type="checkbox"/>	Stone, etc. <input type="checkbox"/>	Others <input type="checkbox"/>
Type _____			Construction _____		
Work For Which Lighting Is Required			Present Lighting		
General..... <input type="checkbox"/>	On dark material... <input type="checkbox"/>		Type _____		
Reading..... <input type="checkbox"/>	Display..... <input type="checkbox"/>		Footcandles (if known)		
Drafting..... <input type="checkbox"/>	Decorative..... <input type="checkbox"/>		Now_____fc.	Needed_____fc.	
Shop Work..... <input type="checkbox"/>	Proofreading..... <input type="checkbox"/>		Current available		
Type _____			Phase _____	Cycles _____	Volts _____
Windows: Area, Approx., total _____ sq. ft.	Exposure: <input type="checkbox"/> North <input type="checkbox"/> South <input type="checkbox"/> West <input type="checkbox"/> East				

MY PROBLEM: (state here, or in a letter, any specific questions, present problems, unusual or custom-built requirements, special colors or changes of lighting intensity to be included, architectural features such as concrete or steel beams, coves or troffers, etc.)

NAME: _____

POSITION OR TITLE: _____

PIN THIS FORM TO YOUR COMPANY LETTERHEAD

USE THIS FORM 



(Continued from page 58)

WILEY Books

in ARCHITECTURE

These Wiley Books are practical and authoritative—designed to help you do better work. Whether you want a "refresher" or want to increase your knowledge, look over the important titles listed below. Then make your selection and order from the coupon today.

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This architectural "best seller" presents the authoritative and convenient answer to the questions raised in solving the architect's daily problems. All data, standards, and information are shown graphically, so that pictures tell the story clearly. The essential facts are given without excessive detail or ornament. This book has proved itself an indispensable time- and effort-saver to the draftsman, architect, and engineer.

SIMPLIFIED DESIGN OF STRUCTURAL STEEL

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Clear, concise presentation of basic principles and modern methods of structural engineering. Covers the design of the most common structural steel members that occur in building construction. All necessary tables. Illustrative examples, problems and their solutions.

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Contains information on every subject likely to come up for consideration by architects and builders.

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By CHARLES M. GAY and HARRY PARKER
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Now revised, this book gives the latest uses of pressed wood, plastics, and structural glass, as well as the newest tables on the strength of materials and properties of structural steel.

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A compact, thorough treatment of the essential principles and methods behind the design of the most common types of roof trusses. Comprehensive enough for the practicing architect or builder... simple enough for the beginner.

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Covers every phase of plumbing graphically, with no text description. The drawing tells the whole story—installation, connections, and how they fit together. This valuable book presents sound, reliable information covering best modern practice.

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By HARRY PARKER
(1938) 214 Pages \$2.75

A practical book containing the important basic principles employed in the design of structural members in buildings. Features practical problems with their solutions.

many of them built over 30 years ago. This is due mostly to the French influence. It is the Frenchman, too, who has made the balcony a distinguishing feature of all apartment houses. The older buildings have separate balconies for each apartment, but the newer ones have a single continuous balcony along each floor. Instead of making them of concrete flooring with attached iron railings, the whole thing is now made of concrete. This is streamlining à la Algiers.

With increases in population and education, plus improvements in household equipment and bus transportation, it has become easier for Algerians to buy sub-marginal land outside the city on which to build modern homes. I photographed a few such houses in Eckmuhl, a borough of Oran. They are small, but well-planned and are the pioneers in the small house field which



FUTURE: Small homes

is now the vogue and which will undoubtedly become even more widespread after the war. They are made of concrete which can be dyed any color to alleviate monotony. Yellow, brown, red and green are popular colors, and with red or green tile roofs they make a pleasing design. Ten-foot walls surrounding the property are still required as a protection against thievery and to insure privacy. Many walls have broken glass bottles imbedded in the top so that the intruder will be cut if he tries to scale the wall. However, further out in the country or where the French military is stationed there are no walls. Guards and watchdogs keep all prowlers away. It was while enroute to Algiers that I first noticed these small houses and for a few moments thought I was back in the States... they looked so much like our own typical style. It is proof that Algerian architecture is changing and that the Persian arch with its fanciful decoration is being left for large cities and the tourist trade.

CAPTAIN DALE HOLT, A.U.S.
c/o Postmaster, New York, N. Y.

(Continued on page 66)

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Please send me on ten days' approval the books I have checked in this advertisement (or I am attaching to this coupon a separate list of the books desired). At the end of that time, if I decide to keep the books, I will remit indicated price plus postage; otherwise I will return the books postpaid.

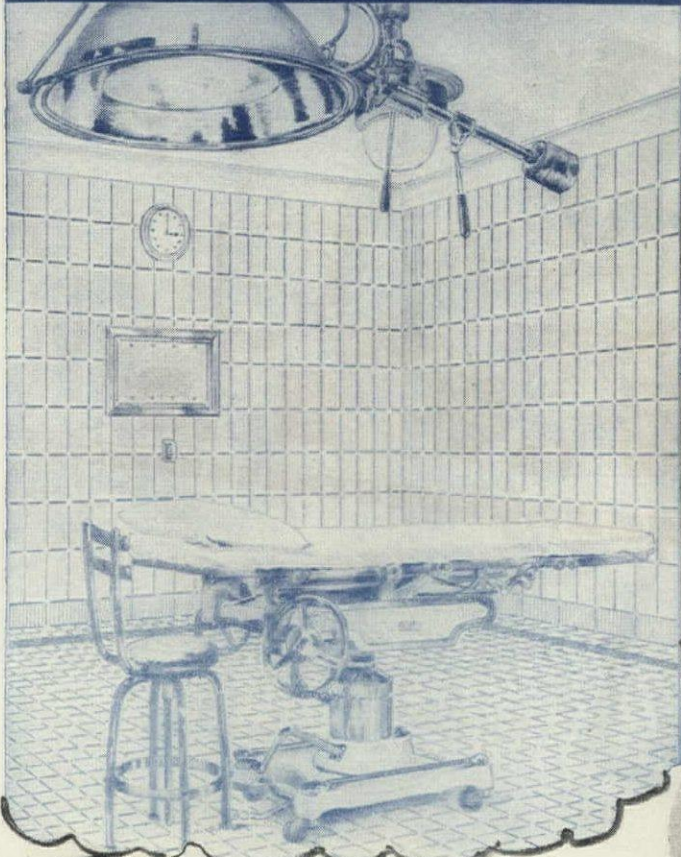
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★ *What they dream about*



"Gee, Doc, let's take a whiff of that other and dream we're doing all this in a sanitary Suntile operating room."



★ **WHAT THEY SEE ...**

Suntile deserves important consideration in planning a modern hospital. Because its installation is verminproof . . . because its surface is non-absorbent and stainproof . . . Suntile is perfect in hospital rooms where cleanliness is of prime importance.

Beautiful color-balanced Suntile adds cheerfulness to the surroundings. Suntile helps cut hospital maintenance costs, too . . . it's so easy to clean and keep clean . . . only minimum upkeep.

Suntile's range of body types, surface finishes, sizes, shapes and colors provides the correct tile for any installation. For permanent beauty and utmost utility, investigate Suntile's advantages for your hospital plans. Suntile will be made again when our war job is finished.



Suntile

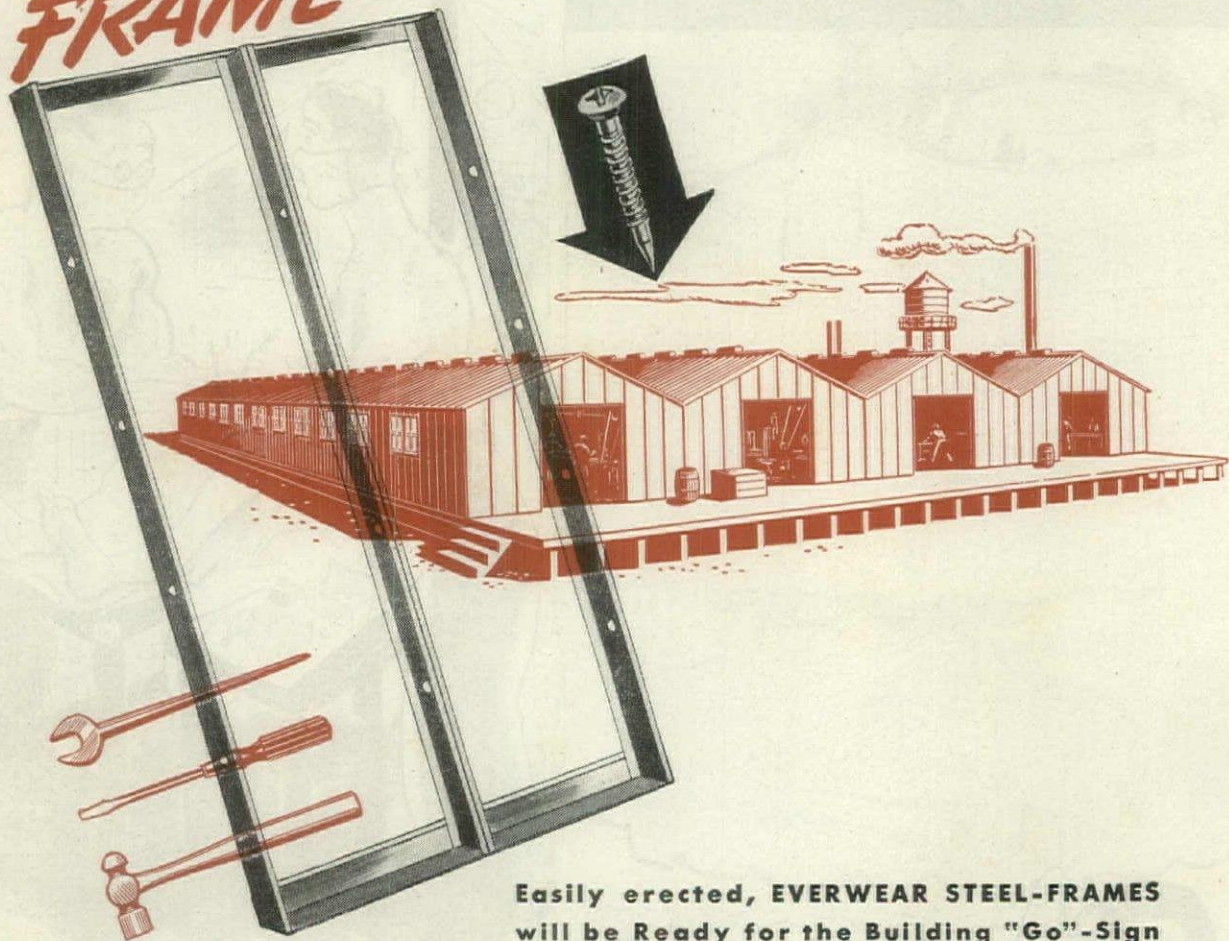
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THE **FRAME** OF THINGS TO COME



Easily erected, EVERWEAR STEEL-FRAMES will be Ready for the Building "Go"-Sign

EVERWEAR Steel-Frame Construction, proved in every theater of war, merely awaits the opening of the building scene in the vibrant America freed from war-time restrictions. It will bring to architects new flexibility of design, to builders and building-supply dealers, speed, simplicity, and ready adaptability to normal construction practice.

This method of better-building construction employs patented welded-steel channels in the form of steel panel-frames which can be quickly erected in standard arrangements. They are designed to frame wall- or roof-surfaces, door-openings, or window-spaces. They can be used in combination with any conventional building materials. They are easily assembled, no tools other than hammers, wrenches and screwdrivers being required.

With Steel-Frame Construction, your freedom of

design is not limited by standard lumber lengths. It permits effective insulation. Foundations and framing are termite-proof. Cost compares with ordinary building-methods.



EVERWEAR Steel-Frames are the ideal construction, from every viewpoint, for the post-war home, for commercial and industrial buildings, and for additions to existing structures.



Southern States Iron Roofing Company, a pioneer in the building-materials industry, known throughout the South for nearly forty years for its EVERWEAR "Lock-Tight" interlocking galvanized Steel Roofing, Steel Shingles, Asphalt Roofing and Paints, can help you visualize the myriad possibilities of Steel-Frame Construction. Write for our new booklet: "PREFABRICATED STEEL BUILDINGS."

Southern States

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Reading and writing...

Designed to fit the way people live, this Tomlinson grouping is a companionable setting for dashing off a letter or browsing through a book. From the interior designer's standpoint, eighteenth century inspiration enlivened by the choice of contemporary fabric is one of many Tomlinson solutions to the problem of making a long, lonely wall more interesting. You will enjoy seeing other examples of today's decorative ideas in our exhibits.

EXHIBITS

IN NEW YORK:
385 MADISON AVENUE

IN CHICAGO:
1666 MERCHANDISE MART

IN PITTSBURGH:
907 PENN AVENUE

AND IN HIGH POINT,
NORTH CAROLINA



Furniture by

TOMLINSON

(Continued from page 62)

CLICHE EXPERT



Forum:

Just tore up your latest issue. As usual the old sing song goes on. When will a new system for captions be substituted for greybeards such as: "privacy is secured" . . . "the room is enhanced" . . . "provides outdoor living," etc? Isn't it about time for A.F. to make a scoop along these lines?

BOB JORGENSEN, A.U.S.

Somewhere in Fort Lewis

Staff contemplates diving from terrace which opens off living room.—Ed.

Forum:

I note with interest your comment on the Colean-Davis rebuilding slide-rule for housing projects (FORUM, July, '45). Your remark about "surprising plums, not quite hidden in the ample Colean-Davis charts and tables" recalls inevitably the statement of a notorious Fascist historian that human dwelling is not a branch of art or architecture but a form that arises in the obscure courses of being.

Leaving obscurities aside, let's take the proposition "land cost is the most critical element." Is it? Let's take a case in the functional cost-return-rent complex when land cost=0. At return =6 per cent (not so high for interest, amortization, taxes) we find rent=\$10.50 p.r.p.m. (See Colean-Davis chart.) Even this is too high for a large section of economic society as things stand today.

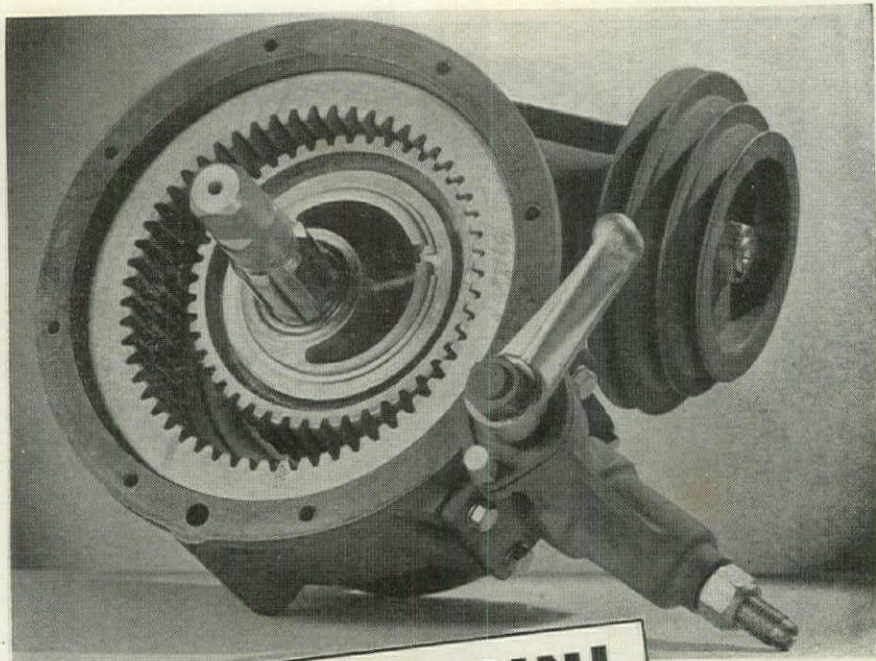
Therefore we must have either:

- 1) as drastic reduction in all costs as in land.
- 2) subsidized housing.

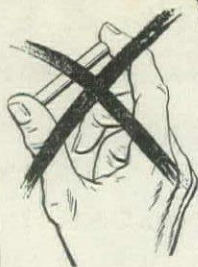
As 1) seems improbable, 2) appears inevitable. Why, then, does the building industry oppose public housing? It might get something more unpalatable in the long run.

Assuming public housing as inevitable, for the sake of argument, what about slum clearance? Why even consider maintaining uneconomic land values and artificial densities at public expense? Why perpetuate the metro-

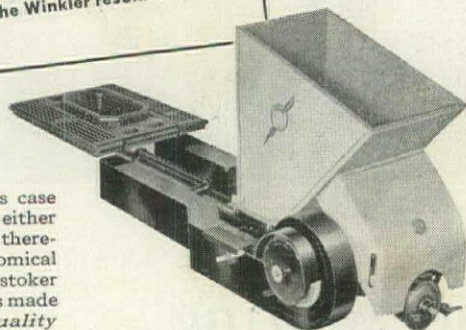
(Continued on page 71)



NO SHEAR PIN!



When the screw load exceeds a predetermined torque the Winkler Automatic Safety Release disconnects the transmission from the drive shaft, then momentarily re-engages it. If the obstruction is rock or slate, two or three re-engagements will, in most cases, crush it. If the feed screw is permanently locked, the mechanism is fully protected even though it runs for hours. Upon removal of the obstruction, the Winkler resumes normal operation.



Stoker-firing has long since proved its case as the low-cost way to burn fuel for either space heating or power. The question, therefore, among men responsible for economical heating plant operation is not *why* a stoker but *what* stoker! Obviously the savings made by a stoker hinge directly upon the *quality* of the equipment purchased.

The creative engineering and high construction standards found in Winkler Stokers are a warranty of maximum fuel and labor savings plus protection of the investment itself. The Winkler Fully Automatic Transmission, for example, is a unit in which *Internal Planetary Gearing* eliminates the mechanical deficiencies of conventional gear designs. It is one of the reasons a Winkler Stoker can be depended upon for service-free operation and longer life.

TRIPLE WARRANTY OF SATISFACTION

The purchaser of a Winkler Stoker has his investment protected in three ways. First—a nation-wide Distributor organization trained and equipped to give service under the close supervision of Winkler District Managers. Second—the backing of a company with excellent financial rating and complete manufacturing facilities. Third—a guarantee on the product itself.



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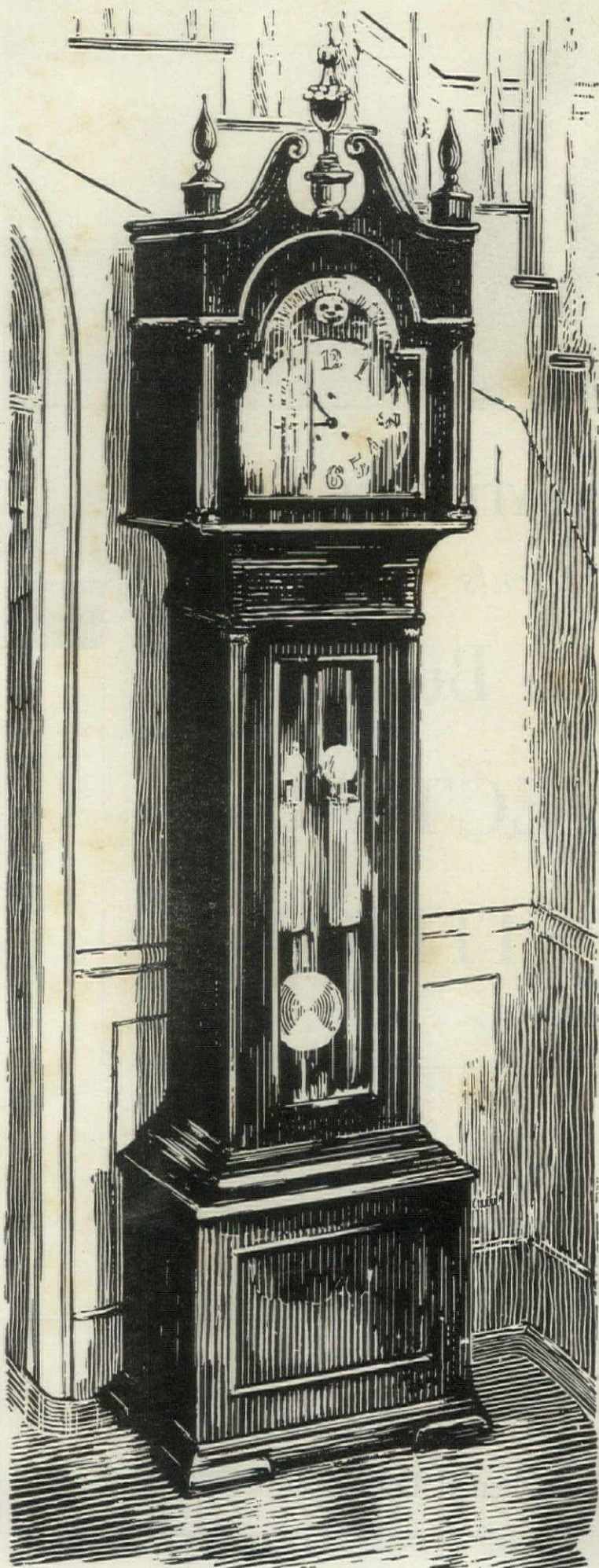
A real estate man writes—"After careful investigation into stokers for our two apartment buildings, we bought Winkler Stokers. Their performance has been very economical, *without service attention in the two years of operation.* I would highly recommend Winkler Stokers to any apartment owners who want the best in heating service."



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The clock ticks . . .

hours slip by . . . days roll into months . . . another calendar page is torn away and we come ever closer to total victory. With each such passing month comes a well earned right to lay down a bit more of our war work burden and increase the use of our resources and abilities in civilian production — the manufacture of UNIVERSAL GAS RANGES.

As we gear for reconversion now, our full determination is to employ our accumulated skill in but one direction — we shall specialize in making the finest gas ranges possible ..UNIVERSAL GAS RANGES

*- America's Preferred
Cooking Choice.*

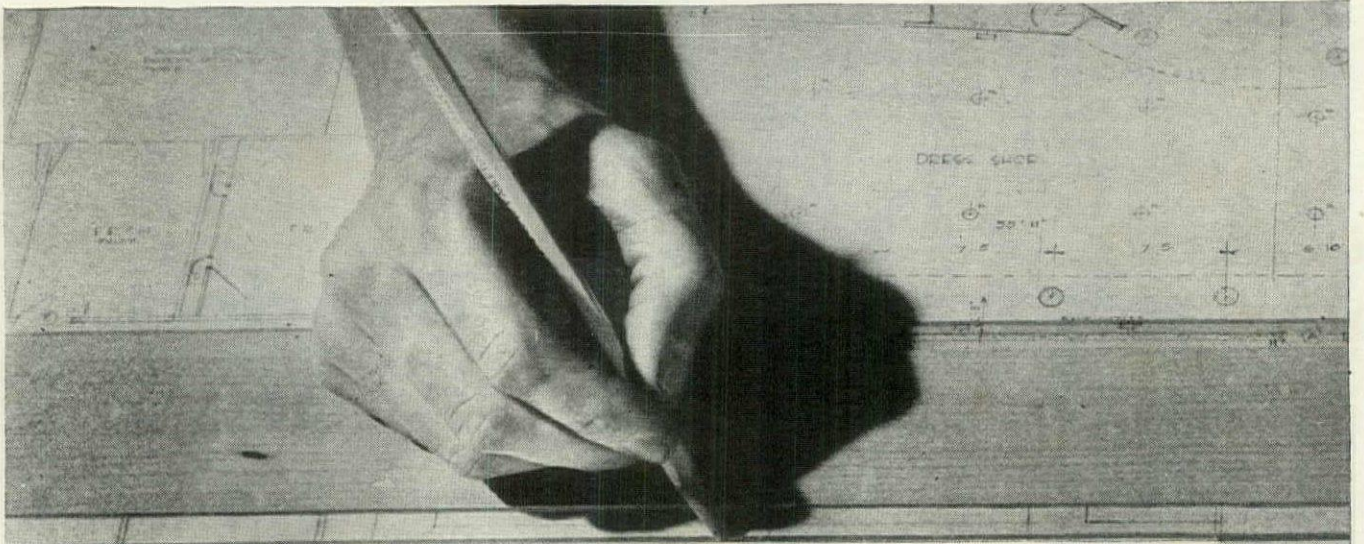


CRIBBEN & SEXTON CO.

Manufacturers of Universal Gas Ranges

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RICH'S - ATLANTA

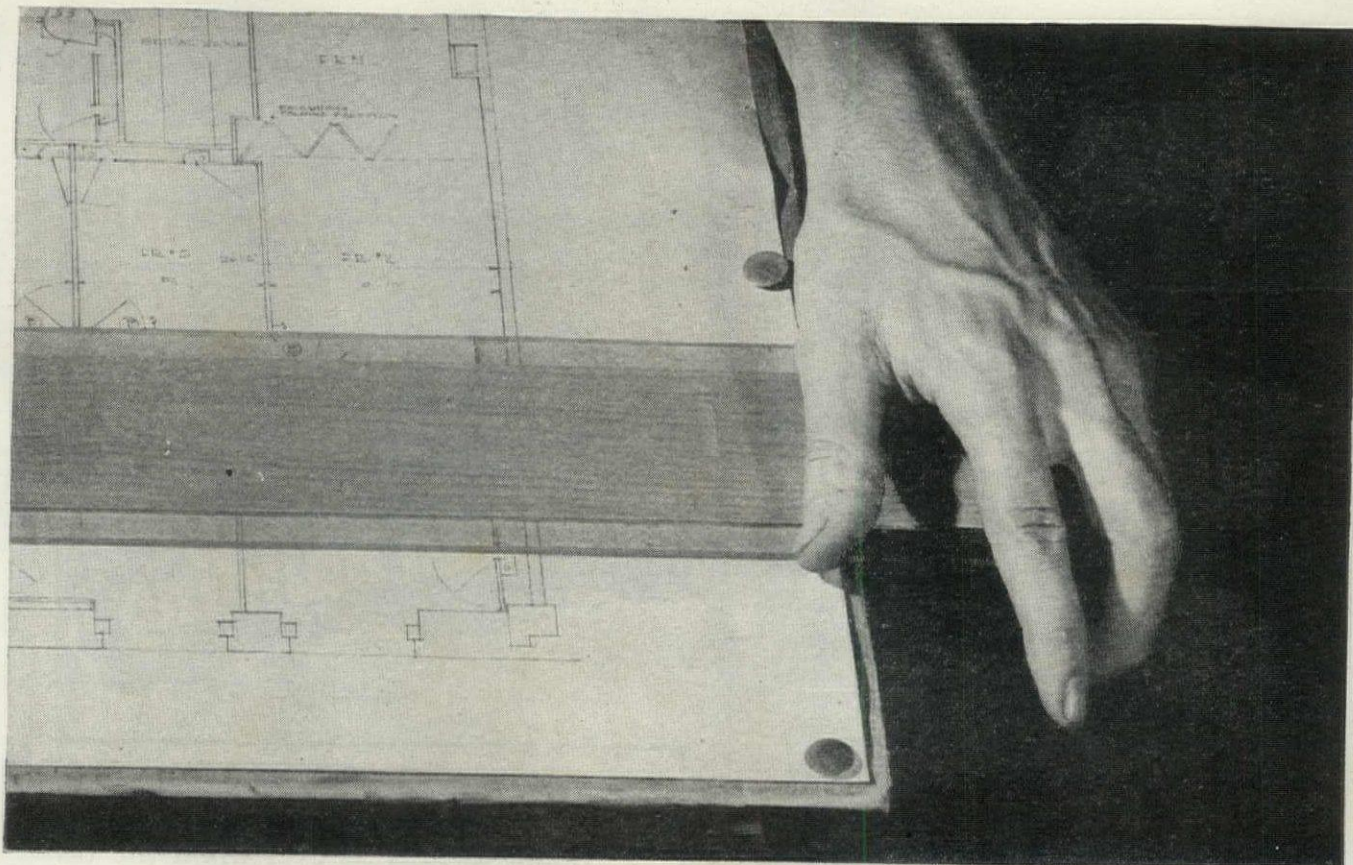
presents

“Georgia Builds”
ARCHITECTURAL
COMPETITION

Problem: *realistic house for a family in Georgia*

Prizes: *totaling \$10,000*

The Official Program of the Pencil Points - Rich's, Inc.
Architectural Competition will be published in the October
1945 Issue of Pencil Points



Rich's, Inc. of Atlanta, largest department store in the South, is vitally interested in the well-being of the people of Georgia. They also realize the universal need for better homes, soon to be built, to satisfy the huge pent-up demand for better living.

Knowing the Architectural Profession to be best qualified to raise the standards of living through residential design, Rich's is sponsoring, in collaboration with Pencil Points, this competition with \$10,000 in prizes.

The problem calls for a small post-war house for a family living in Georgia. Consideration must be given to the climate, the topography, and the mode of living in the South. The materials may be anything that will benefit your design. Full details about the competition will be published and made available by the time the competition opens.

Henry J. Toombs, A.I.A. of Atlanta, and Kenneth Reid, A.I.A., Editor of Pencil Points will be the professional advisers. The competition will be conducted in accordance with the code set up by the American Institute of Architects. The jury will be composed of five leading Architects of established standing, representing different sections of the country.

The competition starts with the publication of the Official Program in the October issue of Pencil Points and closes January 21, 1946. There are no entry blanks, no fees, no

product or material limitations. The winning designs will be given wide publicity. You are free to design *your* idea of a realistic house to be built for living in Georgia. Mail the coupon at once and insure that you will get your copy of the Official Program reprint.

RICH'S
ATLANTA

Kenneth Reid, A.I.A.
Pencil Points, 330 West 42nd Street, New York 18, N.Y.

Please send me, without obligation, a reprint of the Official Program for the Pencil Points - Rich's, Inc. Architectural Competition.

Name _____

Address _____

City & Zone _____ State _____



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BUFFALO LOUISVILLE DETROIT BOSTON NEW ORLEANS
CLEVELAND PITTSBURGH HOUSTON



(Continued from page 66)

politan population surge-tank instead of building houses where needed at rents appropriate to prospective tenants?

War necessity has taught much. Let's profit by it and divorce public housing from slum clearance. And let's have bold plans. Men can't be stirred to imaginative action by charts, tables and nifty-neat graphs.

GEORGE HOWE

Washington, D. C.

VERTICAL STYLE

Forum:

The discussion of the Philadelphia Savings Fund Society Building in the July issue includes the statement: "the columns at the sides of the building project beyond the wall line producing smooth interior surfaces and giving validity to the vertical style while the cantilevered front makes possible continuous windows and is the basis for an equally forthright horizontal treatment."

If smooth interior surfaces are an advantage in the side walls why not also in the front wall?

Do not the front wall columns, about 5 ft. inside the wall, interfere with the placement of furniture?

On the side walls, why not have the spandrels flush with the faces of the piers as on p. 106, thus adding to the office floor space?

CHARLES W. KILLAM

Cambridge, Mass.

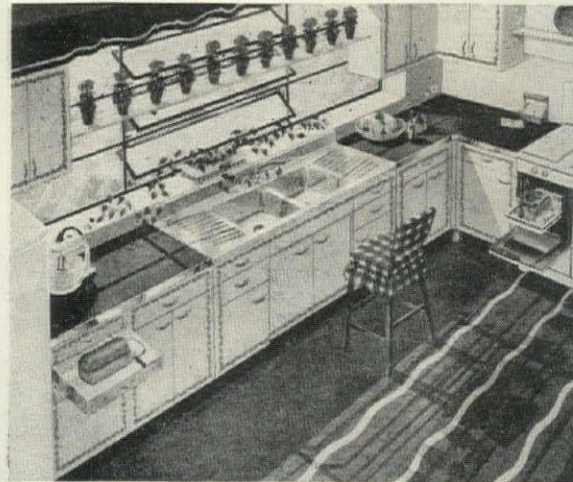
Both the front and side walls of the Philadelphia Savings Fund Society building are smooth and this feature is equally advantageous in each case. The front wall columns 5 ft. inside the wall undoubtedly interfere with the placing of furniture as has been true of free-standing interior columns since they were first used. A modern office building in Boston employing a 55 ft. clear span throughout office sections has already achieved smooth outside walls with no interior columns whatsoever. In future buildings of this type we may be able to escape entirely the problem of columns.—Ed.

Forum:

Your recent detailed analysis of skyscraper design was an interesting example of how an over-riding interest in style or, more concretely, the building facade seems to have preoccupied most of the architectural talent of our generation. It may be that those architects engrossed in skyscraper design cannot afford to think in any more penetrating terms on this subject. An honest analysis of this building type as a solution to human living and working needs might inspire the designer to look for a

(Continued on page 74)

Looking for practical new ideas in Kitchen Planning?



Mail the coupon, today, for plans and specifications of these three "dreamlined" kitchens, built around the famous Estate HEATROLA RANGE... the range with the BAR-B-KEWER.*

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Send for series of three illustrated folders, containing full description, plans and specifications of these scientifically designed, modern kitchens. Many unique ideas that may be readily adapted to your own original designs. Mail the coupon today.

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Heatrola
RANGES

For City Gas, L-P ("Bottled") Gas, Electricity

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THE ESTATE STOVE COMPANY
Dept. AF-9, HAMILTON, OHIO

Please send me plans and specifications for the three modern kitchen designs; also information about the new Estate Heatrola Ranges.

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



Hotel in 194X

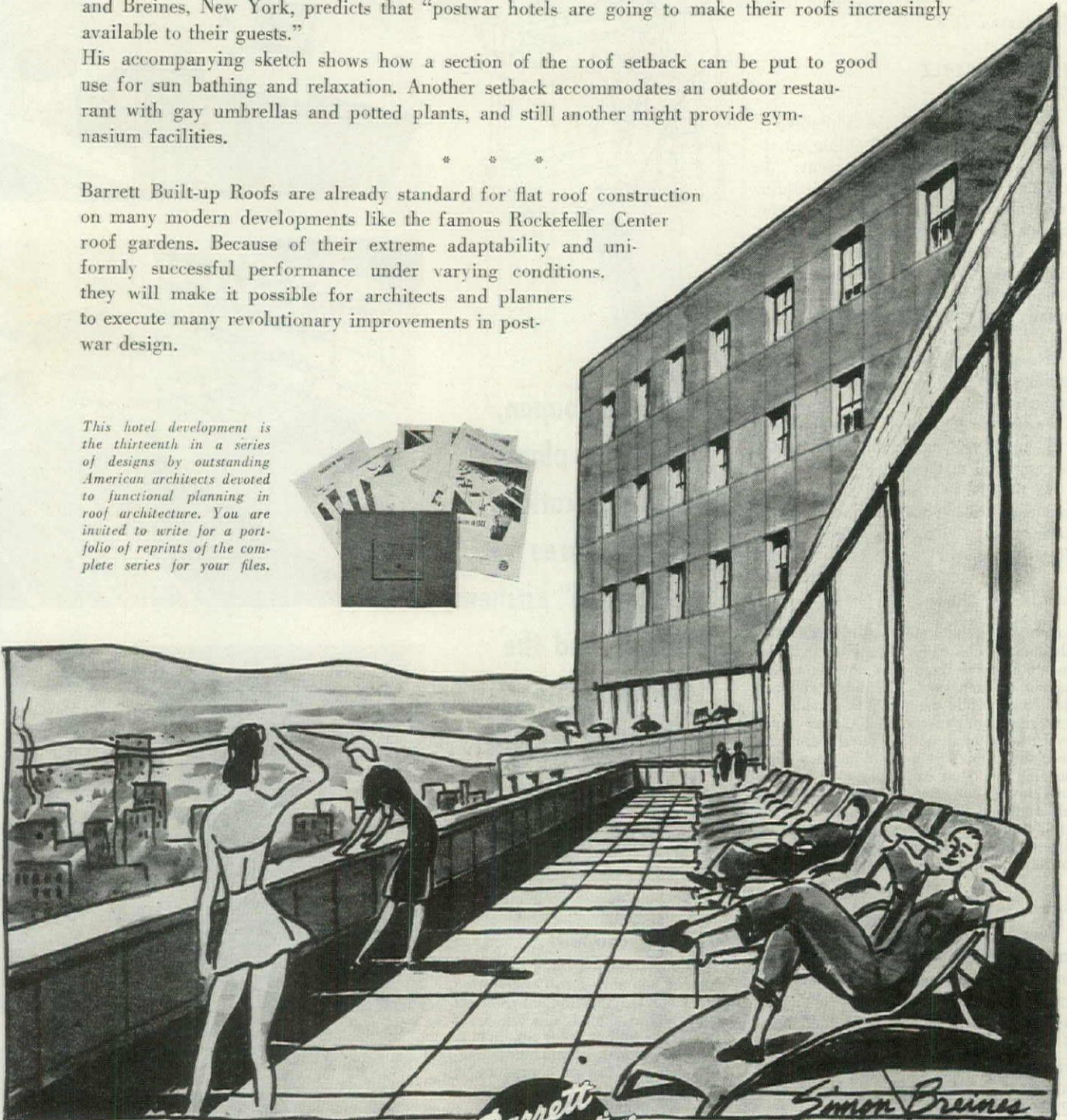
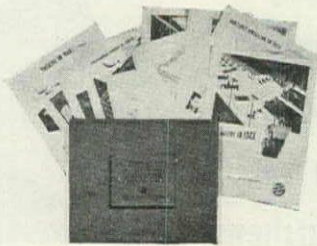
Reasoning that the vogue for sunlight and air is with us to stay, architect Simon Breines, of Pomerance and Breines, New York, predicts that "postwar hotels are going to make their roofs increasingly available to their guests."

His accompanying sketch shows how a section of the roof setback can be put to good use for sun bathing and relaxation. Another setback accommodates an outdoor restaurant with gay umbrellas and potted plants, and still another might provide gymnasium facilities.

* * *

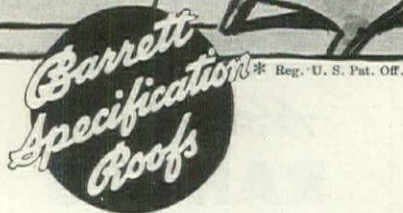
Barrett Built-up Roofs are already standard for flat roof construction on many modern developments like the famous Rockefeller Center roof gardens. Because of their extreme adaptability and uniformly successful performance under varying conditions, they will make it possible for architects and planners to execute many revolutionary improvements in post-war design.

This hotel development is the thirteenth in a series of designs by outstanding American architects devoted to functional planning in roof architecture. You are invited to write for a portfolio of reprints of the complete series for your files.



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TIME-TESTED
Cabinet Showers

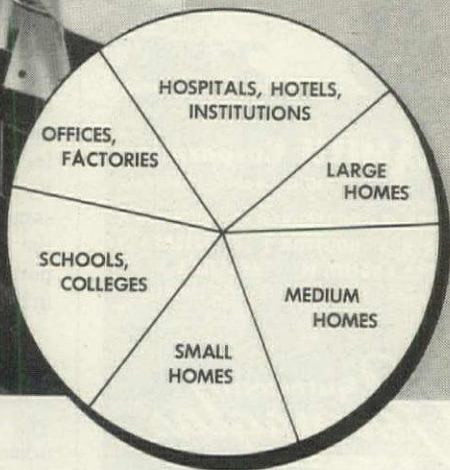
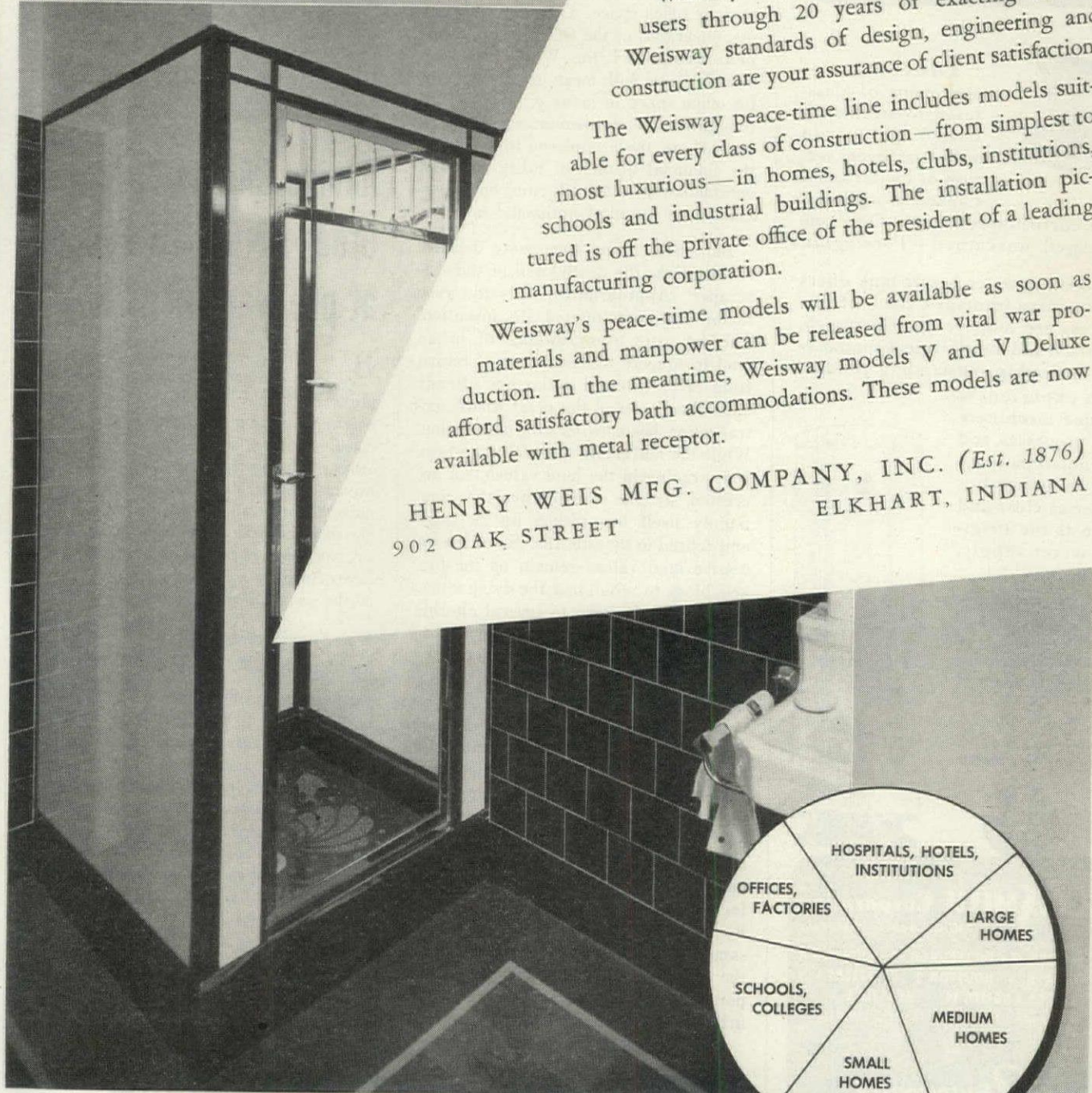
Weisway Cabinet Showers provide the architect's answer to the demand for more bath facilities—and the markedly increased preference for better shower bathing.

Weisway dependability has been proved by users through 20 years of exacting service. Weisway standards of design, engineering and construction are your assurance of client satisfaction.

The Weisway peace-time line includes models suitable for every class of construction—from simplest to most luxurious—in homes, hotels, clubs, institutions, schools and industrial buildings. The installation pictured is off the private office of the president of a leading manufacturing corporation.

Weisway's peace-time models will be available as soon as materials and manpower can be released from vital war production. In the meantime, Weisway models V and V Deluxe afford satisfactory bath accommodations. These models are now available with metal receptor.

HENRY WEIS MFG. COMPANY, INC. (Est. 1876)
 902 OAK STREET
 ELKHART, INDIANA



Weisway CABINET SHOWERS

(Continued from page 71)

handy window to jump out of, instead of another juicy contract to sign.

I doubt the soundness of your assumption that low office vacancies "guarantee continued interest in the skyscraper." It is fairly well known that in most cities the enormous expansion and decentralization of federal agencies and of military offices have accounted for a sizeable percentage of the present boom demand for skyscraper office space. Consider what the disappearance of the Office of Price Administration and the War Production Board alone will mean to the market for office space in many cities. And although real estate memories are notoriously short, there is reason to hope that the financial history of many of these spectacular jobs is frightening enough to deter even the most optimistic investor.

But another and even more decisive factor marks the death-knell of the skyscraper. Appropriately, it is the very factor that precipitated its invention. The fantastic over-crowding of urban land to squeeze the maximum of return from every invested dollar has already more than reached the point where centralization becomes its own destruction. While the real estate speculator has been busy trading in the land values that are created by the community, the community itself has picked up its taxes and retired to the suburbs. Since the excessive land values remain as the biggest block to rebuilding the dying cities, we can look forward to several alternatives: There may be realistic action to reduce the fictitious value of urban land and so rescue the cities. In this case, skyscraper construction will be no longer profitable, and urban designers may turn their substantial talents to a larger problem than they face at present—how to compress the last possible inch of rentable space within the envelope prescribed by the zoning laws. On the other hand, the real estate and mortgage fraternity may stubbornly and effectively resist every attempt to avert its imminent destruction, and we may someday be treated to the spectacle of the investors, clutching their worthless portfolios, as the last inhabitants of an urban wilderness.

GABRIEL VAN VOORHEES

Chicago, Ill.

The FORUM is well aware that excessive urban land values constitute the major block to rebuilding. If Reader Voorhees has any solution to this problem which has baffled the experts we will be overjoyed to hear of it.—Ed.

(Continued on page 78)

Buried-in-Earth Tests Prove— there is only one PERMAGLAS



THOUSANDS of specimens of glass-fused-to-steel were buried for years in soils from every section of the U. S. and Canada, to super-test their corrosion resistance. Only one emerged unscathed—Permaglas.

No other water heater tank offers Permaglas advantages. Back of this success are long years of research, chemical and metallurgical engineering leadership, outstanding production experience, unique machinery and processes, and unlimited patience . . . to assure hot water as clear and pure as the original water supply, always.

Write for "The Inside Story of Permaglas"... valuable to you and your clients when discussing corrosion-proof water heaters.

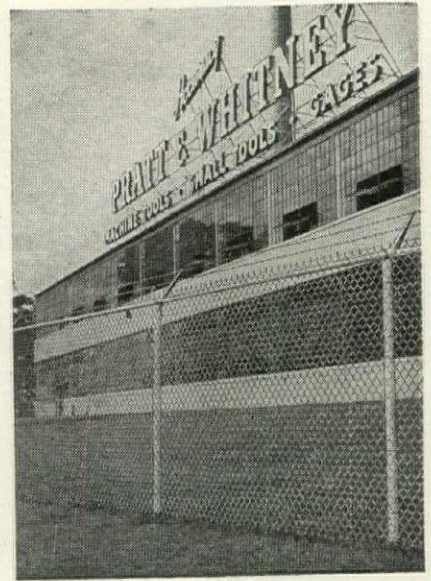
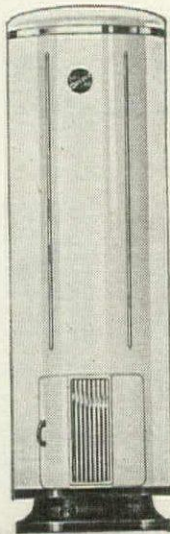
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BY ordering Anchor Fence now your clients can get the benefit of pre-war prices . . . plus Anchor service in expediting erection . . . plus exclusive Anchor features which are found in no other chain link fence. For example, deep driven Anchors hold Anchor Fence permanently erect and in line in any soil . . . permit erection in any climate or weather . . . yet make it easy to take up and relocate Anchor Fence *without loss* if changes in the enclosed area are required later.

Free Specification Manuals for Your A. I. A. File 14-K

Let us send you our Specification Manuals on Anchor Chain Link and Anchor-Weld Iron Picket fences. Prepared especially for Architects and Engineers, they contain installation photographs and sectional drawings . . . describe the various heights, weights, structural features and applications of Anchor fences and gates . . . include helpful sample specifications for many types of fencing jobs. These books will prove helpful to you in planning many postwar projects. For free copies address: Anchor Post Fence Co., 6635 Eastern Ave., Baltimore 24, Maryland.



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"Postwar home buyers will want quality that's more than just 'skin-deep' . . ."

And that's why you'll want to weigh the many merits of KIMSUL*—its functional worth — its quality appeal



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KIMSUL has proved its effectiveness through use on thousands of metal and wood buildings—serving our armed forces in Arctic cold and Tropic heat. The Southern States Iron & Roofing Company workmen, shown below, are applying KIMSUL insulated panels to a prefabricated building to be used as an Army Field Hospital.

Yes, people will still buy homes on the basis of eye appeal. But, if you are planning cottages, castles, or prefabricated homes, it will be wise to remember that postwar buyers will be more quality-conscious than ever before—regardless of the price range in which they'll buy.

And the architect who specifies KIMSUL Insulation will not only render an extra, client-appreciated service, but also one that will pay dividends over the years. Here's why:

1. KIMSUL has a "K" Factor of .27. It is superior in principle—the *only* many-layer insulation.

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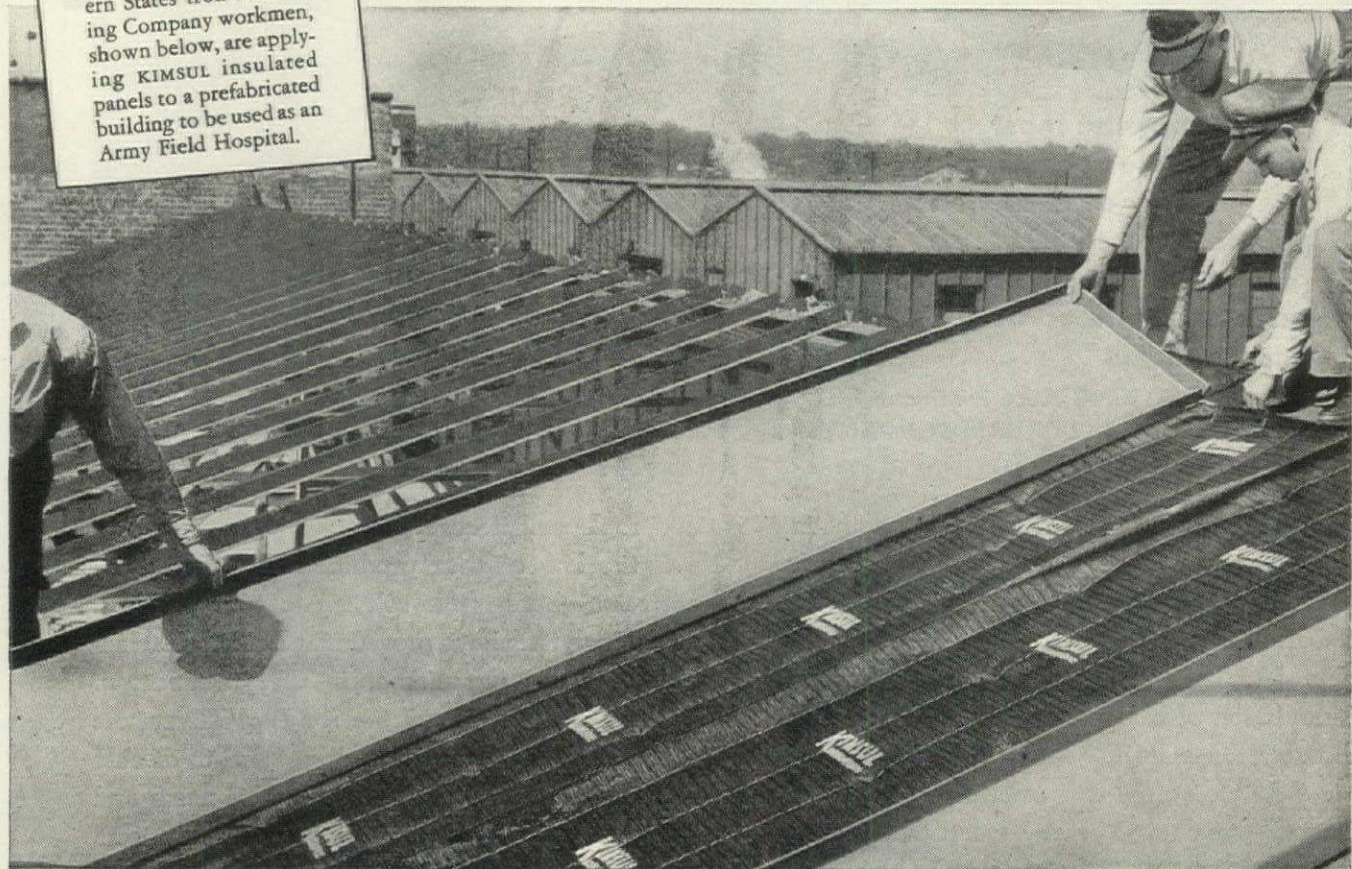
4. KIMSUL will last the life of the structure in which it's installed.

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For complete technical data on KIMSUL Insulation, refer to Sweet's 1945 Catalog, or write to Kimberly-Clark Corporation, Neenah, Wisconsin.



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POSTWAR HOME
IN A KIMSUL
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Thousands of installations mutely testify that the definite fusion of molten zinc with the base metal—through the Hot-Dip Galvanizing Method, increases the life of iron and steel products and installations—years and years beyond their normal expectancy. This process has saved users millions of dollars in expensive maintenance

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If the life of your products is menaced by corrosion—here is the solution to your problem. Conclusive tests have proved that Hot-Dip Galvanizing provides *the utmost in rust prevention*.

There is a member of the Hot-Dip Galvanizers Association near you who will be glad to discuss rust and corrosion prevention—for his name and address write: American Hot Dip Galvanizers Association, Inc., First National Bank Building, Pittsburgh 22, Pennsylvania.



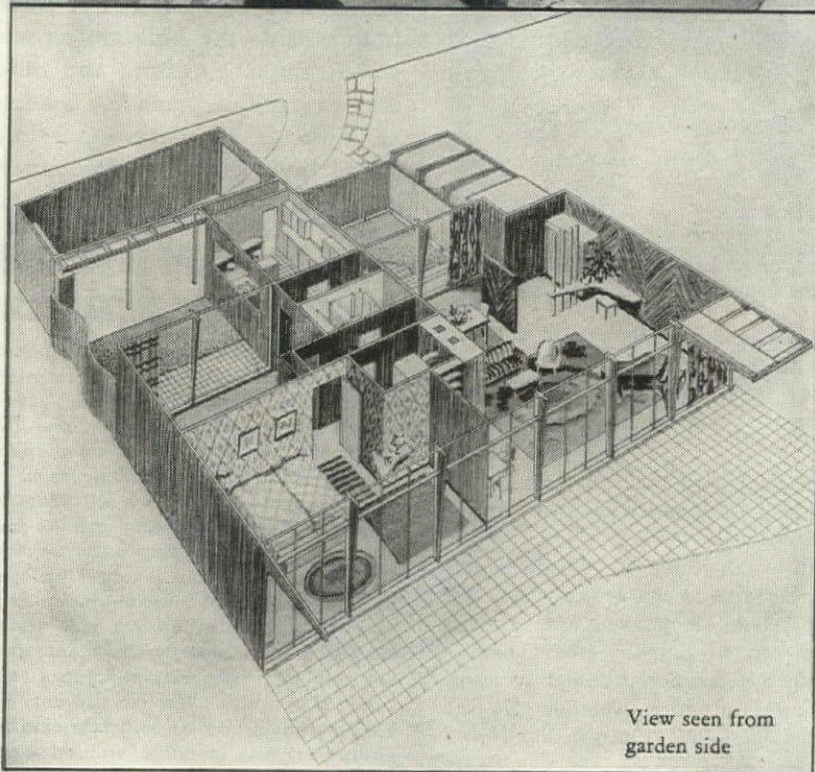
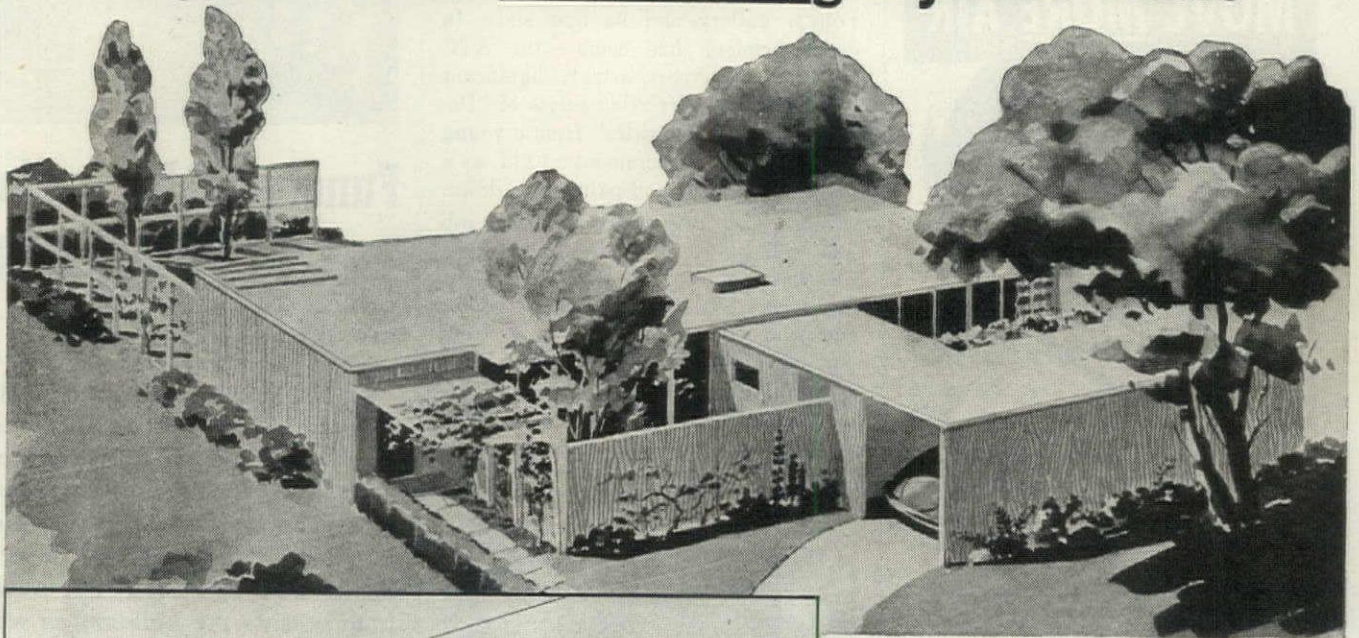
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COMPACT, SIMPLIFIED PLANNING

Keynotes this Prize-Winning Plywood Home



View seen from garden side

Plywood's structural possibilities are graphically illustrated in this second-prize plan, in the recent United States Plywood Corporation — "Arts & Architecture" Small Home Competition.

This highly simplified method of construction, based on the principle of the three-hinged arch, shows that plywood is truly a material that combines beauty and utility.

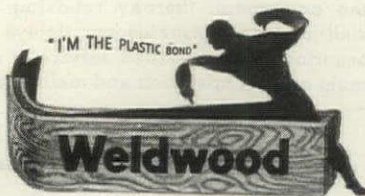
Laminated wood arches...strong plywood hardwood paneling...plywood sheathing for sub-floors, ceilings and walls to be papered...waterproof exterior sheathing...they all combine to produce a compact, livable, economical home for the modest budget.

Another very interesting feature of this design is the way Lt. Amdal provided for today's demand for easy transition between indoor and outdoor living. Here again the structural advantages of plywood permit a freedom of planning that would have been difficult, economically, with other materials.

Complete details of this and the other winning designs are available upon request.

Second-Prize Design

by Lt. (j.g.) Russell M. Amdal,
U.S.N.R., Washington, D. C.



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Waterproof Weldwood, so marked, is bonded with phenol formaldehyde synthetic resin. Other types of water-resistant Weldwood are manufactured with extended urea resins and other approved bonding agents.

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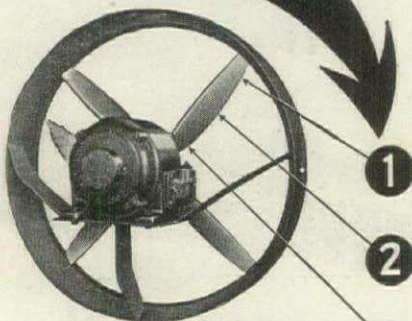
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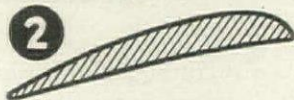
Here's Why PROPELLAIR FANS MOVE MORE AIR



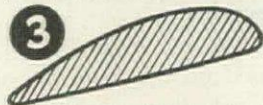
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High-speed tip has least camber (curvature of working surface); least chord (width of airfoil section); least pitch (angle of attack).



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BOTH Sides of these Blades WORK and over their Full Length!

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Non-overloading Propellair axial-flow fans deliver maximum volume, require minimum torque, are easy to install, take little space... save money at every turn. Types and sizes for every industrial service. Ask us today for Catalog No. 10-AF.

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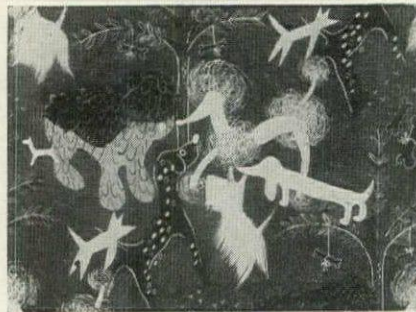
A LETTER FROM THE PUBLISHER

Dear Reader:

A long-cherished FORUM notion has been that some day we might sport a little gallery right in our office. The FORUM gallery and its first show (a double-header) has come—the ATC Washington Airport, a truly significant building, and a diverting series of "Designs, Some for Textiles" from a young lady who favors Sacramento, Calif. as a place to get ideas and paint them down.

Since Charles Goodman's ATC job was well shown in the March FORUM, we will say a few more words about our new friend, Miss Lorraine Miller, whose age is no secret—just 19. Quoting from our show program—

"Perhaps the most outstanding feature of her work is its sense of humor. Animal forms have been a source of pattern since earliest times, but the animals seldom have had a chance to wink at



"Canine Convention"

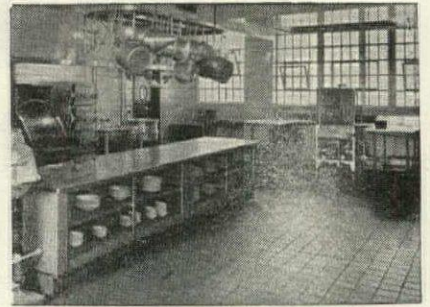
their audiences with the sly wit that Miss Miller allows her seals with head scarves and dogs with Tyrolean breeches."

One final word about the gallery. Our hope is to use it chiefly for new talent—not necessarily young but new and necessarily real. Both Mr. Goodman and Miss Lorraine fit this requirement. We invite you to see for yourself. Also we invite you to propose other shows—architecture, industrial design, painting, sculpture, furniture, whatnot. Do you crave a spotlight? Can you stand one?

* * *

Various thoughtful friends have been phoning, wiring, writing to find out what happened to the FORUM in the now famous Empire State plane crash. At 9:53 Saturday morning when we are "officially" closed but never really, only two early birds had arrived—Leslie Cheek and Dorothy Stone. Cheek, a recent OSS Major and trained not to jump under fire, found Miss Stone equal to the emergency. She calmly turned on a radio to find out what had happened but the news was not yet being broadcast.

(Continued on page 80)



Functional Design for INSTITUTIONAL KITCHENS

• No departments of hospitals, schools, colleges, hotels and other institutions involve more complex problems of functional design than those in which food is to be prepared and served. These departments must be directly accessible from outside the building as well as to ramps, elevators and other service facilities inside. Leading institutional architects, therefore, submit their plans in the preliminary stage for functional detailing by

JOHN VAN RANGE FOOD SERVICE ENGINEERS

If you have such projects on your boards or in prospect send us your blue prints. Let us suggest the most efficient layout for all food service facilities, one that will make the best use of floor space, straighten the line of handling, from receipt of provisions through all processes of preparation and serving and the final washing of dishes and disposal of garbage. Upon approval of the layout developed by cooperation of our engineers and your own organization we will design all equipment, incorporating automatic devices for temperature control and safety of operation. We will use only the best materials and we will fabricate the equipment with invisible, welded seams and sanitary rounded corners. We will assume full responsibility for installing the equipment, thereby relieving your staff of many troublesome delays and assuring long continued service at minimum cost for operation and maintenance.

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Send us your inquiries

The John Van Range Co.

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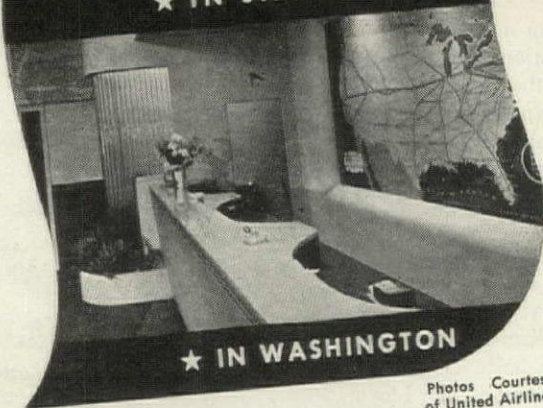
328 EGGLESTON AVE. CINCINNATI 2, O.



★ IN VANCOUVER...



★ IN SAN DIEGO...



★ IN WASHINGTON

Photos Courtesy of United Airlines

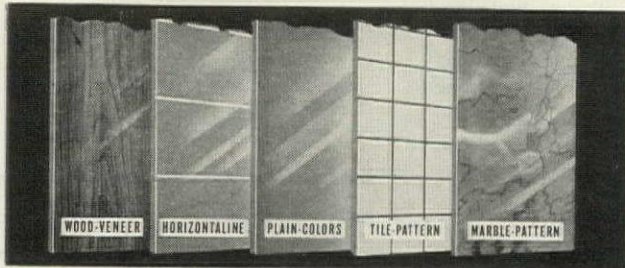
PLASTIC-FINISHED MARLITE
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“... we are so pleased with it (MARLITE) that we have made it a standard item in all of our installations.”

From a Recent Letter By Richard Barry, Chief Building Designer for United Airlines.



Marlite's pioneer high-heat-bake finish means everything to you . . . to your clients.

- Redecorating eliminated.
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Normally available in a wide variety of colors and patterns, these moderately priced and large, wall-size panels are easily and quickly installed—usually without interrupting regular routine. Equally adaptable to all types of rooms, in all types of buildings; new construction or remodeling as your planning progress.

Marlite paneling helps you solve the unusual problems of interior decorating. A striking example of its practical versatility is a recent application by United Airlines. Silver Marlite completes their characteristic color scheme of gray, blue and silver in three important offices; San Diego, Washington and Vancouver, B. C.

In addition, the designer, by adapting Marlite's warm, reflective beauty to the counter topping, enhances the counters' cock-pit design in these highly functional offices. This is just one more instance where plastic-finished Marlite, in addition to its conventional use as wall and ceiling paneling, brings interior designers many opportunities for unusually imaginative construction. Whatever the interior designs that now wait on your boards, you too, will find that there's a place for Marlite.



Marlite
REG. U.S. PAT. OFF.

MARSH WALL PRODUCTS, INC.

91 MAIN STREET, DOVER, OHIO

PIONEER HIGH-HEAT-BAKE PLASTIC-FINISHED WALL PANELS

(Continued from page 78)

Check decided they should smoke a couple of cigarettes and wait for developments. Fortunately these failed to materialize. Presently an elevator man came through looking for people, took them down. As everyone knows, the building stood the shock and is reassuring evidence of the competence of architects, engineers and builders.

* * *

We continue to meet such interesting people right here in our office. Among them, Constantine Doxiadis, a Greek who with several hundred technicians serving with the underground, replanned 800 communities *during* the occupation—no mean assignment even when there is a peace on. Dorothy Rosenman stopped in just before sailing to talk over her European trip and to promise to expert the situation for FORUM readers—probably in the October issue. We told her to look up Jaqueline Tyrwhitt, the English planner who was here recently on a reverse mission for the British. Then there was Paul Frankl of Los Angeles and long-time fame as a modern designer. Neither his charm (via Vienna) nor his fame has diminished over the years. The great portraitist, Youssef Karsh came out from under his green baize cloth long enough to report that Frank Lloyd Wright, who sat for him that morning, was the most provocative man ever to pose before his five-star lens. Dapper publisher William Towler of dapper TOWN & COUNTRY came in to show off his enthusiasm, undiminished by the British election results. Victorine Homsey, sparkling wife of Lt. Comdr. Sam Homsey and his peace-time architectural partner, reported a pending building boom in Delaware. As in recent years, the Homseys doubtless will contribute handsomely.

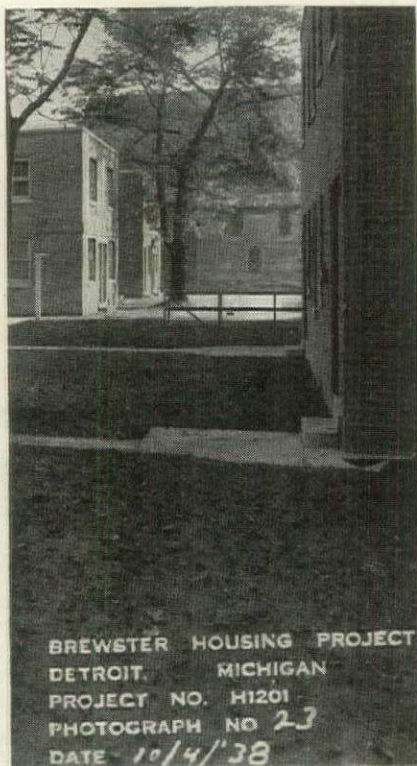
* * *

As we go to press, technicians are hurriedly trying to interpret what atomic energy can do *for* building. A convincing demonstration of what it can do *to* building is before them.

* * *

The FORUM-Crosley home-building survey carried in this issue as a special supplement attempts scientifically to forecast the public's attitudes on new houses—when, where, how much, what kind and other data essential to sound industry planning. Your reading of this report is both invited and strongly recommended.

H. M.



BREWSTER HOUSING PROJECT
DETROIT, MICHIGAN
PROJECT NO. H1201
PHOTOGRAPH NO 23
DATE 10/4/38

Are you sure LAWNS will function in your functional plans



There is more to grass than planting seed. A grass plot beautifying a housing development would be unsuitable for an airport. Because soil conditions vary in different locations, because grading and drainage affect grass growth, because varying traffic, terrain and shade conditions demand different treatments, because climatic zones must be considered, because the insects and pests attacking lawns are not the same even in different parts of the same state . . . each of your plans for a turf area must be treated as a separate problem.

We have helpful information about planting problems, which will be given you without obligation, just as it has been given such outstanding projects as the Williamsburg Restoration, the N. Y. World's Fair and the Willow Run Airport.

WOODRUFF Adapted Lawn Seed

Write and send us your problems.

Grass Seed Division

F. H. WOODRUFF & SONS, INC.

Milford, Conn.

Toledo, Ohio

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Atlanta, Ga.

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Optonics

The
FUNCTIONAL
USE OF COLOR

Speeds
Plant
Production



SEND FOR THIS Booklet

By bolstering employee morale, improving industrial safety and reducing absenteeism, the Optonic Color System increases plant efficiency and production. This newly developed FUNCTIONAL use of color is described in a booklet, "Color Power for Industry". A note on your business letterhead will bring you a copy with our compliments.

THE ARCO COMPANY
CLEVELAND, OHIO • LOS ANGELES, CALIF.





In this attractive Domestic Science Room of the J. W. Sexton High School in Lansing, Michigan, Nairn Linoleum is used on floor, borders and base, as well as on work surfaces and window ledges. The walls, also, are Nairn Wall Linoleum.

meets all four "musts"

for modern school floors . . .

ALL FOUR "MUSTS" for a modern school floor —
appearance, resilience, durability, ease-of-maintenance—
are met with Nairn Linoleum.

Floors of Nairn Linoleum are colorful, easy
to keep clean and sanitary. Their proved
wearing qualities

insure long, trouble-free service,
even in areas of heaviest traffic.

*Their quality is backed by the reputation of
the oldest manufacturer of linoleum in America.*

In Kindergartens, High Schools, Great Universities,
Educational Institutions of every type, this most modern
of floors—Nairn Linoleum—is daily proving itself
the outstanding floor for tomorrow's school building.

For a specially prepared handbook on Linoleum specifications,
write to Congoleum-Nairn Inc., Kearny, N. J.

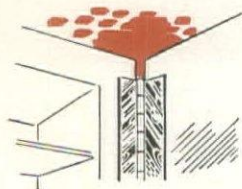
For modern floors and walls

NAIRN LINOLEUM

easy to maintain,
colorful, permanent, resilient.



Who took the *cricks* out of "close-ups"?



NO SAG—NO WARP—NO STICK
Miami-Carey was first with piano-type hinges and one piece mirror frames.



ROSETTES "WENT OUT" when Miami-Carey introduced the mirror-clip—now standard in the industry.

MIAMI-CAREY did. To end the tiring over-the-lavatory stance, Miami-Carey developed an ingenious cabinet door hinge that let the mirror swing out over the lavatory. Result: close-ups became comfortable.

This accomplishment is another reason why everybody looks to Miami-Carey for the "firsts" in bathroom cabinet design, convenience and quality. Some high-spot examples: Non-rusting steel construction—5-year guaranteed copper-backed mirrors—high quality finishes—solid brass hinges and mirror frames.

Watch for news soon on postwar Miami-Carey bathroom cabinets and accessories. For information on current models—write—

MIAMI
Carey



CONCEALED LIGHTING—another Miami-Carey first in beauty and convenience.



A SAFETY "FIRST"—introduction of the razor blade drop eliminated a major bathroom hazard—enhanced convenience.

MIAMI CABINET DIVISION
MIDDLETOWN, OHIO

THE PHILIP CAREY MANUFACTURING CO.
LOCKLAND, CINCINNATI 15, OHIO

Careyduct • Industrial Insulations • Rock Wool Insulation • Asbestos Shingles and Siding • Asphalt Shingles and Roofings
Built-up Roofing • Roof Coatings and Cements • Waterproofing Materials • Asphalt Tile Flooring • Pipeline Felt
Expansion Joint • Asbestos Wallboard and Sheathing • Corrugated Asbestos Roofing and Siding • Miami-Carey Bathroom Cabinets and Accessories



These beautifully designed, power-operated elevator doors replaced old-fashioned grille work.

4 ELEVATORS NOW DO THE WORK OF 5



The Michigan building in Detroit which appreciates the advantages of Otis Elevator Modernization.

In the Michigan Building of Detroit, modernization of the elevator plant by Otis has resulted in marked improvements in elevator service and *worth-while savings in elevator operating costs.*

Here's the story:

Originally, this building contained five Car Switch Gearless Elevators with open grille fronts and manually operated doors. All five of these elevators had to be operated at full capacity to handle the building traffic.

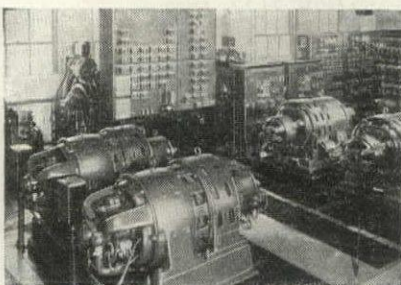
But, after being changed over to Otis Peak Period Signal Control, only four

elevators were required to handle the traffic during busy periods. During slack periods, *only three cars were required.*


This is only one interesting example of the benefits of Elevator Modernization by Otis.

Whether your problems of vertical transportation are in Office Buildings, Department Stores, Hotels, or any other type of building, your Otis representative is ready to discuss modernization plans with you or your Architect.

For the finest in vertical transportation tomorrow, call your Otis representative TODAY.



Partial view of the penthouse machine room after Otis Modernization.



ELEVATOR COMPANY
OFFICES IN ALL PRINCIPAL CITIES

TURN TO



FOR

Oil-fired Boilers

Gas-fired Boilers

Conversion Oil Burners

Warm Air Conditioners

(Oil-fired and Gas-fired)

Room Coolers

Cooling and Heating Coils

Remote Room Air Conditioners

Central Plant Air Conditioners

Condensing Units

(for air conditioning and refrigeration)

Evaporative Condensers

Water Coolers

Beverage Coolers

Storage Cabinets

Cube Ice Makers

Conditioned Air Cooling Units

(for commercial refrigeration)

When you've a problem of heating or cooling ...first get the facts on this complete G-E line

WHETHER it's a home to be heated—
or a skyscraper to be cooled—you'll
find the equipment you want in G.E.'s com-
plete line. Equipment that has been devel-
oped by the most highly developed engin-
eering skill . . . yet is *competitively priced*.

But that's just *one* of the reasons for
turning to G. E. for Heating, Air Condi-
tioning and Commercial Refrigeration
Equipment.

When you specify G. E., the *same* experi-
ence and know-how that developed G-E
equipment are available through G-E dis-
tributors to help you in layout of installa-
tions.

G.E.'s reputation gives full assurance to
your client of the quality of the equipment
—and of its successful performance.

And *you* know that an outstanding or-
ganization stands back of the job.

Good reasons why G-E equipment will
have an important part in your postwar
plans—begin *now* by getting the facts on
the G-E line.

*General Electric Company, Air Condi-
tioning Department, Section 5139, Bloom-
field, New Jersey.*

BUY . . . and hold . . . WAR BONDS

AUTOMATIC HEATING AND COOLING
AIR CONDITIONING AND COMMERCIAL REFRIGERATION

GENERAL  ELECTRIC

Architectural Dutch Treat

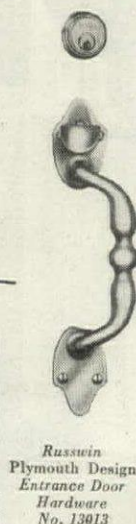
... A FIFTY-FIFTY PACT BETWEEN A HOUSE AND ITS OWNER LEFT A HAPPY HERITAGE FOR HOME LOVERS



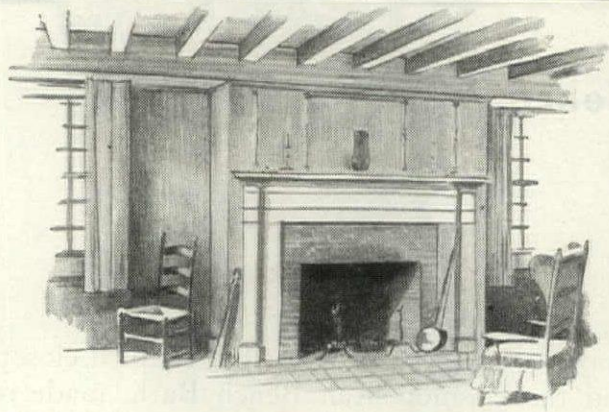
■ This is an authentic version of the durable Dutch Colonial. Beloved by Americans for its friendly hominess, it fits the landscape like a sturdy oak, never inflicting a sense of stark newness. Its originator, the Dutch immigrant, perhaps made a pact with his house... a promise to build it honestly of stout timbers and native stone... receiving in return abiding security and cheer.



■ This is an ornamental doorway evolved from the earlier plain design to eliminate, by means of side and fan lights, the gloom of the central hall. Of course, the graceful design also expressed the owner's desire to make the entrance as inviting as possible. See how Russwin craftsmanship follows the authentic style in gleaming cast brass.

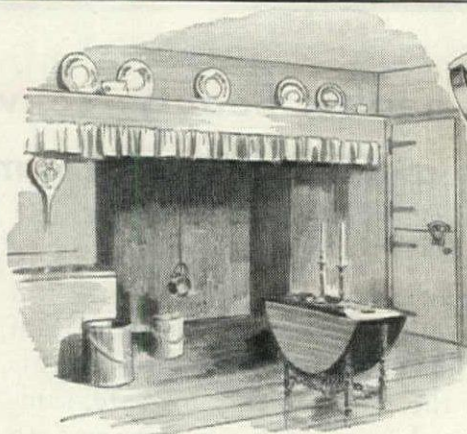
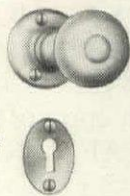


Russwin
Plymouth Design
Entrance Door
Hardware
No. 13013

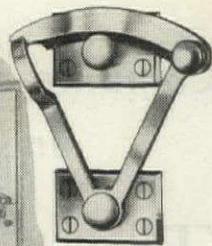


■ This is snug, restful comfort... beamed ceiling... warm tones of mellowed woods in hand-planed paneling... small-paned windows. The Dutch farmer contrived his house as honestly as he would a chair - to suit his personal comfort - for he was not the sort to pick up and move. If, like him, you would have enduring service from each detail of your home, look well to the hardware you choose. Allot a full 2% of the building cost to finish hardware - and Russwinize throughout with cast brass and bronze.

Russwin
Interior
Door Set
No. 496-75



■ This is the kitchen "workroom" - ample in space in the early days - more compact now by reason of modern appliances. The quaint charm of certain features has been retained, such as the Dutch door with its unique quadrant latch. Past masters in the authentic and serviceable, Russwin has the right hardware for your postwar house. Plan to choose from Russwin's illustrated booklet, *Residential Hardware*. Write for a copy. Russell & Erwin Manufacturing Company, New Britain, Connecticut.

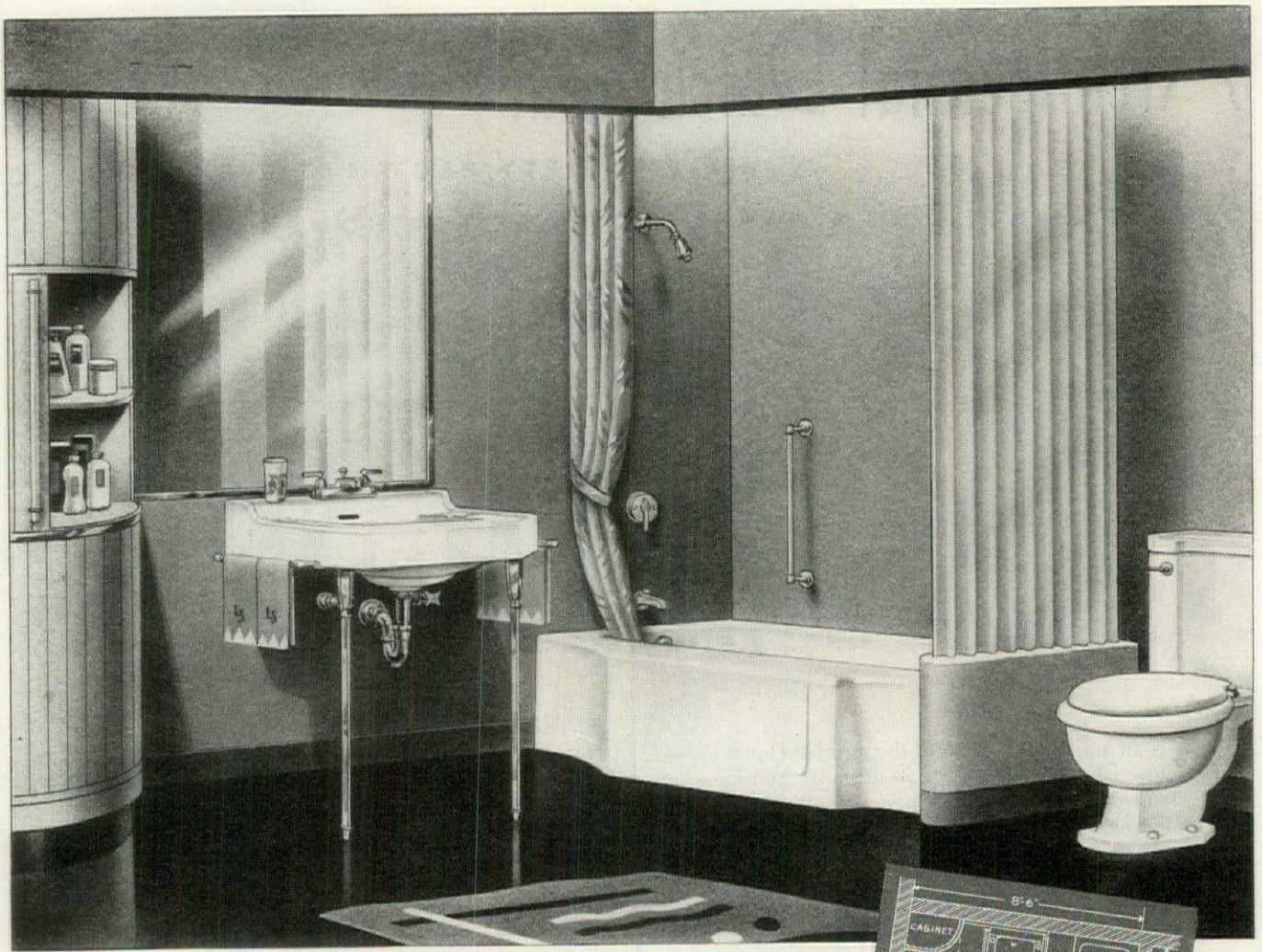


Russwin
Plymouth Design
Dutch Door
Quadrant
No. 050

FOR ENDURANCE... WROUGHT OR CAST BRASS AND BRONZE

FOR DESIGN AND WORKMANSHIP...

SINCE 1839
RUSSWIN
DISTINCTIVE HARDWARE



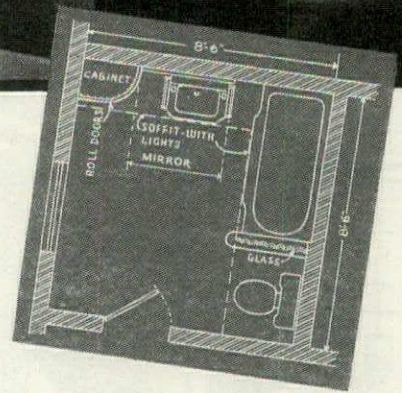
**Combine health, beauty, convenience
in a KOHLER bathroom**

THE recognized excellence of Kohler plumbing is a valuable guide for the Architect in designing a bathroom that will be a foundation for health in the home. Kohler fixtures and fittings meet all the requirements for safe, sanitary protection. The working parts are smooth and reliable in performance, and Kohler designs have the advantage of being practical as well as distinguished—lending themselves to arrangements in which beauty, utility and convenience can be admirably combined.

The Chesapeake vitreous china lavatory, in the arrangement above, has a handy ledge for toilet articles, roomy basin and efficient, mixer-type Centra fitting. Also shown are the quiet,

smooth-acting Wellworth close-coupled closet; and the Cosmopolitan Bench Bath, made of enameled cast iron for satisfactory and lasting service, with the easily controlled Triton shower mixer.

The uniform high quality which the name Kohler signifies is safeguarded by the fact that Kohler products are made in one plant, under one supervision, backed by 72 years of manufacturing experience. Write for a copy of Catalog K-41. Kohler Co., Dept. AF-9, Kohler, Wisconsin. Established 1873.



KOHLER OF KOHLER

Buy and Keep
U. S.
War Bonds

PLUMBING FIXTURES AND FITTINGS • HEATING EQUIPMENT • ELECTRIC PLANTS

THERE IS A NEW TREND IN STORE DESIGN



JOSE A. FERNANDEZ' conception of a Jewelry Store . . .

"Being a firm believer in the 'open-faced' front, I have designed this jewelry store with a maximum amount of glass to reveal the interior to the prospective customer. This is not merely an expression in drawing, for in my private practice I have designed other jewelry stores using a great amount of glass. In this store, a metal grille hidden in the ceiling of the vestibule will close the entire

front for adequate protection at night. The control sign space is one of the features of this design with a continuous cantilevered canopy forming an arcade to avoid using an awning as well as to protect the prospective customer from the weather. The main sign will be block glass letters in front of a continuous panel of Softone Bevelite removable glass panels with illumination behind."

IN CONSTRUCTING this "open-faced" front and others of similar type, the use of quality construction materials is of supreme importance. Many prominent architects include Pittsburgh Glass and Pittco Store Front Metal in their designs because both are of uniformly high quality. The complete line of versatile, adaptable products gives the architect's fancy full scope, providing a type of glass and a type of mounting that meet every need. A nationwide system of branches and dealers assures you of prompt and helpful service.

Pittsburgh Plate Glass Company advertising, in 21 leading retail magazines is urging merchants to consult their architects *now*, in order to avoid unnecessary delay in store modernization.

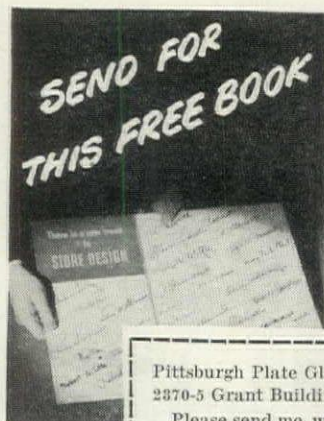
"PITTSBURGH"

stands for Quality Glass and Paint



PITTSBURGH PLATE GLASS COMPANY

PRODUCTS FOR STORE FRONTS AND INTERIORS



It contains 41 designs, submitted by leading architects, for stores, restaurants, service stations, theaters, etc. Every architect, designer and student will want to own this up-to-date reference book of ideas for building or modernizing retail stores. Send the coupon for your free copy of "There is a New Trend in Store Design." It will be sent to you promptly.

Pittsburgh Plate Glass Company
2370-5 Grant Building, Pittsburgh 19, Pa.

Please send me, without obligation, a free copy of the book, "There is a New Trend in Store Design."

Name.....

Address.....

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

CRANE PLUMBING

FOR THE HOMES YOU PLAN TO BUILD

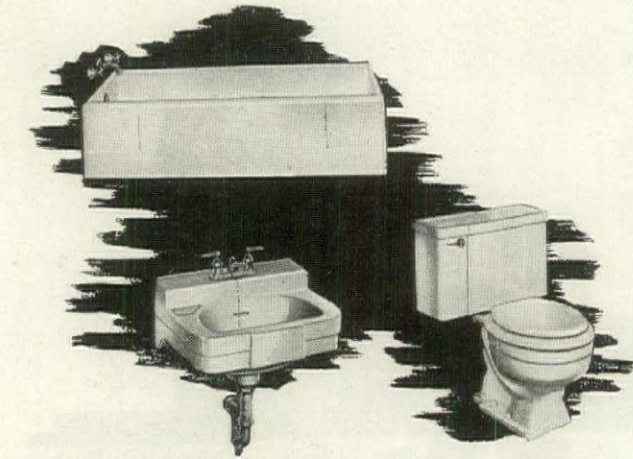
Your plans are doubtless far along on the homes you are intending to build as soon as construction becomes possible.

Crane plumbing in these homes will immediately identify them in your prospect's mind as being high in quality and will assist you in selling them and in keeping them sold.

The complete new Crane line will include a wide selection of fixtures suitable for homes in every price range. This line will incorporate new styling—new convenience features—but, above all, will include the same high quality and sturdy reliability that have always been associated with the name Crane.

As soon as material and labor conditions make full production possible, complete details on the new Crane line will be announced.

This modern and attractive Crane bathroom will be even more beautiful and efficient when furnished with plumbing fixtures from the new Crane line, available as soon as conditions permit.



In production today are plumbing fixtures for the homes you are constructing or remodeling—jobs on which you are working. See your nearest Crane Branch or Crane Dealer for full information.



AND HEATING...

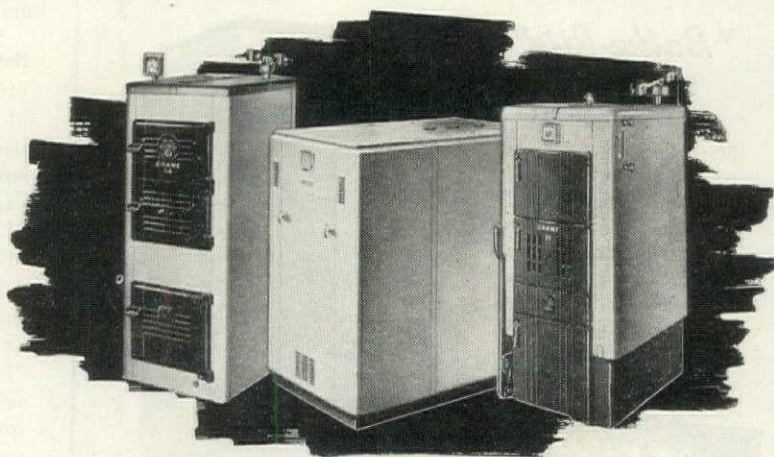
The heart of this modern basement is the new Crane Twenty Boiler—now in production. The complete Crane Heating line will include everything for every heating system.



Whether the homes you are planning will be heated by hot water—steam or warm air—whether you intend equipping them with hand fired or fully automatic heating systems you will find everything you need in the complete Crane heating line available as soon as labor and materials are available.

This Crane line will include equipment newly designed to assure greater efficiency—greater convenience—easier operation. In it you will find boilers for homes, public buildings, industrial plants—warm air furnaces for any type of installation. The Crane line will also include oil burners, stokers, controls, water specialties and all necessary piping.

For complete information on Crane plumbing and heating consult your Crane Branch or call your Crane Dealer.



Three Crane Boilers, the FOURTEEN, SIXTEEN and TWENTY, are already in production to care for today's essential construction or replacement.

CRANE

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

CRANE CO., GENERAL OFFICES:
836 S. MICHIGAN AVE., CHICAGO 5, ILL.

VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS

3 out of 4...



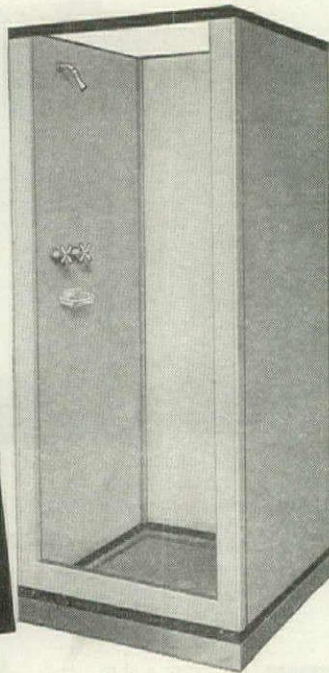
NEW POSTWAR HOMES WANT *Auxiliary* SHOWERS

Authentic Surveys show that the majority of new home planners want the convenience of an *extra* shower — in the utility room, laundry or basement.

In Your Plans for homes designed for modern living, include a "BATHE-RITE" Prefabricated Shower Cabinet. Designed in standardized sizes, on the modulus of 4, "BATHE-RITE" Shower Cabinets are suitable for every type of home. Easy to install—durable—attractive. Ask for our new illustrated catalog—and refer to our postwar catalog in "Sweets."

"Bathe-Rite" PREFABRICATED SHOWER CABINETS

fit squarely into this picture. They can be installed in the bathroom, utility room or in the basement — without special wall or floor preparation — and installation requires a very minimum of time. See your plumber.



NOW AVAILABLE

in 2 sizes, 30"x30" and 32"x32" — "BATHE-RITE" Shower Cabinets may be recommended with complete confidence. Write for 1945 catalog.

MILWAUKEE STAMPING COMPANY

802-S South 72nd Street

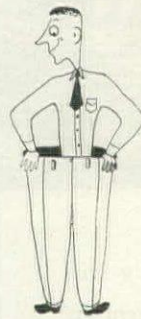
Milwaukee 14, Wisconsin

THE FORUM

Accustomed as we are to engineers who sag visibly when the talk turns away from girders and trusses, we were unprepared for the touch of whimsy which leavens Fred N. Severud's technical accomplishments.



From an appreciation of morning glories and turtles as magnificent structural designs, he arrives at revolutionary building ideas based on the efficiency of natural forms (p. 149). This fascination with flora and fauna began in the verdant mountains of Severud's native Norway, continues even in mechanized New York where he is reduced to the company of pompous city pigeons as an excuse for wild life.



We have often wondered why modern architects are so passionately addicted to the flat roof. It now occurs to us that their bar-acquired girth prevents reaching far enough on the drafting board to draw a gable. In wistful hope of changing the course of architecture, therefore, we recommend the Harris Armstrong spot reducing method. This prolific designer whose recent work rates a portfolio (p. 115) has now added the

building of a cabin in the Ozarks to his more sedentary pastimes. Fourteen days of back-breaking labor had two results—a stone wall set in a hole in a hill and the loss of the Armstrong bay window.

Henry Kamphoefner, professor of architecture at the University of Oklahoma, broke the ivied bonds of tradition when he substituted modern design for campus gothic in a new group of buildings (p. 104). In spite of advanced architectural theories, Kamphoefner is himself the exponent of rustic simplicity. To a business acquaintance he wrote recently:



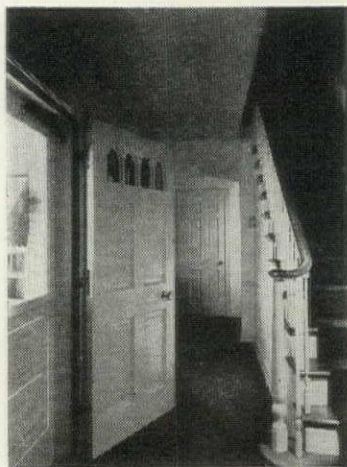
"I am embarrassed by the title of Dr. that you so generously give me. I am just a cowboy professor. You saw me in New York with shoes on, but I got rid of them as soon as I recrossed the state line."

W. Earle Andrews, engineer for Detroit's new expressway system (p. 125), is a flashy runner in the backfield Bob Moses calls on for last minute touchdowns. His most spectacular power plays to date are Jones Beach and the New York World's Fair. Asked about his hobbies, Andrews solemnly listed dams, culverts, freeways, bridges and clover leaf intersections. Obviously, this leaves him no time for fishing or playing the violin.

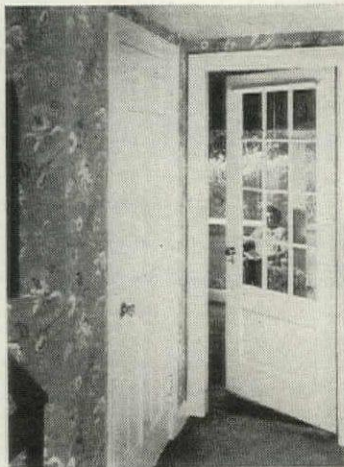


How to shut the door on High Fuel Costs

WELL fitting doors—weathertight windows of stock designs—can work with you in assuring your clients low fuel bills in the homes you are planning for them. And here's a brand new Ponderosa Pine booklet, "Today's Idea House," full of valuable pointers on saving fuel with stock design doors and windows of Ponderosa Pine. Treating doors and windows in terms of their function in making living more comfortable and more economical, "Today's Idea House" is full of usable information and illustrations. A copy of this booklet will prove a valuable addition to your files—and is yours without cost or obligation. Just mail the coupon!



This entrance door, an attractive stock design of Ponderosa Pine, effectively bars out cold because it is machined accurately to fit snugly for maximum weathertightness. Note that the door is hung with three hinges for correct balance.



The windowed door of Ponderosa Pine shown above admits plenty of light—yet enables the sun porch to be shut off for fuel saving in winter. Stock design Ponderosa Pine storm doors are available for exterior doors in sizes for all standard openings.



An abundance of windows need not impose a burden of high fuel costs—for pre-fit, precision manufactured stock windows of Ponderosa Pine are weathertight, keeping cold out and comfort in. Remember, too, that wood has natural insulating qualities and thus does not readily transmit cold.

Send for Your Copy of "Today's Idea House!"

Arrangements for every room of the home—helpful suggestions and diagrams—are contained in "Today's Idea House." Use this booklet as a source of ideas and inspiration—a copy is yours for the asking.



Ponderosa Pine Woodwork
Dept. MAF-9, 111 West Washington Street
Chicago 2, Illinois

Please send me a free copy of "Today's Idea House."

Name.....

Address.....

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

Ponderosa Pine
WOODWORK

THE BEST IS YOURS... WITH PONDEROSA PINE

Effective use of Marble

IN SCHOOL NEAR HYDE PARK, N. Y.

The development of central schools in New York State is requiring new buildings which incorporate the best features of modern school design. A recent example which shows the use of Vermont Marble in toilet rooms is illustrated at right. Toilet wainscot and partitions in Neshobe Gray, exemplify Vermont Marble's advantages of low first cost, and low expense of maintenance, combined with durability and natural beauty. A partial list of installations in this country is shown below, with the name of architect in italics.



Central Junior-Senior High School, East Park, N. Y., serving towns of Hyde Park, Poughkeepsie, Clinton, Pleasant Valley, N. Y. Architect—Robert R. Graham

- | | | |
|---|--|--|
| <p>Roosevelt Jr. High School, San Francisco, Calif.—<i>Timothy L. Pflueger</i>
 Eli Whitney Grade School, Bridgeport, Conn.—<i>Frederick Beckwith</i>
 Visitation H.S., Chicago, Ill.—<i>McCarthy, Smith & Eppig</i>
 St. John the Baptist School, Fall River, Mass.—<i>Oliver W. Fontaine</i>
 Carlsbad H.S., Carlsbad, New Mexico—<i>Haynes & Strange</i>
 Heminger School, Akron, Ohio—<i>Milton E. Murphy</i>
 Vocational School, Lehigh Avenue, Philadelphia, Penn.—<i>Board of Education</i>
 Hope St. High School, Providence, R.I.—<i>City Architects</i>
 Women's Building, Kilgore Jr. College, Kilgore, Texas—<i>J. L. Downing</i>
 Kappa Alpha Theta Sorority, U. of Texas, Austin, Texas—<i>Jensen & Millhouse</i>
 Senior High School, New Brunswick, N. J.—<i>Alexander Merchant</i>
 Fairview-Viola Grade School, Poughkeepsie, N. Y.—<i>Chas. J. Cook</i>
 Central High School, Cleveland, Ohio—<i>H. A. Fulton</i>
 Orthopedic School, Philadelphia, Penn.—<i>Board of Education</i>
 Monsigneur Coyle School, Taunton, Mass.—<i>Joseph I. Higgins</i>
 East Senior H.S., Rockford, Ill.—<i>Gilbert A. Johnson</i>
 P.S. DuPont High School, Wilmington, Del.—<i>E. William Martin</i>
 Sacramento High School, Sacramento, Calif.—<i>Stark & Planders</i>
 Junior H. S., Mt. Lebanon, Penn.—<i>Ingham & Boyd</i>
 Roger Williams Junior High School, Providence, R. I.—<i>City Architects</i>
 Orange High School, Orange, Texas—<i>C. H. Page & Son</i>
 St. Catherine's School, Westhampton, Va.—<i>Uppjohn & Langman</i>
 Steffan Manor Elementary School, Vallejo, Calif.—<i>Harry J. Devine</i>
 Ball State Teachers' College, Lucia Hall, Muncie, Ind.—<i>Geo. Schreiber</i>
 St. Thomas School, Houston, Texas—<i>Maurice J. Sullivan</i>
 Western State Teachers College—Men's Dorm., Kalamazoo, Mich.—<i>Malcolmson, Calder & Hammond</i>
 Elementary School, Phillipsburg, N. J.—<i>Hacker & Hacker</i>
 George Washington H. S., New York, N. Y.—<i>New York Board of Education</i></p> | <p>Lawndale School, Akron, Ohio—<i>Milton E. Murphy</i>
 Elementary School, Barrettsford, Penn.—<i>H. W. Castor</i>
 Mt. Pleasant St. H. S., Providence, R. I.—<i>City Architects</i>
 Baylor U. Medical Library, Dallas, Texas—<i>LaRoche & Dahl</i>
 Midvale Avenue School, Philadelphia, Penn.—<i>Board of Education</i>
 Home Economics & Commercial Bldg., Vallejo H. S., Vallejo, Calif.—<i>Harry J. Devine</i>
 Michigan State College, East Lansing, Mich.—<i>Bowd & Munson</i>
 Lafayette H. S., Brooklyn, N. Y.—<i>New York Board of Education</i>
 Lincoln School, Akron, Ohio—<i>Milton E. Murphy</i>
 Ranklin & Stevens Schools, Easton, Penn.—<i>E. H. Wenzelberger</i>
 Nathan Bishop Junior H. S., Providence, R. I.—<i>City Architects</i>
 Helps' Dormitory, Texas A & M College, College Station, Texas—<i>A. C. Finn</i>
 Junior-Senior H. S., Middleton, N. Y.—<i>Robert R. Graham</i>
 Senior High School, Lancaster, Penn.—<i>H. Y. Shaub</i>
 Patten Gymnasium, Northwestern University, Evanston, Ill.—<i>Holabird & Root</i>
 High School Auditorium, Tyler, Texas—<i>Shirley Simons</i>
 Gilbert Stuart Junior H. S., Providence, R. I.—<i>City Architects</i>
 Wm. Penn H. S., York, Penn.—<i>H. R. Leuker</i>
 Lane School, Akron, Ohio—<i>Milton E. Murphy</i>
 Parochial School, McSherrytown, Penn.—<i>G. W. Stickle</i>
 Prairieview State College, Prairieview, Texas—<i>P. G. Norton</i>
 Ohio State University Dorm., Columbus, Ohio—<i>Howard Dwight Smith</i>
 Northeast H. S., Philadelphia, Penn.—<i>Board of Education</i>
 Sam Houston State Teachers' College, Huntsville, Texas—<i>Harry D. Payne</i>
 Dover High School, Dover, Ohio—<i>Harry A. Fulton</i>
 Junior High School, Master St., Philadelphia, Penn.—<i>Board of Education</i>
 Moton School, Orange, Texas—<i>C. H. Page & Son</i>
 Bowen School, Akron, Ohio—<i>Milton E. Murphy</i>
 Junior-Senior High School, Wyomissing, Penn.—<i>Muhlenberg Bros.</i>
 Andrews School for Girls, Willoughby, Ohio—<i>Harry A. Fulton</i></p> | <p>Dondren Library, Southern Methodist U., Dallas, Texas—<i>DeWitt & Washburn and Paul P. Cret, Cons.</i>
 Central High School, Akron, Ohio—<i>Milton E. Murphy</i>
 Delta Tau Delta Fraternity House, U. of Texas, Austin, Texas—<i>Page & Anderson</i>
 Elementary School, Haines St., Philadelphia, Penn.—<i>Board of Education</i>
 Timken Vocational High School, Canton, Ohio—<i>Charles E. Firestone</i>
 Elementary School, Chester Avenue, Philadelphia, Penn.—<i>Board of Education</i>
 Cypress-Fairbanks School, Cypress, Texas—<i>Volcker & Dixon</i>
 Genoa School, Canton, Ohio—<i>Chas. E. Firestone</i>
 Junior-Senior High School, Wayne, Penn.—<i>I. T. Catherine</i>
 Findley School, Akron, Ohio—<i>Milton E. Murphy</i>
 Fairmont Avenue School, Philadelphia, Penn.—<i>Board of Education</i>
 Osnaburg Grade & High School, Osnaburg, Ohio—<i>Chas. E. Firestone</i>
 Academic High School, Ogontz Ave., Philadelphia, Penn.—<i>Board of Education</i>
 Lamar College Library, Beaumont, Texas—<i>W. B. Livesay & Stone & Pitts</i>
 Portage Path School, Akron, Ohio—<i>Milton E. Murphy</i>
 Senior High School, Elmwood Ave., Philadelphia, Penn.—<i>Board of Education</i>
 Stadium, Sr. High School, Corpus Christi, Texas—<i>Brock, Roberts & Anderson</i>
 Snyder Avenue School, Philadelphia, Penn.—<i>Board of Education</i>
 Mason School, Akron, Ohio—<i>Milton E. Murphy</i>
 Arts & Science Bldg., Dallas Tech. H. S., Dallas, Texas—<i>LaRoche & Dahl</i>
 Wm. Howell's Junior High, Cleveland, Ohio—<i>Harry A. Fulton</i>
 Junior High School, Corpus Christi, Texas—<i>Brock, Roberts & Anderson</i>
 Kentucky School, Cleveland, Ohio—<i>Harry A. Fulton</i>
 Sundown School, Sundown, Texas—<i>Haynes & Strange</i>
 Reedurban School, Canton, Ohio—<i>Chas. E. Firestone</i>
 Delta Delta Delta Sorority House, U. of Texas, Austin, Texas—<i>C. H. Page</i>
 James A. Garfield School, Cleveland, Ohio—<i>Hays, Simpson & Hunsicker</i>
 Dennesson University, Granville, Ohio—<i>Wm. Gehron</i>
 A. B. Hart School, Cleveland, Ohio—<i>Harry A. Fulton</i></p> |
|---|--|--|

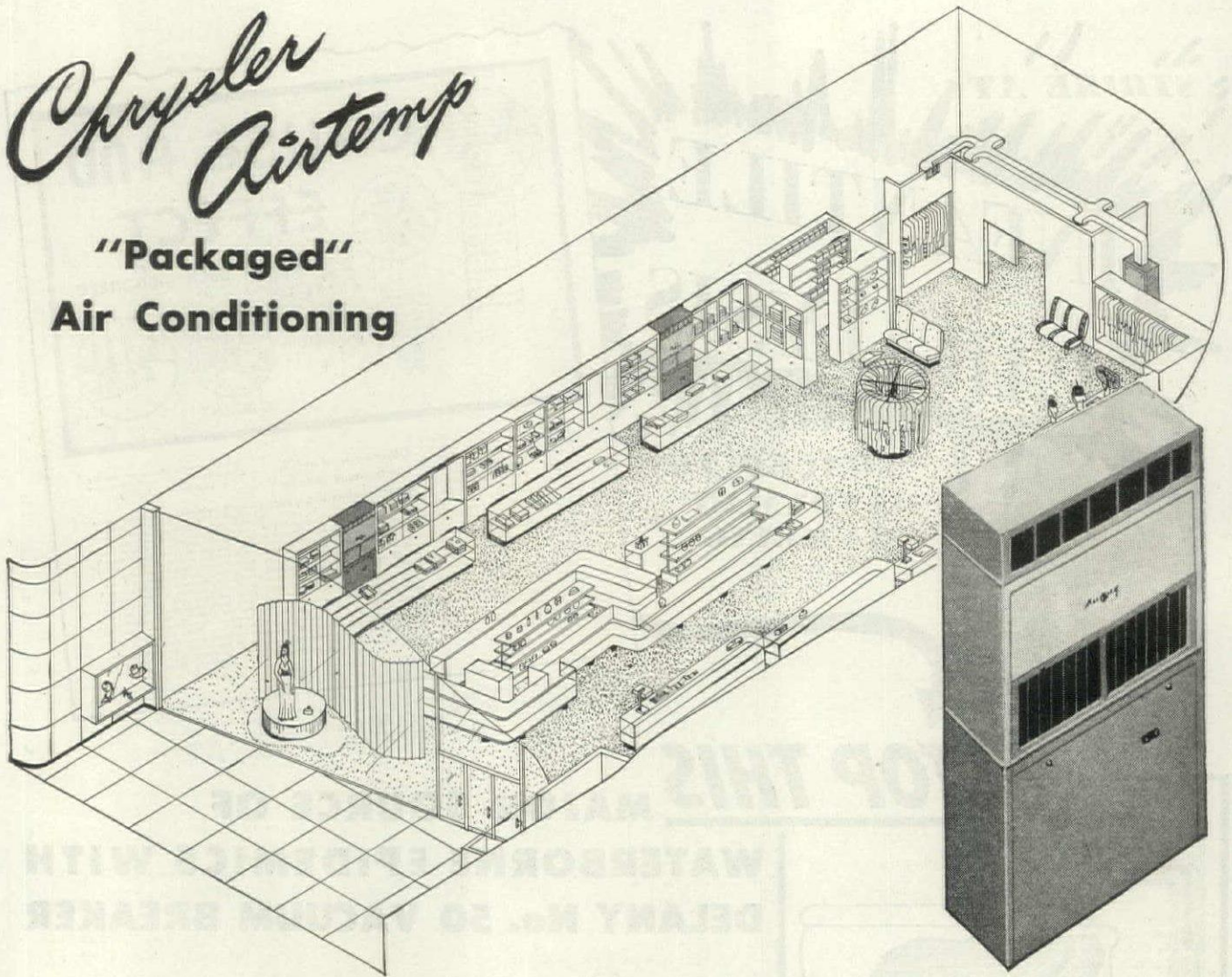
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Customers are attracted to the modern specialty shop where they can select and try on garments and accessories in cool comfort. Merchandise stays cleaner and fresher avoiding costly mark-downs; employees look and act alert; and sales increase. Chrysler Airtemp "Packaged" Air Conditioning is ideal for apparel shops and department stores. Flexible and easy to install, these "Packaged" Air Conditioners can be used with or without a duct system. Pioneered by Chrysler Air-

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HEATING • COOLING • REFRIGERATION

STRIKE AT INFANTILE PARALYSIS TRACED TO "HANDYMAN" PLUMBING

CAUSE AND EFFECT
of back siphonage

The DOCTOR

The PATIENT

The only expense involved on the part of plumbing and heating contractors, in the three-year stamp needed to mail the questionnaires, forms, to committee tabulating the questionnaires, and all work of correspondence has been provided by industry members without charge.

In evaluating future benefits, it is important to realize that only one year's data (the questionnaires received in date) and that these cover only a small fraction of the cases that have occurred. Nevertheless, questionnaires already received have been sufficient to build a strong preliminary framework of evidence to be filled in by later results.

Fully plumbing sanitation has been discovered in connection with a great

Objective is to obtain one thousand filled-in questionnaires this year

the public committee, in to accumulate the greatest possible amount of information
(Continued on Page 5)

Health protection—from the standpoint of plumbing sanitation—obtained when known water and polluted water are kept separate from water that is ingested or used for cooking or bathing. This appears to be a simple, much-achieved objective, but it is not. Point 1 is that water and polluted water both are present in every plumbing fixture which will draw spray or splash water into a series of simple, common water lines, unless proper protection is afforded at every point of contact in the plumbing. Plans above, illustrating how polluted water from a water closet can be drawn into the drinking water supply, is a duplicate of British Water Supply Co., Allentown, Pa.

Proportion of the cases. Sewage backed up into basements has been noted in a large number of cases. Rural sewage disposal without filter life has been unacceptably labeled dangerous. Wading pools and improperly protected swimming pools in cities. Entire epidemics of infection traced to poor sanitary conditions at picnic, summer camps, taverns, and other gathering places. Previous articles in Domestic Engineering have covered some of these points, and more will be analyzed here and in succeeding editions.

The important thing now, according to

Reprinted from DOMESTIC ENGINEERING

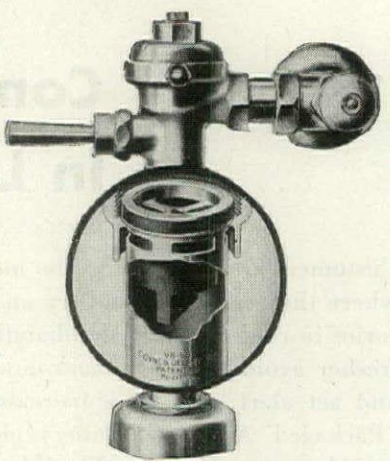
STOP THIS MAJOR SOURCE OF WATERBORNE EPIDEMICS WITH DELANY No. 50 VACUUM BREAKER



Stop all back-siphonage into the water lines through the use of the No. 50! All submerged inlets, flush valves in particular, that have jets must be equipped with an approved vacuum breaker in a large number of the country's municipalities.

The universal adoption of the vacuum breaker will do more to stop the spread of waterborne germs and epidemics such as typhoid, polio, etc., than any other method of protection.

If health protection is the only yardstick in determining the Vacuum Breakers you plan to specify, sell or install, then the Delany No. 50 is a MUST. It is self-policing—will function for years. Will prevent back-siphonage, even though the unit is mischievously or maliciously sabotaged. The No. 50 is unobtrusive—almost invisible. Fits any make flush valve, or other jet type unit such as washing machines, etc. FULLY APPROVED by U. S. Bureau of Standards, States and Municipalities.



Send for complete information, and interesting comments, reports and tests made by recognized sanitation authorities.

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**FOR ENDURING FIXTURE SATISFACTION
... LOOK FOR THIS LABEL FIRST**

● Here's a quick easy way to make certain of Fluorescent fixture quality. Be sure the fixtures you buy or specify, bear the Certified Fleur-O-Lier label.

For this label is not a trade-mark of just one brand, but a distinguishing mark of a quality-protecting service that the products of more than 30 leading manufacturers have won the right to wear.

Get this EXTRA VALUE. Be sure of having the newest proved knowledge and research of the outstanding fluorescent lighting technicians. Look for the Fleur-O-Lier label FIRST.

Fleur-O-Lier Manufacturers, 2116 Keith Bldg., Cleveland 15, Ohio

**Why you can depend on FLEUR-O-LIER
for long-lasting lighting performance**

● Fleur-O-Lier fixtures must be built to rigid specifications covering not only lighting characteristics but minute details of mechanical and electrical construction. That's why they give you the best in lighting and lamp performance.

● Before being Certified, fixtures are painstakingly tested by the Electrical Testing Laboratories, Inc. Even after approval they still are subject to re-check, so that continuous quality is assured.

● Widely diversified lines of fixtures bearing the Fleur-O-Lier label mean that a broad variety awaits your choice. No matter which you choose you can be sure that the fixture is RIGHT... for lamp performance and trouble-free operation.

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CERTIFIED FIXTURES FOR FLUORESCENT LIGHTING

Participation in the FLEUR-O-LIER MANUFACTURERS' program is open to any manufacturer who complies with FLEUR-O-LIER requirements.

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SCHMIEG & KOTZIAN, INC.
ARE PLEASED TO ANNOUNCE THAT
ROBERT VON EZDORF
HAS BECOME ASSOCIATED WITH THIS COMPANY
AS VICE-PRESIDENT



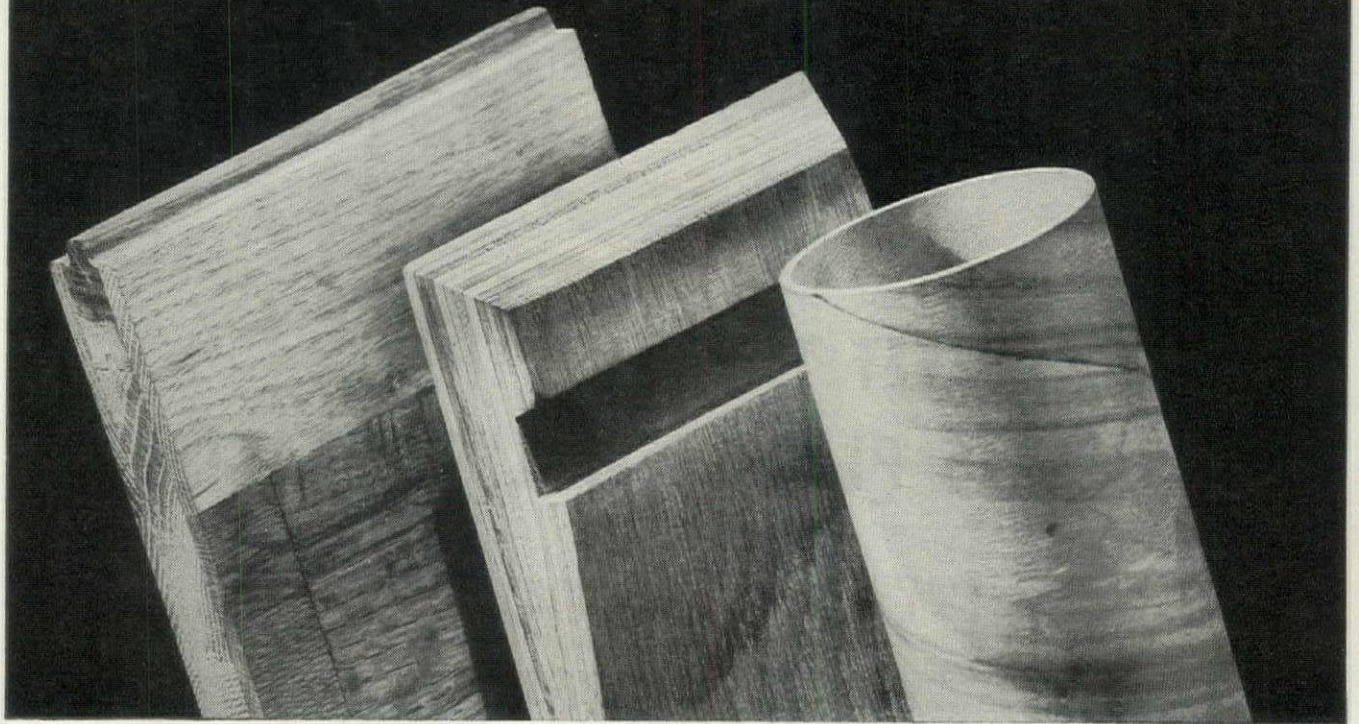
Mr. von Ezdorf will continue our policy of maintaining the fine traditions of furniture design and manufacture. His scholarly knowledge acquired through many years of association with recognized authorities of our craft will assure our clients that we will continue to serve them as in the past.

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1. Laminated oak flooring. Utilizing clear wood on face, lower grades in core. Made at low cost on continuous gluing machines. Waterproof, heatproof, moldproof glue line.
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Gluing “thin ones into thick ones” changes wood’s physical characteristics. The grain patterns of no two plies of wood are alike. When the plies are glue-lami-

nated, the grain crosses, and each ply holds its neighbor from splitting and warping. Each ply reinforces the other.

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Glues for Industry

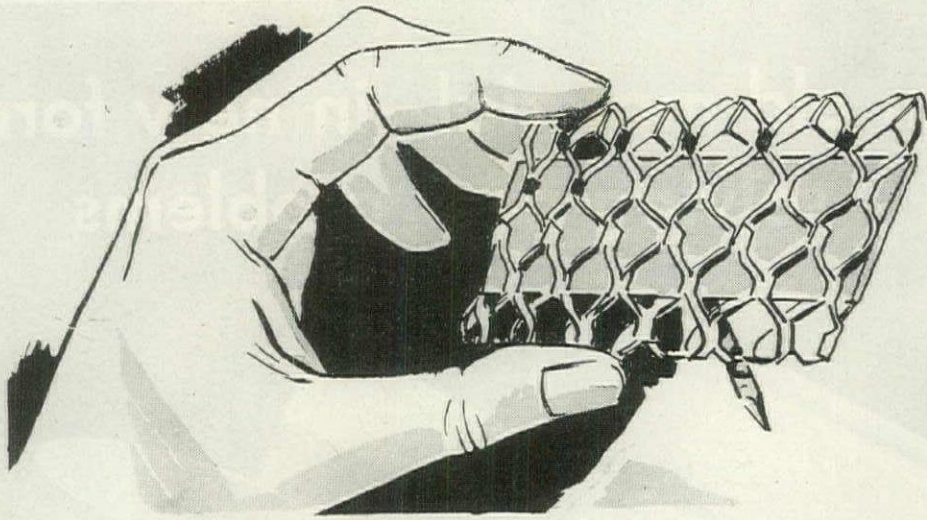
CASEIN COMPANY OF AMERICA, Dept. AF-95

Division of The Borden Company

NEW YORK . 350 Madison Avenue, New York 17, N. Y.

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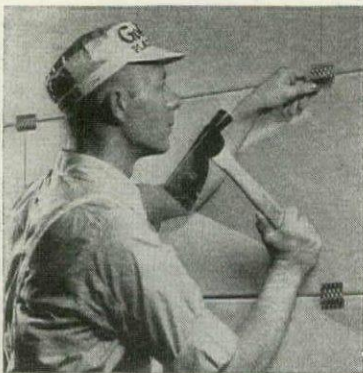


MEET THE NAIL THAT MAKES PLASTER WALLS FLOAT!

YES, this is the famous Gold Bond Floating Wall Nail. Before the war it was gaining in popularity everywhere as it demonstrated its superiority over old style construction. So it's not at all strange that so many plans for new homes call for the use of this exclusive product of National Gypsum Research. For the Gold Bond Floating Wall System actually suspends plaster walls. The nails are applied between the panels of gypsum lath. And then plaster is applied in the usual way.

It's actually simple, isn't it? But look at the advantages. The contractor finds it much easier to get a uniform thickness of plaster. The wall itself is much more resistant to structural strain and has a 1-hour fire rating. On top of this the owner will discover that noise transmission from room to room is materially reduced over more conventional wall systems. The extra cost of using the Gold Bond Floating Wall System is negligible. National Gypsum Company, Buffalo 2, New York.

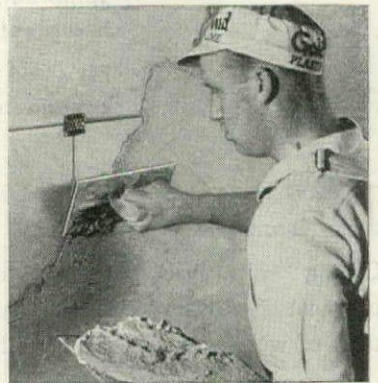
You will find full details of this system described in Sweet's



Only four nails are needed to hold a panel of lath securely in place.



Of course, the Floating Wall System is also used for the ceilings.



The plastering is then done in the regular way.

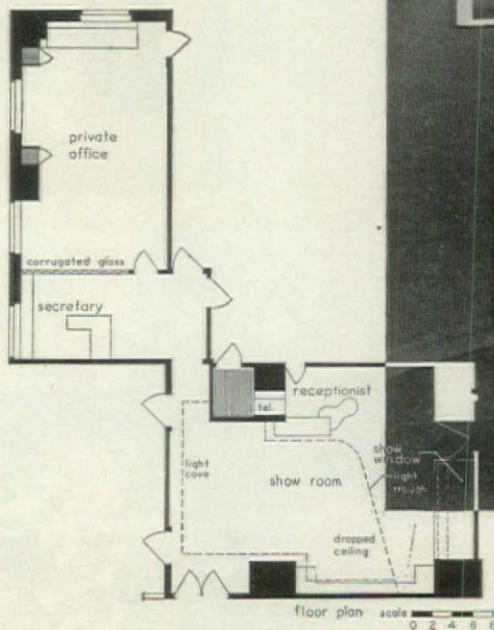
**BUILD BETTER WITH
GOLD BOND**

LATH • PLASTER • LIME • METAL PRODUCTS • WALL PAINT • INSULATION • SOUND CONTROL • WALLBOARD



SHOWROOMS

SHOWROOMS



RECEPTIONIST'S DESK IN EBONY ADJOINS A BLUEGREEN SCF

1 ■ Executive offices for Rabhor Robes, Inc. Elroy Webber and Adolph Brukin, Architects.

The principal requirement of the client here was that one wall of his reception room simulate (not too literally) a de luxe men's shop in which he could set up typical displays of his products as suggestions for his customers. Hence the architects have incorporated a full-size shop front—complete with lighted show window and “entrance” door—in the end wall of the reception room. The effect is furthered by a green and white striped soffit suggestive of a canopy or awning. The shop door, which is of tempered plate glass, is a notable solution to the problem of too much transparency: a large bronze plaque by the sculptor Chiam Gross makes a handsome, easily visible and very practical door push.

The furnishings, all of which were designed by the architects, are simple. Desks and tables are in macassar ebony and bronze; chairs are upholstered in chartreuse; floors are carpeted in blue green; walls and ceiling are white.

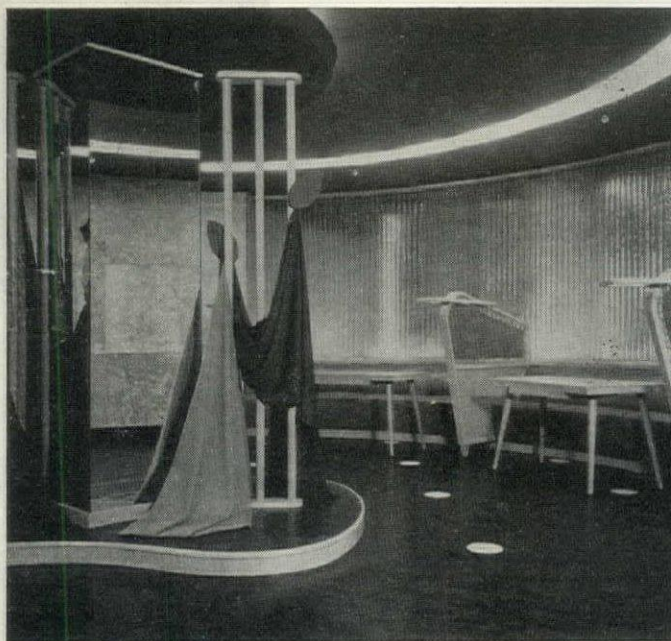
FINISHES AND EQUIPMENT: WALLS: Reception room, one travertine wall, rest, sand float plaster. FLOORS: Carpeted throughout, bluegreen in reception room, maroon in offices. FURNITURE: Architect-designed; ebony in reception room, black and white lacquer in offices.

OFFICE IN MAROON, BLACK AND WHITE

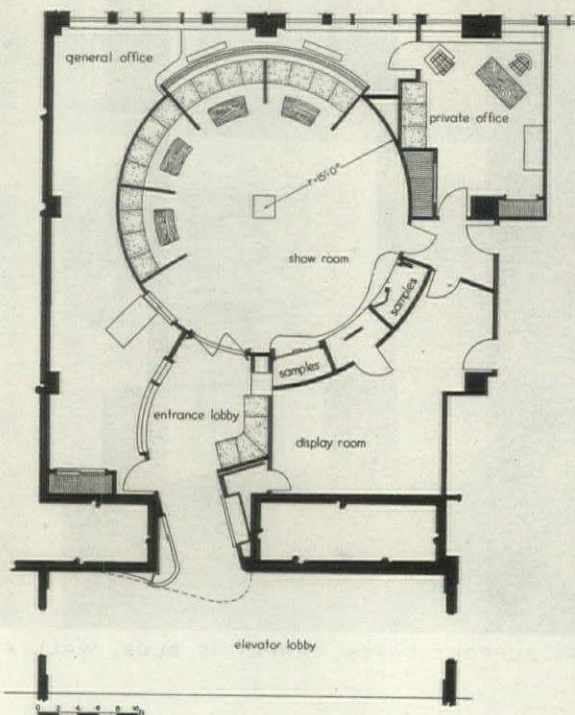




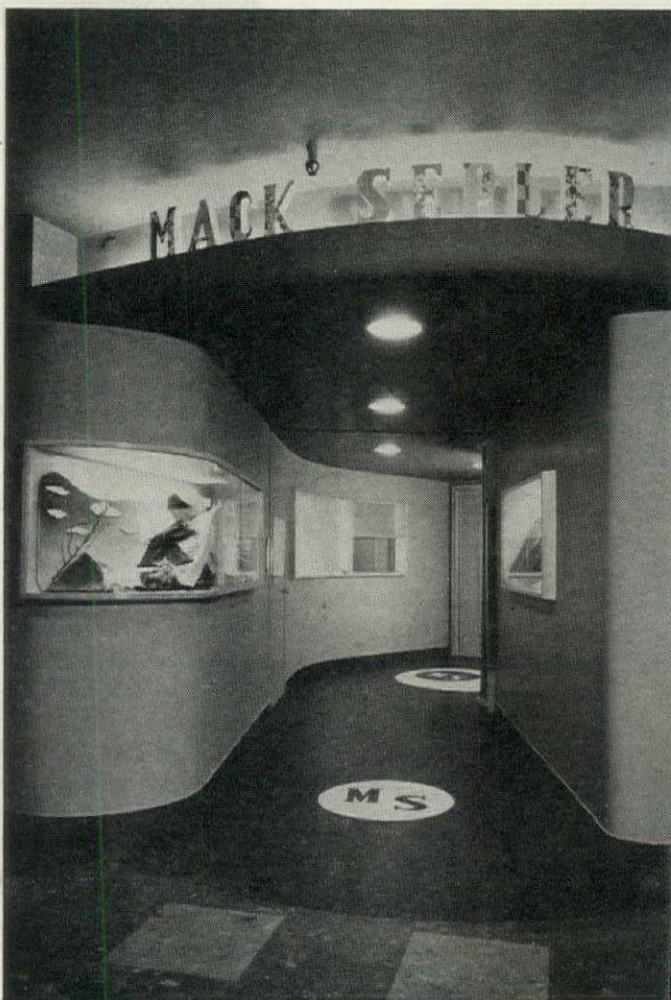
BUILT-IN CASES LINE MAIN SHOWROOM WALL



RECESSED FLUORESCENT TUBES LIGHT SHOWROOM



MAIN ENTRANCE DOOR DISAPPEARS IN WALL SLOT



2. Showroom for women's apparel designed by Vinicio Paladini and Leon Barmache.

Requirements faced by the designers in these showrooms for Mack Sepler, Inc., New York, N. Y., included: an information booth near the entrance, shortest possible entrance hall, large main showroom, auxiliary display room and office space. Since the entire area was to be air-conditioned, the designers were able to place a circular showroom in the approximate center. Customers' booths, divided by oak and leather screens, line one side of the show room while sample cases occupy most of the other. The display room, which can also be used as a models' dressing room, is primarily designed for merchandising displays. To eliminate the sharp line between elevator lobby and private hall, the entrance door has been placed behind the information window. During office hours, this door slides along a ceiling track into a concealed slot.

FINISHES AND EQUIPMENT: WOODWORK AND FURNITURE—pickled oak throughout. FLOORS—blue and white linoleum in entrance hall and display room, plum and white in showroom; Armstrong Cork Co. WALLS—slate blue in entrance, dusty coral in display room; marbelized white paper in showroom. CEILINGS—delft blue in entrance and display room, plum in showroom. UPHOLSTERY—natural saddle leather.

SHOWROOMS

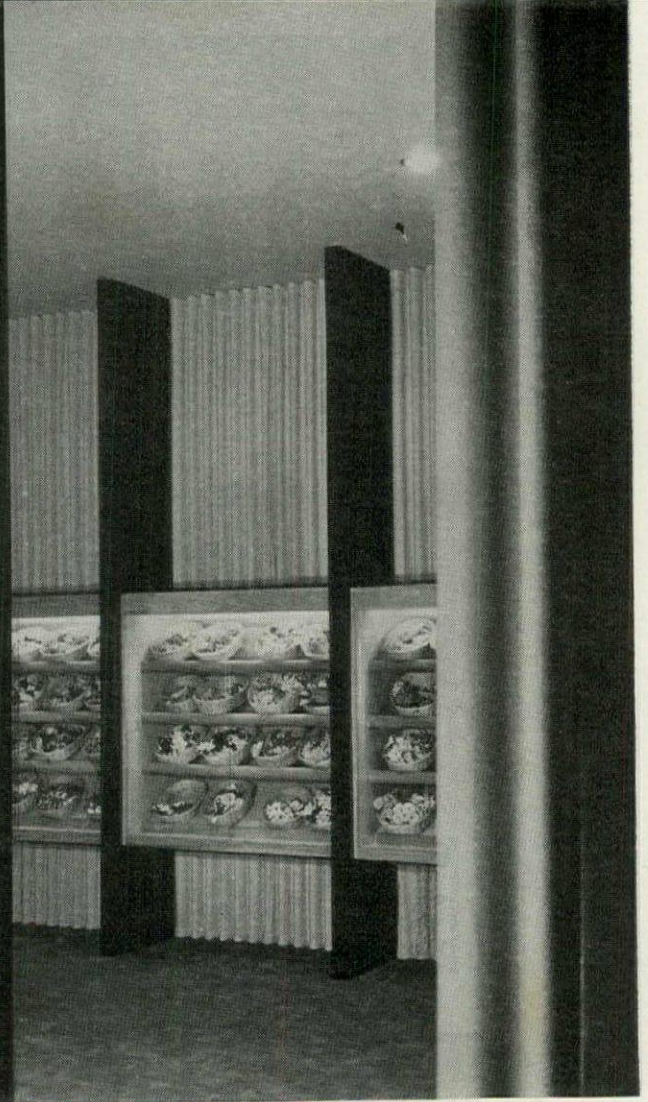
SHOW ROOM
SOL L SILVERSTEIN & CO.

July Bond Blouses

KADET-KRUGER & CO.

JAMI NECKWEAR

INGBER & CO. HANDBAGS



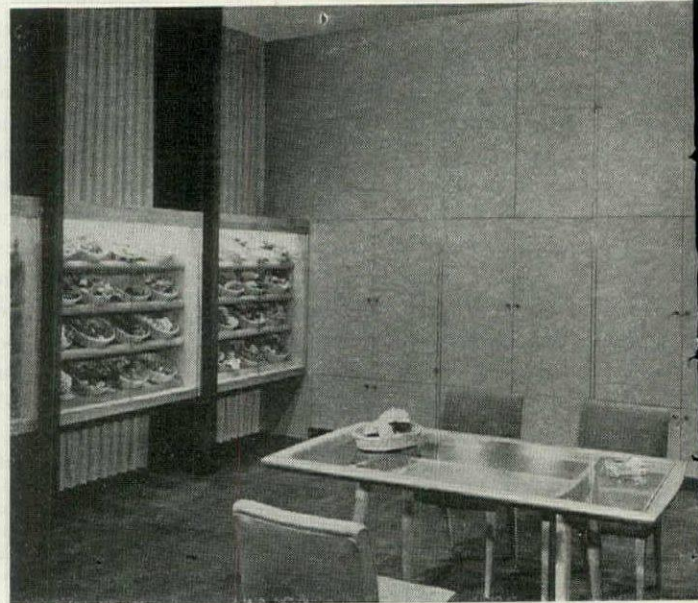
BLACK FIBERBOARD FINS SUPPORT CASES: CARPET IS BLUE, WALL FABRIC ROSE

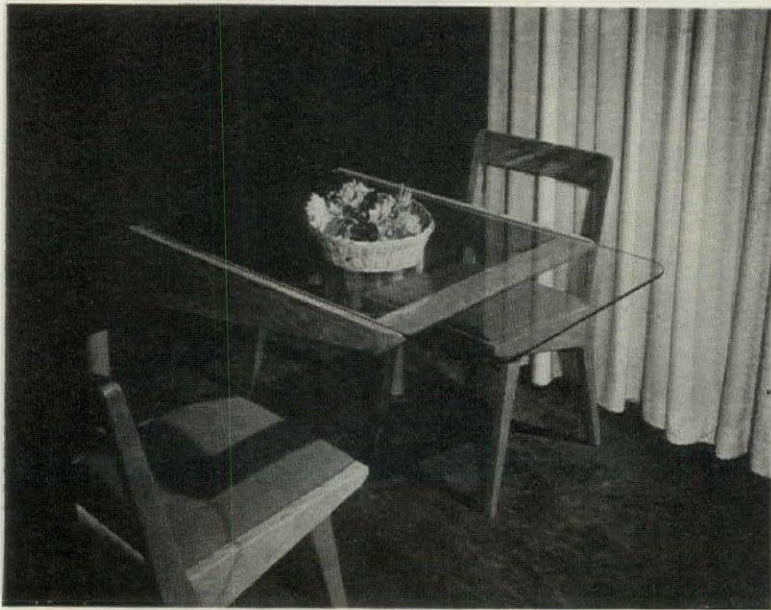
3. Fixtures and fabrics replace walls in wartime showroom. Gruen and Krummeck, Designers.

Wartime restrictions on construction did not prevent a successful solution in these Hollywood showrooms for Silverstein & Co.: on the contrary, the designers have exploited their limitations to the fullest. The firm's merchandise is primarily wholesale artificial flowers, with blouses, handbags and neckwear as secondary lines. For such small and fragile items the designers evolved a system of storage and display cases. These units were then organized and installed as whole walls. Elsewhere—since plaster partitions were out of the question—they used draped fabric walls. Here wood strips were cut to a wavy line and fixed to floor, ceiling and display cases: on this frame the fabric was tightly stretched. The cases themselves are designed for good display and easy access. Fluorescent lighting is built in and the whole assembly may be demounted and moved if necessary. Total cost of the project was about \$8,000.

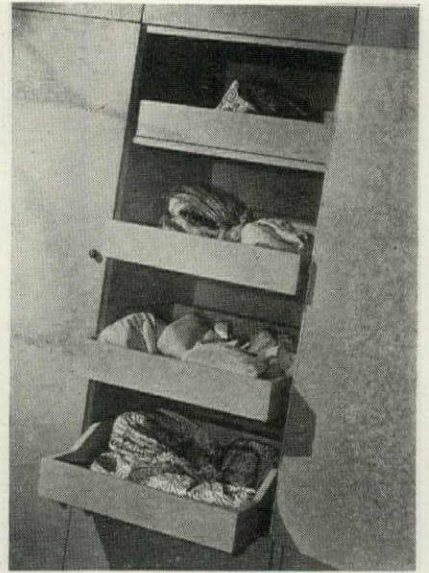
FINISHES AND EQUIPMENT: FIXTURES—light oak; Feldman Company. FLOORS: Blue carpet. WALLS—Reception room, lemon yellow; rear wall of showroom, blue; draped walls, in rose fabric. CEILING—blue. FURNITURE—Knoll Associates.

LIGHT OAK STORAGE CASES FORM A PREFABRICATED WALL

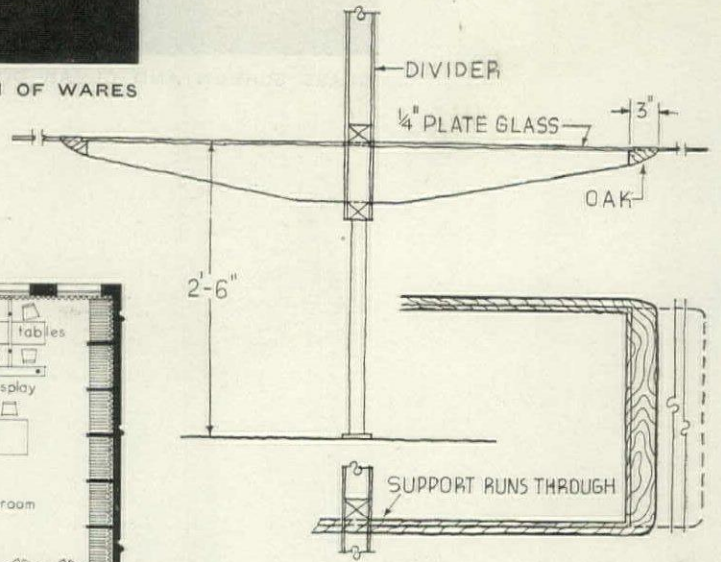
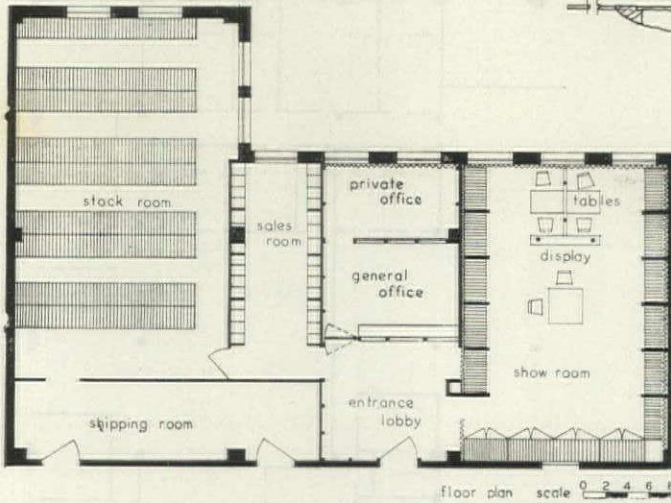




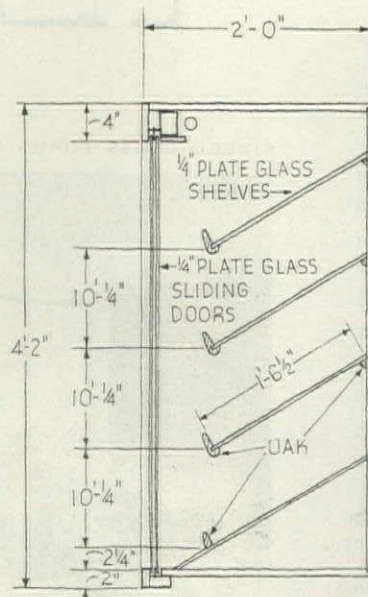
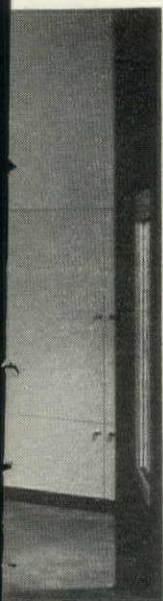
CUSTOMERS' TABLES PERMIT LEISURELY INSPECTION OF WARES



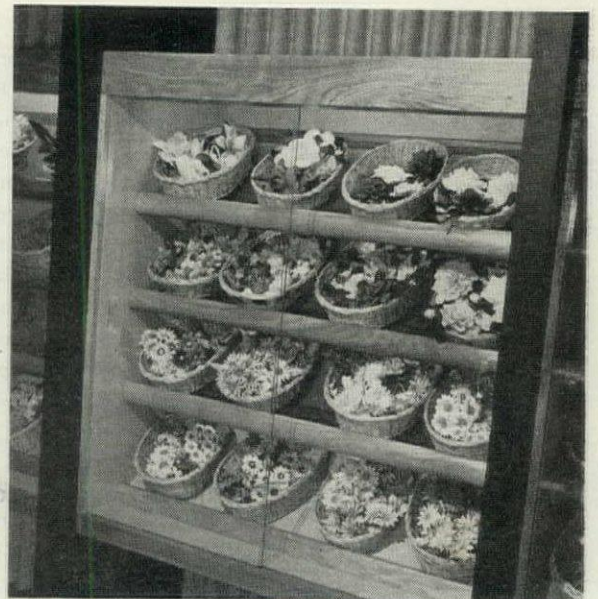
TYPICAL STORAGE UNIT, OPEN



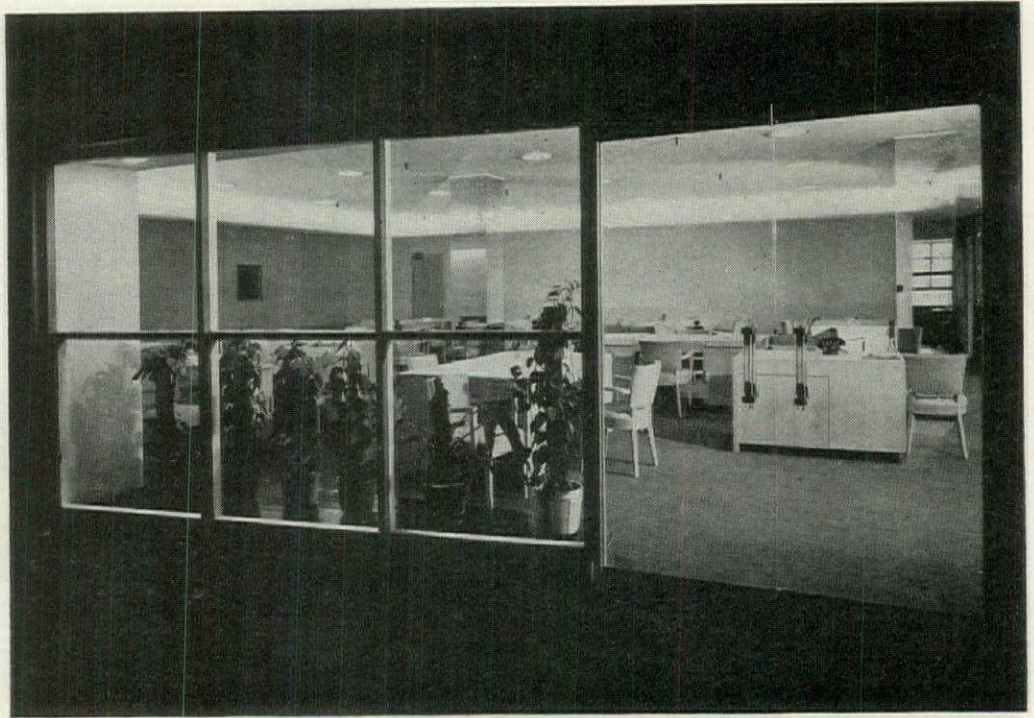
R SHOWROOM



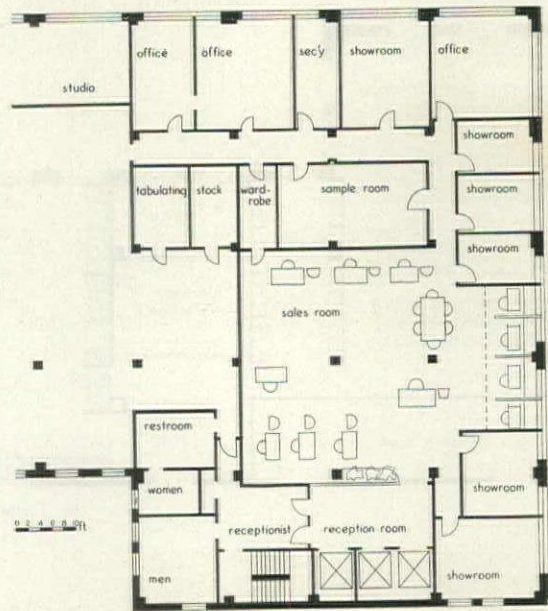
DISPLAY CASES HAVE SLIDING GLASS DOORS



SHOWROOMS



GLASS SCREEN AND CLEAR DOORS SEPARATE RECEPTION ROOM FROM SALES ROOM

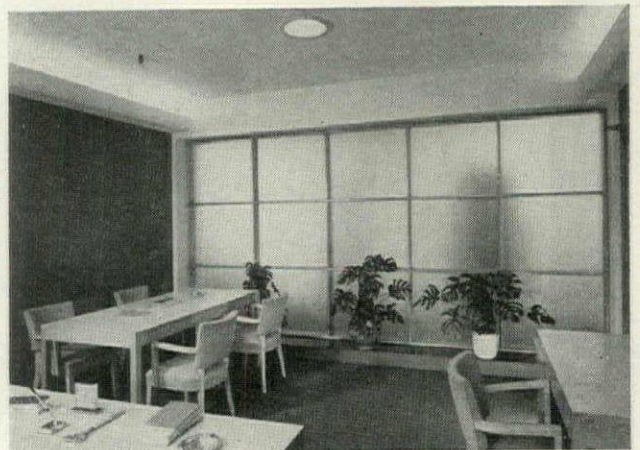


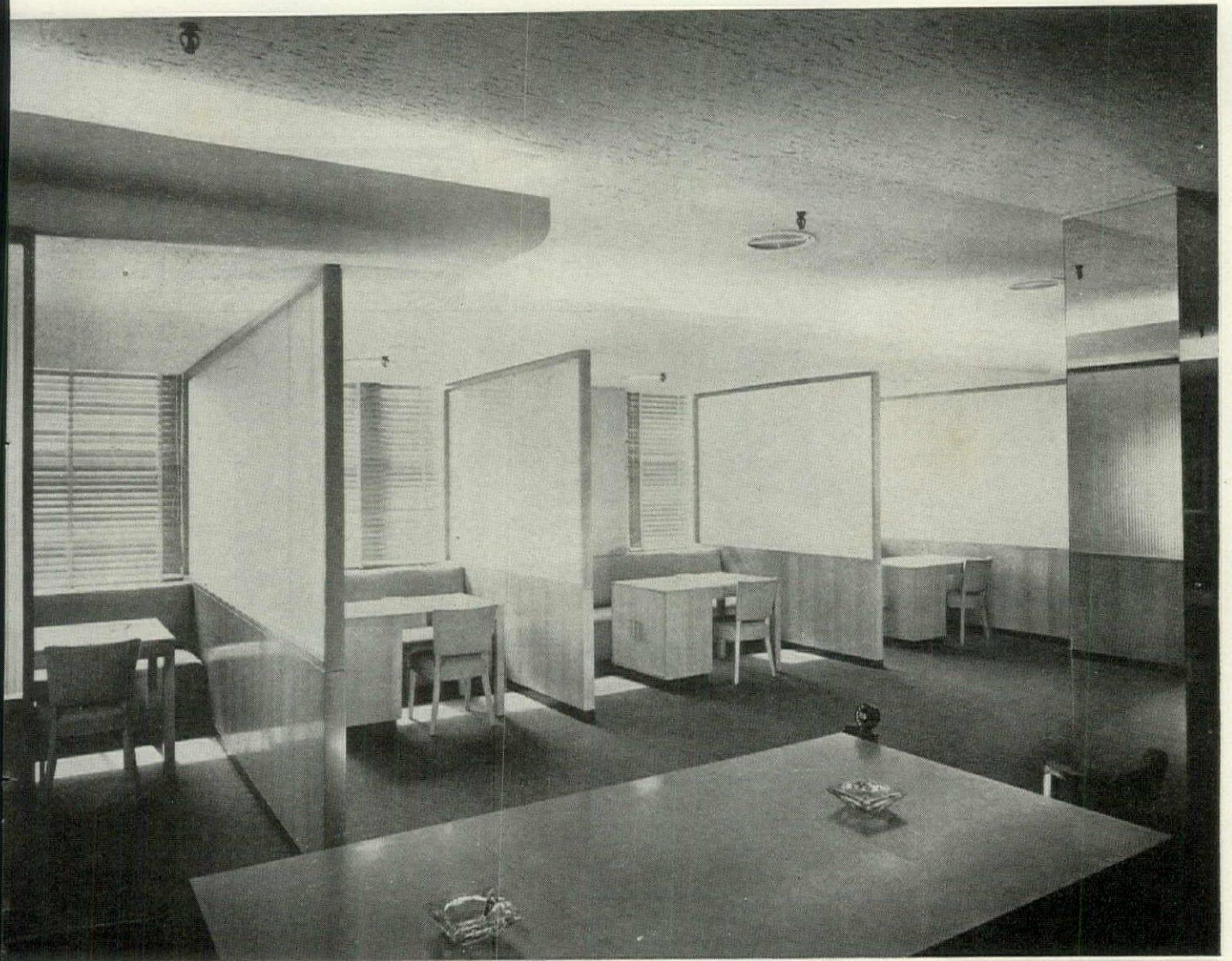
4. Fabrics showroom designed by Sidney Goldstone, Architect.

The new general offices of the Mallinson Fabrics Corporation occupy an entire floor of a New York office building. Of this area, only the portion shown here is devoted to sales and display, the rest being office space. The project involved no structural changes but all partitions, suspended acoustical ceilings, lighting and finishes are new. Fixtures, furniture and woodwork are in light oak, designed by the architect. The color scheme is light and warm. The general effect achieved is one of simplicity and quietness, a good background for this display of fabrics. According to the owners, this has contributed to the restfulness and efficiency of their occupancy, while the isolation of saleskeeping from general office areas has "improved the general housekeeping of the personnel."

FIXTURES AND EQUIPMENT: FLOORS: Carpets—Bigelow Carpet Co. WALLS—painted, various shades of ivory, coral, cinnamon and grey green—Pittsburgh Plate Glass Co. CEILINGS—"Acoustone" tile—U. S. Gypsum Co. HARDWARE—Russell Irwin Manufacturing Co.

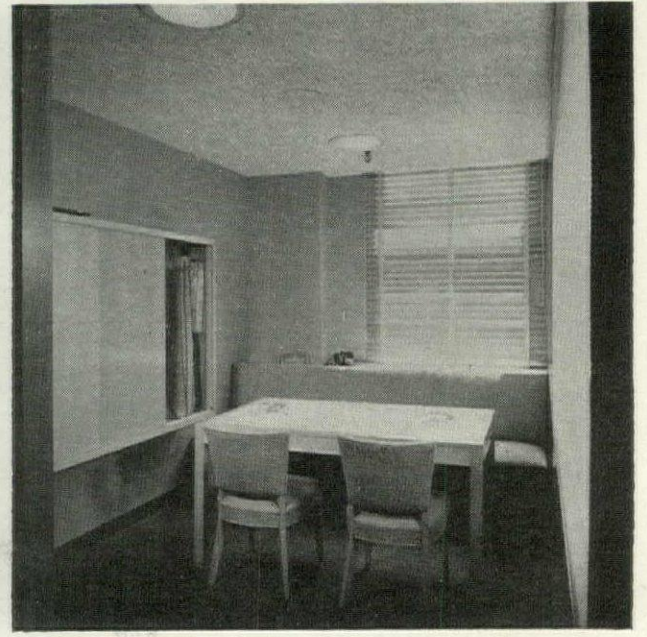
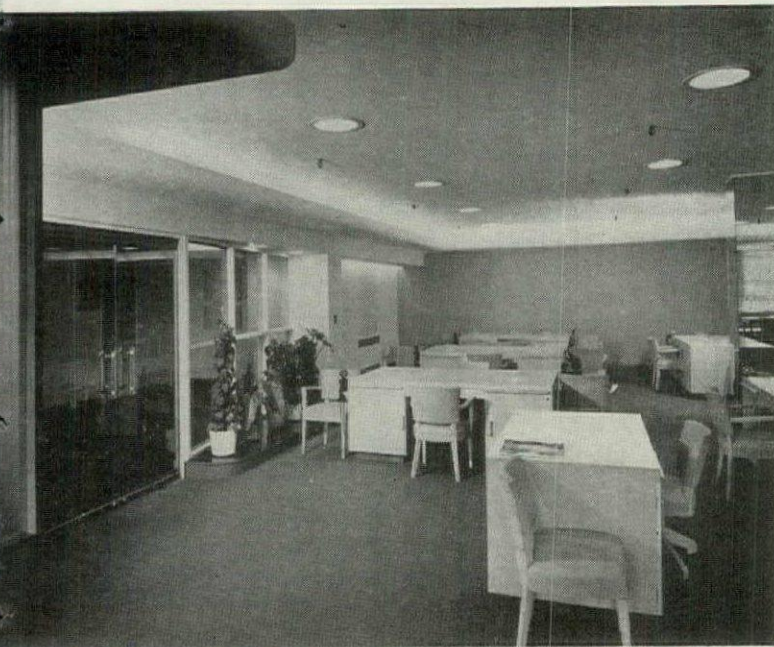
RIBBED GLASS FORMS WALL OF LARGE SHOWROOM

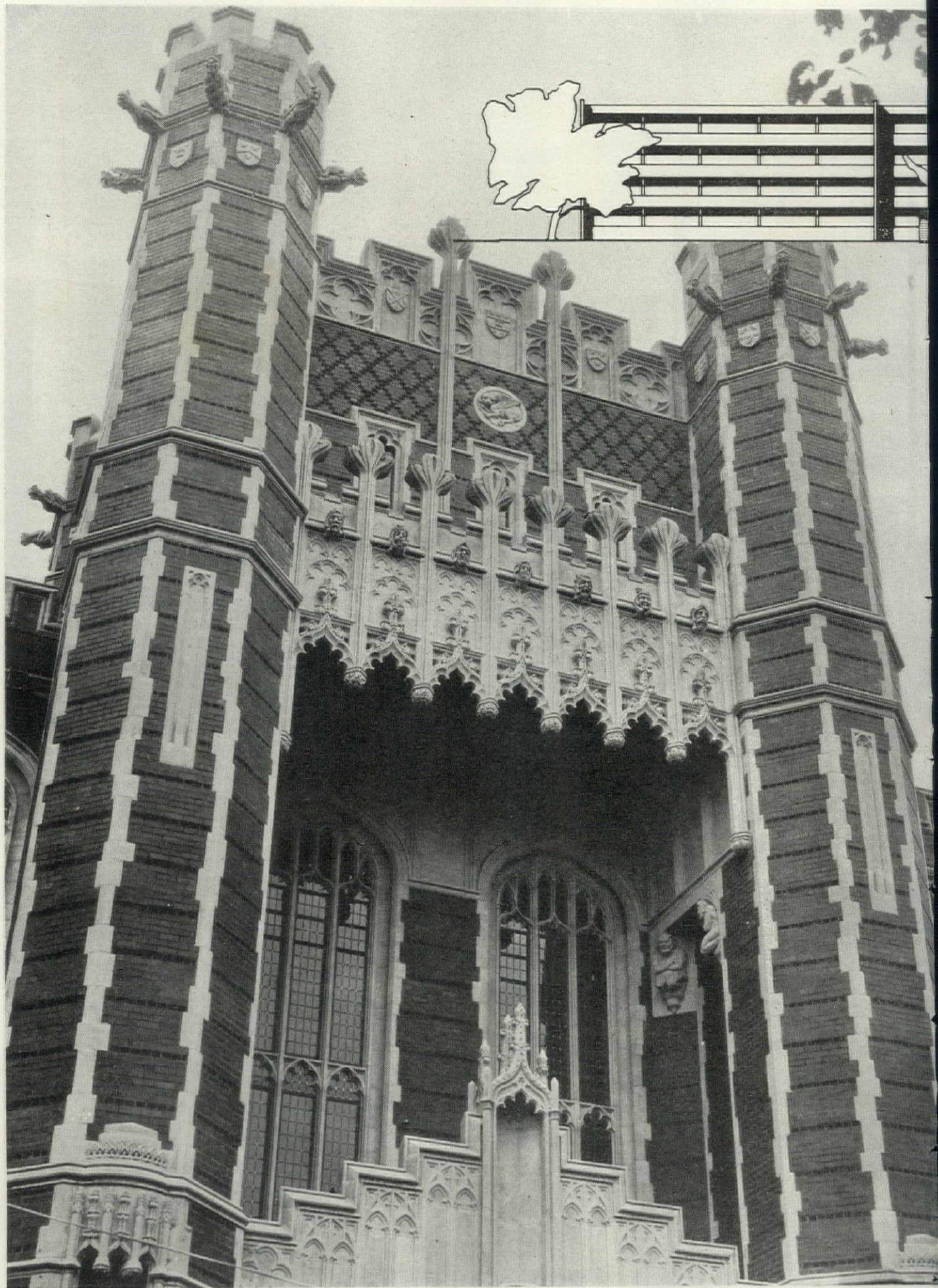




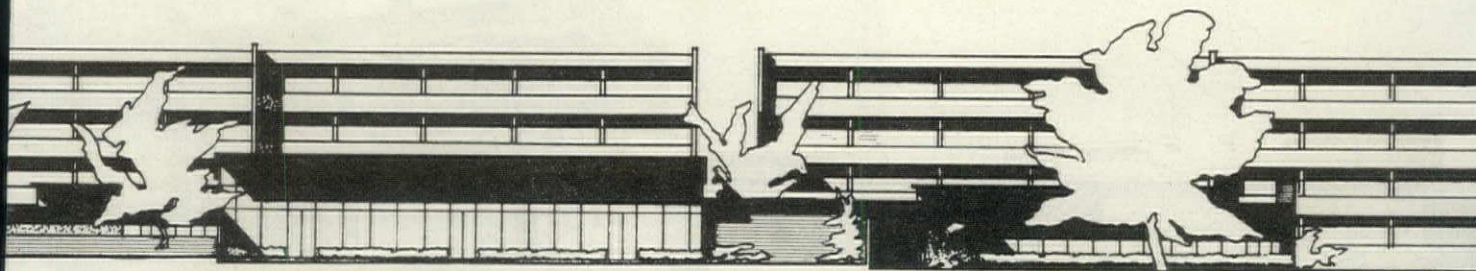
INDIVIDUAL SELLING BOOTHS LINE ONE WALL OF SALES ROOM, INDIRECT FLUORESCENT COVES SUPPLEMENT DOWN-LIGHTS

SALES ROOM WALLS ARE PAINTED IVORY, CORAL, TERRA COTTA. TYPICAL SHOWROOM, FINISHED IN GREY AND PINK





1930 LIBRARY WAS DUBBED "OKLAHOMA'S CROWN JEWEL." NEW DORMITORY, ABOVE, TYPIFIES CURRENT PROGRAM



OKLAHOMA UNIVERSITY goes modern

A typical state university debates the eclectic versus contemporary approach to architecture, decides in favor of modern, and launches a bold, long-term program.

People don't know enough about Oklahoma. Many think of it as the state from which the Okies fled, while a more recent group are convinced that everyone there greets the new day singing, "Oh, What a Beautiful Morning." As for the University of Oklahoma, most have not given it a thought since Governor "Alfalfa Bill" Murray wrote it off as the place with "too many footballs, highballs and screwballs." Yet this university is now embarked upon its postwar building program, and from plans perhaps more truly modern than any so far proposed in America.

The struggle that the University of Oklahoma has gone through to obtain its fresh architectural approach is typical of many now raging on campuses throughout the country. Current structures are inadequate to meet future needs in general, and those of returning veterans in particular. Extant teaching plants cannot be scrapped, and many are part of long-established plans calling for the continuation of a chosen style of architecture. Advanced groups are clamoring for more modern thinking in the solution of campus building problems; harassed conservatives are fighting for tradition. The national conflict between the eclectic and modern approach to architecture is coming into its sharpest focus on the university campus.

Oklahoma's plans began as a series of studies concerning trends in student housing in 1942. Through the leadership of a forceful young architect abetted by two modern-minded presidents of the University, the studies grew into a complete building program with detailed plans for four of the new structures suggested. The proposal was breath-taking in its refusal to deal further with the University's tattered Gothic program, in its espousal of completely modern planning and construction. With great tact, general approval of the modern program has been secured from traditionally conservative faculty, regents and alumni. Finances to construct the four initial buildings are assured, and work has begun on the apartments for married veterans.

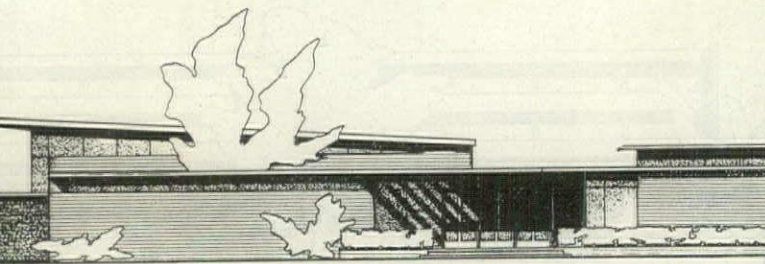
This vigorous new think has come from one of America's younger state institutions. The University of Oklahoma was established in 1890 as one of the first acts of the Legislature of the newly-created Territory of Oklahoma, whose inhabitants—the "boomers" and the "sooners" of the land settlement runs of 1889 to 1901—were anxious for education in

their new western world. When the Indian and Oklahoma Territories were combined into the state of Oklahoma in 1907, the University became the keystone of the state educational system. Since then it has had the typical rapid expansion of students, faculty and facilities, fitfully supported by the state legislature. Before the war a faculty of 301 was teaching on the flat campus of 222 acres in 41 more or less Gothic buildings.

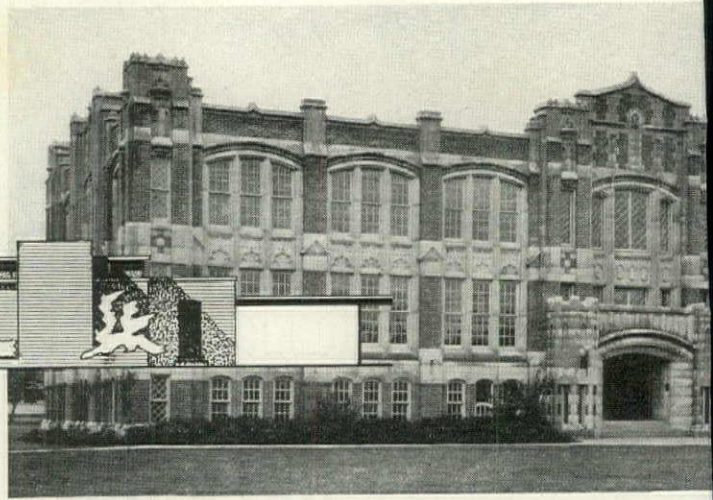
When J. A. Brandt took over the presidency of the bustling University in 1941, he found an acute housing shortage. Of the 6,900 students, only 500 were sheltered in dormitories, leaving the other 6,400 to the questionable mercies of clubs, rooming houses and commuting. President Brandt set about to rectify this situation, but before constructing new dormitories in the University's watered Gothic manner, he wanted to know how the eastern colleges were building their new "house" plans. Accordingly, a young Professor of Architecture, Henry L. Kamphoefner, was dispatched in the spring of 1942 on a tour of Harvard, Yale, Princeton and the University of Virginia. This tour resulted in designs by Kamphoefner for a completely modern men's dormitory, embodying the best features of the eastern "houses" adapted to the Oklahoma environment. But the new designs met with little approval from faculty or citizens.

This espousal of modern architecture was but one of the unpopular advanced ideas of President Brandt, all of which contributed to his resignation at the end of 1943. He was succeeded by the current President, George Cross, who inherited the housing shortage and Kamphoefner and his proposals for its solution. Cross found himself in basic agreement with most of his predecessor's ideas, but realized that a more light-footed advance was required, particularly in regard to architecture. Majority of faculty opinion was expressed by one of its leading members: "I think Gothic architecture is the only architecture now." One of the Planning Commissioners of nearby Norman gave the point of view of many citizens toward postwar planning by saying, "We have gotten off to a good start. We have changed some of the names of the streets." And Oklahoma architects recently had turned down an AIA proposal to present a gold medal to Frank Lloyd Wright by a vote of 25 to 5.

Oklahoma's most recent class buildings, those for Business



SIDE VIEW OF THE NEW DORMITORY-DINING HALL CONTRASTS SHARPLY WITH GOTHIC ORNAMENTATION OF THE EXISTING UNIVERSITY BUILDINGS AT RIGHT



SOLID AND ORNATE, THE 1919 GEOLOGY BUILDING TYPIFIED THE UNIVERSITY'S POST-WORLD-WAR-I BUILDING PROGRAM

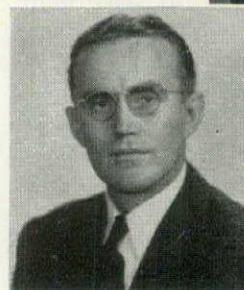
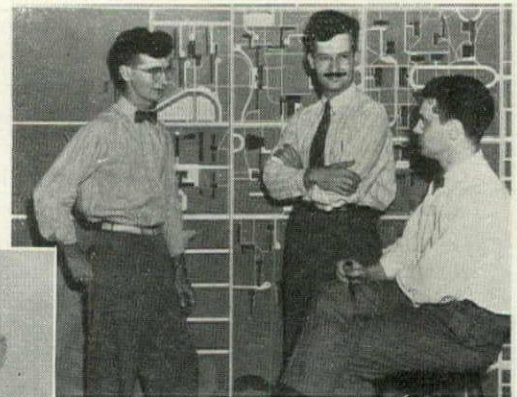
Administration and Biological Sciences, had been designed in 1936 by the Director of the Department of Architecture, J. E. Smay, in the Gothic manner. But these structures represented little advance over campus buildings executed 20 years before, being essentially "just a block mass with a corridor running down the center." The windows on the south side of both buildings had been painted to keep out the intense sun, and the western classrooms were used as little as possible because of their extreme heat. Smay had said: "I am not in accord with a radical departure from Collegiate Gothic. I think that if Modern has something to justify it, I am strong for it. Merely to say 'Modern' for the sake of being different or being modern . . . I don't quite see it . . . The more I study it the more I commence to wonder whether I know anything about architecture." Future plans for Oklahoma came under an organization called University Utilities, whose head, when questioned about modern planning, had said: "We don't need any campus plans . . . I've got seven plans in my office already . . . I've even got buildings over there without a name."

Since none of the extant University Departments or other organizations seemed disposed to consider the realities of the building needs, President Cross appointed an advisory committee composed of the Directors of the Departments of Art and Architecture, the head of University Utilities, and Kamphoefner. The President asked the committee to consider chiefly the style for the new buildings on the campus, since style seemed to be the main bone of contention among all parties. After discussion, each member of the committee was to submit a separate report to the President. "I listen to the committee," says Cross, "then recommend what I think should be followed to the Regents; then they make up their minds." The contents of the four reports was not divulged, but shortly thereafter a Campus Planning Group, headed by Kamphoefner, was established by the President to work out a new building program for the University.

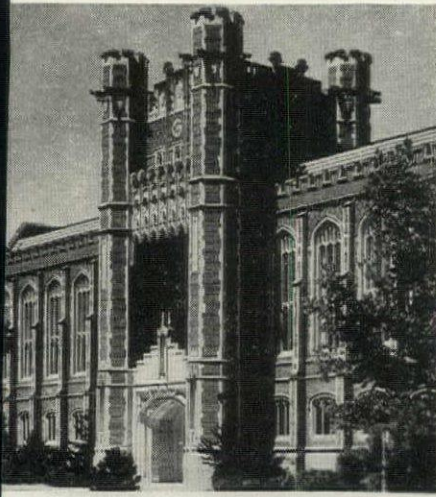
The policy of the new Group was boldly stated by Kamphoefner: "Planning of lines of advance for . . . the well-being of Oklahoma can be expressed through a basic understanding of the true role of architecture. If we satisfy the requirements of our buildings, create simple, workable structures, orient these structures to the sunlight, the prevailing winds, and the

physical characteristics of the property, we will find very little need for serious discussion . . . of 'style.' We should prefer to justify the building as an expression and embodiment of the life and structure within rather than as an 'authentic' reproduction or rejuvenation of a past style."

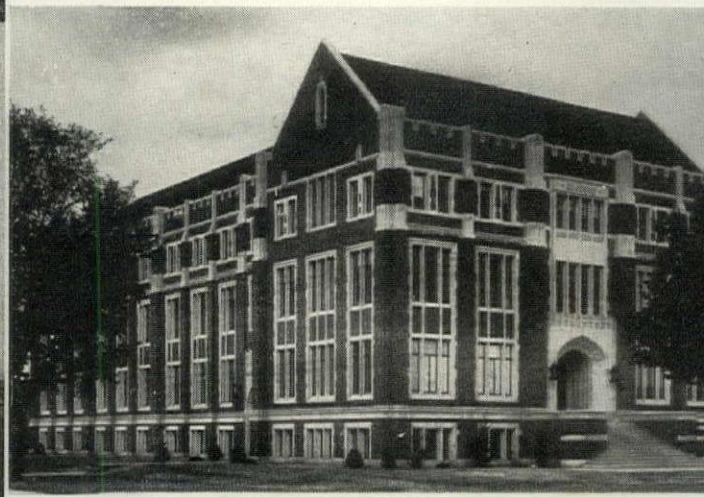
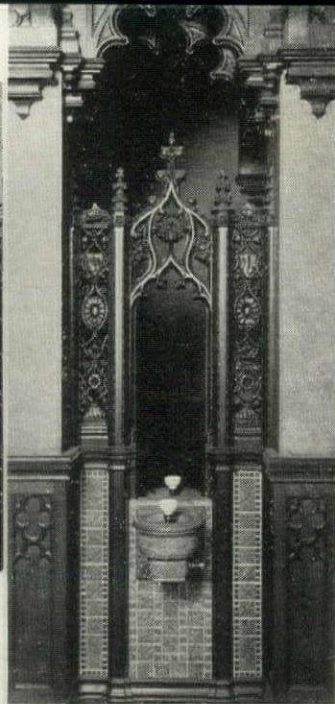
The Campus Planning Group began at once to make its principles tangible in a series of excellent drawings and a campus model, and to furnish President Cross with logical written and verbal explanations of all details. The Campus Planning Group consists of Kamphoefner and two other young architects, James W. Fitzgibbon and Martin S. Kermacy. Kamphoefner was born in Des Moines in 1907 and received his architectural education at the University of Illinois and Columbia. Before coming to Oklahoma he had excellent office experience in New York, Washington, Chicago and Sioux City. Fitzgibbon was born in Omaha and Kermacy in Hungary, both in 1915. Both studied architecture at the University of Pennsylvania, and worked in various offices before coming to Oklahoma. Fitzgibbon was "easily lured to Oklahoma by Kamphoefner's vivid word pictures of new worlds to tackle," while Kermacy came when Fitzgibbon wrote, "Here is a fine chance to work on a group of buildings that look as though Le Corbusier slept here." The Planning Group has operated



MODERN campus plan and four buildings have been designed by Campus Planning Group composed of architects Kamphoefner and Fitzgibbon (left to right above) backed by President Cross (left).



MILLION DOLLAR LIBRARY (ABOVE)
CONTAINS FANCY FOUNTAIN AT RIGHT



BIOLOGICAL SCIENCES BUILDING FINISHED IN 1936
CONTINUED USE OF ILL-ADAPTED "GOTHIC" STYLE

with perfect team work, turning out a Campus Plan for the future expansion of the University and detailed drawings for four new buildings.

The Campus Plan is no H. G. Wells fantasy. It is a down-to-earth realization that Oklahoma will have to use every building it has for the present and perhaps a long while in the future. So no sweeping demolitions are proposed. The campus has been re-zoned, each of the major functions of teaching, living and recreation being given several campus areas of their own. Within each of the ten new zones, various renovations and additions are proposed to render old buildings suitable, and certain new buildings will be added. Greatest current need has established priority for the first four construction projects: a classroom building, a building for the University of Oklahoma Press, a women's dormitory, and fifteen veterans' housing units—drawings for all of which are shown on the following pages.

Final approval of the Campus Plan and the four new buildings had to be obtained, first from the seven Regents of the University, and then from the nine Regents of Higher Education who coordinate all state institutions. In addition to esthetic approval, definite financial support had to be arranged. Let Kamphoefner tell about the meeting with the

University Regents in 1945:

"President Cross gave a short talk on what we had started to do and then asked me to carry on the informal discussion. We had a group of Kodachrome slides of the recent work at Wheaton College to show how well Hornbostel and Bennett had succeeded in making the modern work fit harmoniously into the old campus by Cram. I went into details on the change we wanted to make and stressed the use of matching color, in the same materials and textures as the adjoining buildings, and in a similar scale. . . . The Board of Regents is

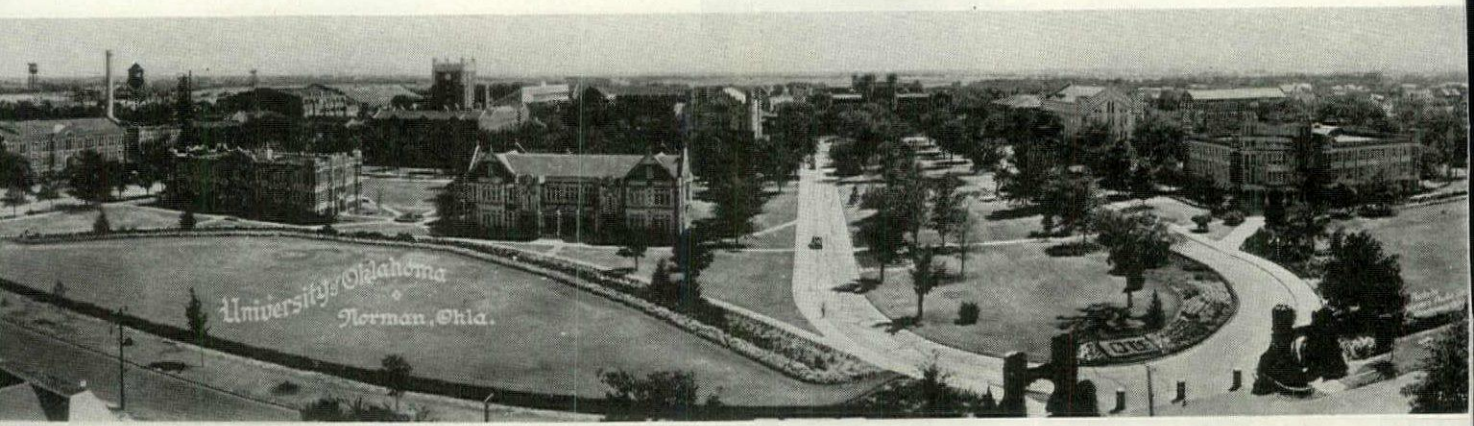
a very progressive group of successful Oklahoma business and professional men, and we are well satisfied with the kind of questions they asked. The inevitable question, however, came from one of the most progressive members, a newspaper publisher and National Democratic Committeeman for Oklahoma. He said, 'It is still a bit difficult for the average layman to believe that there will not be a clash between the old and the new work.' I asked him then if he felt a clash between the old and the new work at Wheaton, and he told me that he did not think so. I said that we believed we could do as well . . . as had been done at Wheaton. That statement seemed to convince all the members, and after a short discussion with the President in his office, they gave us a blanket approval on everything that we had done. We think this paved the way for the building of probably 20 to 30 modern buildings on the campus within the next ten to 20 years."

Since the approval by the University Regents, conservatives have tried to whip up opposition among the Alumni, but President Cross called a special meeting of the Alumni Board and explained the aims of the entire scheme. The Alumni Board gave the President a unanimous vote of confidence. Consent likewise has been obtained from the State Regents, and funds have been allotted or bond issues approved for actual construction of the four buildings. In fact, self-liquidating, 20-year bonds issued by the University Regents on the income-producing veteran's project have already been sold, with interest at the low rate of 2¾ per cent, and work on this group has begun. A similar financing plan will be used on the women's dormitory, while the press and classroom buildings will use allotted state funds. All buildings will be executed under the direction of the Campus Planning Group, whose preliminary studies will be taken over by various state architectural firms for carrying through the stages of working drawings, specifications and construction. In this manner, the firm of Sorey, Hill and Sorey of Oklahoma City is now executing the veteran's project.

From the University of Oklahoma, one of the younger of America's state universities, has come the first large-scale re-thinking of collegiate architecture to go into construction. In Oklahoma there are still "boomers" for expansive ideas, and "sooners" to rush such ideas into actuality. People don't know enough about Oklahoma.



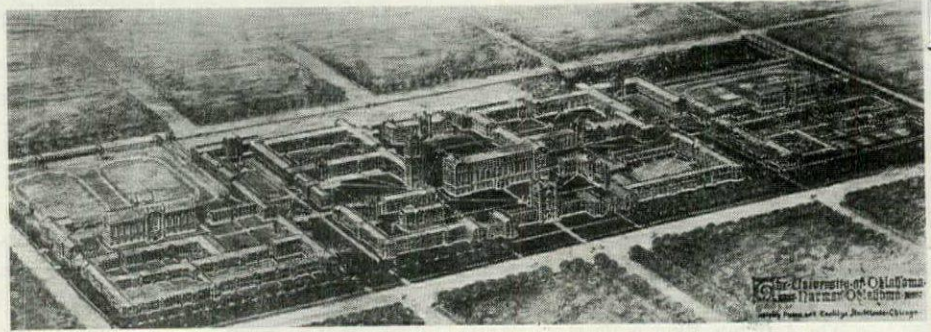
ECLECTIC approach to campus is represented by Director Smay of University's School of Architecture who designed recent Business Administration Building (above).



PRESENT Oklahoma campus (above) typifies most American universities in its mixture of styles and haphazard plan.

PAST plan for Oklahoma (right) was designed by Shepley, Rutan and Coolidge in 1908-10 but not followed.

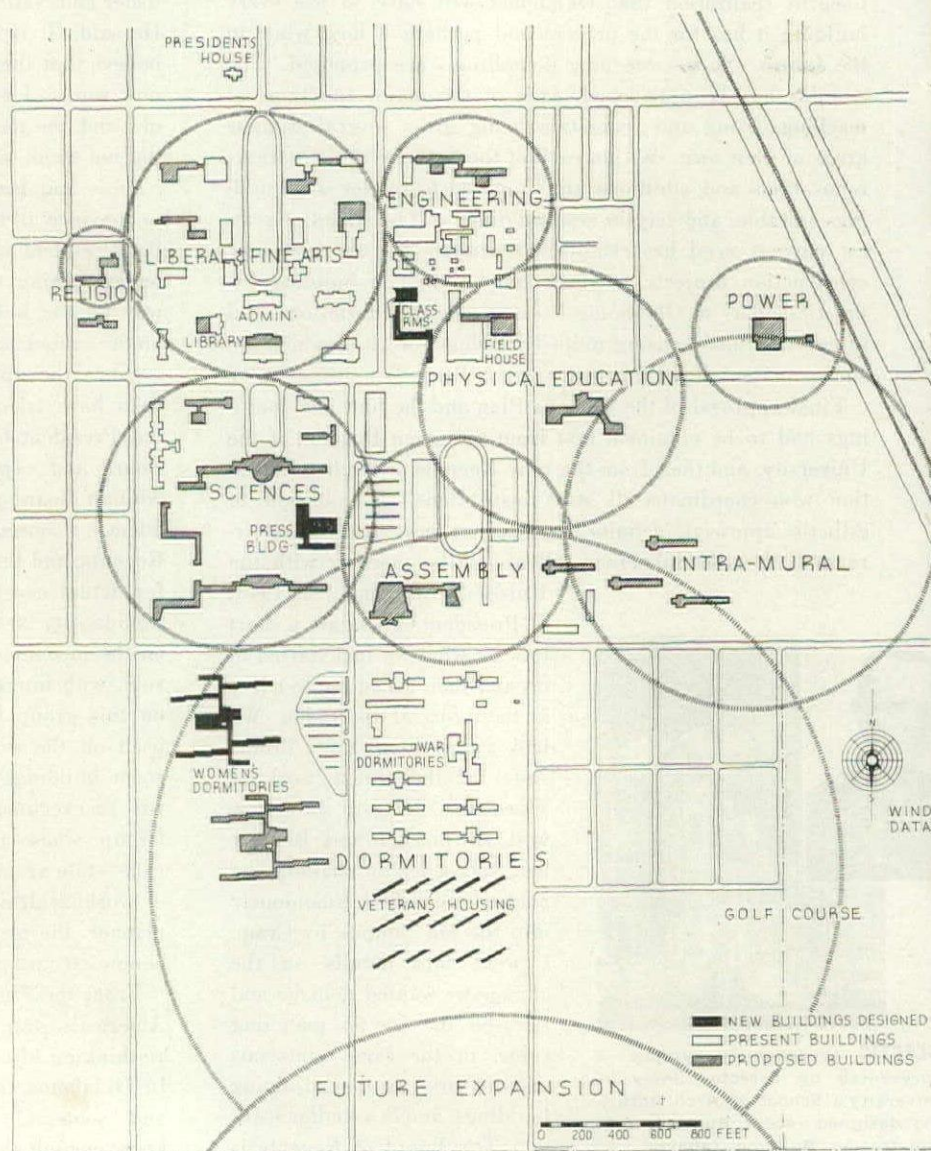
FUTURE expansion layout (below) is by current Planning Group. Four buildings in black are to be built immediately.

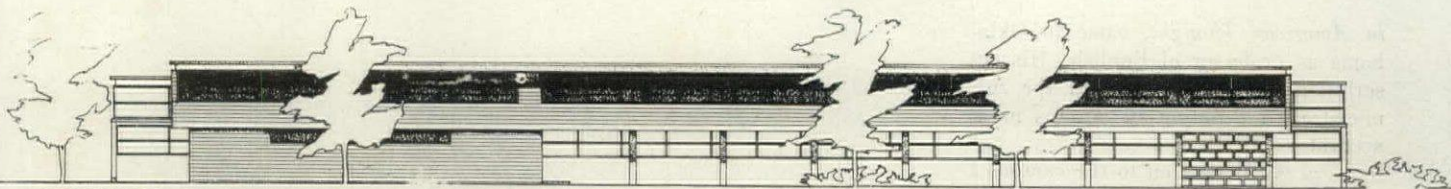


The story of the architectural past and present of the University of Oklahoma is representative of college building throughout the country. The structures on the campus at Norman today may be "Prairie Classic" or "Cherokee Gothic," but most American campuses are full of such records of abandoned architectural trails. Out of such a background Oklahoma's new program has arisen, and out of similar backgrounds many other universities will bring their future schemes.

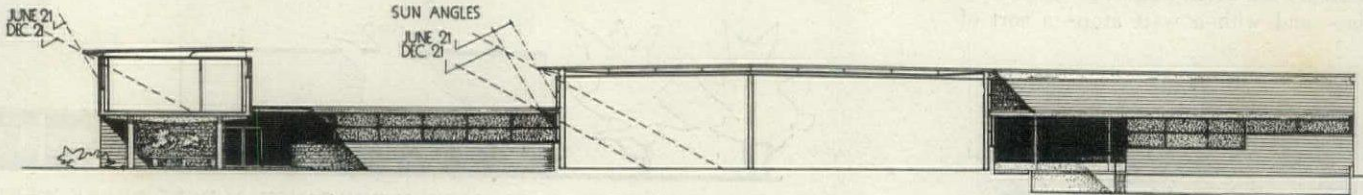
By 1850 the "grand tour" to Europe had made the variety of reviving only two former architectural styles, the Classic and the Gothic, seem dull, and the culture of the expanding new country tried to prove itself by an amazing series of combinations of all former building modes. It was in this latter half of the 19th century that most of America's universities got their start, and it was in this varied architectural mode that their first structures were erected—from Vassar's huge Main Hall in the East to Oklahoma's lonely Administration Building in the Mid-west.

The opening of the Administration Building on the new campus of the university on September 3, 1893, was an event for the whole territory. Said the *Norman Transcript*: "Both the interior and exterior of the building is [sic] not alone a picture of beauty, and symmetry, but a model of art, an encomium upon the architect and a living panegyric upon the skill of the contractor." Four years later Vernon L. Parrington, subsequently author of the Pulitzer Prize interpretation of US literature, *Main Currents*



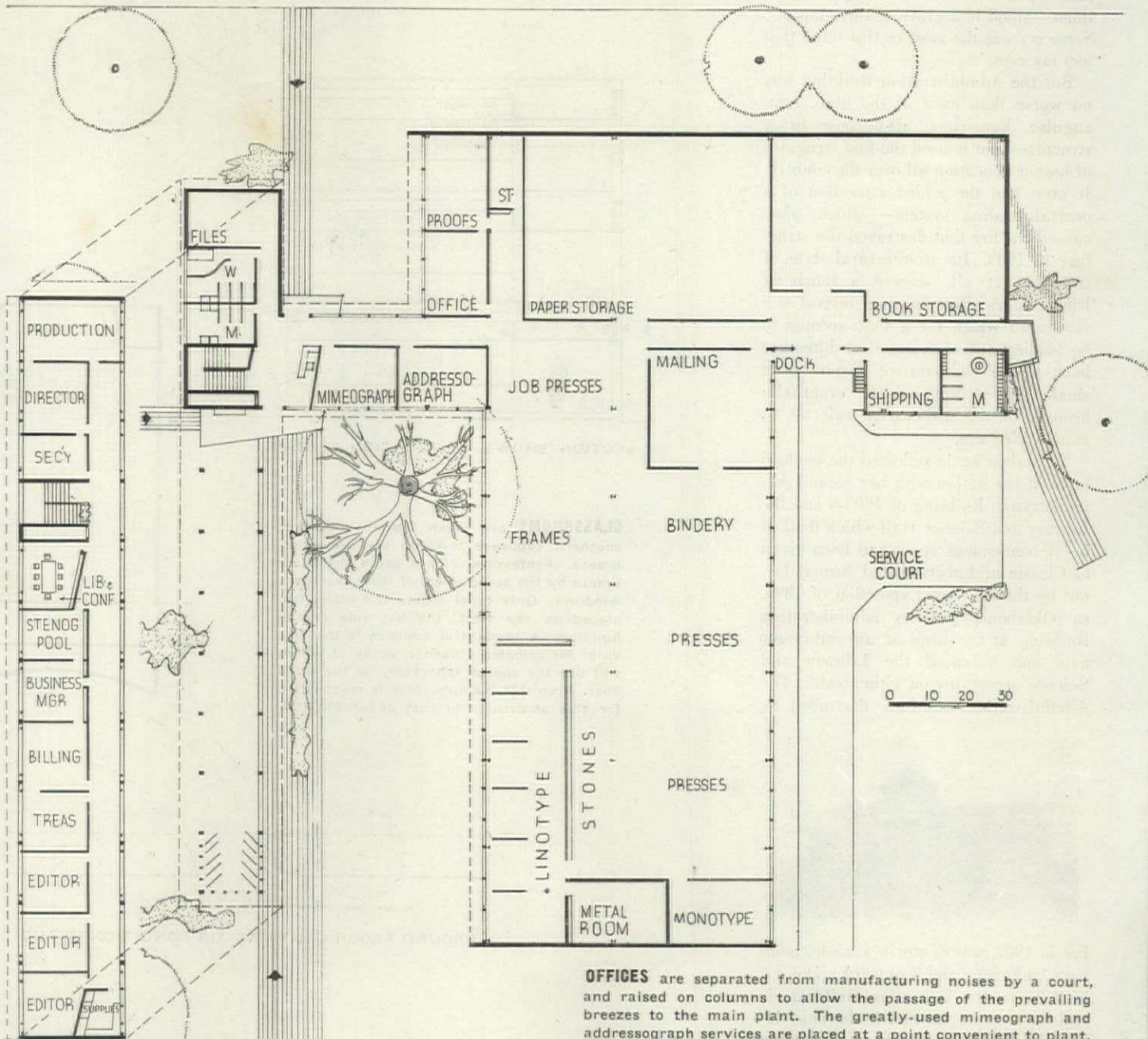


EDITORIAL OFFICES CARRIED AS SECOND STORY RIBBON ACROSS SOUTH WALL CREATE COVERED BREEZEWAY



CROSS - SECTION OF PRESS BUILDING REVEALS CAREFUL ORIENTATION TO SUNLIGHT AND PREVAILING BREEZE

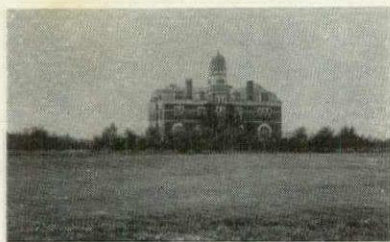
PRESS BUILDING offers a unique arrangement for a complete printing plant.



OFFICES are separated from manufacturing noises by a court, and raised on columns to allow the passage of the prevailing breezes to the main plant. The greatly-used mimeograph and addressograph services are placed at a point convenient to plant, offices and campus entrance. As the University Press serves the whole Southwest, large areas are provided for paper and book storage. The building was designed by team member Fitzgibbon; its estimated cost is \$200,000.

in *American Thought*, came to Oklahoma as professor of English. His description of the campus and the Administration Building is perhaps more accurate:

"... As I came on to the campus I stopped—was this the university! ... A single red brick building—ugly in its lines and with a wart atop—a sort of



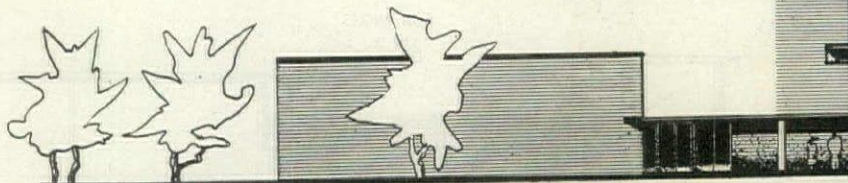
misshapen cross between a cupola and a dome—stood in a grove of tiny elms ... Some ivy was the most restful thing that met my eyes."

But the Administration Building was no worse than most of the high, rectangular, humorless, all-purpose brick structures that housed the first struggles of higher education all over the country. It even had the added attraction of a central heating system—which, alas, caused the fire that destroyed the structure in 1903. Its architectural style, if traceable at all, showed a touch of Richardson's Romanesque revival—a movement which for a time seemed to be leading out of mongrel architecture back to the comparative dignity of a single style, but which eventually brought on the still-current eclectic, or many-styled era.

Oklahoma again reflected the general taste of the nation with her second Administration Building of 1903-4 and the Library and Science Hall which flanked it. A tremendous spurt had been given to Classic architecture and formal layout by the Chicago Exposition of 1893, so Oklahoma put its administration Building at the head of an embryonic axis and balanced the Library and Science structures on either side. The Administration Building, destroyed by

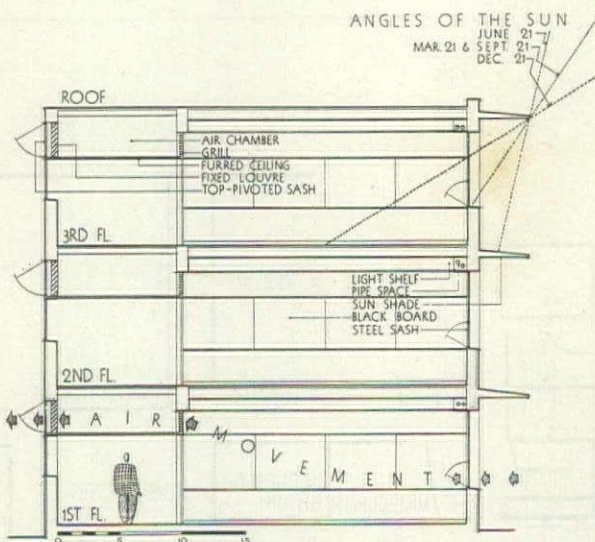


fire in 1907, was of sterile Classic, pompous, inhuman and awkward. The Library, now the Education Building, is still on the campus, and is the most interesting building of the three. Its facade shows a trace of the wide eaves and horizontality of the then-contemporary Chicago School led by Sullivan and Wright.



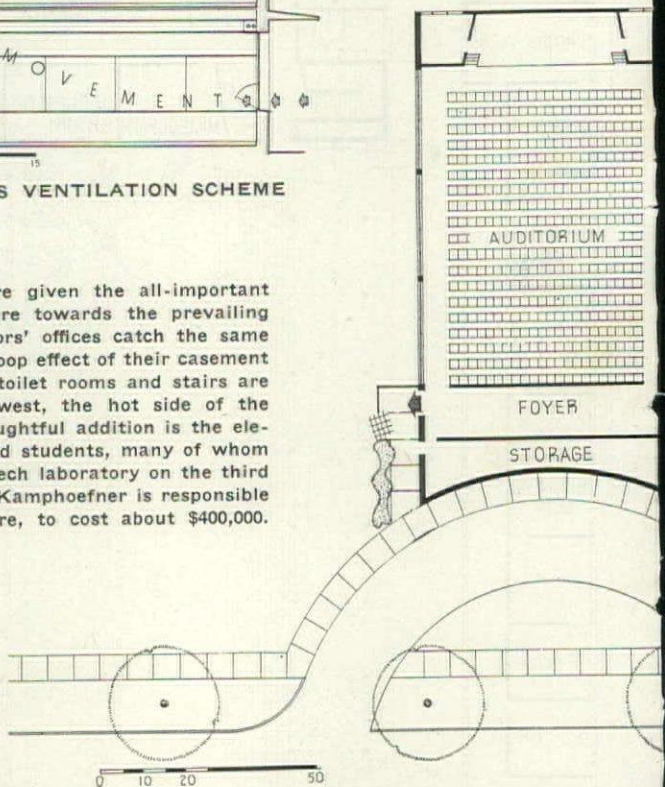
SMALL WINDOWS IN CLASSROOM BUILDING'S ALMOST BLANK WEST WALL

CLASSROOM BUILDING combines special facilities for the

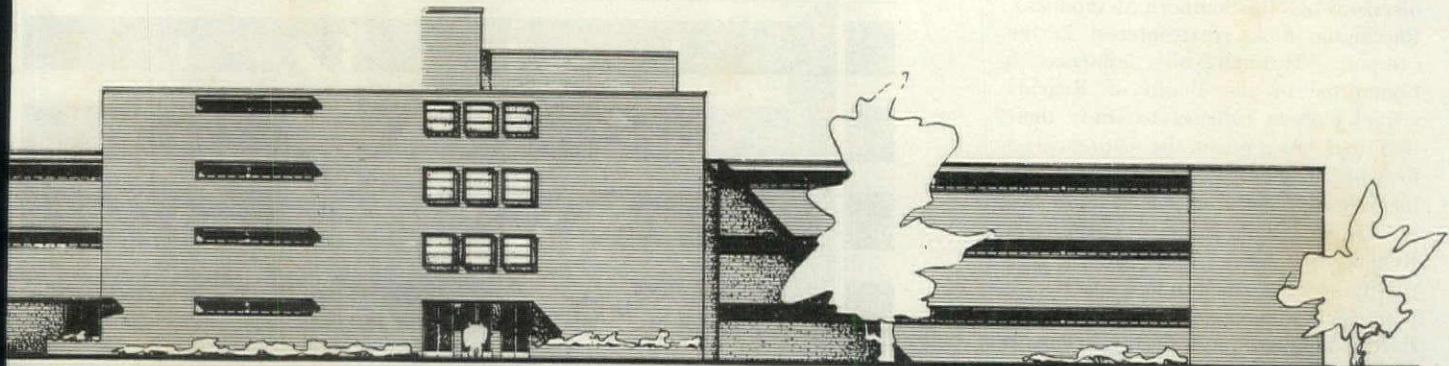


SECTION SHOWS VENTILATION SCHEME

CLASSROOMS are given the all-important southern exposure towards the prevailing breeze. Professors' offices catch the same breeze by the scoop effect of their casement windows. Only toilet rooms and stairs are placed on the west, the hot side of the building. A thoughtful addition is the elevator for crippled students, many of whom will use the speech laboratory on the third floor. Architect Kamphoefner is responsible for this structure, to cost about \$400,000.

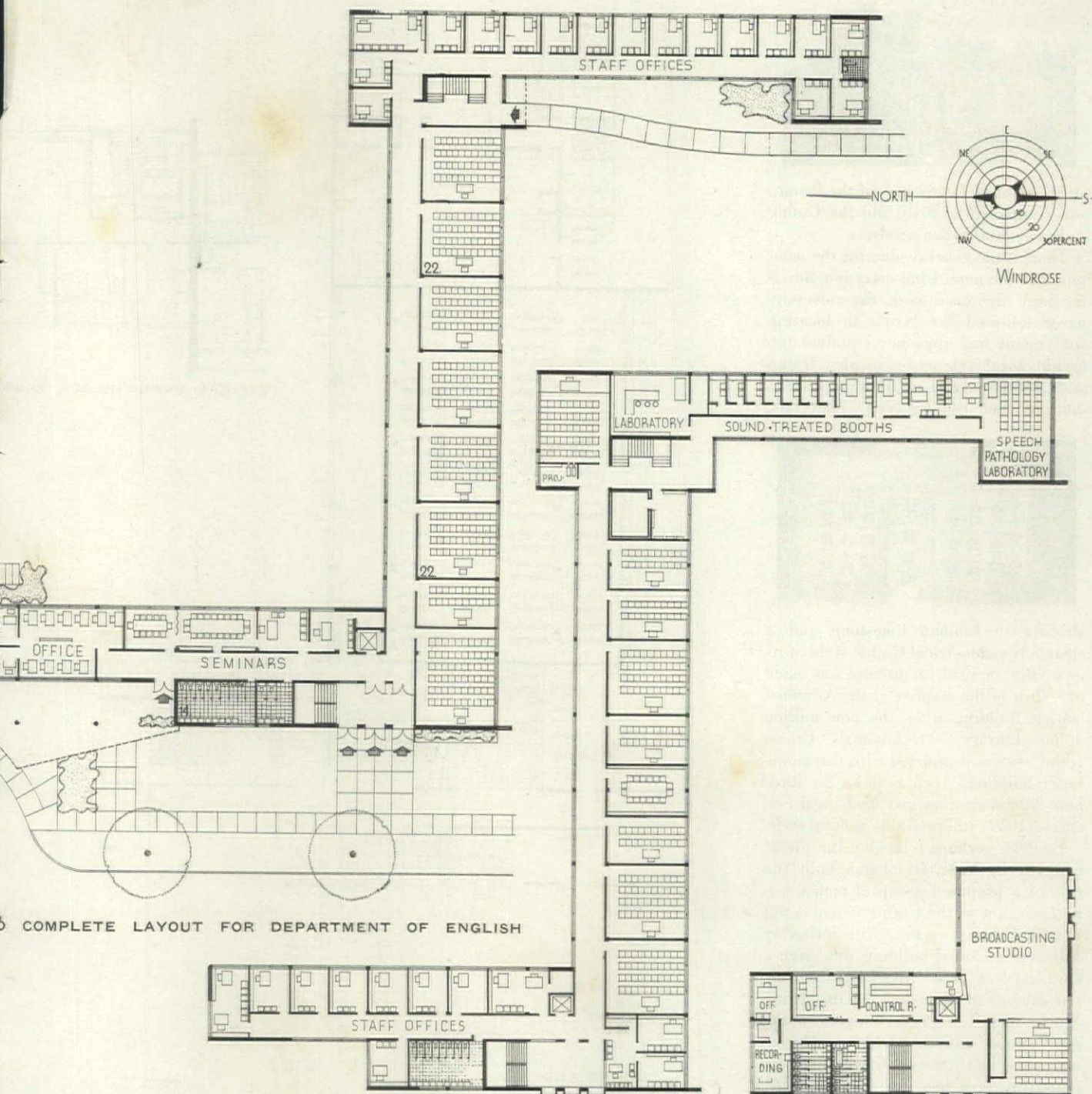


GROUND FLOOR CONTAINS AIR CONDITIONED AUDITORIUM



WARD OFF HOT AFTERNOON SUN, SERVE ONLY CORRIDORS AND WASHROOMS. OPPOSITE WALL OPENS OFFICES TO EAST

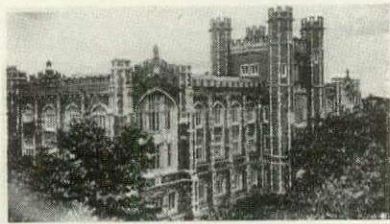
iversity departments with related auditorium and broadcasting studios.



ND COMPLETE LAYOUT FOR DEPARTMENT OF ENGLISH

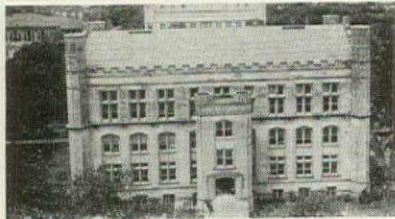
THIRD FLOOR IS FOR DEPARTMENT OF SPEECH. FOURTH FLOOR IS DEVOTED TO BROADCASTING

After the fire of 1907 and before his dismissal by "the Southern Methodists," Parrington took great interest in the campus. Through his influence a Committee of the Board of Regents visited eastern colleges to study their buildings. As a result, the distinguished firm of Shepley, Ruten and Coolidge, the inheritors of Richardson's practice in Chicago and the designers of the great Romanesque layout for Stanford University, were retained to make a general plan for Oklahoma and to design the third Administration Building. The new Oklahoma layout was a huge, tightly organized affair, with quadrangle opening into quadrangle—all in the style of the then-fashionable Gothic. The Administration Building, the northernmost



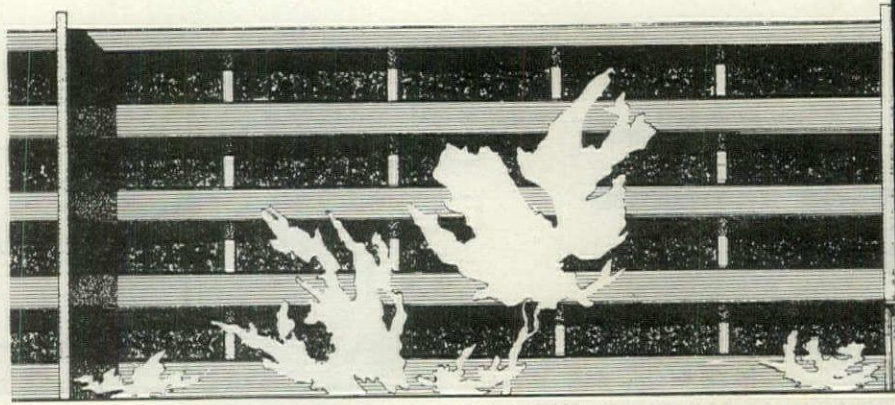
structure on the main axis of the layout, was completed in 1910, and the Gothic style was established firmly.

Though the general plan for the campus and the new Administration Building were high class work, the university never followed the layout in locating subsequent buildings nor equalled the architectural style set by Shepley, Ruten and Coolidge. The Law Building of 1913 did not even use the same materials,



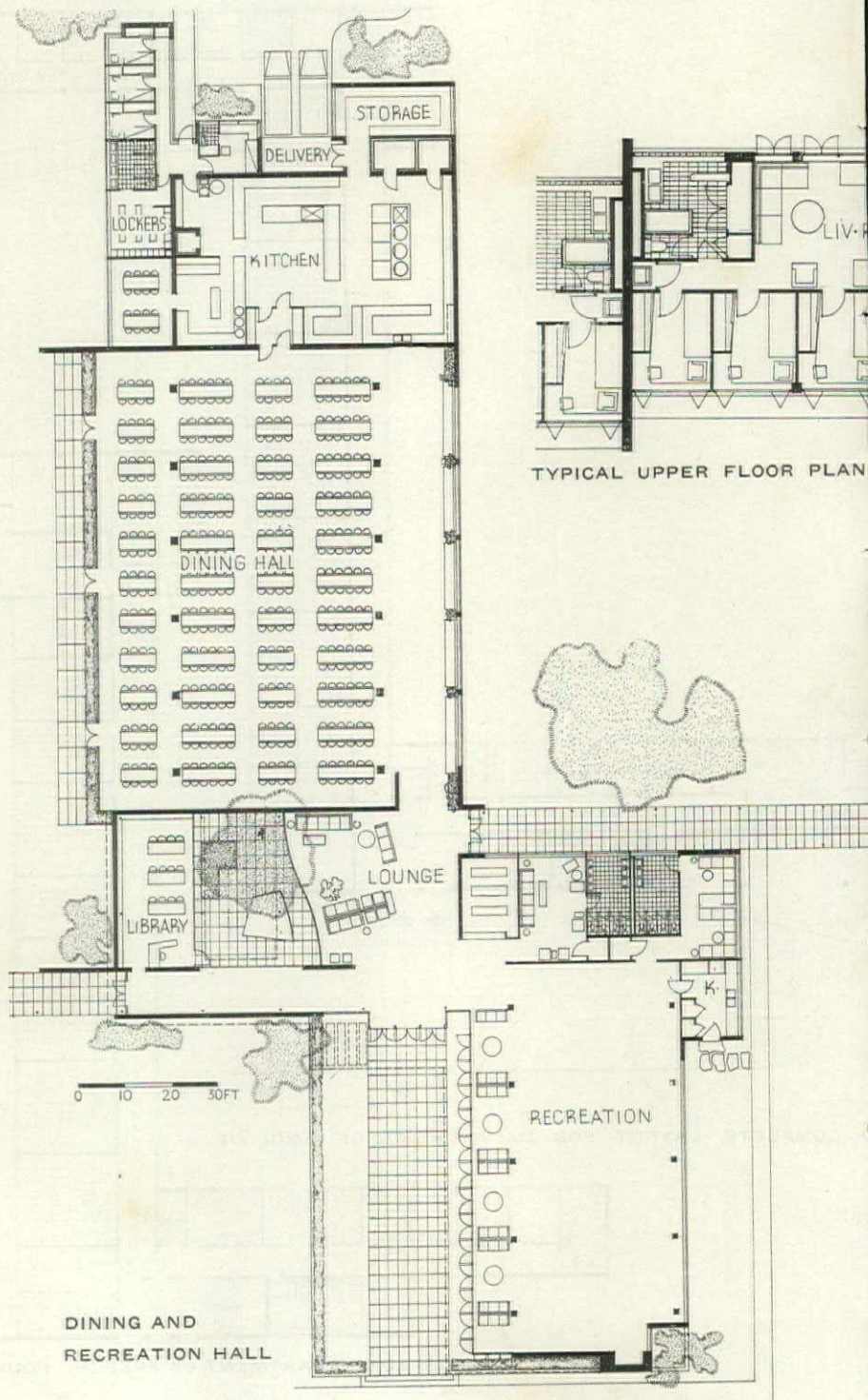
shifting to Indiana limestone and a strangely symmetrical Gothic style of its own. But, in 1930, an attempt was made to return to the manner of the Administration Building when the new million dollar Library—"Oklahoma's Crown Jewel"—was completed with ceremony. Later buildings, such as those for Business Administration and Biological Sciences (1939) followed this general style.

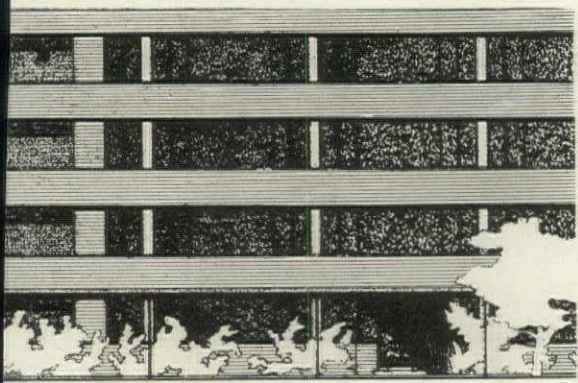
In 1943, perhaps following the precedent set by Yale, Oklahoma built the first of a proposed group of men's dormitories, not in the Gothic manner, but in the Colonial—and, still following Yale, one Colonial building was given a Gothic porch as a "transition from the old campus to the new." At this point, World War II stopped collegiate building for good; and when Oklahoma began again she had her eyes fixed on the architecture of a new era.



PARTIAL SOUTH ELEVATION HAS LARGE WINDOWS FOR STUDENT BEDROOMS

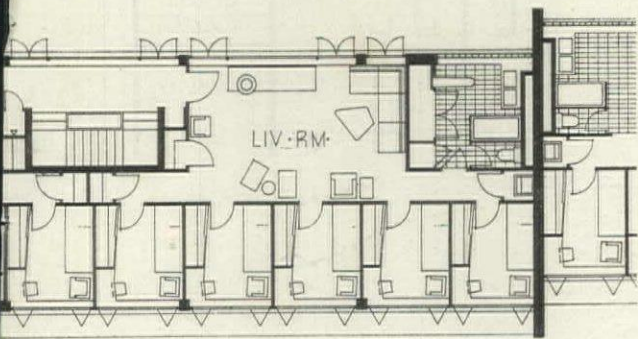
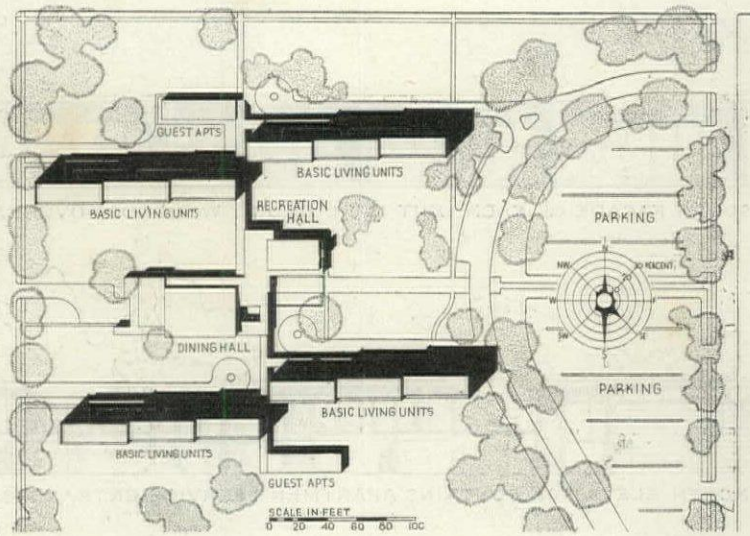
WOMEN'S DORMITORY is two carefully oriented rows of basic



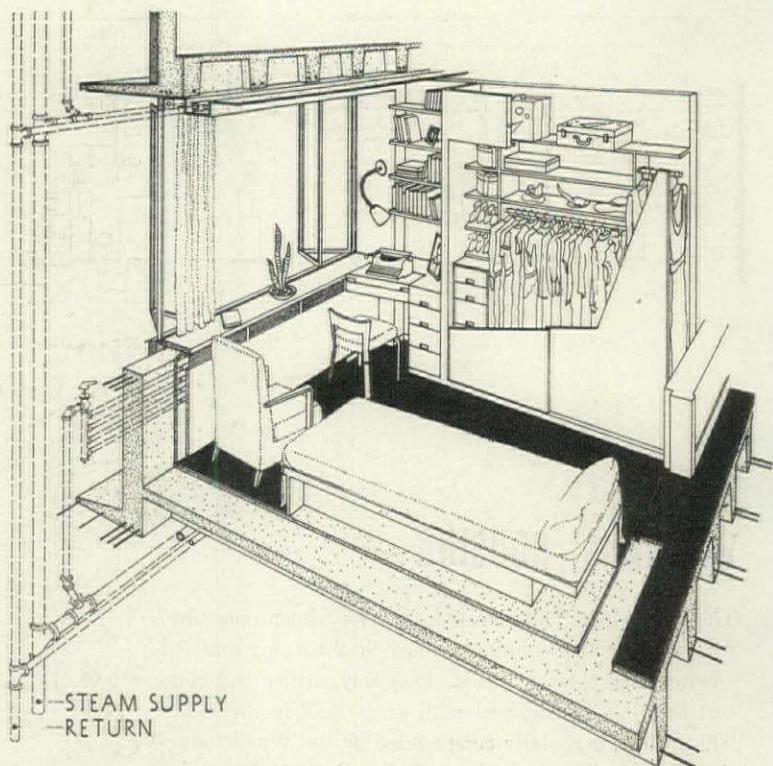


...IVING ROOMS TO NORTH HAVE SIMILAR WINDOWS

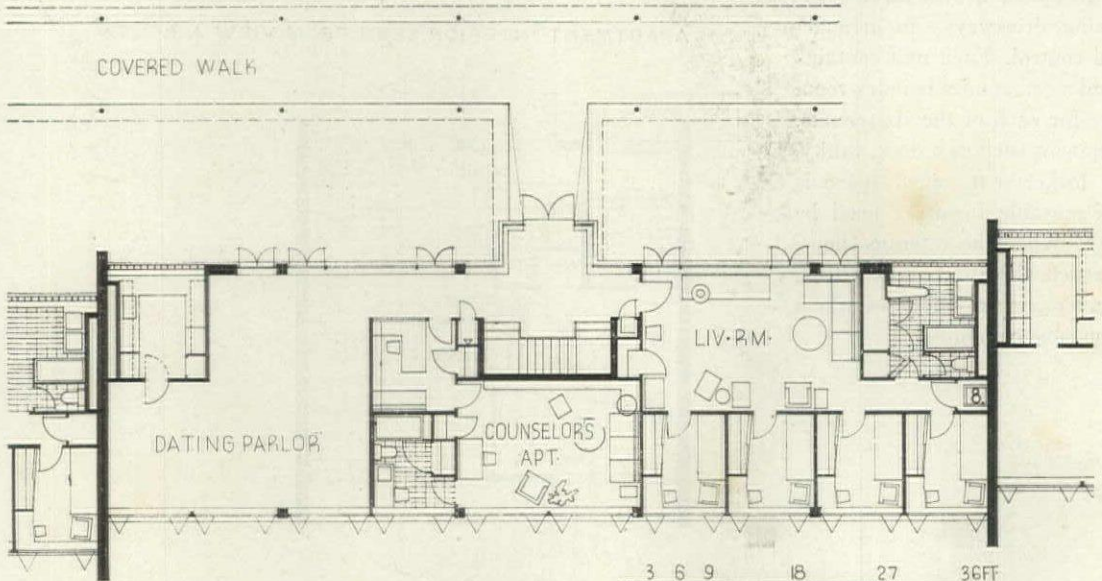
...ng units with communal facilities between.



BASIC LIVING UNITS are four floored and made up of similar suites accommodating five girls each. All minimum-size bedrooms open directly into the large suite living room, which has exposure to the sun and breeze to the south. New conveniences for each suite include cork walls for pinups, laundry and hairwashing equipment. The whole dormitory will house 408 girls and cost about \$1 million. Kermacy is the Planning Group member who designed this building.



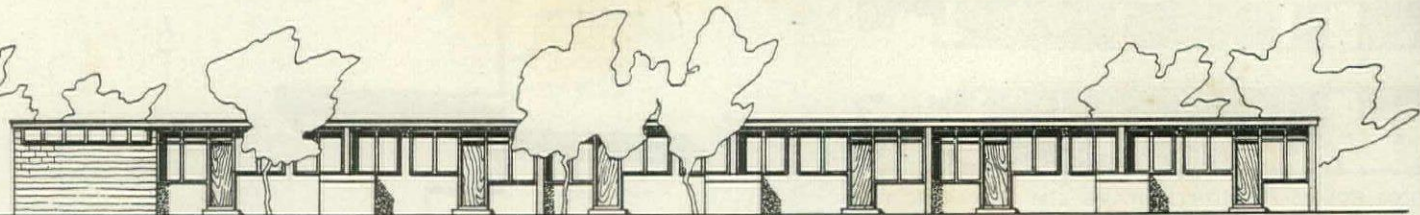
STUDENT ROOM LAYOUT IS RESULT OF CAREFUL ANALYSIS



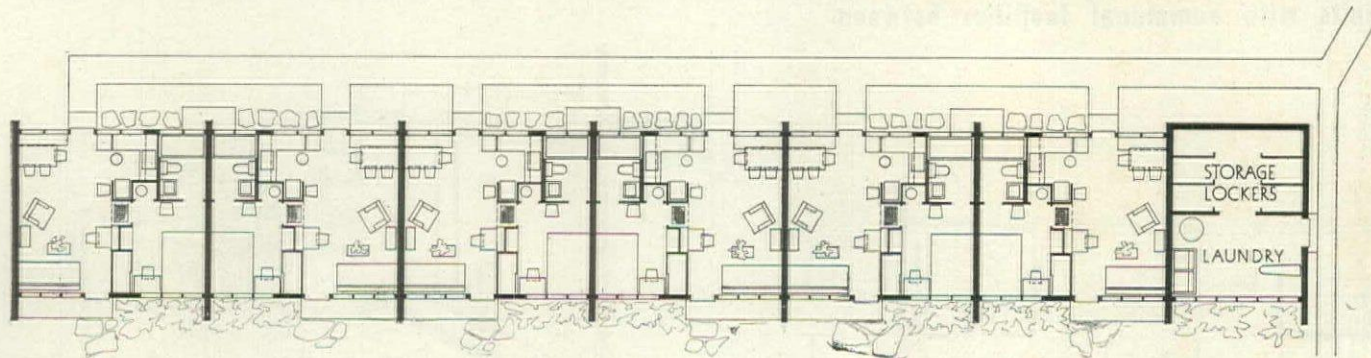
GROUND FLOOR OF EACH UNIT PROVIDES DATING PARLOR AND COUNSELOR'S SUITE



SOUTH FACADE OF EACH UNIT IS SHADED BY WIDE ROOF OVERHANG AND PROJECTING APARTMENT DIVIDING WALLS

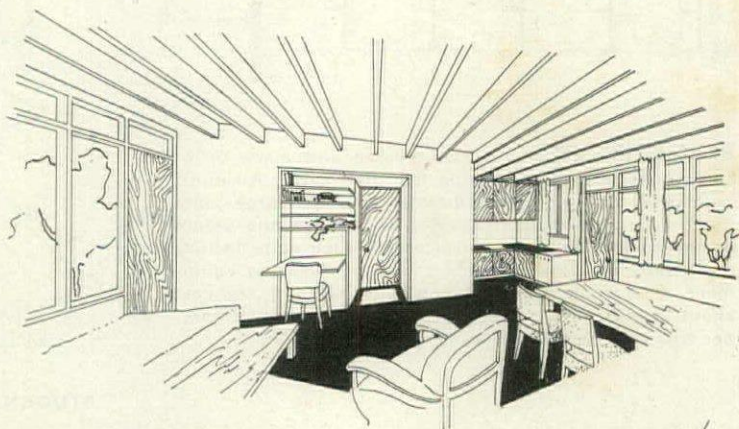


NORTH ELEVATION CONTAINS APARTMENT SERVICE ENTRANCES. COMMUNITY LAUNDRY AND LOCKERS ARE AT LEFT

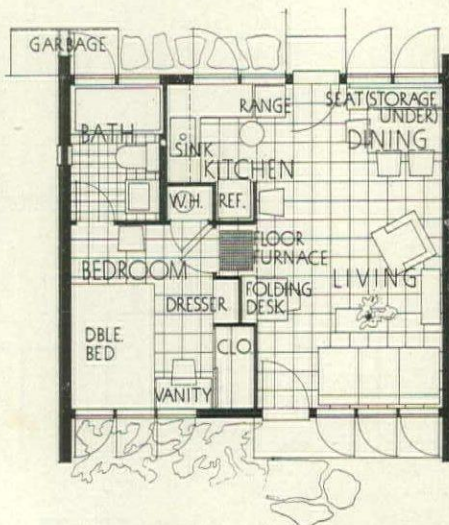


VETERANS' HOUSING

The entire team collaborated on these fifteen one-story, row-type apartment units to house 96 returning married veterans and their families. Economy, utility and comfort have been combined with great skill in the \$275,000 project, especially commended by the War Production Board. The units have been oriented to the sun and breeze and placed in groups of five on three dead-end circulation and parking driveways—an arrangement assuring traffic speed control. Each unit contains six identical apartments and a community laundry room with adjacent locker space for each of the six tenants. By the use of built-in equipment such as a desk, vanity, dining table and storage locker seat, much space is saved and a minimum of movable furniture need be provided by the University. When the veterans' housing problems have been settled, the apartments will be used for married students, proper provision for whom has been long overlooked on most campuses.



APARTMENT INTERIOR SEEN FROM VIEW A BELOW



ORGANIZATION GETS MUCH INTO SMALL INTERIOR SPACE



Recent work by
HARRIS ARMSTRONG

HARRIS ARMSTRONG is a complete product of the Midwest. Born in Edwardsville, Ill., in 1899, he received a typical American education, capped by architectural training at Washington University, and at Ohio State University. After the usual jobs in various architects' offices, including that of the late Raymond Hood, Mr. Armstrong returned to St. Louis in 1931 and set up his own practice, much against the advice of friends.

"But," says Armstrong, "it was St. Louis itself and its conservative, even reactionary, tendencies that presented such a challenge and such a need that we decided to stay here and starve. It looked like that might be a very likely solution, too, in the early Thirties. But those hard years gave meaning and value to work and to the chance to work. They made clients people, and very special people, at that."

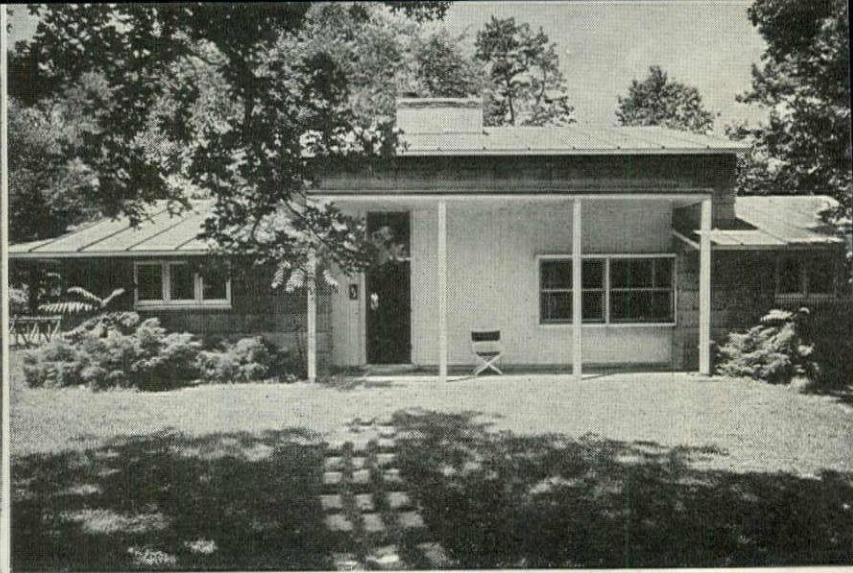
The clients, mostly young professional people, began to trickle in after 1933, and Harris Armstrong began to establish a reputation for his unusual residences and physicians' buildings. His earlier work showed the influence of the crisp, cubical, impersonal architecture of the modernists of Holland and Germany, slightly enriched by the ornament and built-in planting of Frank Lloyd Wright. Gradually, the Wright influence and a feeling for the land, the people, and the materials of his environment lowered and spread the houses, added roofs and textures, gave warmth and charm. The recent examples of Armstrong's work shown on the following pages indicate a further crystallization of his style.

Photographs by Tom Leonard

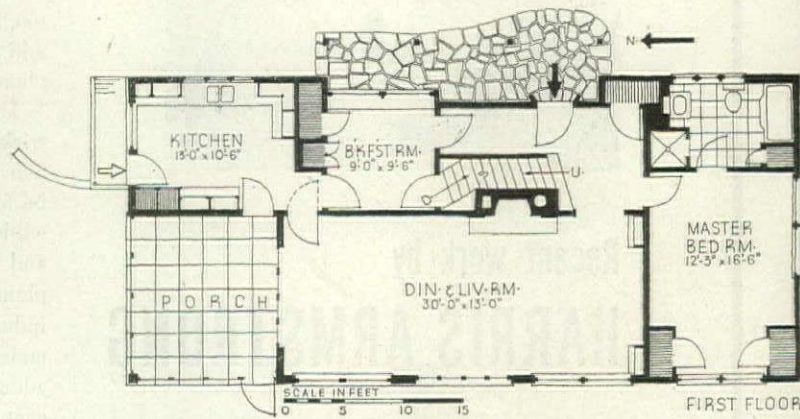




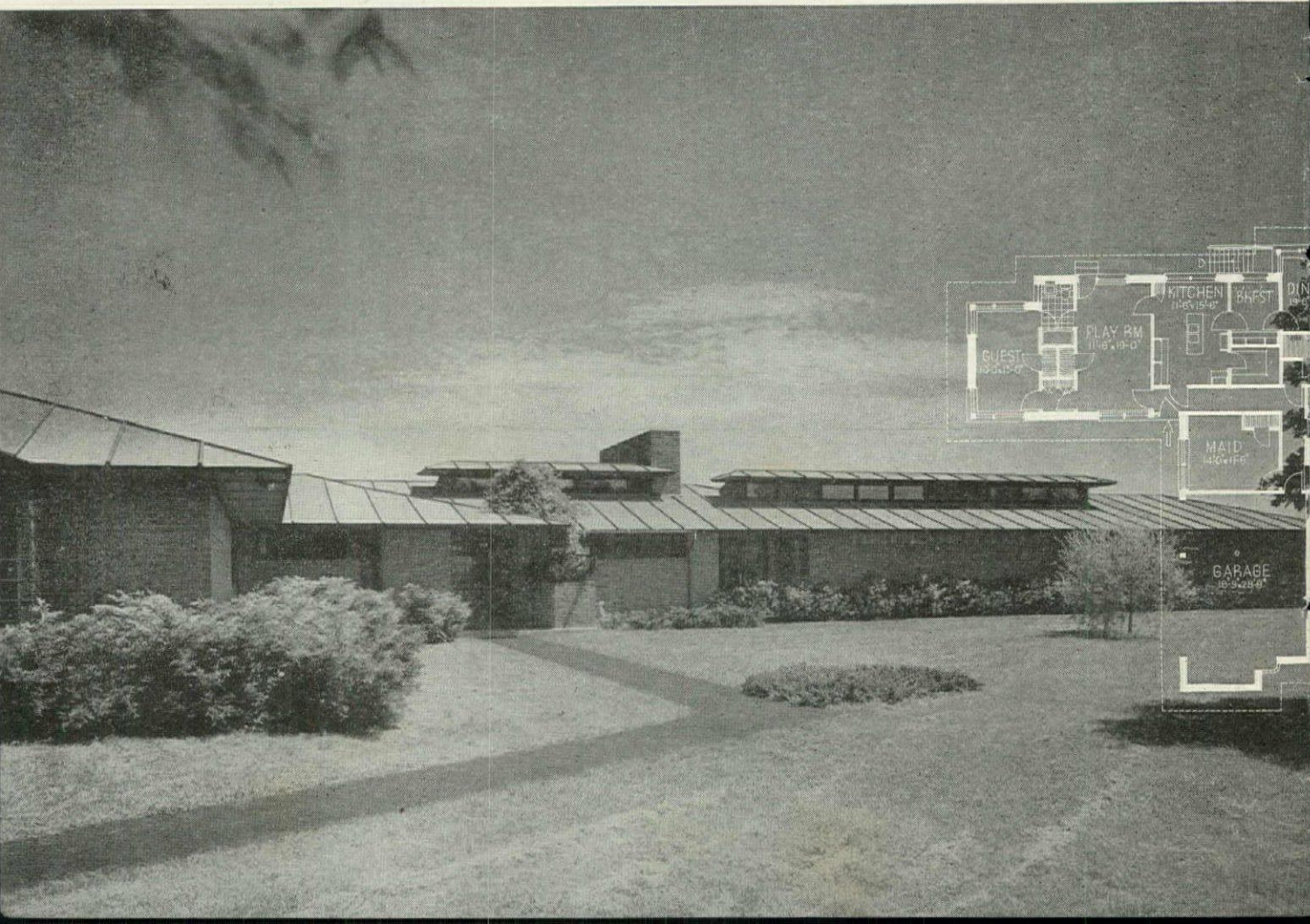
A SINGLE TRANSOM WINDOW LIGHTS STAIR HALL



BALANCED LOW-LYING STREET FACADE BELIES ACTUAL SIZE OF HOUSE



LATERAL EXTENSION OF STUEBNER HOUSE IS EMPHASIZED BY HORIZONTAL EAVE LINES OF ROOFS AND CLERESTORY





REAR OF HOUSE OPENS MANY WINDOWS TO SUN AND GARDEN

Photo: C. A. Lorenz

BORMANN HOUSE

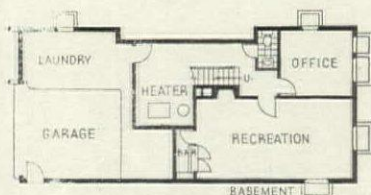
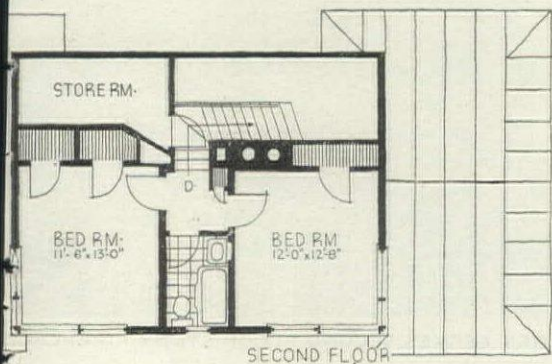
The owner of this house, a building contractor, picked Harris Armstrong as his architect because of "his flare for modern and something different," but the resulting plans provided a house unique for its use of interior and exterior space—a far cry from mere stylistic "modernism."

On a tight suburban lot, a single main floor provides what the owner specified: complete living facilities for himself and wife, with guest rooms and storage above, and garage and recreation spaces below. The location of the kitchen with access to three dining spaces and the exterior is particularly convenient. Note the handling of roof lines and windows to provide privacy from the street on the north, intimacy with nature on the south.

OWNER'S COMMENT: "We shall be forever grateful to Mr. Armstrong for viewing our plot of ground and then taking our preliminary plans, spinning them around and showing us what we could and should build. We were of a receptive mind and had the vision and the daring to follow through in spite of all opposition and discouragement.

"Our combination living-dining room fills our personal needs for everyday living, and we may entertain a large or small group with equal ease, including enjoying a movie with projector and screen set up at the far end of the room.

"We are pleased with the overhanging roof. It captures the warmth of the sun in winter, and keeps the rooms cool throughout the summer. We have no gutters or downspouts and do not need or want them, as the grass, flowers, shrubs and trees get the benefit of the water."

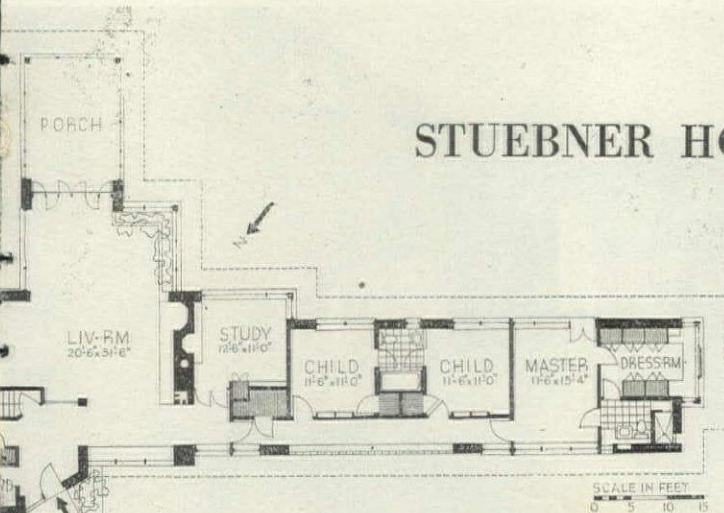


STUEBNER HOUSE

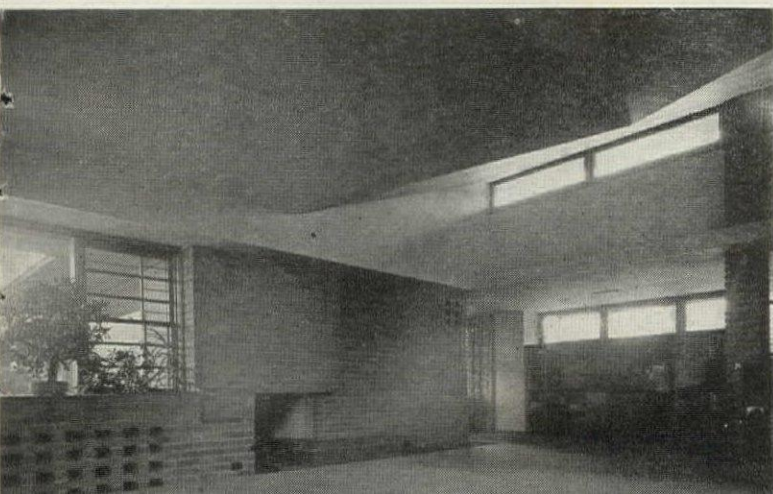
With plenty of room to spread on a generous lot in a highly restricted residential park, architect and client soon discarded two-story schemes for the extended layout shown here. The plan is "zoned both for heating and activities"—a fact which has allowed the family to close off the bedroom wing during the wartime absence of husband and help. A useful feature is the nursery adjacent to the kitchen for child supervision by maid or mother, but the location of the guest room resulting in almost equal intimacy seems questionable. Hipped roofs, strongly battened, with thin gutterless eaves, are a recurrent Armstrong detail. Perhaps more decorative on the exterior than functional on the interior is the clerestory lighting for the two small children's rooms.

OWNER'S COMMENT: "If walls and roof and arrangement of rooms can become an inspiration in addition to shelter, then this building has been that to us. Our reaction to the design seems to become more favorable as time goes on.

"If we were to build again, we would use a different roof construction which would not be so helplessly conducive to leaks and make all large windows double glazed and with heavier sashes of less pliant wood than cypress."



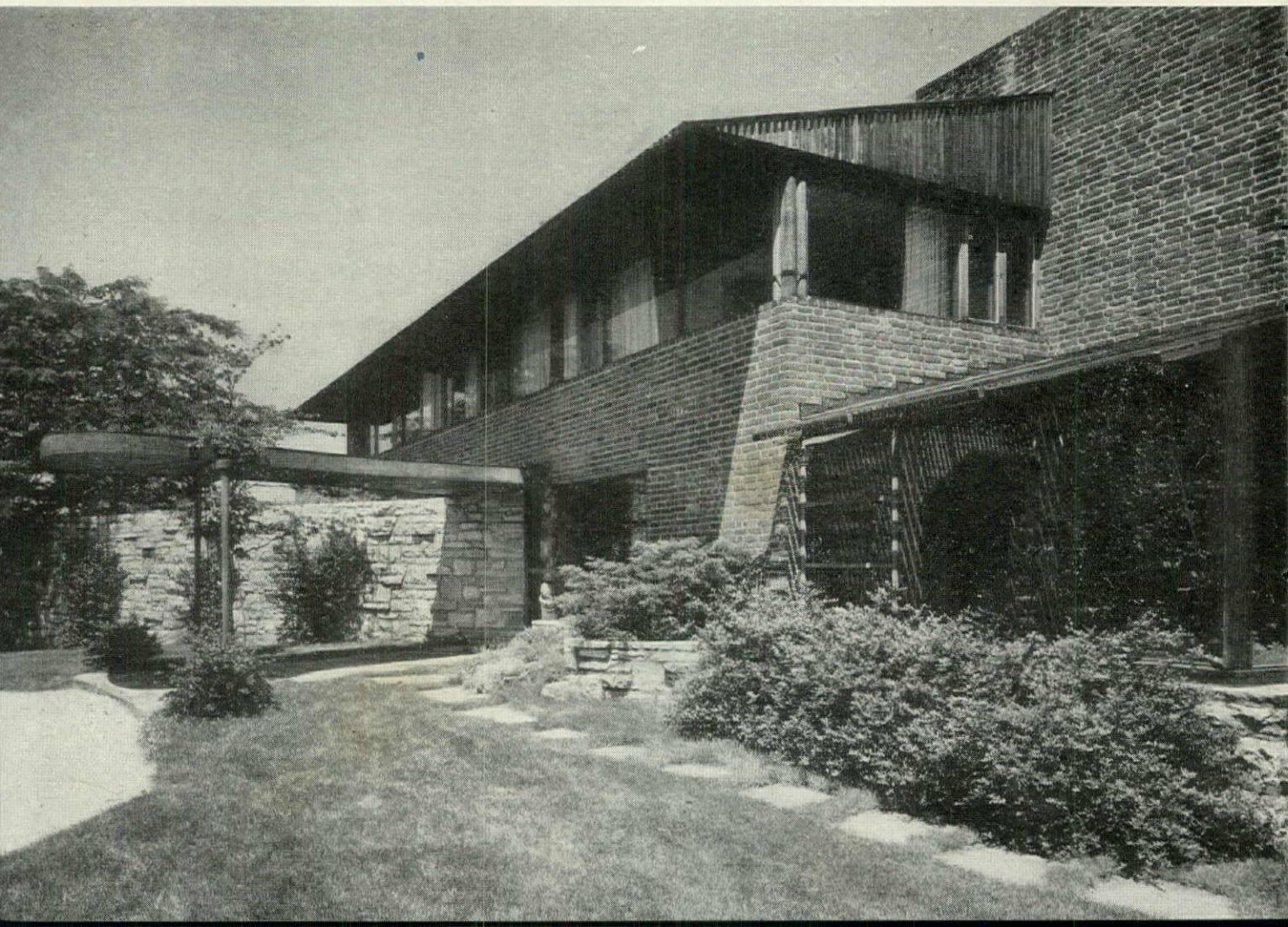
LIVING ROOM RECEIVES LIGHT FROM THREE DIRECTIONS





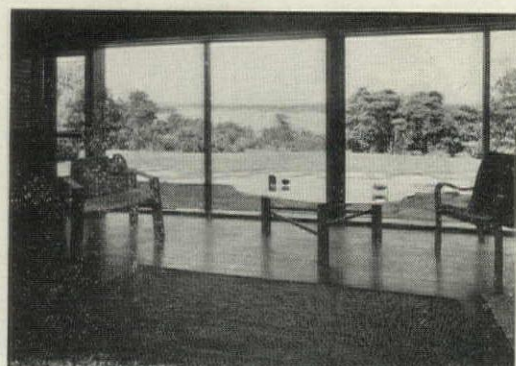
SOUTH ELEVATION REVEALS LAYOUT OF ENTIRE HOUSE. PROMINENT CHIMNEY SERVES SECOND FLOOR STUDY FIREPLACE

LOCAL MATERIALS ARE COMBINED TO GIVE ENTRANCE FACADE INDIVIDUAL CHARACTER AND APPROPRIATENESS TO SITE





LIVING ROOM OFFERS FIRESIDE READING OR MAGNIFICENT VIEWS



WOOD CANOPY COVERS MAIN APPROACH



GRAHAM HOUSE

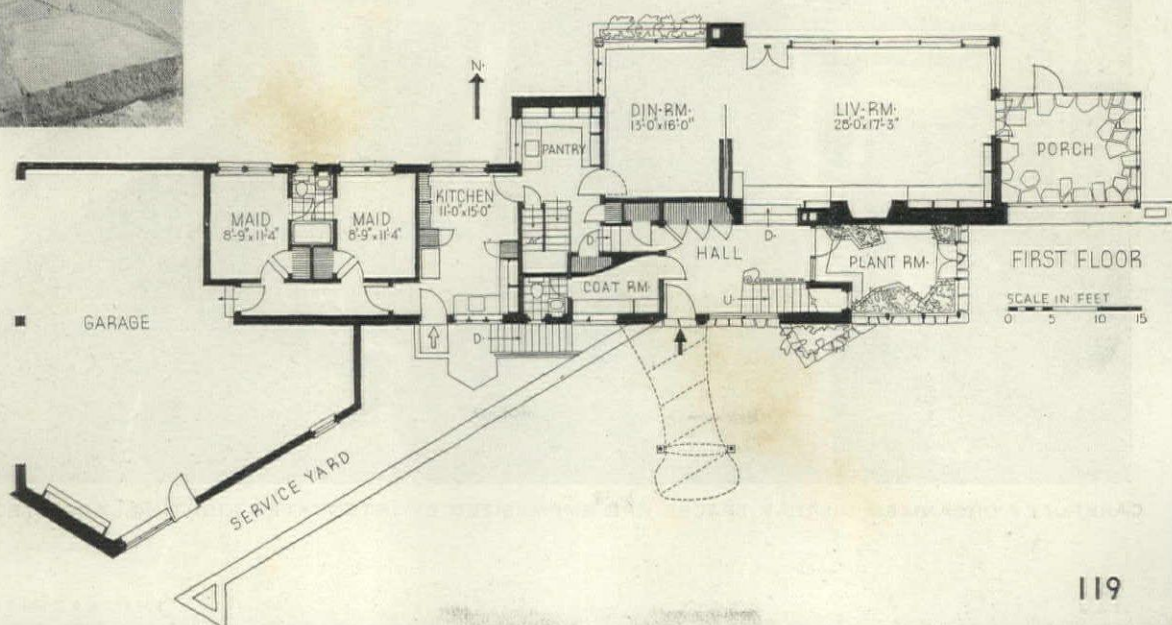
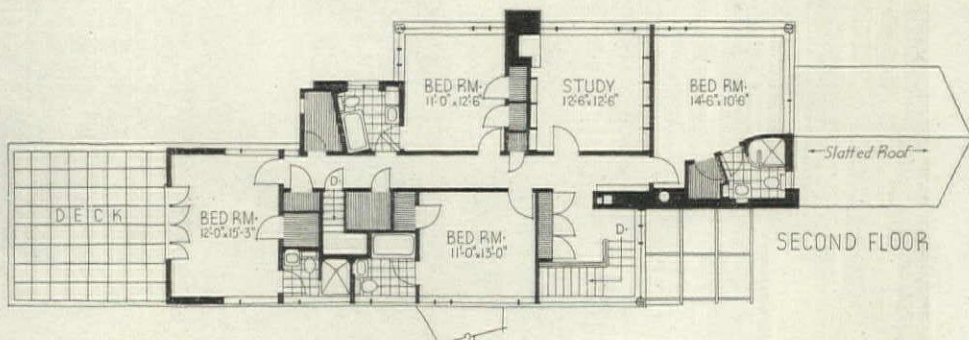
Completed as the war began, this luxurious modern home occupies a rural site with sweeping views of the Missouri and Mississippi rivers. The owners, a surgeon and his scientist wife, are ardent gardeners, as suggested by the conservatory adjoining the front hall.

The house is successful in its use of site contours and local materials to fit into its environment, but the slanting service court wall of the entrance facade is unduly dominant in elevation, and awkward in plan. As all transportation is by private car, the five-unit garage is a necessity, though the inner vehicles may be difficult to move.

A fresh and personal use of materials and masses—particularly roofs—gives the elevations much individual character. A strange primitivism appears in the hand-hewn supports of the entrance canopy, in the totem-pole-like carving at the main door by Enrique Alferez, and in the lashed log corner posts of the second floor windows. The garden facade is marred by the change in character of the service wing windows and the excavation to provide light for basement rooms.

OWNER'S COMMENT: "We are much pleased with the external appearance. A common remark is that it seems to fit into the landscape as if it belonged there. The Thermopane windows have been most satisfactory. There is no frosting in the winter time and the insulation air space has worked very well.

"Most of the defects which are recognizable in the design of the house are due chiefly to Mr. Armstrong's desire to keep expenses down. It would have been desirable to have a separate entrance to the house from the garage. There is not enough basement and basement noises are too easily heard in the living room."





CAREFULLY ORGANIZED DISPLAY SPACES ARE EMPHASIZED BY INTEGRATED LIGHTING. ARCHITECT DESIGNED THE TABLES

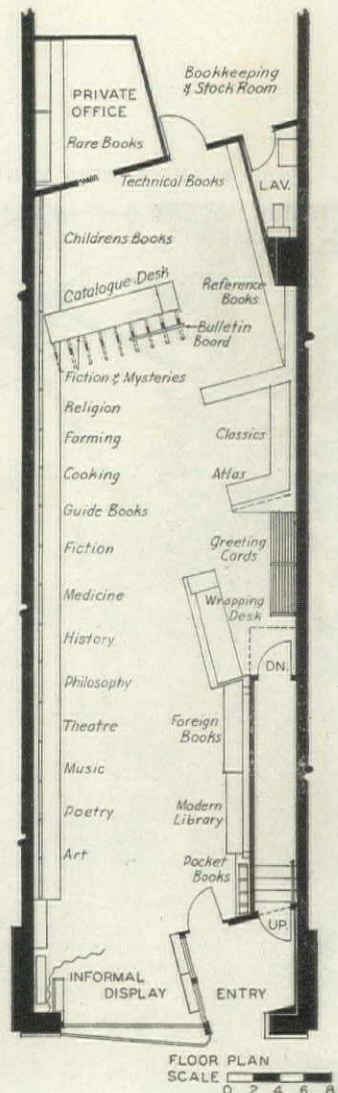
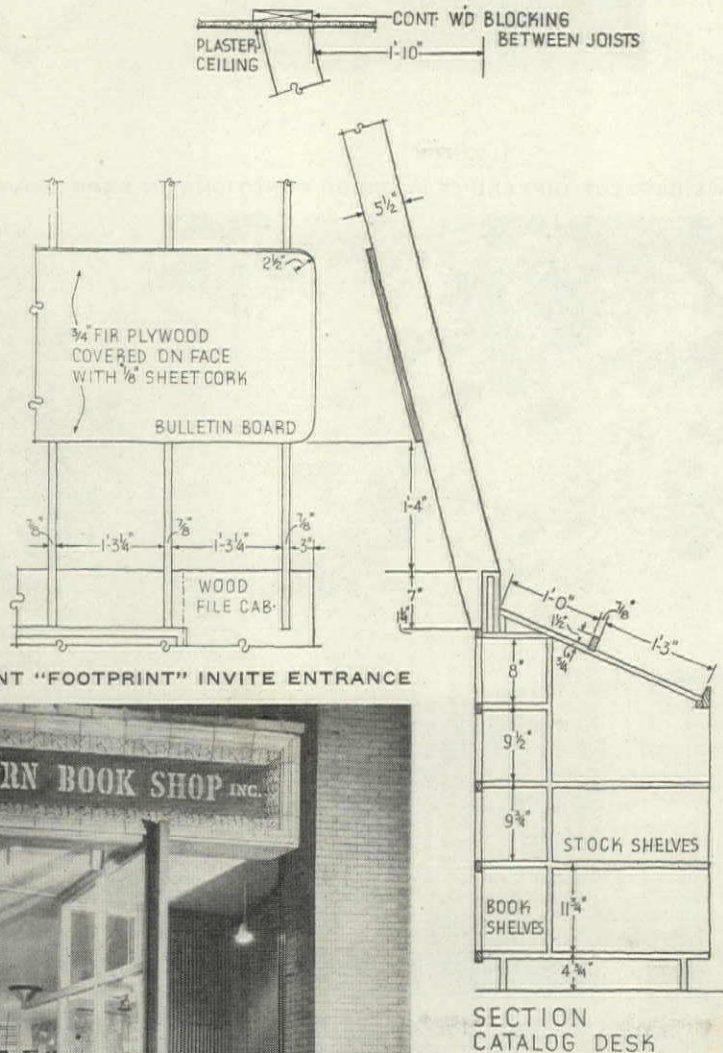
BOOK SHOP

The owner gave Harris Armstrong and his associate, John P. Hunter, complete freedom to create "an unusual, interesting and functional bookshop" in an existing building in downtown St. Louis. Though budget restrictions and wartime priorities required re-use of many materials by carpenters on the job, the finished shop has had wide public acceptance. It is one of the first examples in this region of "open front" store design, where a whole interior becomes its own window display. Colors are: ceiling, pale yellow; one wall and floor, deep green; other wall and cabinets, terra cotta red; trim, natural wood.

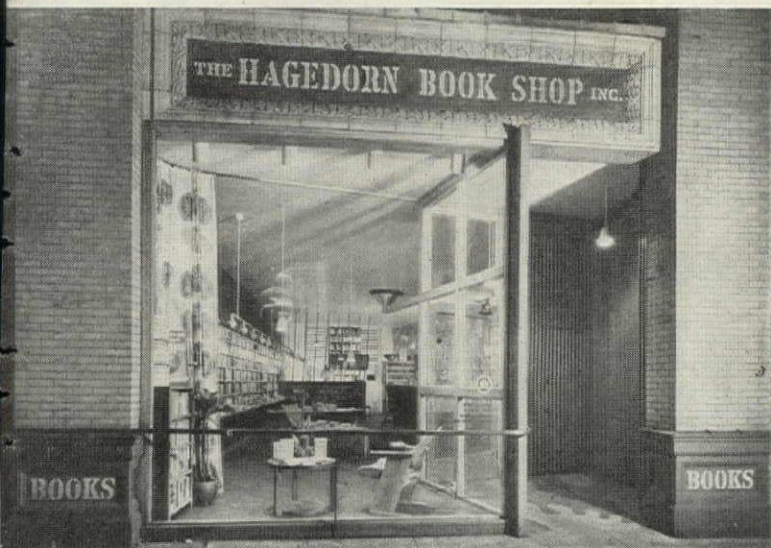
OWNER'S COMMENT: "My staff and I are delighted with Harris Armstrong's unique imaginative gifts, his healthy disregard for conventional architecture; his very conscientious hoarding of his client's resources; his belief that his duty is more than just designing the shop (he did the curtains, an amazing neon sign now in construction, and worked with us in initial advertising). It might have been wiser to have had a marbled pattern floor, rather than a solid color. Because paper on books tends to pulverize slightly, it is a constant housekeeping job to keep a book shop clean."

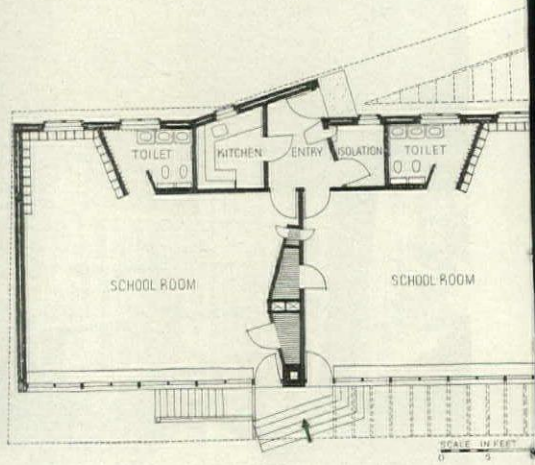
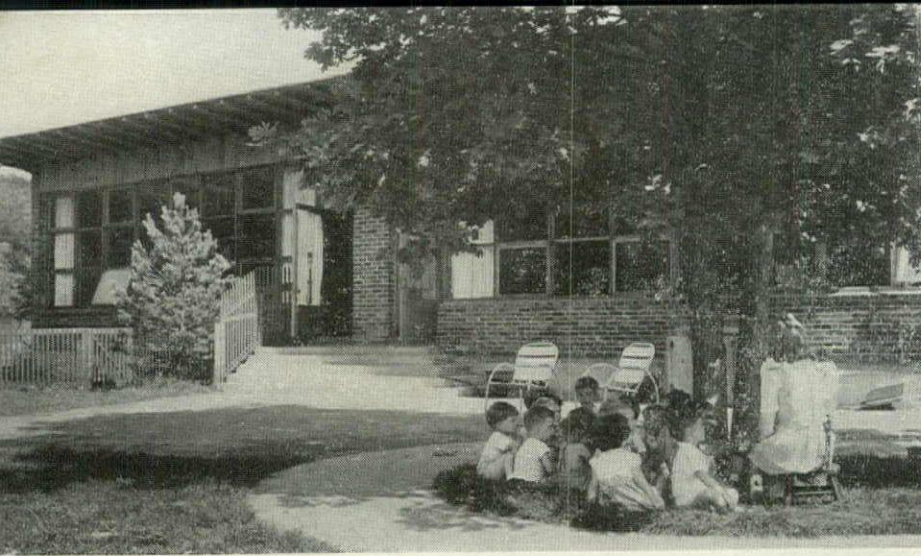


SHOP IS VIEWED OVER SHELF FOR PUBLISHERS' INDEXES

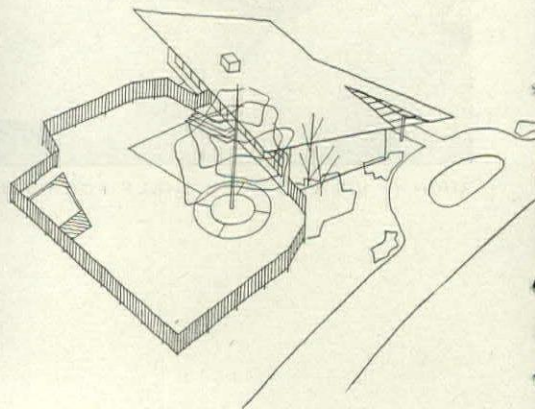
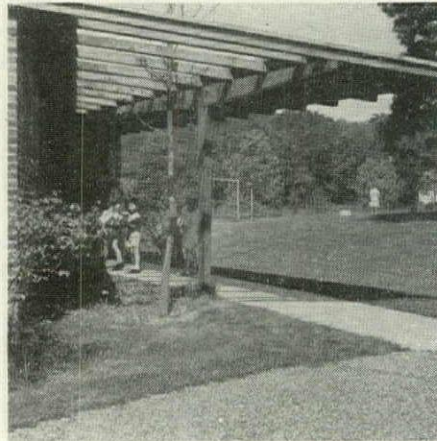


COLORFUL INTERIOR, PAVEMENT "FOOTPRINT" INVITE ENTRANCE

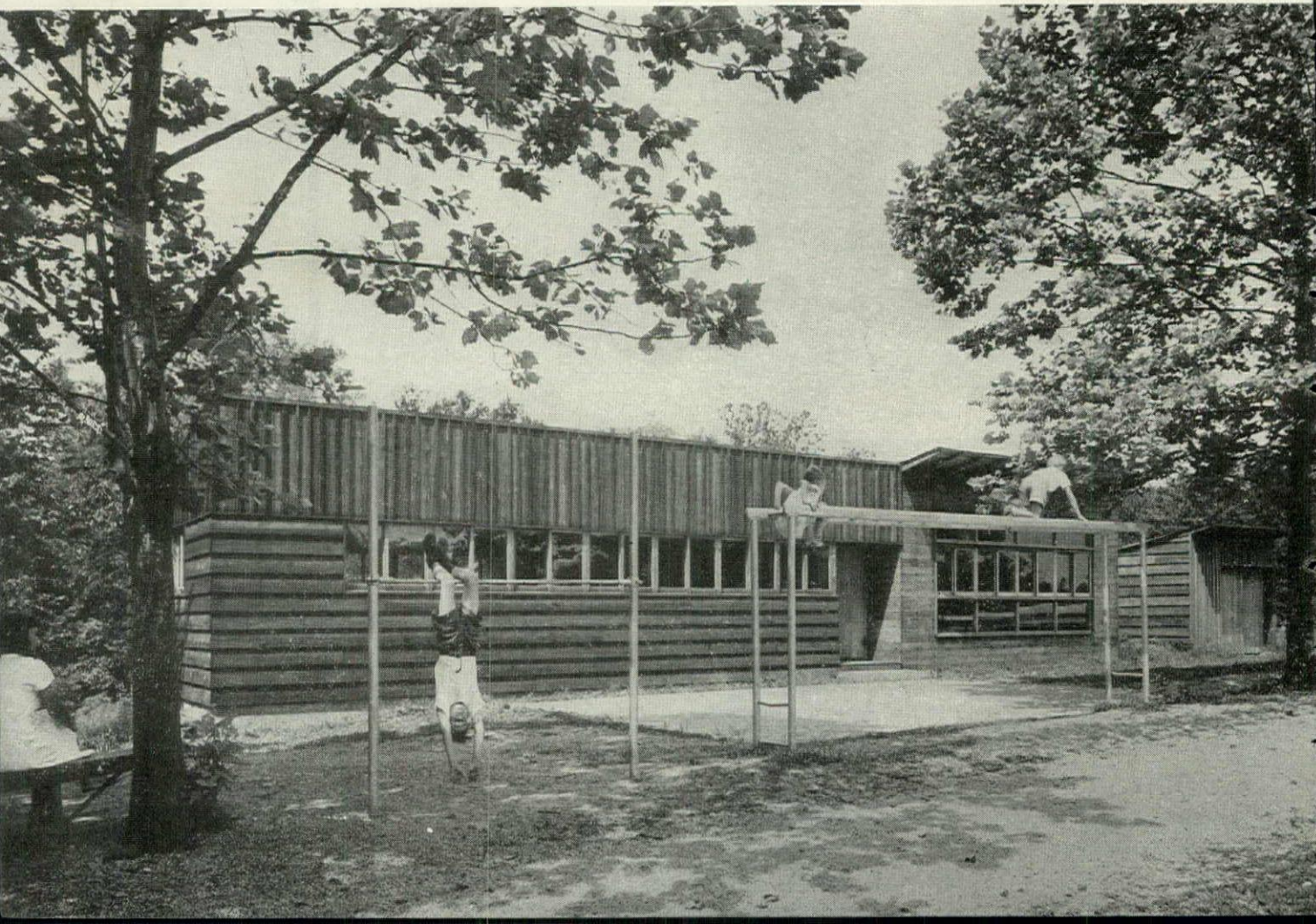




TWO LARGE WINDOWS OF NURSERY SCHOOL ARE TO SOUTH, UNUSUAL ENTRANCE CANOPY IS TO NORTH



RIBBON AND STUDIO WINDOWS REFLECT DIFFERENT INTERIOR FUNCTIONS ON EXPRESSIVE FACADE OF WORKSHOP



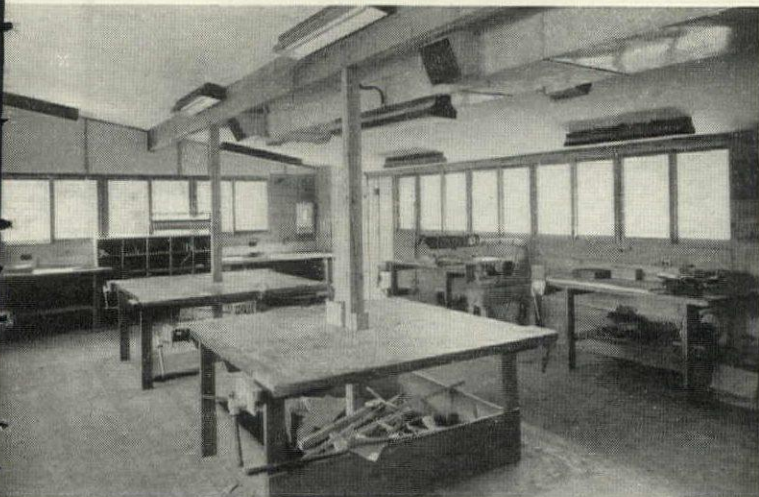
COMMUNITY SCHOOL

Two additions to the Community School of suburban Ladue, Mo., were designed by Harris Armstrong as specialized separate buildings on the school grounds, since the age difference of the Nursery School children suggested such removal and the noises of the workshop would be less disturbing. Also, small individual buildings tend to increase informality and friendliness.

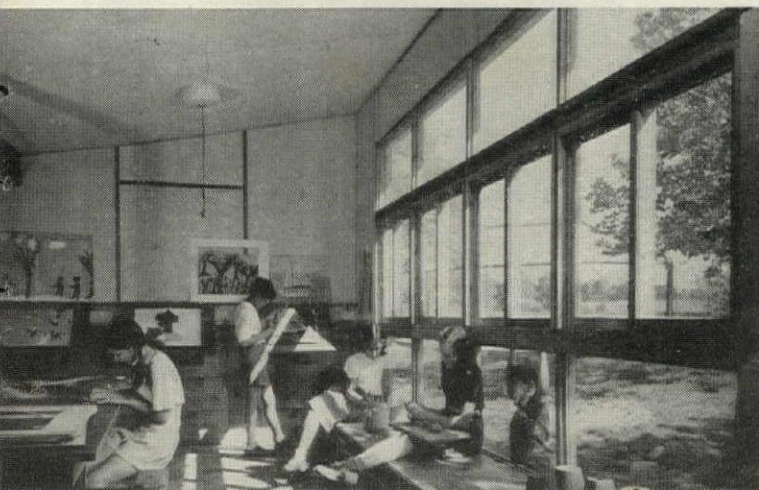
THE NURSERY SCHOOL entrance and its service facilities are to the north, thus reserving the southern exposure for the large windows of the two class rooms and the outdoor teaching areas beyond. Facilities have been arranged to follow the educational practices of the school, from the "isolation" room to the doorless, child-size toilets. An unusual feature is the entrance canopy paralleling the angle of the approach walk, and supported by a single, freestanding post and beam.



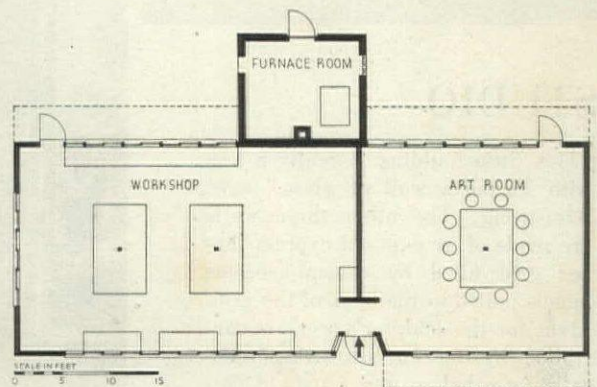
FIXED AND HINGED SASH NICELY VARY SCHOOL'S WINDOW GRID



BENCHES AND TABLES ABOUT COLUMNS SAVE WORKSHOP SPACE



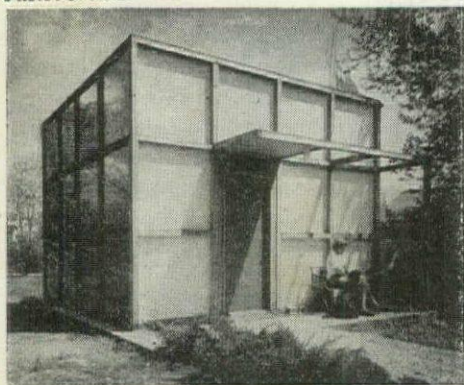
THE WORKSHOP is a completely frame structure surfaced by oiled cypress boards applied in three ways: overlapping clapboards, vertical boards and battens, and smooth flush-siding. Design unity is achieved by repeating the sliding window feature of the woodworking section across the middle of the large window of the studio. Orientation is again to the south for the main work rooms and outdoor play spaces. Interior finishes are natural wood or wallboard.



CONSTRUCTION OUTLINES; houses by Harris Armstrong.

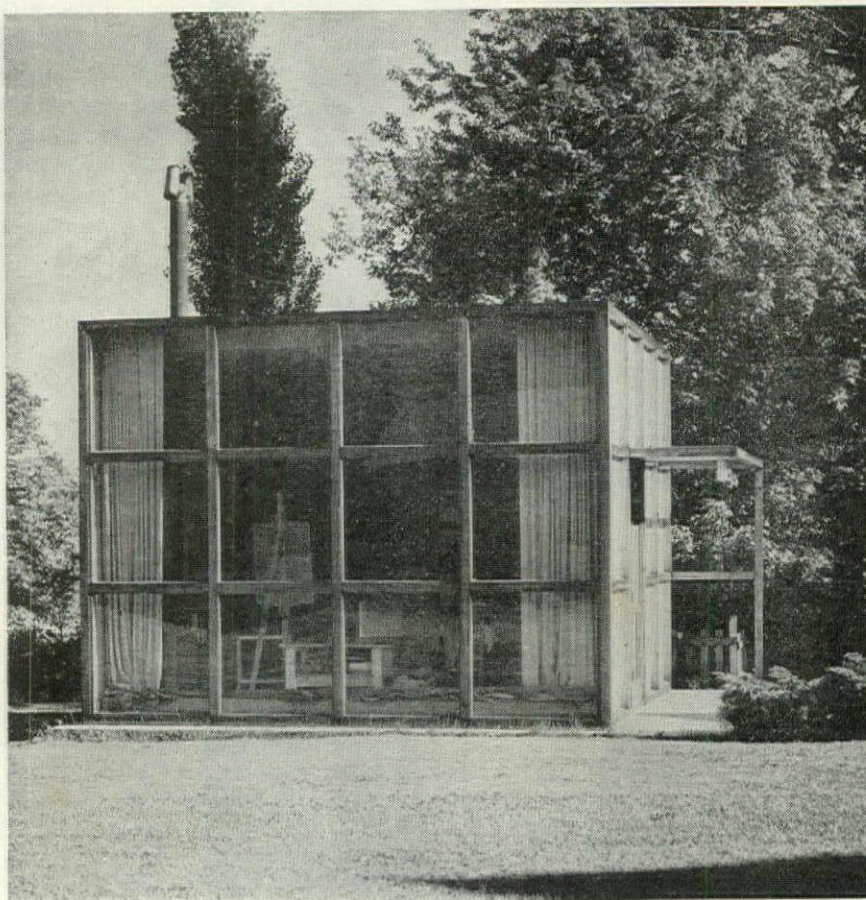
	BORMANN	STUEBNER	GRAHAM
STRUCTURE	Exterior walls — shingles, Creco-Dipt Co., Inc., over 15 lb. asphalt paper, sheathing, studs; interior — Rocklath, U. S. Gypsum Co., and plaster.	Brick, Alton Brick Co., furring strips, insulation, Rocklath and plaster.	(Same)
ROOF	Wood battens and copper channels at each width of roll roofing, Philip Carey Co.	(Same)	Built-up over ceramic-coated capsheet, Philip Carey Co.
INSULATION	Mineral wool, Eagle Picher Sales Co.	"Air Cell" corrugated paper, Hinde & Dauch Paper Co.	Blanket type batts, Eagle Picher Sales Co.
SHEET METAL WORK	Ducts — galvanized steel; remainder — 16 oz. copper.	(Same)	(Same)
WINDOWS	Glass—Libbey-Owens-Ford Glass Co.	(Same). Glass blocks—Pittsburgh Corning Corp.	(Same windows)
PLUMBING	Fixtures—Kohler Co.	American Radiator-Standard Sanitary Corp. Kitchen sink—Tracy Mfg. Co.	Fixtures—Kohler Co. Range, refrigerator and sink—General Electric Co.
HEATING	Warm air system, Muller Furnace Co. Regulators (all houses) — Minneapolis Honeywell Regulator Co.	Circulated hot water system.	Warm air, American Furnace Co.
MISCELLANEOUS	Garage doors — Overhead Door Co. Electrical fixtures — Architectural Bronze Studio. Paints (all houses)—Pratt & Lambert. Linoleum (all houses) — Armstrong Cork Co.	Hardware — (all houses) — Schlage Lock Co.; butts—Hager Hinge Co.	Electrical switches (all houses) — General Electric Co. Weatherstripping — Chamberlin Metal Weather Strip Co.

Photo: C. A. Lorenz



STUDIO

"This little building is really a box with its north wall of glass," says Armstrong. The other three walls are made of an exposed cypress timber grid filled by cement-asbestos panels nailed to the back of the grid. Light for the sculptor's work is controlled by one curtain rising vertically from below, and a pair of curtains sliding in horizontally from both sides. This single room building rests on a concrete slab foundation topped by a wood interior floor.



PLANNING WITH YOU

Many cities have built superhighways to handle the increased volume of traffic which daily enters and leaves the urban area. Few have developed an integrated pattern of thoroughways providing uninterrupted traffic flow within the town itself. Such a scheme is the proposed Detroit expressway and transit system, a solution to the type of transportation problem which plagues nearly every modern city.



Fairchild Aerial Surveys Inc.

DETROIT

Expressway system designed by engineer W. Earl Andrews eliminates downtown congestion, speeds up traffic movement between widely separated districts.

In most large cities of today transportation constitutes one of the major problems. Outdated street patterns disrupt the free flow of traffic from one part of town to the other and create serious congestion in the more densely populated areas. Such a condition is an anachronism common to modern urban districts where automobiles, built at an ever-increasing rate, have appeared faster than the highways to accommodate them. With the advanced engineering techniques developed in the last decade, however, there is no longer any excuse for this situation. An organized and efficiently functioning city is not a dream of the future, but an immediate possibility.

The new expressway and transit system for Detroit, Mich. is an excellent example of this basic approach to planning. Although not as comprehensive as an over-all master plan, it is nevertheless a solution to pressing problems. Under this scheme, transportation routes provide quick, uninterrupted traffic flow throughout the entire city.

In addition they act as guides for redevelopment studies of specific sections (ARCH FORUM, June, '45).

One of the plan's most important aspects is its treatment of expressway surroundings. Since the through highways are depressed to allow overpasses for local traffic, the necessary cut on either side has been sloped to allow pleasant landscaping. This obviates expensive retaining walls and eliminates the reverberation of traffic noise which would occur with masonry construction. These green belts also act as sound deadening strips between the highway and adjoining residential areas. Landscaped as single or double terraces, they provide space for promenades and bicycle paths, safe from speeding cars. Unused portions of the right-of-way are made into playgrounds and attractive roadside parks. Such incidental improvements are an important part of a modern highway system, contributing more than any other feature to the stabilization of land values in adjacent property.

W. Earle Andrews, highway engineer

who executed this new plan for Detroit's transportation facilities, divided the program into two parts: expressways for mixed vehicular traffic and separate routes for public conveyances such as trains, buses and subways. Andrews and his associates concentrated on the expressway system while De Leuw, Cather and Company was called in to make an independent plan for public transit. In this way, the two traffic systems were designed for maximum efficiency without the inhibition of constant reference to each other. When completed, one plan was superimposed upon the other and certain revisions made to insure an integrated over-all scheme, but the basic structure of each system remained as originally planned.

Such a method was practicable because the different requirements of public and private transportation routes makes separation desirable in most instances. Expressways must be routed to avoid high property costs while transit lines must be close to large concentrations of people in both commercial and

residential zones. It is also advantageous to route expressways around the central business district, but the transit system must penetrate into the very heart of the commercial area.

At the present time private cars and public conveyances converge on the business section along the same routes, causing a conflicting tangle of traffic. Although Detroit's streets are wider than those in most cities, they are not wide enough to handle congestion in this crucial, overcrowded area. Moreover, studies show that a large percentage of traffic proceeds on illogical routes, thus slowing up the flow from one section of town to another.

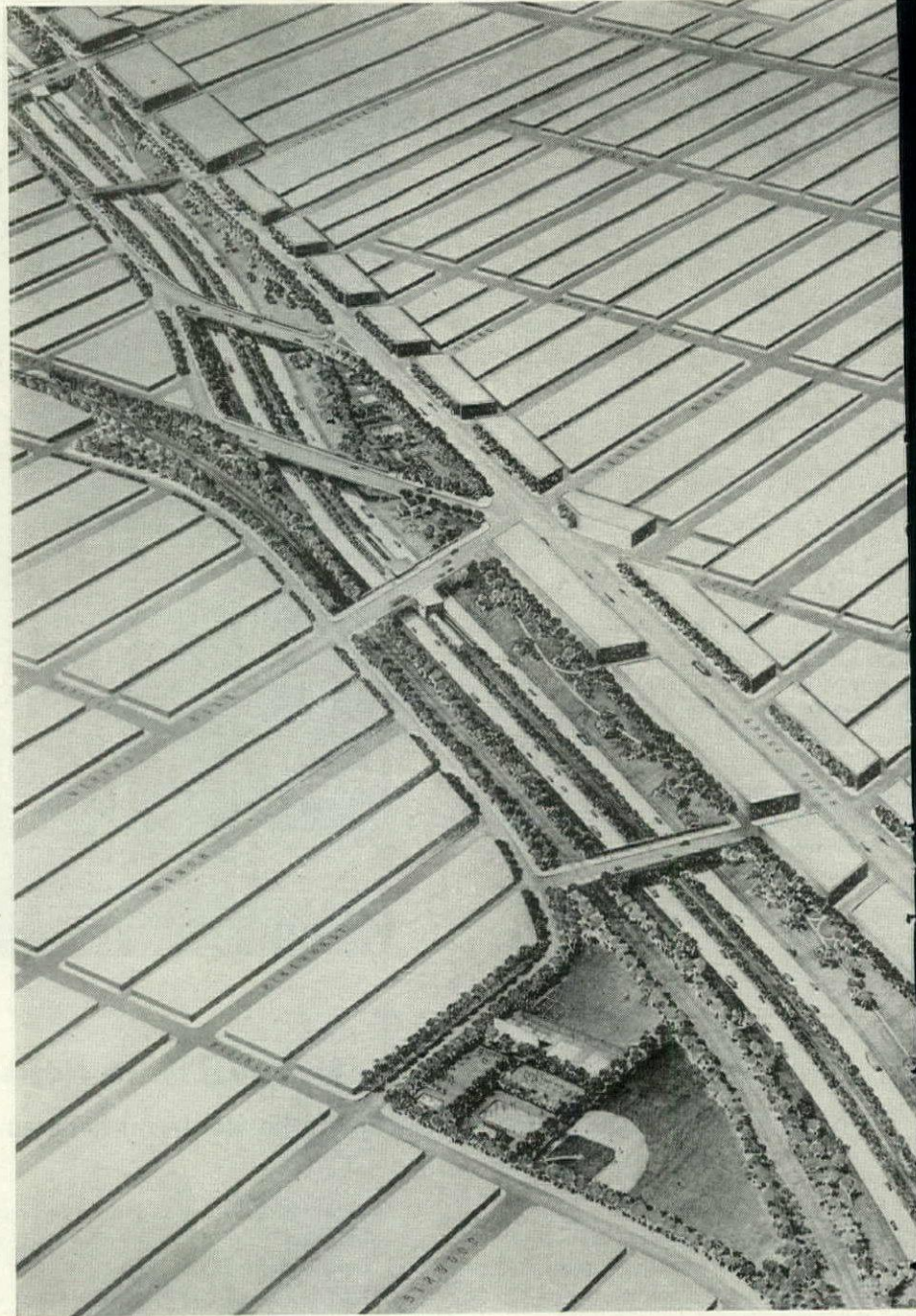
As in most cities, this is due to haphazard growth over a period of years. Detroit's downtown core was sensibly planned in 1806 as a series of quadrants divided by avenues and streets at intervals of 2,000 ft. Uncontrolled subdivisions and real estate developments soon scrambled the original plan, although short sections of street survived to stake down this central section. In 1830, five military roads, each 100 ft. wide, were built as spokes from the downtown hub. A generation later, other radials were added, and in 1877 Grand Boulevard was charted around the city limits. This early road construction still forms the skeleton of Detroit's street system.

As the city grew, a rectangular block pattern of new streets was superimposed over the strong radials. Superhighways were built to handle increased traffic, but these new arteries began near the outskirts of town and did nothing to relieve congestion in the crowded core.

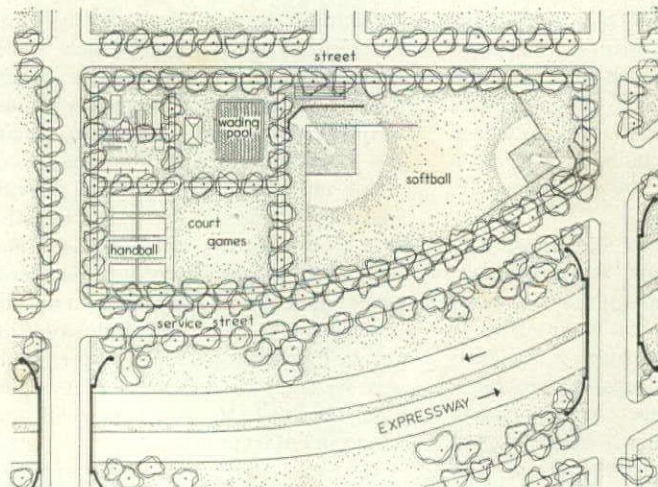
By the time Andrews took over the planning job, Detroit's transportation system had long been recognized by the city fathers as a problem demanding attention. Already seven studies for expressways had been completed by different public agencies. The new plan therefore is not completely original. It represents a selection from these studies, with some deviations from the routes previously plotted and certain additions to the former schemes.

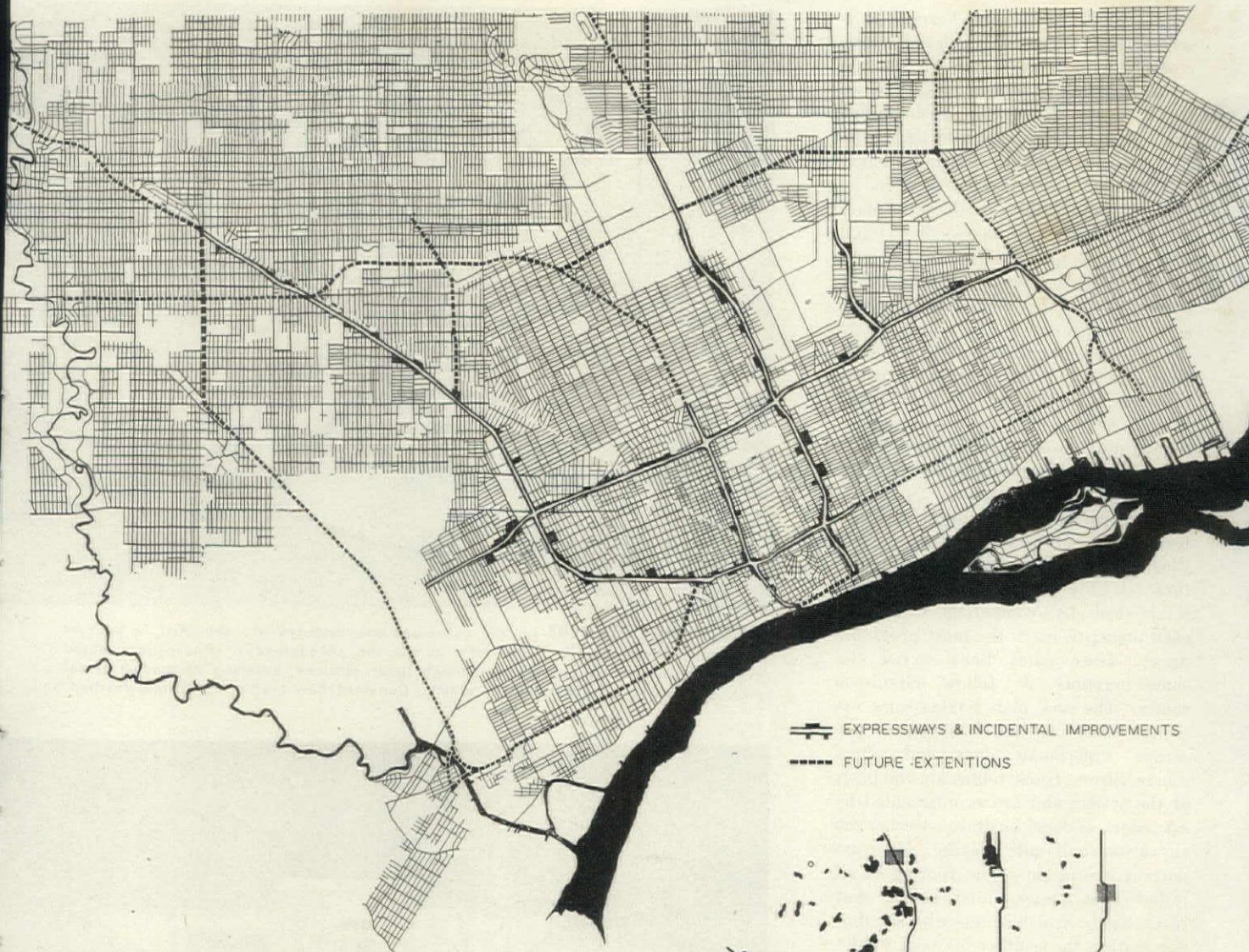
The present north-south median line of the city is Woodward Ave. In the new plan two expressways — John C. Lodge to the west and Hastings to the east — flank this street approximately ten blocks apart, affording much needed traffic relief for overloaded Woodward Ave. At their southern end they also form two sides of the new downtown traffic quadrangle. Intersecting sides to the north and south are formed by Vernor and Jefferson, short expressways which do not extend beyond the center of town. High speed traffic thus skirts the business district and can enter it on already existing feeder roads.

At the northwest corner of the quad-

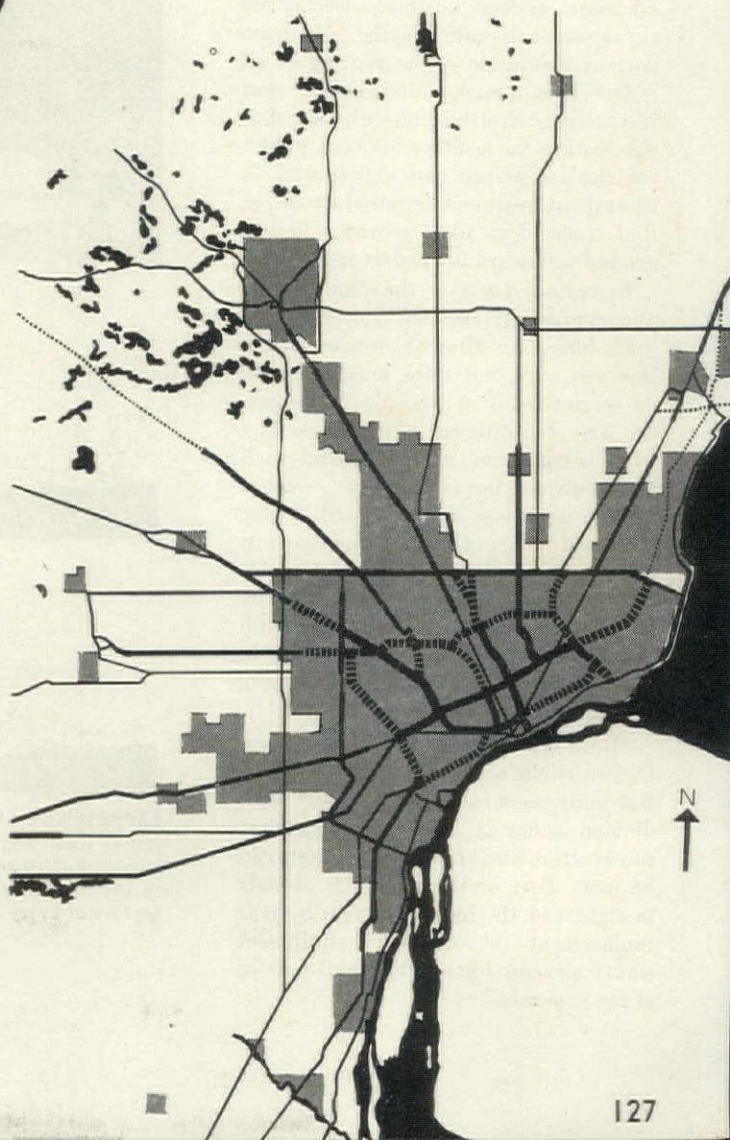


GRAND RIVER EXPRESSWAY provides three lanes of through traffic in both directions, separated by rapid transit tracks in a central mall and flanked by landscaped slopes. Rights-of-way are used for roadside parks and playgrounds (below), thus improving neighborhoods through which the expressway passes.





URBAN MAP shows how expressways link the entire city, providing fast, through travel, supplemented by local roads. Plan is centered around a downtown highway quadrangle which skirts the business district, routing express traffic near, but not into this congested area. Expressways which form this rectangle extend north, south, east and west, servicing the entire urban area.



REGIONAL MAP reveals an integrated system of urban and rural transportation. As now proposed, new city expressways (heavy black) do not extend far enough from the city proper to make a direct connection with state highways. However, future extensions already mapped out by the program will provide smooth linkage with state routes now reached by secondary roads.

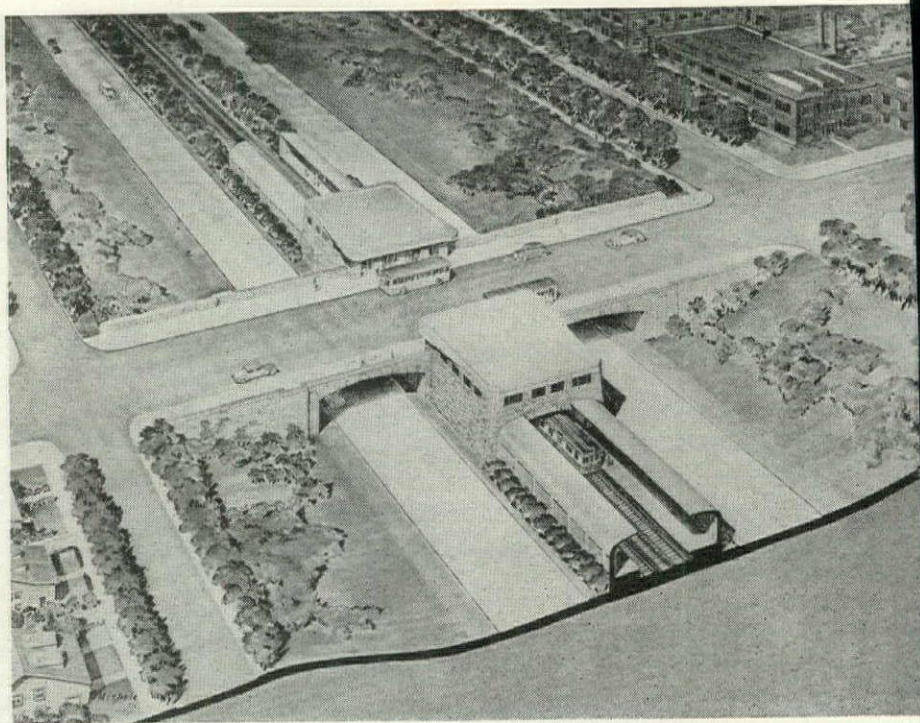
range where Lodge and Vernor intersect, another expressway, Grand River, connects with Vernor, extending into the western section of town where it swings North around a secondary business district. It then bends again to the northwest, providing a fast radial thoroughfare nearly to the outskirts of town.

Cutting across the city above the main business district and intersecting Grand River, Lodge and Hastings is the new Crosstown Expressway. At its extreme eastern end is the Conner Spur which extends south for a short distance to service the eastern section of the city. Also extending from the Crosstown Expressway, near the center of town, is the Mound Expressway, fast thoroughfare for the northeastern part of town. These seven routes comprise the basis of the new vehicular traffic plan.

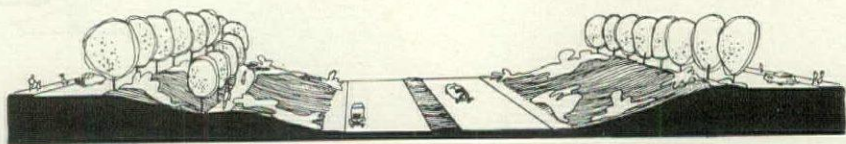
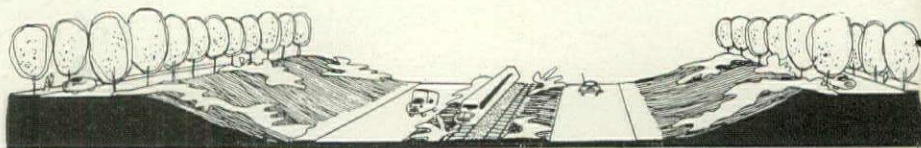
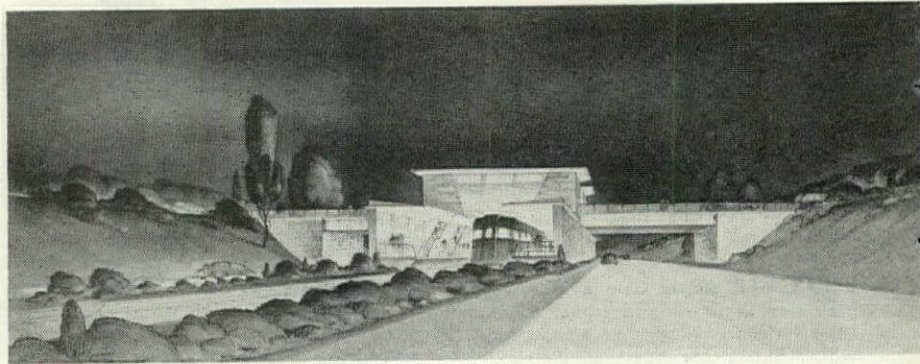
The separate transit system prepared for Detroit puts order into the present illogical pattern of public transportation. Originally, street car lines were established by competing companies each trying to reach the most profitable areas. Thus, many lines service the same territory or follow circuitous routes. The new plan retains some existing street car and bus routes, but scraps superfluous ones and alters others. Strong trunk routes are the basis of the system and are supplemented by a network of local buslines covering the city at one-half mile spacing. Most important innovation is the routing of all radial lines underground before they reach the central business district, thus eliminating the conflict between public vehicles and private cars in that area. A central underground terminal cares for this traffic and also provides underground walkways for pedestrians.

In certain parts of the plan, transit and expressway systems converge. Express buses are allowed on some of the thoroughways, but stops must be made on service roads at the side. Streetcars are also coordinated with expressways by placing them in the central mall which divides the traffic lanes. Such a scheme adds less than one-sixth to the total cost of an expressway and amounts to an even smaller fraction of the cost of a two-track subway. A modern integrated transit system can thus be built within Detroit's financial limitations. In a report to the Detroit Transportation Board, Andrews concludes:

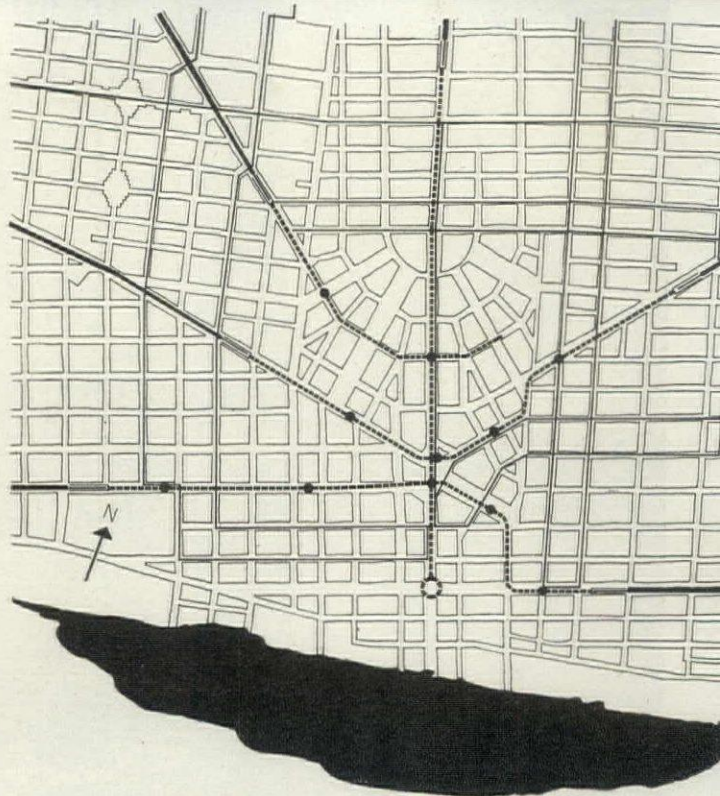
"Built separately or at different times, Detroit could not afford both programs. But built concurrently and closely coordinated in design, scheduling financing, construction and operation, the costs can be met. Part of the money is already in sight and the inevitable year-by-year replacement of obsolete equipment would account for a substantial part of the expenses."



RAPID TRANSIT STATIONS on the depressed expressways are designed as part of overpasses which carry local traffic across the thoroughways. Passengers would reach the covered car platforms through these stations, entering at normal street level, descending on escalators or stairs. Constant-flow traffic is left undisturbed.

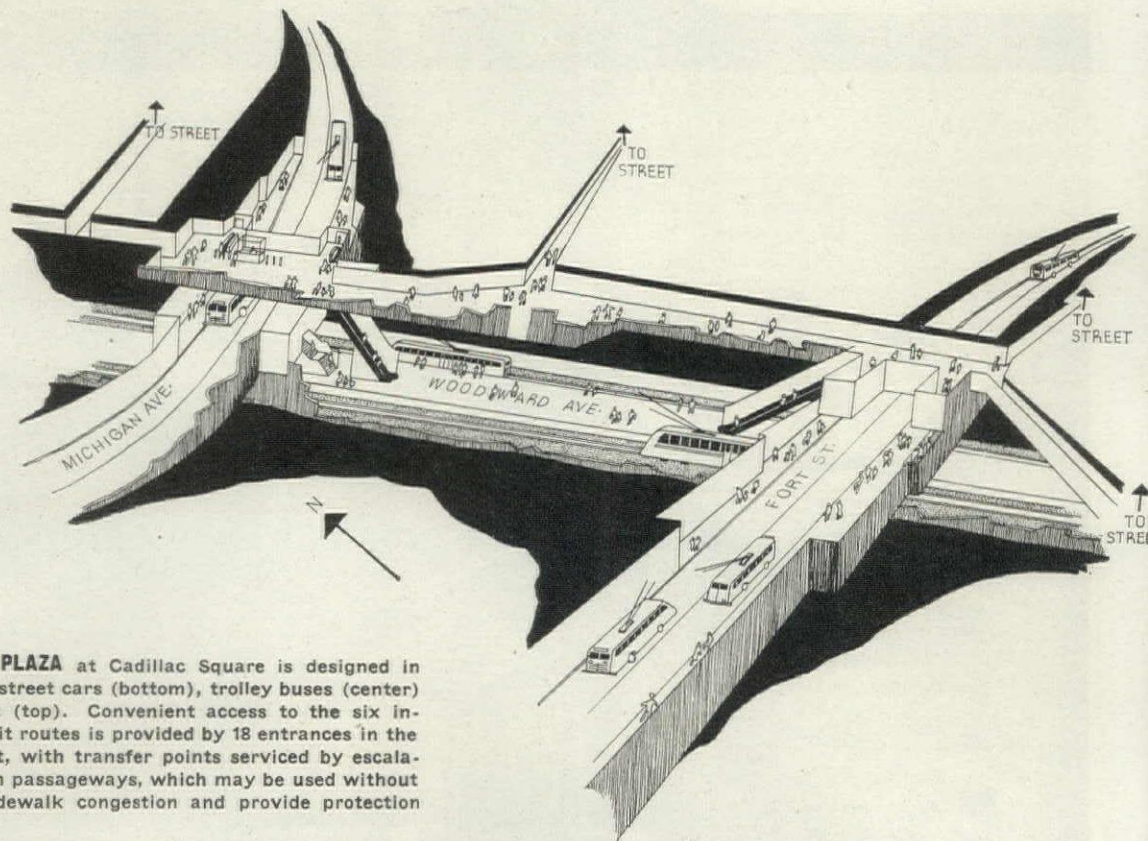


EXPRESSWAY SECTIONS show depression of traffic lanes with landscaped slopes on either side. Rapid transit lines are placed in the central mall of the Conner Spur (top), omitted from John C. Lodge (bottom). Local buses use service roads parallel to the expressways. Paved shoulders for disabled vehicles are an important safety feature of every highway in the new plan.



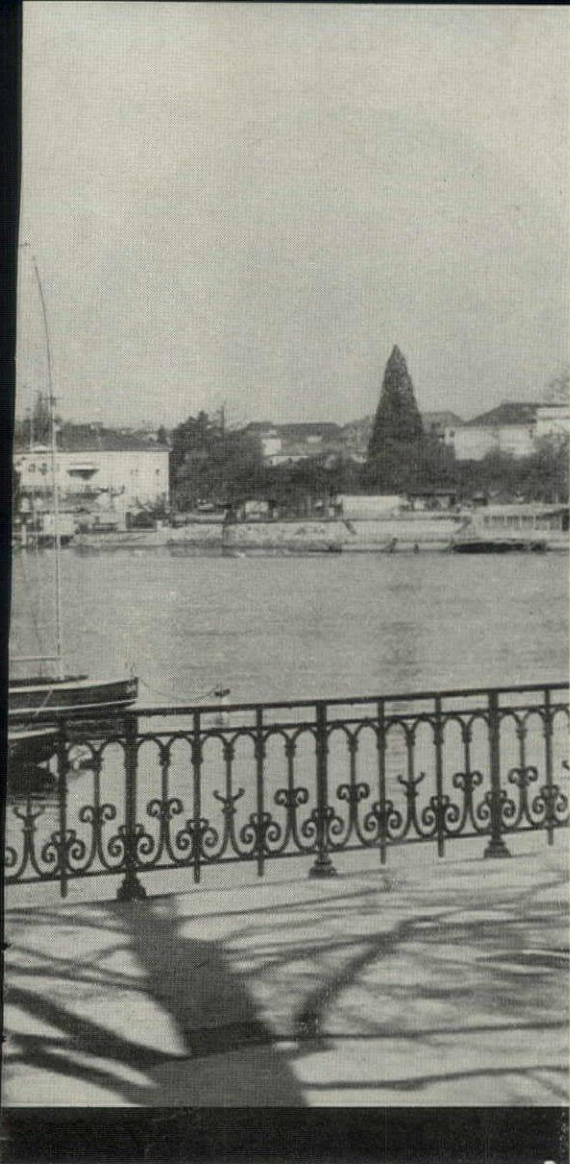
EXISTING TRANSIT SYSTEM routes 36 bus and street car lines into the heart of the business district, over-loading surface streets and slowing all types of traffic in this area to horse and buggy speeds.

PROPOSED TRANSIT SYSTEM routes all except a few buses underground before reaching the downtown business section. Congestion caused by large, slow-moving, public vehicles is thus completely eliminated.



UNDERGROUND PLAZA at Cadillac Square is designed in three levels for street cars (bottom), trolley buses (center) and pedestrians (top). Convenient access to the six intersecting transit routes is provided by 18 entrances in the business district, with transfer points serviced by escalators. Pedestrian passageways, which may be used without fare, relieve sidewalk congestion and provide protection in bad weather.





Courtesy Museum of Modern Art

The U. S. Office of War Information and Alfred Roth, editor, *Das Werk*, Switzerland, were largely responsible for assembling photographs and plans used in this article. Architect L. Parnes, whose apartment houses appear on page 140, supplied much of the background material. Mr. Parnes is now practicing in New York.

SWITZERLAND

Her trim, communalized architecture of to-day is rooted in highly romantic Alpine landscape and tradition.

After five years of cultural estrangement and complete encirclement by warring nations the tiny citadel of neutral Switzerland emerges little worse for wear. She was long the only refuge for war fugitives, honorable and dishonorable. She acted as the blindfolded patroness of some of the craftiest espionage ever plotted. Most recently she has served as intermediary for the most momentous diplomatic negotiation in history—the finish of World War II.

Though often fearful of invasion by the Axis nations, Switzerland's role of middleman was not a hard one. She prospered well and with characteristic conscientiousness managed to maintain a stable economy though she traded in currency, commodities and international protocol. Her traditional attitude of strict neutrality is even reflected in her architecture which, surprisingly enough, remained impervious to the influence of the sterile Fascist style which flourished for a decade on all four sides of her tiny confines.

This unveering neutrality is easily explained. History has proved the Swiss people to be industrious, self reliant and peace loving. Switzerland is, furthermore, Europe's most advanced and successful example of working democracy. Geographically she is contained and protected by her great mountains, but in contrast to the rich beauty of her scenery, poor in natural resources and foodstuffs. Her prosperity and survival depend on international trade and being without seaports, she has no alternative but to trudge the middle road in her diplomatic relations. This national aloofness, however, sharply contradicts the internal spirit of the Swiss people which is adventurous, united and highly cooperative. First-born of the European democracies, Switzerland was also the first country to take definitive measures for the political and social betterment of her citizens. Their high educational stan-

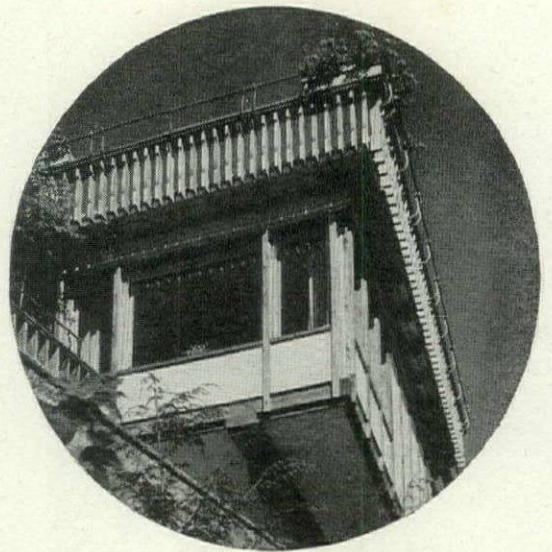
dards are recognized throughout the world, their technical skill and resourcefulness, respected. Caught short by lack of coal during World War I, Switzerland harnessed her swift mountain streams for widescale production of power, electrified her entire national railway system. Every foot of available land has been utilized to increase the national food supply. This combination of industry, resourcefulness and traditionally liberal thought is evident in the Swiss countryside and Swiss architecture. Cities and hamlets are immaculately kept. They have wide streets and a general atmosphere of clean airiness. No obsolete buildings are left standing in dilapidation and while many medieval buildings and traditional chalets still remain, there may also be found many of the best modern structures on the continent. These were, for the most part, completed prior to 1940.

The modern movement in Switzerland was largely influenced by the work of Le Corbusier and Professor K. Moser of the State University of Technical Science, both natives. Social, geographic, economic and educational conditions were also important contributing factors in shaping the characteristics of the modern Swiss school which is best represented by its schools, hospitals, hotels, power plants and low cost housing.

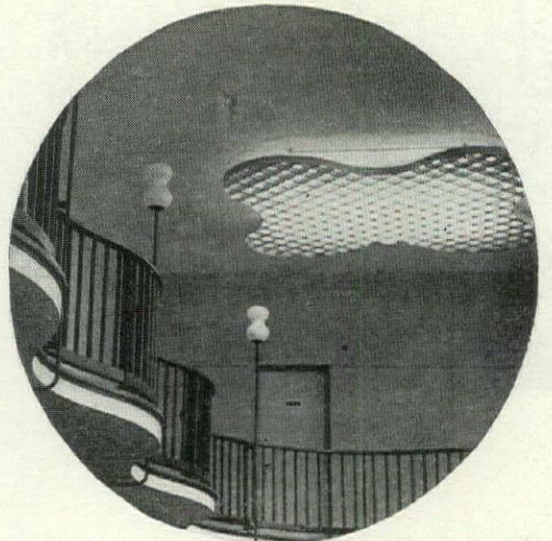
In keeping with the diminutive proportions of the country the new architecture is small in scale. While Switzerland was one of the first countries to exploit mass production as in watches and precision instruments, there are no vast industrial plants that could be compared to our own Dodge Chicago or General Motors. Poor though she may be in steel, Switzerland has plenty of sand and stone. While building materials are very expensive, labor is relatively cheap. The most popular method of construction is reinforced concrete. a high degree of engineering skill has been attained and Swiss architects are responsible for some of the best examples of ferro-concrete design. Le Corbusier's current work in South America and elsewhere is testimony to this. The characteristics of modern Swiss architecture are openness, light construction and a tendency toward rather stiff and naive ornamentation that is undoubtedly a hangover from the quaint wooden decorations of the old chalets.

As in Sweden, the democratic framework of Swiss society is translated into an architectural style that is forthright and unostentatious, in which both countries perpetuate a common tradition of precision and craftsmanship.

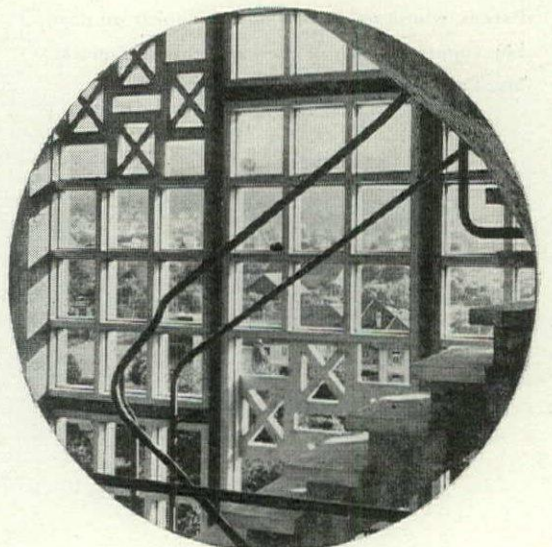
One of the most interesting aspects of Swiss towns and cities is the complete absence of slums. Undoubtedly the innate conscientiousness of the population is in part responsible, but the most logical explanation lies in Swiss economy which is based, not on the spoils of war but on the profits of peace. In the wake of the costly sacrifices made by the United Nations in the winning of World War II, Switzerland's role is apt to be disparaged. She can, however, teach us one great lesson—that the security, prosperity and happiness of all people is realizable through the stability of peace.



BALCONY ORNAMENT IS REMINISCENT OF TYPICAL CHALET BALUSTRADES



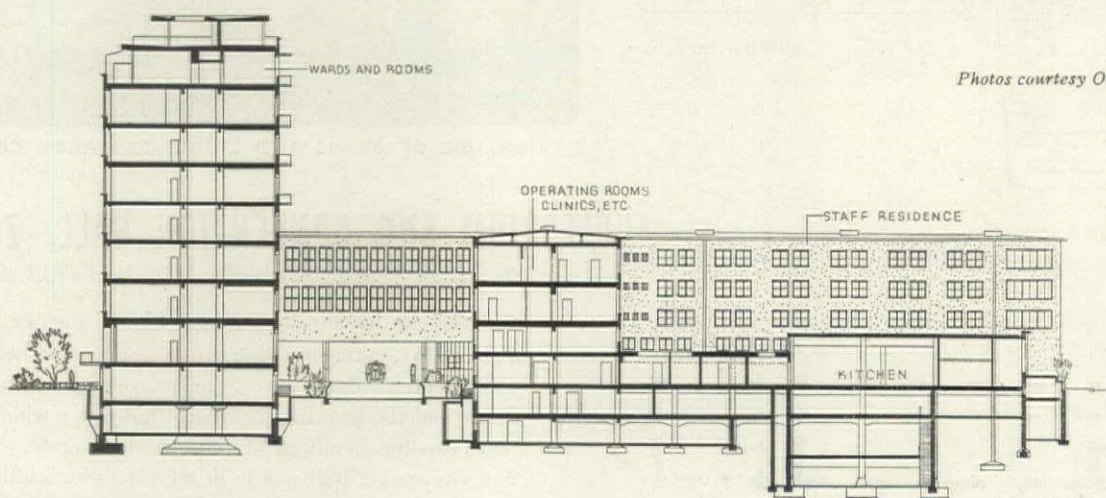
EGGCRATE LOUVER SHOWS AN UNSOPHISTICATED ADAPTATION OF FREE FORM



FRETWORK CHURCH TOWER IS DERIVED FROM OLD PIERCED ORNAMENTATION



IMPOSING FACADE, ORIENTED TO THE SOUTH, PROVIDES ALL PATIENTS' ROOMS WITH TRIPLE WINDOWS

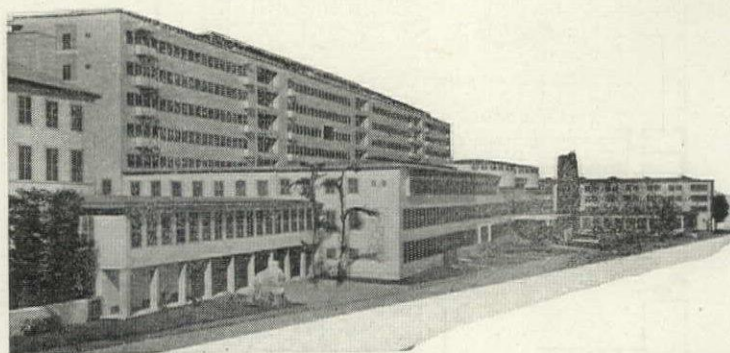


Photos courtesy OWI and DAS WERK

CANTONAL HOSPITAL, BASEL

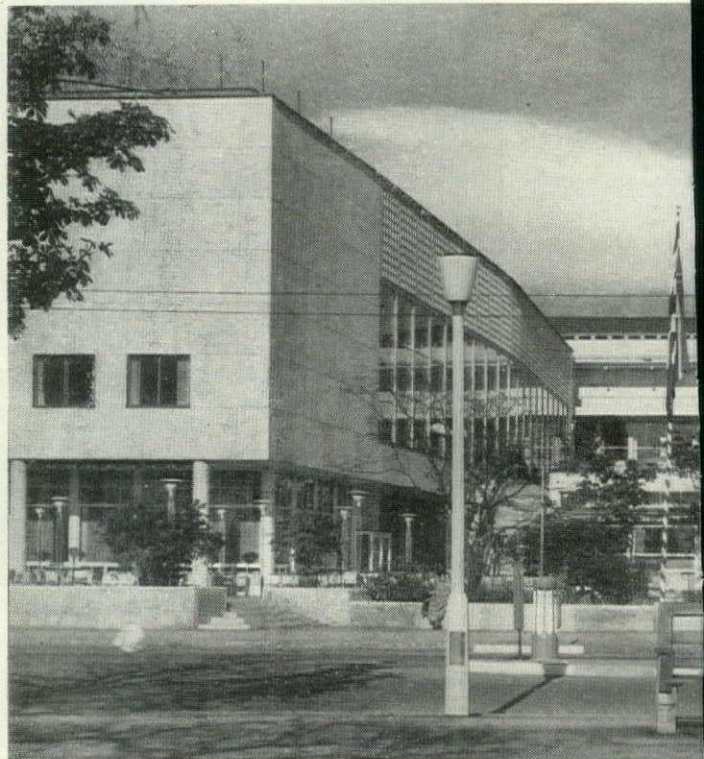
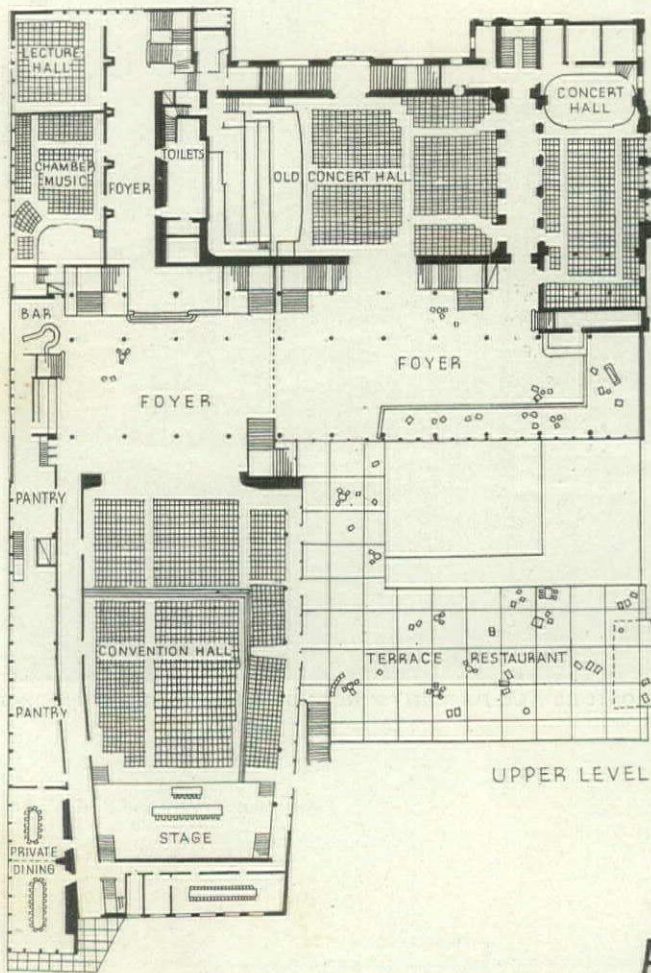
E. & P. VISCHER, H. BAUR, B. L. DÜRIG, Architects

Though a nine-story building is unusually high for a city like Basel, the generous grounds surrounding this hospital coupled with an acute city-wide shortage of beds were the chief reasons for the acceptance of the design. Heavier, more solidly enclosed and less progressively planned than many other Swiss hospitals, it is nevertheless an imposing and efficient building. It also represents one of the earliest attempts to separate wards and patients' rooms from the treatment rooms and service areas. The structure housing the operating rooms, clinics, etc., is connected with the main building at third and fourth floor levels by an enclosed passageway. Kitchen and staff residence flank the structure at the rear. All bedrooms are located on the south side of a central corridor with baths, pantries, etc., on the north. This in itself is indicative of extremely conventional planning since more recent hospitals tend to be more shallow and to contain an outside corridor. The absence of balconies is also a obvious shortcoming, particularly in Switzerland which, as one of the world's most famous spots for the cure of tuberculosis, boasts a number of hospitals that take maximum advantage of sun and air.



DOUBLE ROOF SETBACK CREATES TWO GENEROUS SOLARIA



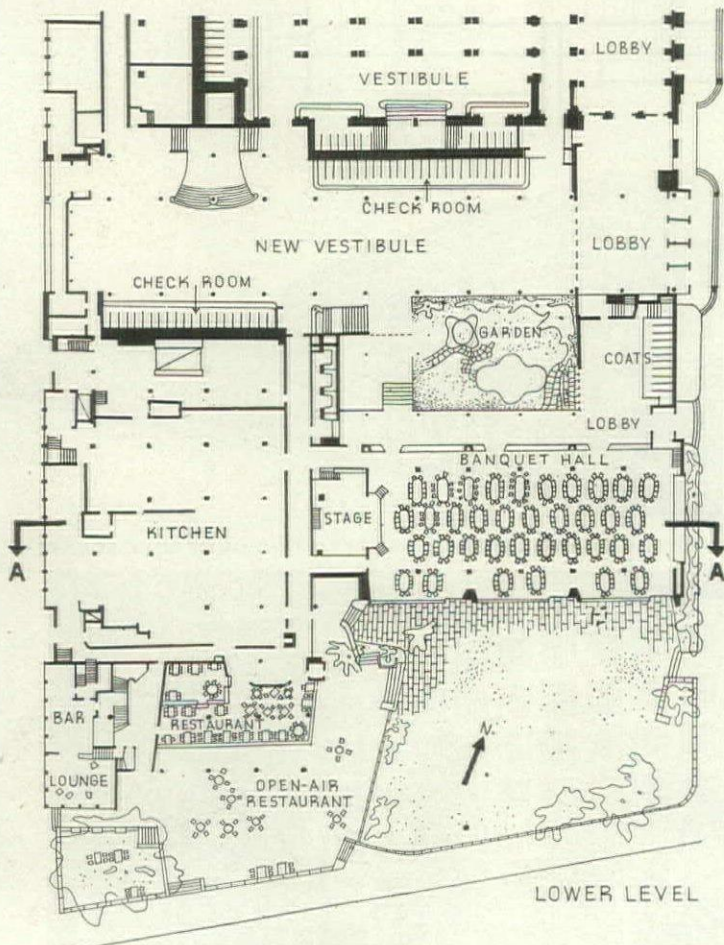


LAVISH USE OF GLASS AND LIGHT CONCRETE CONSTRUCT

AUDITORIUM AND CONVENTION HALL, ZÜRICH

W. M. MOSER, R. STEIGER, M. E. HAEFELI, Architects

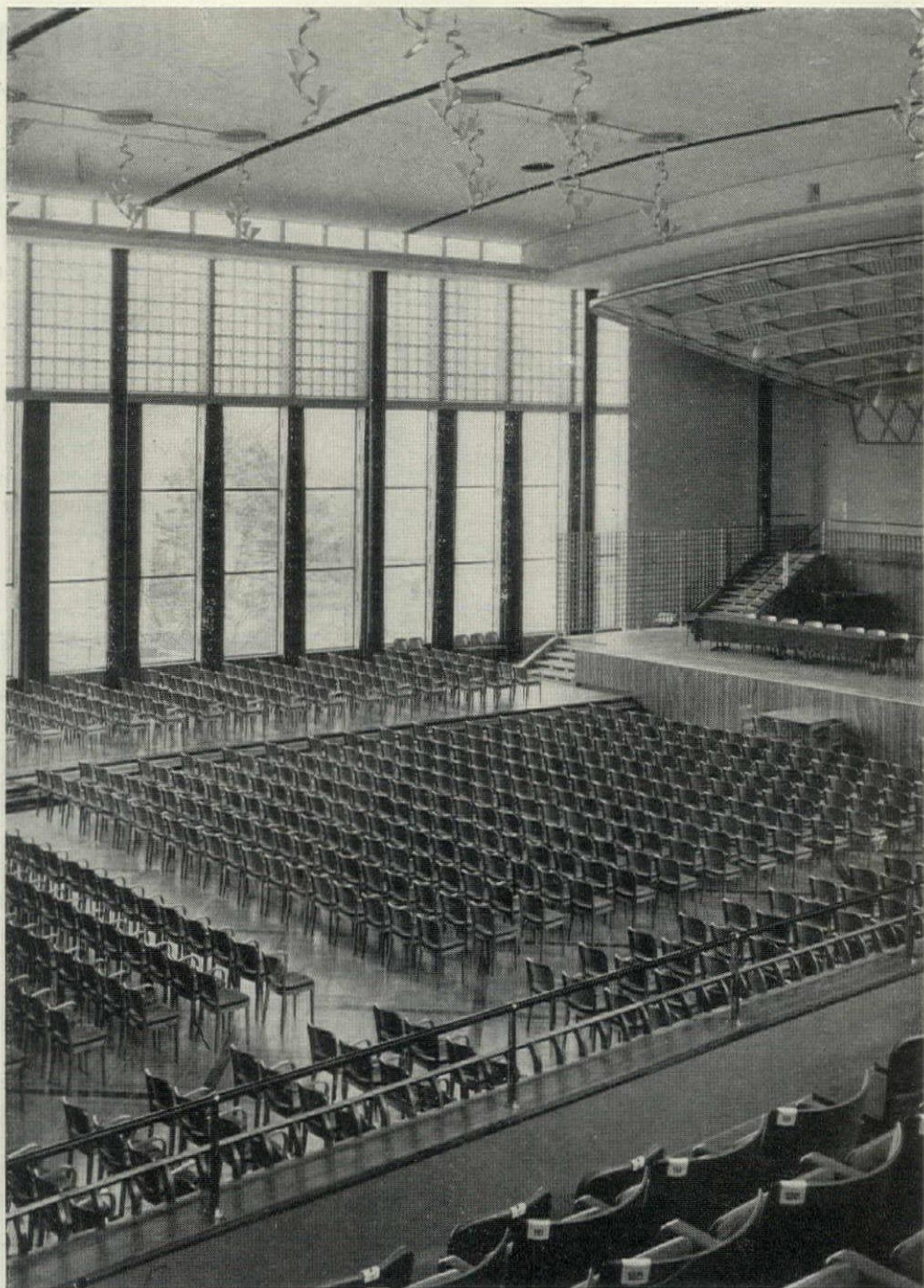
Reminiscent of Sweden's famed Malmö theater (FORUM, Feb., 1945), is this building group which serves as Zürich's civic center. Both have spaciousness, generous glazed areas and the peculiar structural buoyancy which results from capable handling of reinforced concrete. Since the new convention hall was built merely as an addition to an existing concert hall, the architects did not have an entirely free hand with the plan. For one thing, they would have preferred a larger site. In contrast to American civic and theatrical buildings, the Swiss interpretation is neither ostentatious nor monumental in quality. For Switzerland, this design was in many ways revolutionary. It introduced new methods of sound-proofing, acoustical treatment and circulation patterns. All rooms have glass walls facing either the inner garden or the entrance court, and most of them a view of the lake. The large foyers and vestibules provide ample room for the audience to walk about and relax comfortably during intermissions which, in Switzerland, last at least a half an hour. Both restaurants are open to the public and in constant use whether or not there is a performance going on. The open air terrace has proved particularly popular for afternoon tea. The central location of the lobby and vestibule renders all public rooms immediately accessible to the main public space. Recalling the proverbial stampedes in our own theaters and concert halls, there is much to be learned from some of the newer European buildings which do not attempt to pack a maximum number of people into a minimum amount of space but instead, stress the fact that recreation or public events should be planned for the comfort and convenience of the entire audience.





CHARACTERIZE THE BUILDING GROUP

Photos courtesy Museum of Modern Art

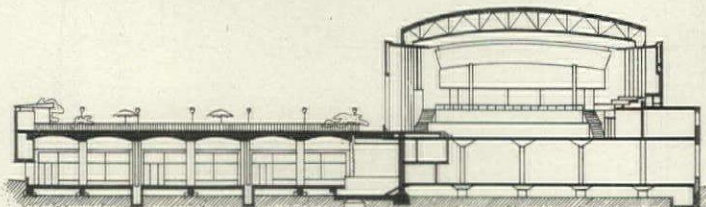


AUDITORIUM SEATS ARE REMOVABLE TO PERMIT CONVERSION OF HALL FOR DANCING



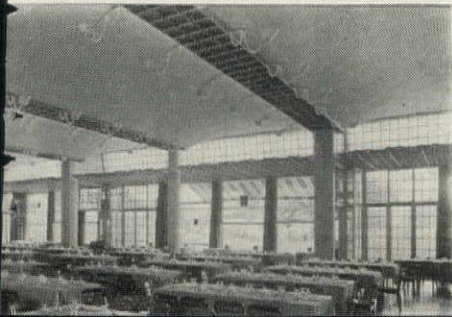
DINING TERRACE OVERLOOKS LAKE

SPACIOUS LOBBY IS AN OUTSTANDING FEATURE



SECTION "A-A"

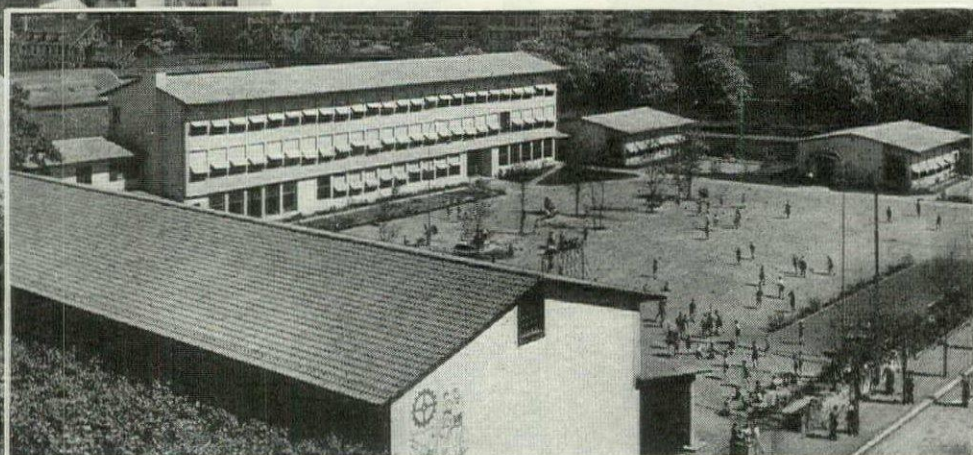
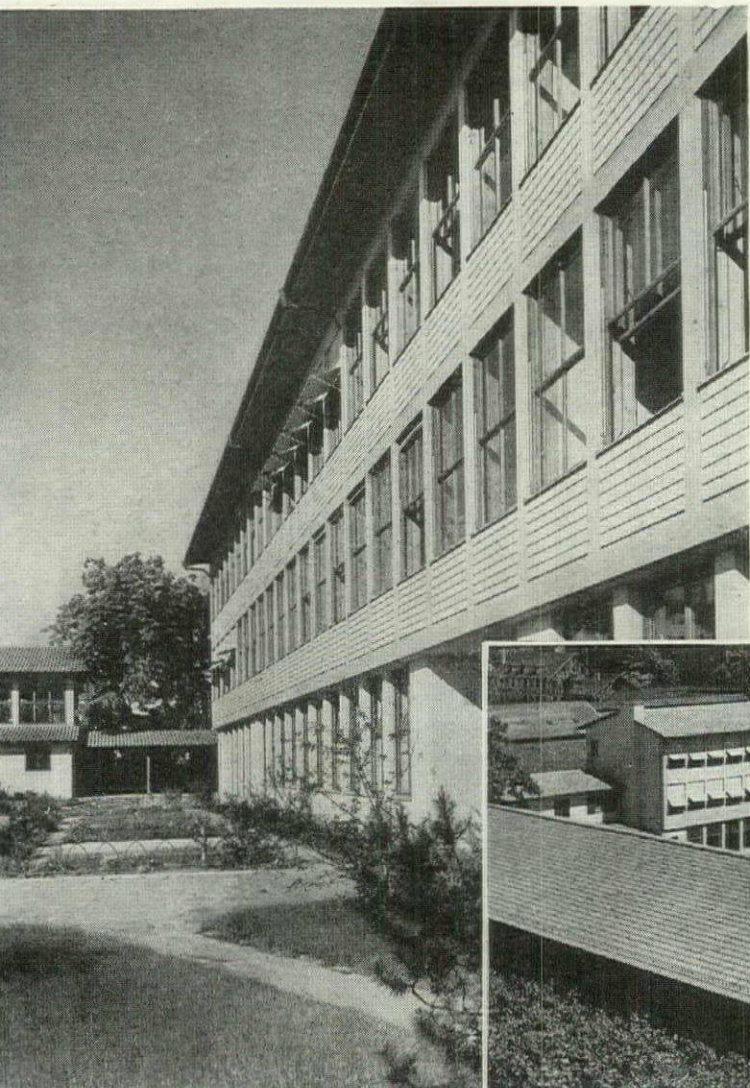
BANQUET HALL IS BELOW THE TERRACE



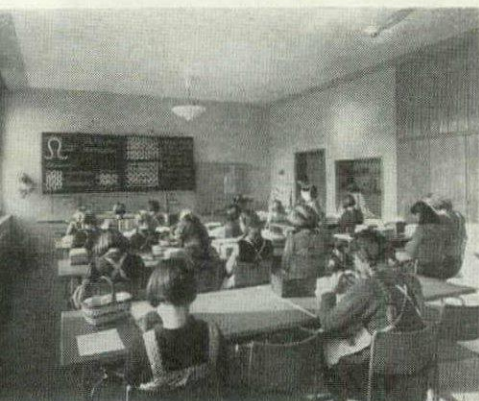
ELEMENTARY SCHOOL, ZÜRICH

A. H. STEINER, Architect

Typical of modern Swiss schools is the openness of this site plan which places emphasis on physical as well as academic education. Though some of those most recently constructed provide for outdoor study this school was designed for less progressive methods. The architecture is extremely simple, relying only on the proportion of the buildings and the horizontal bands of fenestration for its beauty. The continuous window strips and reinforced concrete construction permitted great flexibility in dimensioning the rooms. Also characteristic of Swiss school planning is the separation of the day nursery and kindergarten from the other rooms. Separate gymnasiums for boys and girls is said to help in simplifying the curriculum.

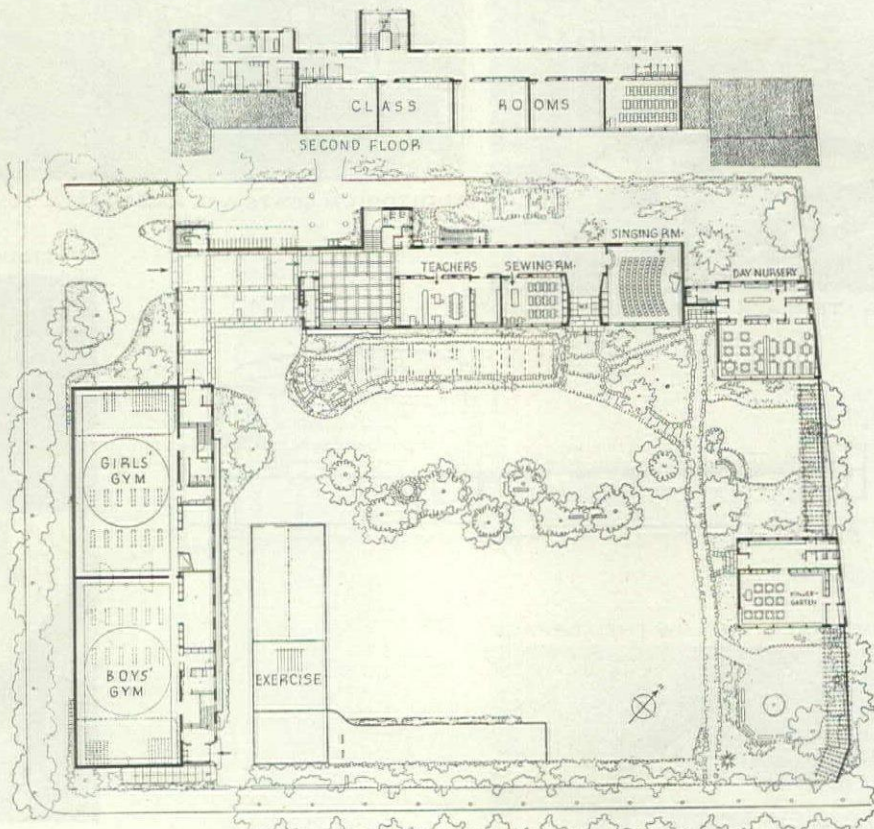
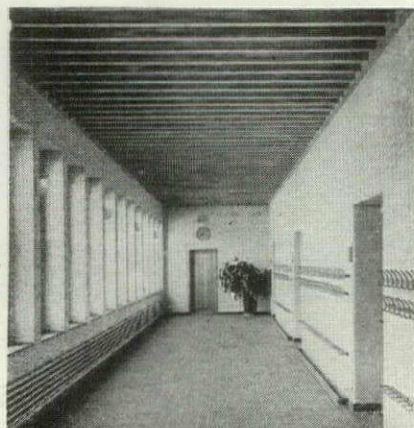


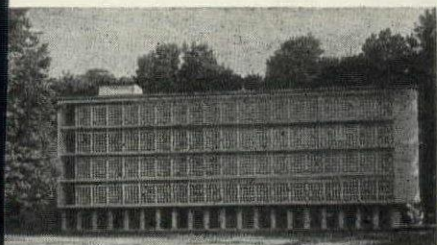
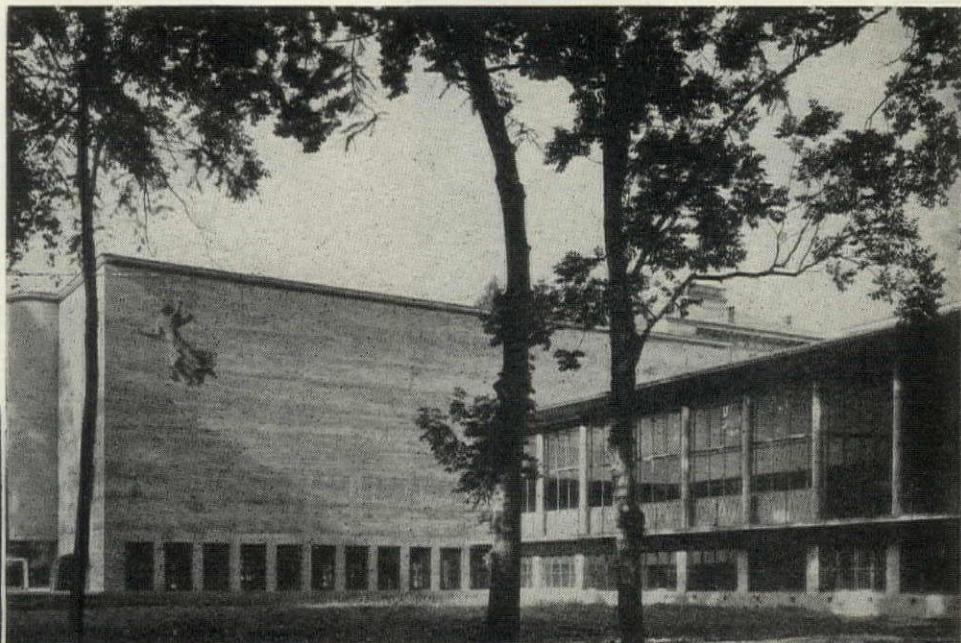
BUILDING SURROUNDS A CENTRAL COURT ON THREE SIDES, PROVIDING A SAFE, SHELTERED AREA FOR OUTDOOR PLAY



CLASSROOMS ARE CONVENTIONAL

HALLS ARE LIGHT AND FRIENDLY

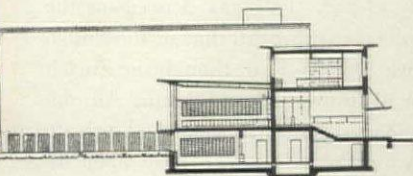




BUILDING HOUSING BOOK STACKS IS CLOSED ON THE COURT SIDE, FACED WITH GLASS BLOCK TOWARD THE STREET

CEILING OF PUBLIC READING ROOM SLOPES UP TO MEET EXTRA HIGH WINDOWS

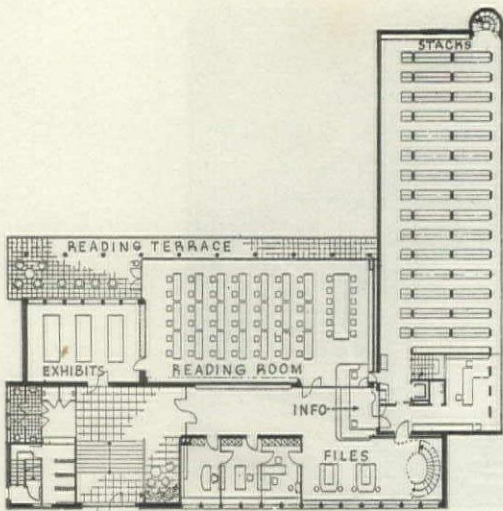
photos courtesy OWI and DAS WERK

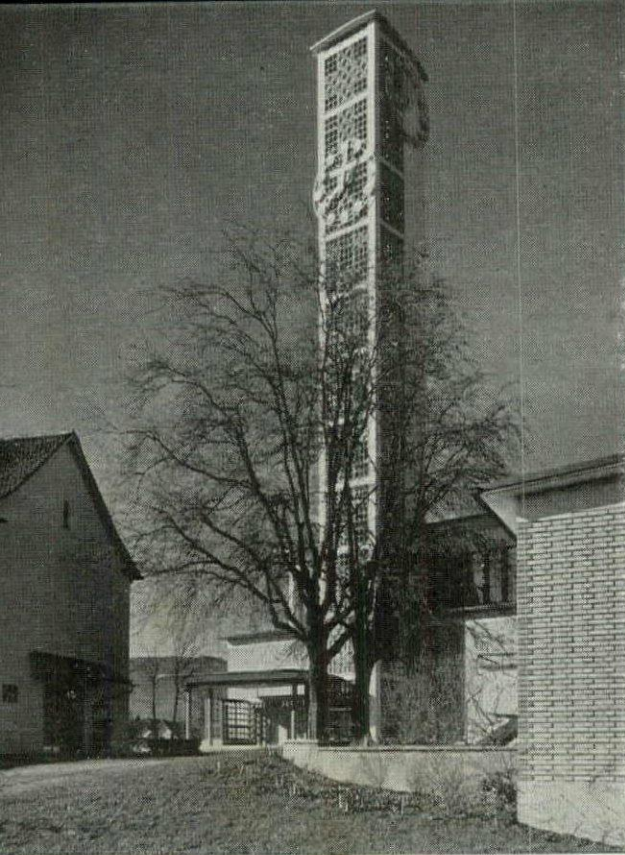


LIBRARY, LUGANO

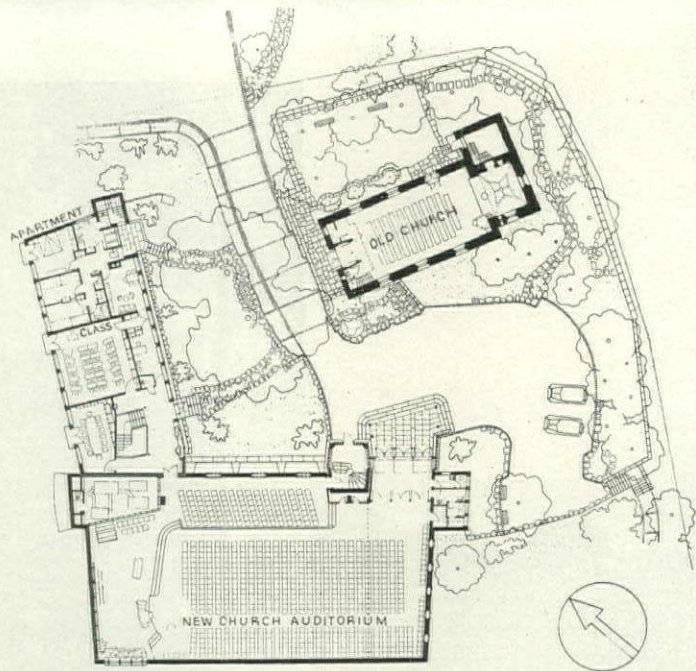
C. & R. TAMI, Architects

In view of Switzerland's social and political structure, it is somewhat startling to learn that no such thing as a public library exists and consequently, on a population ratio, fewer of any type have been built than in the U.S. This example of a private institution is patterned on the principles of a typical public library in America and, excepting the open air reading terrace, offers nothing unusual in the way of a plan. Its chief merit is an honest architectural interpretation of the building's purpose—complete segregation of the storage and public space, large glazed areas in the reading room as opposed to the sealed building housing the book stacks. The bas relief on the storage building contrasts nicely with the plain wall and, while not inspiring as sculpture, is a welcome bit of decoration.





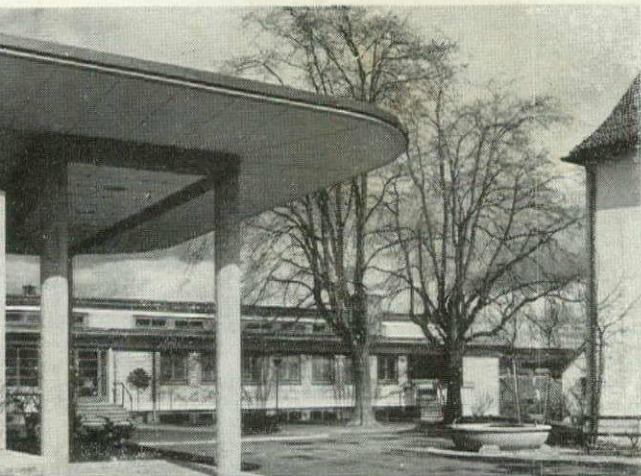
ORNATE FRETWORK TOWER DOMINATES SITE



EVANGELICAL CHURCH, ZÜRICH

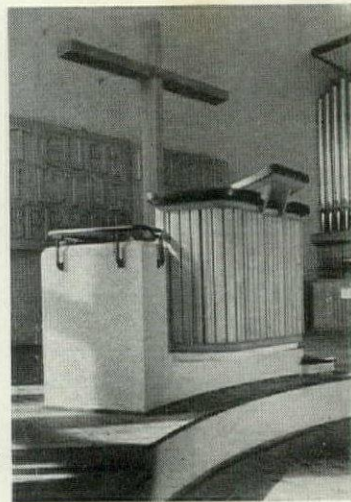
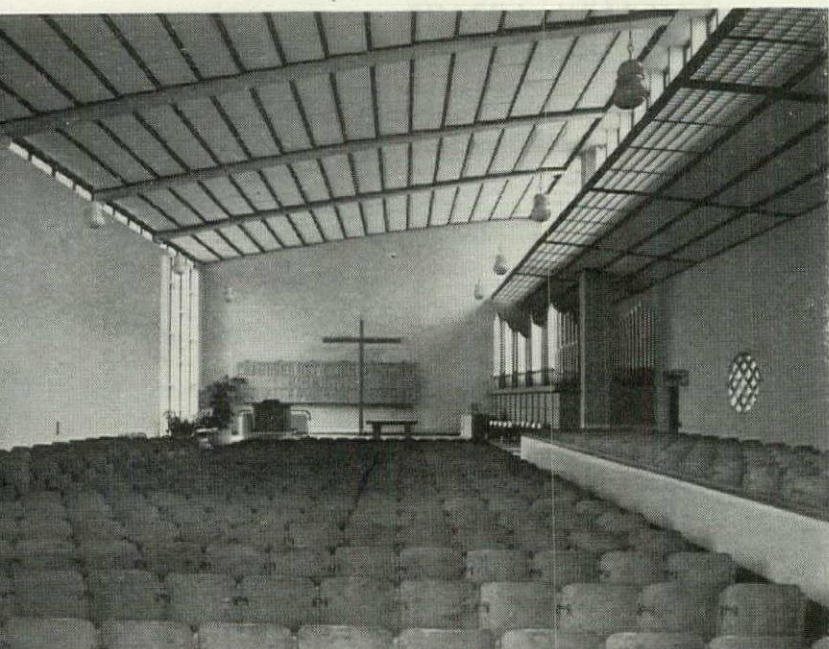
W. M. MOSER, Architect

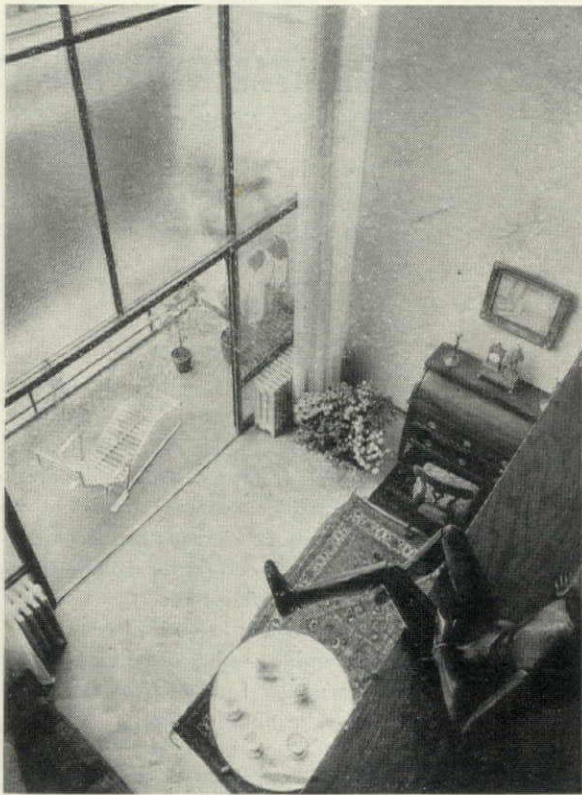
Beyond the tiny old church of the typical Swiss hamlet little remains to be hoped for in the way of an architectural expression of simplicity, chastity and dedication. It therefore seems a pity that with such a tradition of directness and humility, modern Zürich should be endowed with a group of religious buildings like this one which, aside from its sterile ornamentation, lacks the essential spiritual quality of good church design. One of a number of recently completed modern structures, the Evangelical church departs completely from the conventional solution for church auditoriums by having no large windows and one wall almost entirely closed. To many Americans the fretwork tower with its clocks will recall that of the Polish building at the New York World's Fair, though the Zürich version is much inferior in proportion and detail. Adjoining the church is a Sunday school classroom and private apartment, presumably for the minister. These open directly into the center garden.



COURT SEPARATES OLD AND NEW CHURCHES

INTERIOR IS ASSYMMETRICAL, ILLUMINATED ALMOST ENTIRELY BY WINDOWS IN THE NORTH WALL

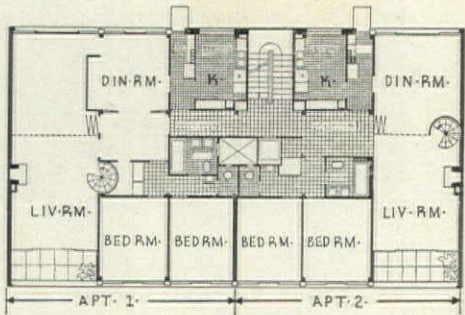
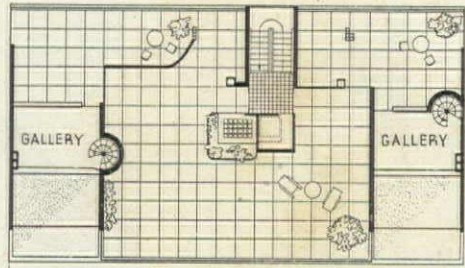
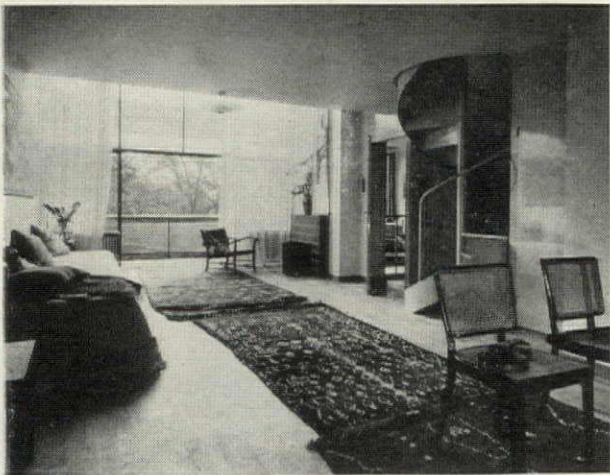




Photos courtesy OWI
and DAS WERK



GALLERY AT SECOND FLOOR LEVEL OVERLOOKS LIVING ROOM. FACADE IS TWO-THIRDS GLASS



PARK APARTMENTS, BASEL

O. H. SENN, Architect

To permit free partitioning of the structure for the provision of various types of apartments, this building was executed in reinforced concrete. Standing at an angle to the street it occupies one of the most beautiful sites in Basel and one convenient to the center of town. The apartments shown at right are duplex penthouses of the most luxurious type. The architect has carried the desire for light and air to an advanced point even though the building was completed some seven years ago. All living rooms run the full depth of the structure (some include a dining area) and have windows from wall to wall and floor to ceiling at either end. The roof provides a large terrace for tenants, pleasantly planted and partially sheltered by masonry canopies. Because first floor apartments are hard to rent, the heating, garages and utility rooms have been placed on the ground floor, avoiding excavation.

ROOF PROVIDES GENEROUS TENANTS' GARDEN



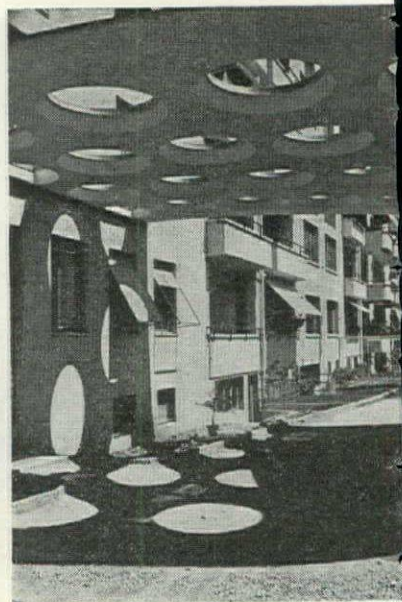


FOUR APARTMENT HOUSES, ZÜRICH

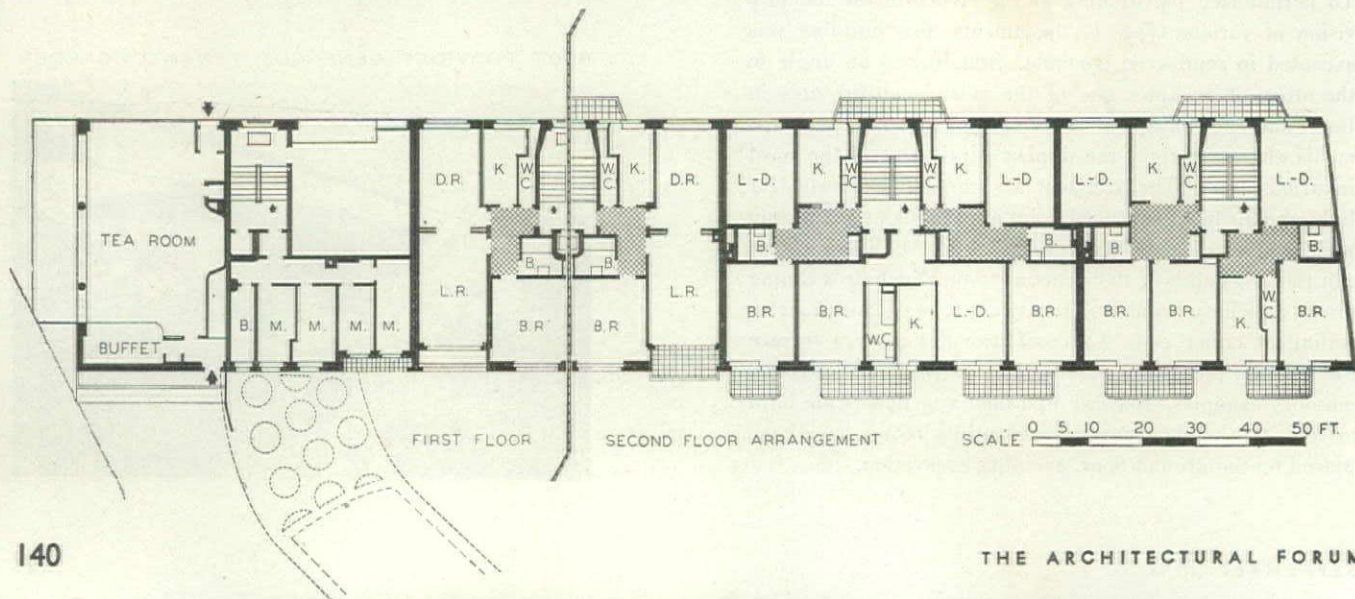
L. PARNES, Architect

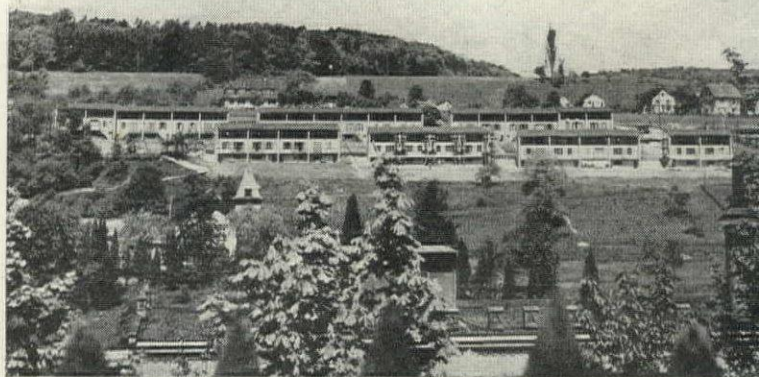
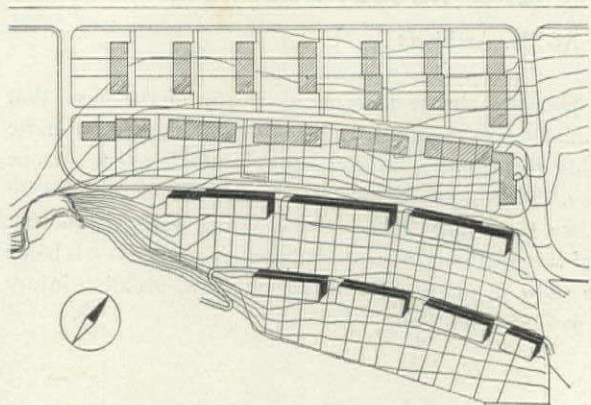
Representing the last building of its kind to be done in Switzerland before the war, this apartment is located in one of Zurich's most exclusive centers. Its design was winner in an open competition for a site development which also includes a community building connected with the apartment by the pierced canopy. The apartment layouts are very simple. Kitchens and baths for every two units are connected by a single plumbing stack with the other rooms grouped around this nucleus. The building is thoroughly insulated and each apartment has at least two balconies—front and back—one large enough for outdoor dining. All living rooms are oriented south overlooking a spacious court, kitchens to the north, or street side. The corner windows (shown below) comprise virtually two walls of the living rooms that occupy that particular location. The construction is of reinforced concrete with brick fill. Planting, which contributes so much to the exterior appearance, is furnished and maintained by the landlord for the sake of uniformity.

CORNER SUNSHADES ARE STRIPED, OTHERS PLAIN



BALCONIES, PIERCED CANOPY AND LARGE SQUARE WINDOWS BESPEAK THE INTERNATIONAL STYLE



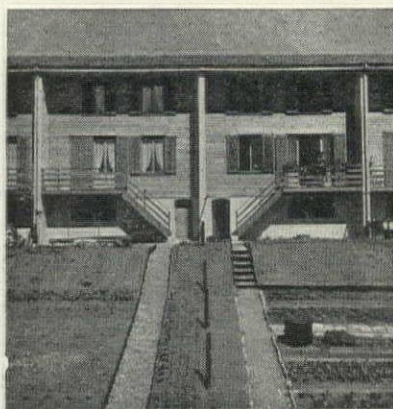


STEEPLY SLOPING SITE ALLOWS EACH UNIT A GOOD VIEW

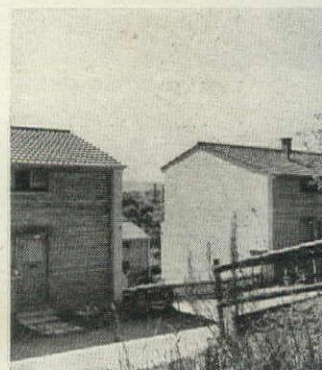
LOW COST ROW HOUSES, SCHAFFHAUSEN

W. VETTER, Architect

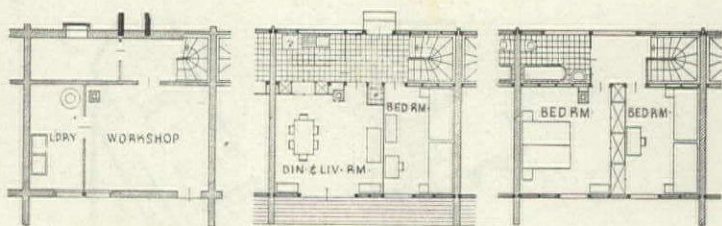
True to Switzerland's democratic ideal, her low cost housing represents a relatively high living standard. Most of it is financed by non-profit organizations such as labor unions or political parties through the local banks. Although some of the housing has been prefabricated, the great majority is of brick construction. These houses in Wadenswil represent a new experiment—that of using wood framing between fireproof walls. By leaving the front ends of the masonry walls exposed and using a wide overhang at the front, the monotony of the long rows is greatly reduced and a clearcut identification of the individual unit is achieved. For economy's sake, windows are small. In Switzerland their cost is relatively high because standardization has not been perfected. Due to the steep grade, basements are above ground at the front of the houses with entrances on the second level. Wadenswil, like all of Switzerland's low cost housing provides each tenant with a garden plot.



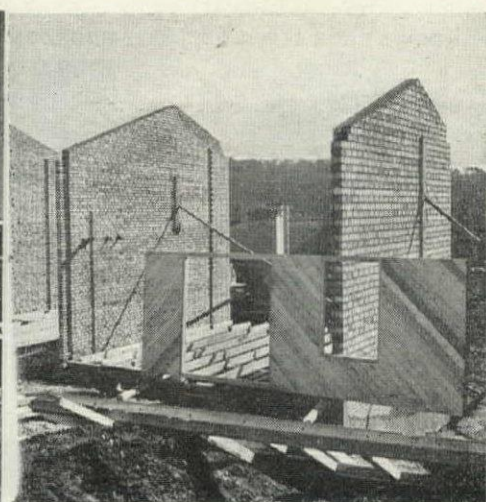
RECESSED FRONTS ADD PRIVACY

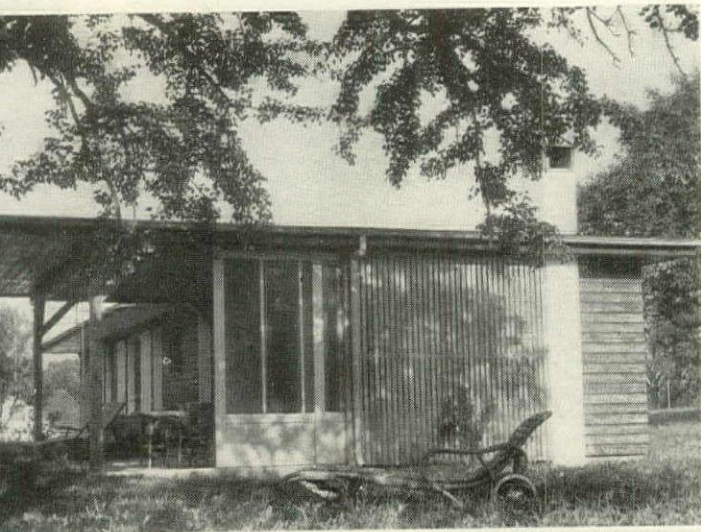


STREET IS AT REAR



TRANSVERSE WALLS ARE OF MASONRY. PREFABRICATED WOOD PANELS ARE USED FOR FRONT AND REAR FACADES



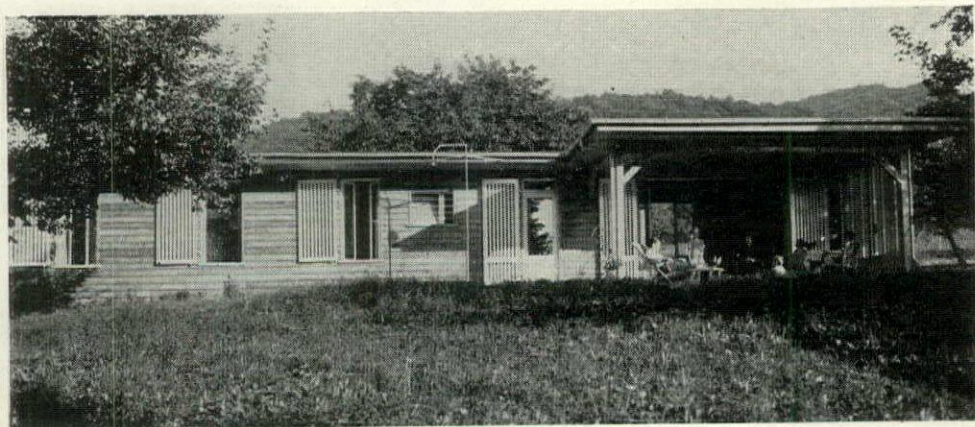


WEEKEND HOUSE, BODENSEE

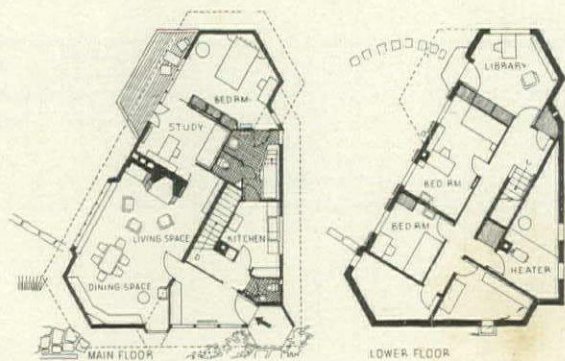
A. ROTH, Architect

In plan, this house incorporates many of the ideas that dominate American small house design today—an oversize living room, many large windows and all rooms on one level. Because of its location in the hills near Bodensee (Lake Constance) where the snowfall is heavy, the flat roof was warranted on more than esthetic grounds—it holds the snow in place until the spring thaw, avoiding injury to passing pedestrians.

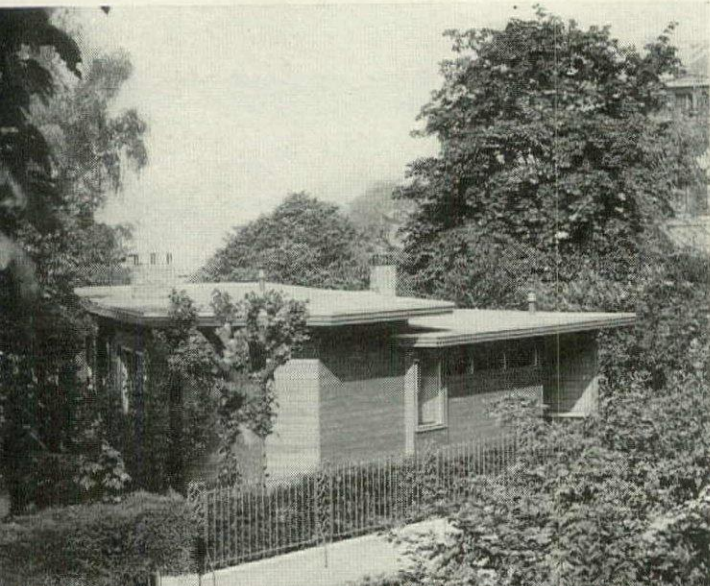
LIVING ROOM OPENS COMPLETELY TO SHELTERED TERRACE. VERTICAL SLATS FORM RECESS FOR SLIDING PANELS



Photos courtesy OWI and DAS WERK



ONLY KITCHEN AND BATHROOM WINDOWS FACE STREET



SMALL HOUSE, ZÜRICH

A. ROTH, Architect

Because of the steep site which slopes down from street level, the architect has employed a solution widely used in our California architecture by placing the entrance, living and service areas on the upper floor with bedrooms below. The location of the principal rooms at the rear of the house, facing south and taking advantage of the view is equally familiar to American architects. Slightly more puzzling, however, is the combination bath-passage which connects the kitchen and upstairs bedroom and the awkward handling of circulation.

BEDROOMS OPEN ON REAR GARDEN

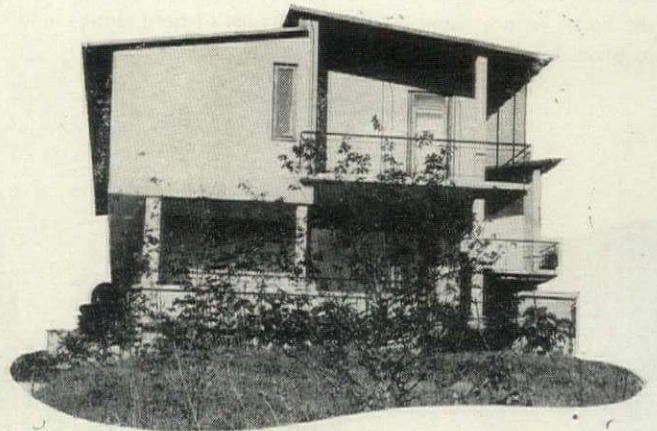




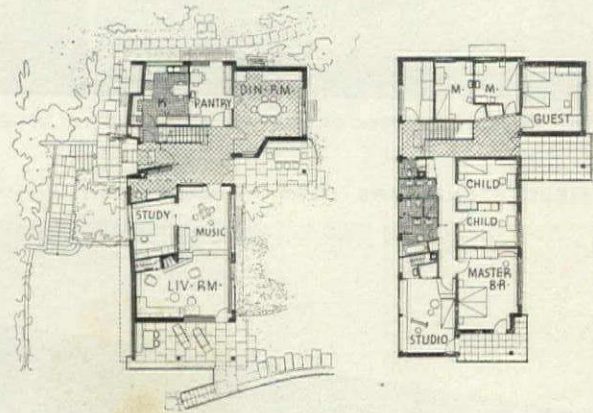
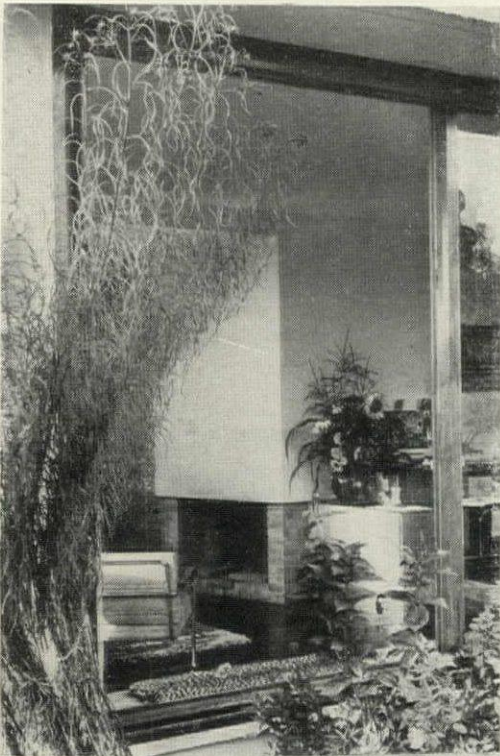
SIDE STEPS LEAD TO LIVING ROOM TERRACE



L - SHAPED PLAN PROVIDES A PEACEFUL GARDEN TO THE REAR



LIVING ROOM FIREPLACE IS KEPT SIMPLE



HOUSE IN ZOLLIKON

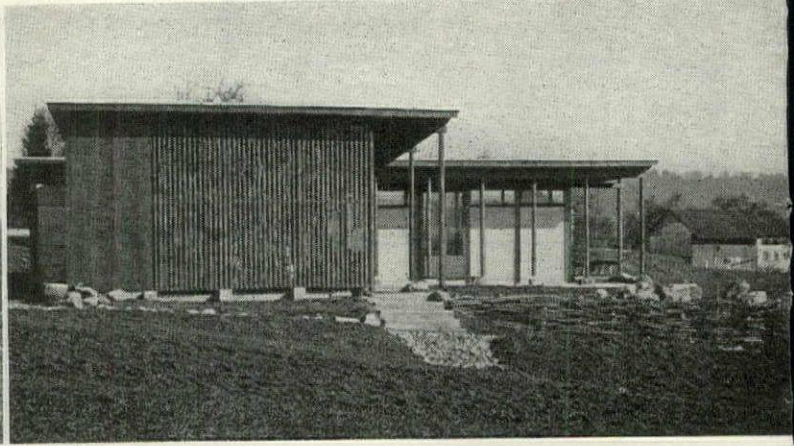
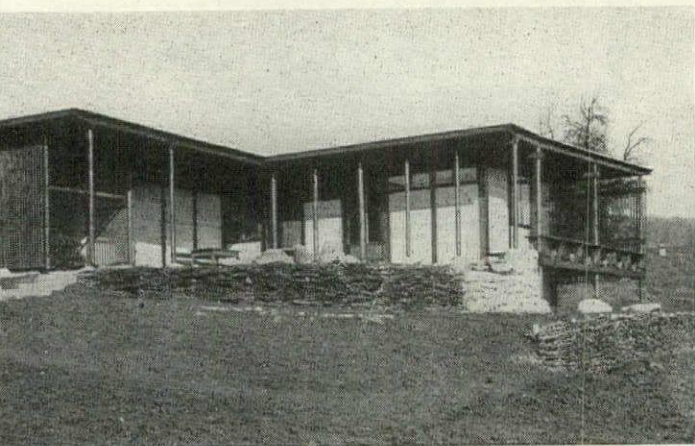
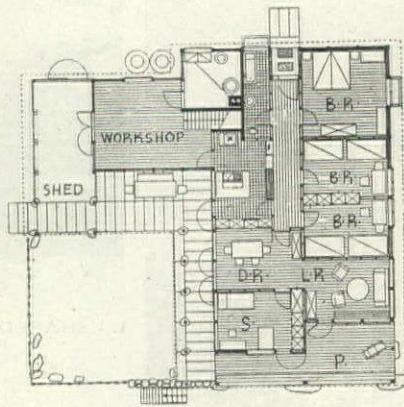
W. M. MOSER, Architect

Located in a wealthy suburban community near Zürich, this house is more formal than the usual Swiss residence. It is placed high on a hill and looks out over the mountains and lake with all windows facing south. The plan is well organized and incorporates more facilities for outdoor living than are usual. On the ground floor, the dining and service area are separated from the rest of the house by a wide entrance hall. The study, living and music rooms form another planning unit. Each has a large covered terrace on the south side of the house, shielded from the entrance. The same principle applies to the second floor plan where the family bedrooms and studio are clearly set apart from the guest and servants' quarters. Both have porches. Sliding steel sash are used throughout.

WEEKEND HOUSE NEAR ZÜRICH

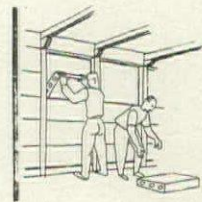
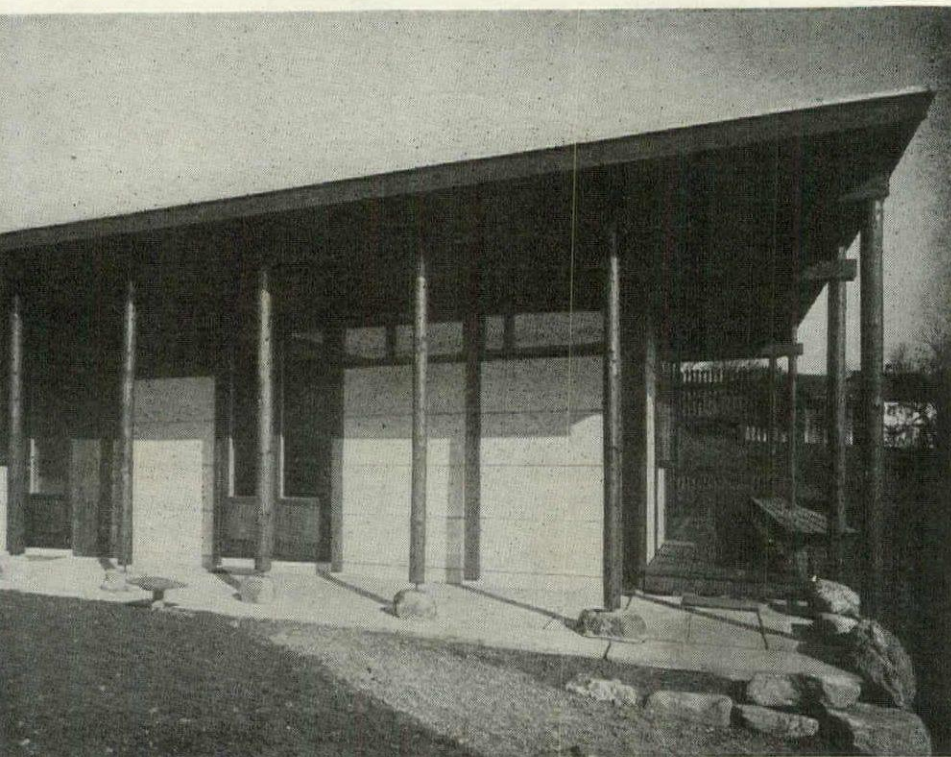
MAX BILL, Architect

Located within an hour's drive of Zürich, this weekend cottage has one outstanding structural feature — all masonry work is of hollow cinder block. The module of the design regulates the space between studs to the length of a single block, creating a simple, inexpensive type of construction. The cost of the house has been estimated at about \$3,000. While the architectural treatment is not typical of Switzerland, it does show ingenuity. The plan clearly separates living, sleeping and working areas with all major rooms opening directly out of doors. Compared with American standards, a single bath may seem inadequate for a three bedroom house but, like many other European people, the well scrubbed Swiss attach less importance to plumbing than we do. The slope of the site was taken care of by supporting the front of the house on posts and creating a terrace of field stones held in place by a woven wood screen.

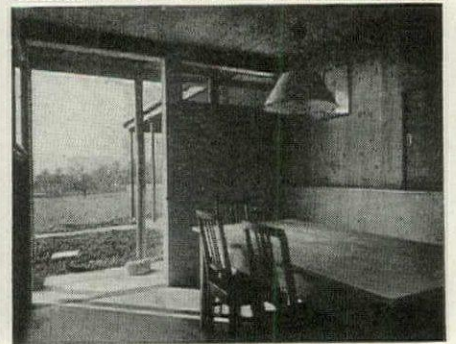


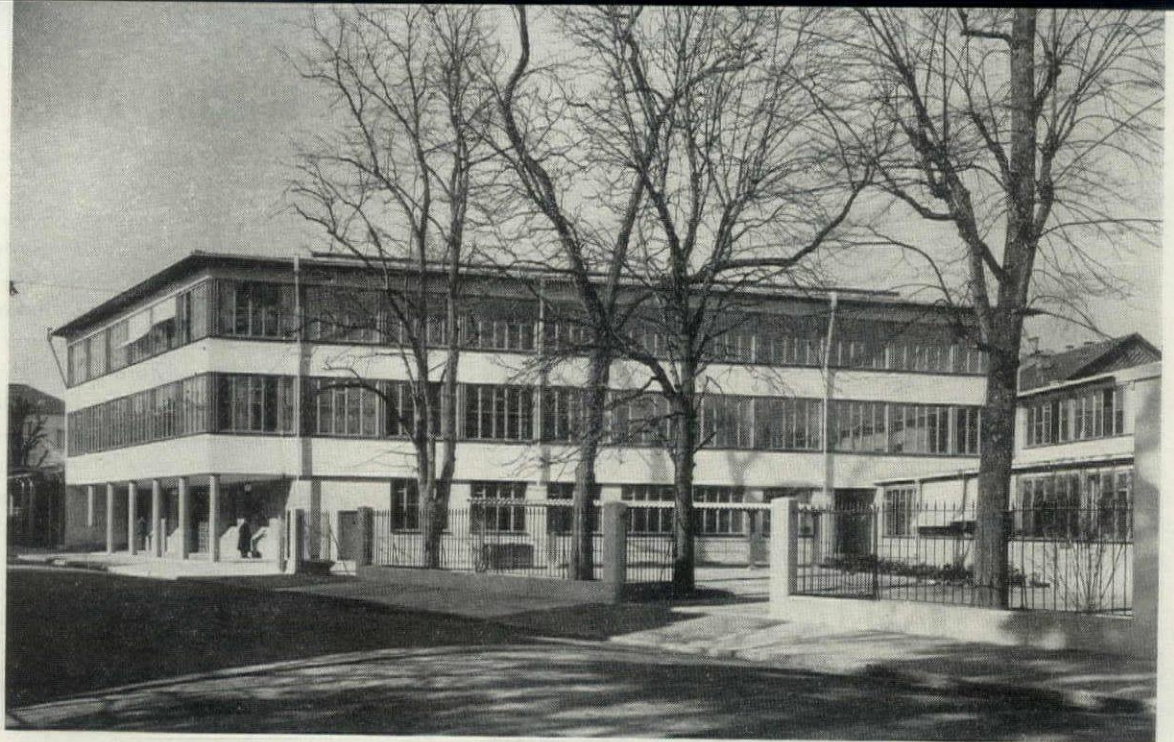
RUSTIC DETAILING AND A MODERN PLAN TYPIFY THIS WEEKEND HOUSE WHICH MIGHT WELL BE FOUND IN THE U.S.

ORDINARY FIELD STONES ARE USED AS BASES FOR WOODEN COLUMNS



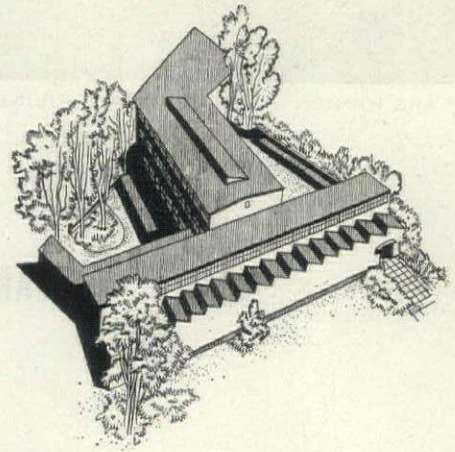
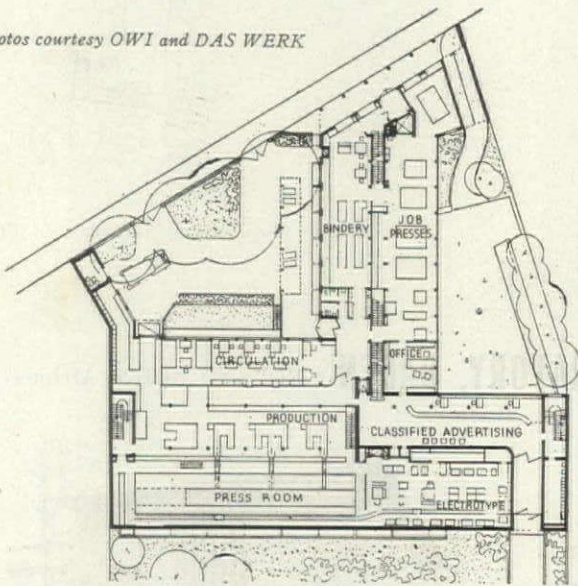
DOORS ARE CHIEF LIGHT SOURCE





CRISPNESS OF LINE AND FORM IS MARRED ONLY BY THE CONSPICUOUSNESS OF WATER CONDUITS

Photos courtesy OWI and DAS WERK



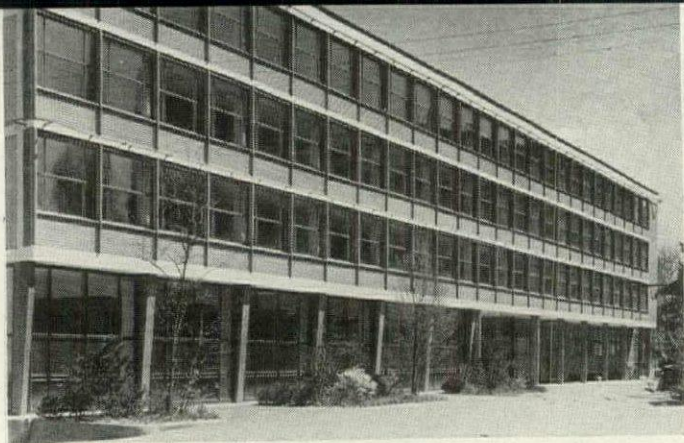
NEWSPAPER PLANT, BASEL

A. MEILI, Architect

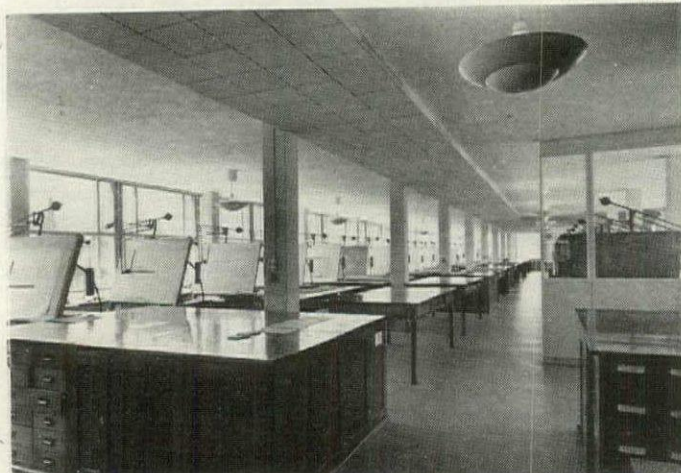
Typical of recent Swiss industrial architecture, this building has few columns, many windows and a flush ceiling which improves lighting and makes possible the use of overhead cranes, important in newspaper publication. Its excellent use of reinforced concrete construction is particularly well illustrated by the trimness and delicacy of the overhanging roof. While the influence of Frank Lloyd Wright is not associated with Swiss architecture, the interior picture (right) bears a remarkable resemblance to his Johnson Wax factory (FORUM, Jan. '38). Mushroom columns supporting cantilevered floor slabs, are however, widely used in Switzerland. The plan shows a pleasant, free arrangement of the buildings on an unsymmetrical lot with excellent proportion. Two small private courts at the front and rear do much to counteract the grimness usually associated with industrial buildings. The exclusive use of ribbon fenestration provides excellent interior lighting and a trim, well integrated exterior.

SHAPELY MUSHROOM COLUMNS SUPPORT THE FLOORS





BUILDING'S STRUCTURE IS COMPLEMENTED BY ITS FACADE

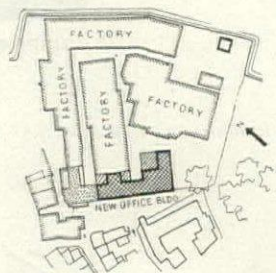


AIR DUCTS ARE HIDDEN BY ACCOUSTICAL CEILING PANELS

OFFICE BUILDING, ARBON

DUBOIS & ESCHENMOSER, Architects

This office building, built as an addition to an automobile factory, is notable for its proportions and a forthright architectural treatment which emphasizes rather than conceals the structure. Interiors are illuminated by the long, continuous glass areas and by indirect ceiling fixtures. Radiant heating is used throughout. Canvas awnings on rolls are used instead of venetian blinds, and, since sun protection is only needed for a couple of hours during the day, are out of sight most of the time. Lowered, they create a facade reminiscent of Le Corbusier's South American office buildings. The slight projection of the upper three stories gives the impression of a single, rectangular mass supported on columns. Framing members are left exposed and brick is used as fill material between.

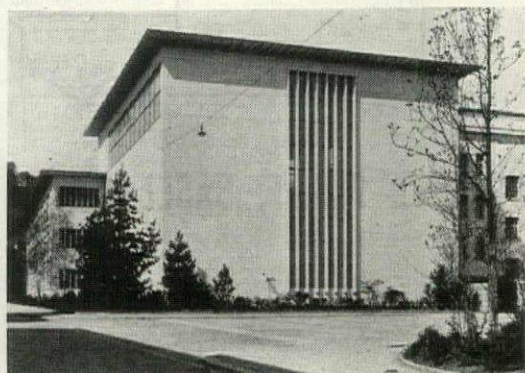
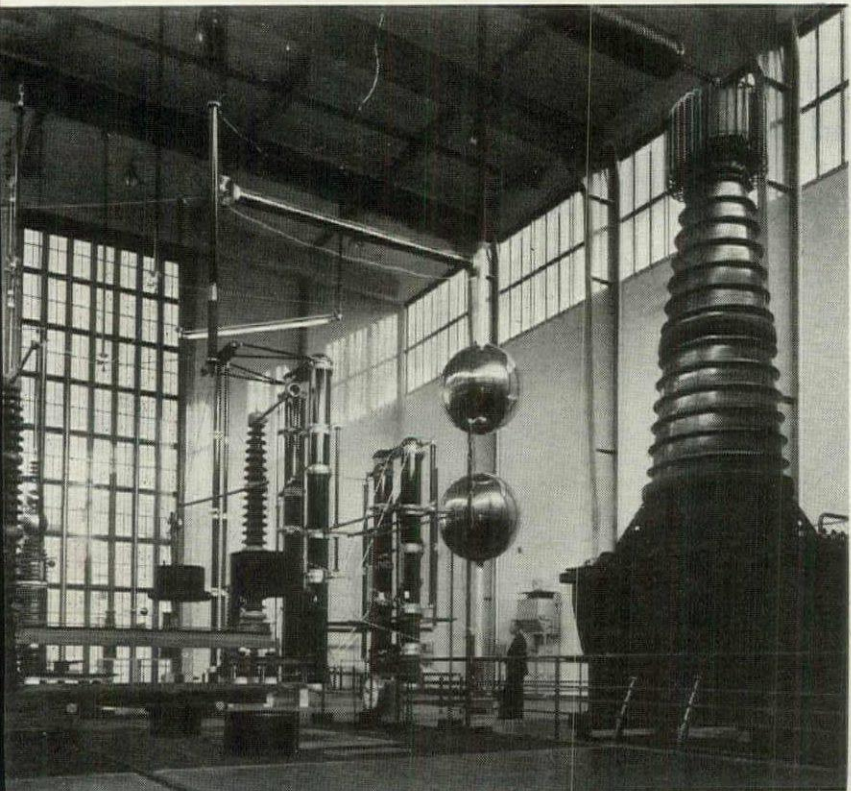


Photos courtesy OWI and DAS WERK

RESEARCH LABORATORY, BADEN

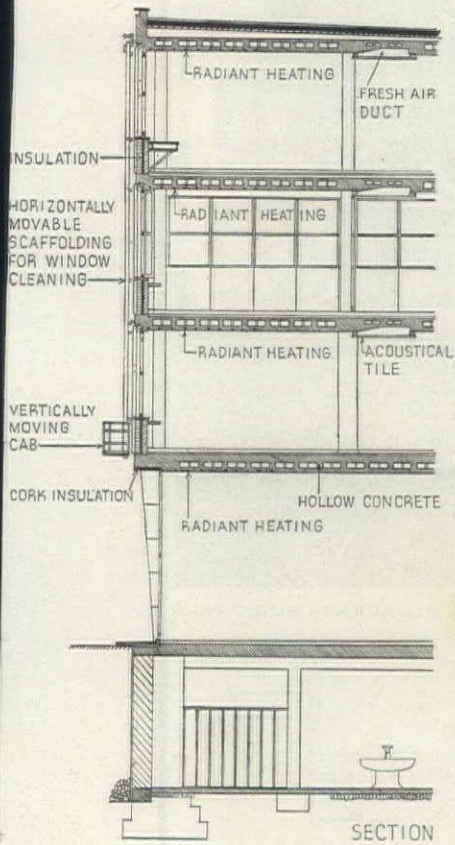
ROLAND ROHN, Architect

SIMPLE STRUCTURAL SHELL HOUSES THE ELECTRICAL APPARATUS



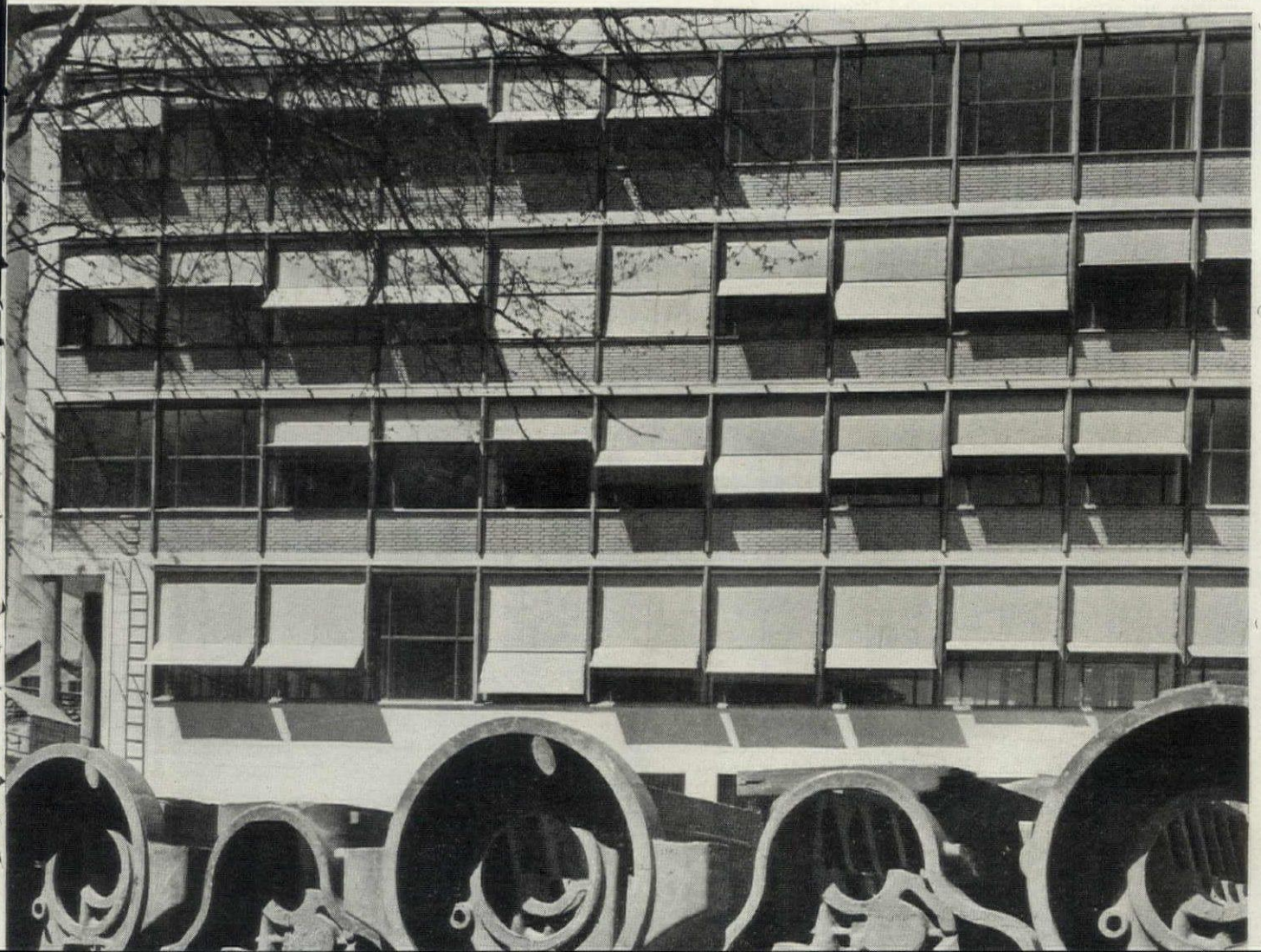
SLIGHT ROOF BREAK SOFTENS STARK CUBICLE

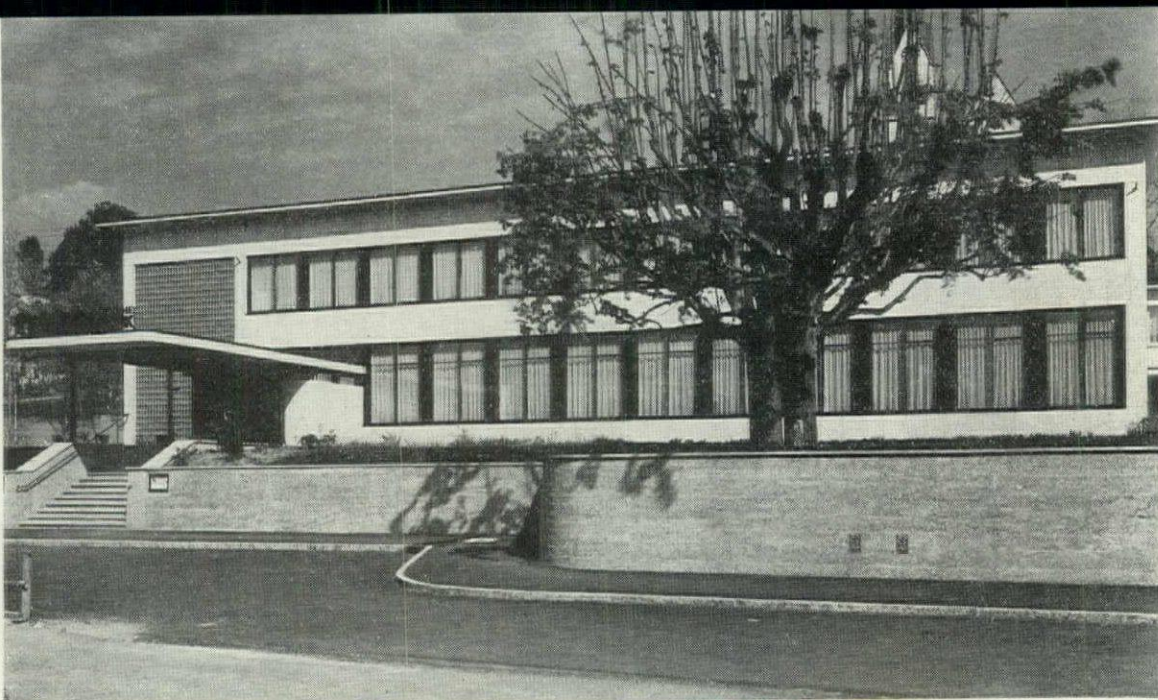
A splendid example of rigid frame construction, this industrial building is refined and unostentatious. The excellent proportions of the laboratory wing are brought out by its flat, overhanging roof and simple fenestration—vertical emphasis in the floor-to-ceiling window counterbalances the horizontal lines of the ribbon strip. Exterior finish is of concrete block.



PERMANENT, MOBILE LADDER SIMPLIFIES WINDOW CLEANING

CANVAS SUNSHADES, LOWERED TO COVER THE PANES OR PROJECTED AS AWNINGS, LEND INTEREST TO THE FACADE



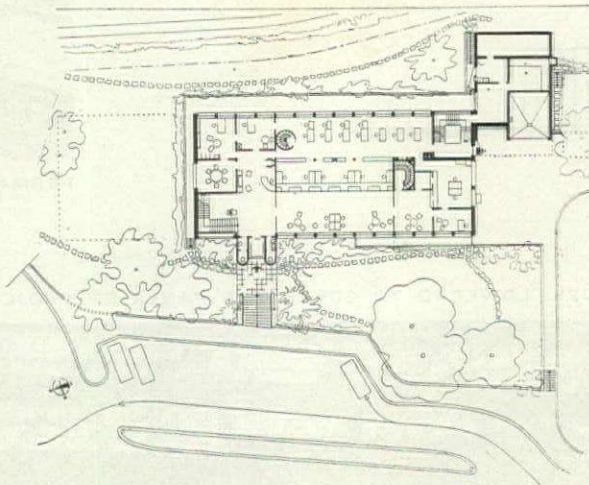


SET - BACK PROVIDES FOR PARKING, DECREASES NOISE, CONFORMS TO ADJACENT BUILDINGS

BANK BUILDING, BINNINGEN

FREY & SCHINDLER, Architects

A characteristic combination of simplicity and elegance, this small-town bank building houses complete banking facilities, including even an apartment for the building superintendent. The structure, which is organized around the central stair hall, has a reinforced concrete frame; exterior walls are surfaced in grey cast stone; interior ceilings are acoustical and suspended throughout; floors are linoleum. The plan is simple and direct. The basement contains vault, lockboxes and archives, as well as washrooms and heating plant. The first floor contains the main banking rooms, top floor accounting department and board rooms.



CENTRAL HALL IS FORMAL WITHOUT SEVERITY. GLAZED SCREEN DEFINES MAIN BANKING AREA



Turtles and Walnuts, Morning Glories and Grass

... under scientific analysis, these and many another natural form reveal important lessons for building. Engineer Fred M. Severud* shows how applicable to current problems are some of Nature's most successful principles.

Improbable as it may sound, it is a fact that the contemporary architect or engineer faces few problems in structural design which Nature has not already met and solved. By our own standards, her designs are structurally more efficient and esthetically more satisfactory than ours. And only our habit of thinking so largely in terms of conventional structure and traditional materials prevents our seeing how applicable to our own problems are some of Nature's more successful design principles.

Recognition of the significance of natural forms is, of course, not new. The Gothic builders saw at least the esthetic success of vine and leaf. Engineers like Leonardo da Vinci saw it clearly long ago in birds. And the nineteenth century's discovery of the natural world produced whole movements like those led by Ruskin and William Morris. But because without science they had not the means to analyze Nature correctly, they usually ended up in an artistic frustration like Art Nouveau.

It is one thing for a Whitman to marvel at the construction of a blade of grass; and quite another for an engineer to be able to see that its triangular profile gives depth and stability to the blade while its tapered elevation requires a minimum of material. We should—to paraphrase that forthright pre-Civil War critic, Horatio Greenough—learn from Nature like men and not copy her like apes. But the truth of the matter is that we have only recently perfected the means whereby her structures can be really understood.

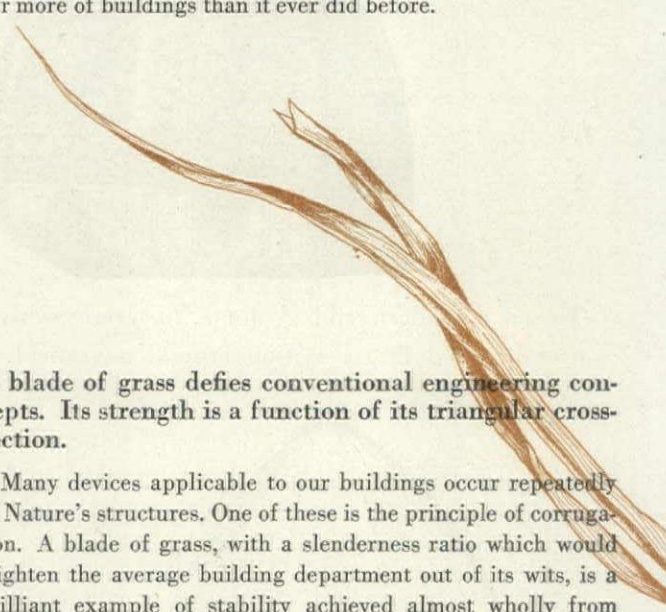
Today, however, it is possible for us both to understand and to emulate Nature's design principles. We can understand them thanks to a whole range of analytical techniques—x-ray, photo-elasticity, testing machines—which have vastly extended our knowledge of the behavior of materials and structural forms. These enable us to analyze the flow of stresses in any structure, natural or man-made, in detail or for the form as a whole. And we can now emulate Nature's principles, thanks to such materials as welded metals, reinforced concrete and molded plywoods. These make possible a much greater plasticity in structural forms.

So great has been the war-time development in these two fields of structural analysis and design they promise to revolutionize engineering concepts. This has been especially true in aviation, marine construction and heavy industry.

In such fields, especially during the war, mass and weight have nearly always been two most critical factors: whether

it was a plane or a hangar, a chemical tank or a submarine hull, each foot and each pound of material had to be justified. This process inevitably tended to simplify and integrate structure and, consciously or not, produced many forms which were strikingly reminiscent of Nature's solutions to similar problems involving speed, pressure and strength.

While these lie outside the realm of building proper, any advances there will eventually have a profound influence on the working concepts of architects and engineers. There is every reason to suppose that this trend, projected into the postwar years, will have its effect on architecture proper. It is unlikely that the heavy and inexact structural systems of prewar years will be able to meet the demand for more efficient, more economical and more attractive structural forms. Nature offers the architect and engineer brilliant examples of how to meet such demands. Her construction can be a source of practical inspiration in the solution of contemporary design problems—practical because they work supremely well, contemporary because the postwar world is likely to demand far more of buildings than it ever did before.



A blade of grass defies conventional engineering concepts. Its strength is a function of its triangular cross-section.

Many devices applicable to our buildings occur repeatedly in Nature's structures. One of these is the principle of corrugation. A blade of grass, with a slenderness ratio which would frighten the average building department out of its wits, is a brilliant example of stability achieved almost wholly from folding the material into a triangular corrugation. Using a minimum of very light material, a strong yet flexible structure is achieved. In a palmetto leaf or a palm frond, the same principle is used repetitively to achieve even more impressive structures. As the size and complexity of the structure increases, there is a thickening of the leaf membrane and the addition of reinforcing ribs parallel to the corrugation. But the basic design remains the same.

* Mr. Severud's concepts of structure are drawn from practical engineering experience. His office has handled the structural design on such projects as the new \$16 million Tripler General Hospital in Hawaii, the \$22 million Rome (N. Y.) Air Depot and the Columbia Broadcasting Studios in Los Angeles.

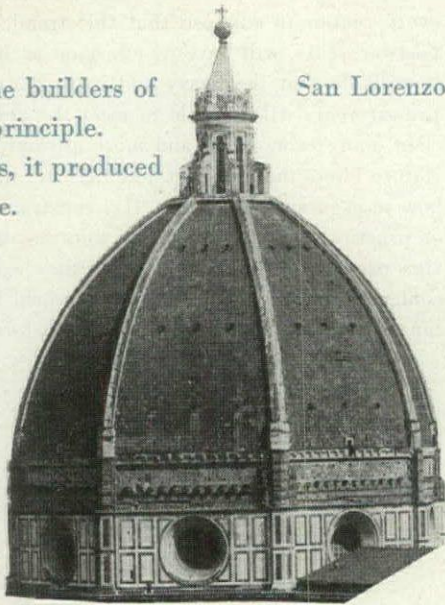
Natural Structures

There are many variations of the blade profile in Nature, straight line and curved: the curved blades are often joined edge-to-edge to form fluted shells. Here a structure of relatively enormous strength results from superimposing a curve at right angles to the corrugations. To date, our use of corrugation has been timid, largely confined to such surfacing elements as glass, sheet metal and asbestos. That it could be fruitfully applied to the solution of purely structural problems is demonstrated by the great strength developed in the familiar corrugated steel culvert.

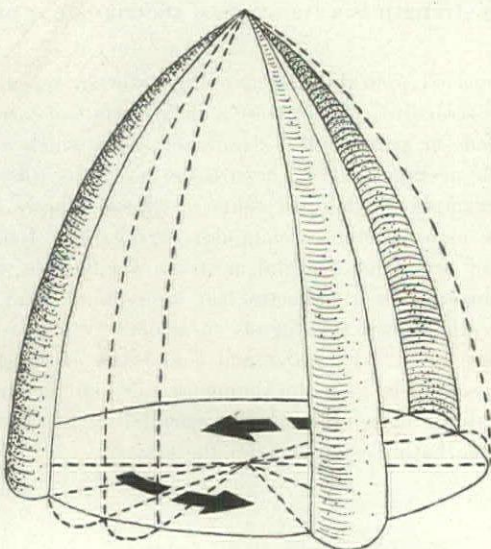
The curved blade form, when revolved around a vertical axis, yields a ribbed or fluted dome of great strength. This is what the builders of San Lorenzo in Florence did, whether or not they were aware of the origin of the principle. With modern materials, this technique would result in a most efficient dome and a greatly simplified construction process. The stability of the blade section would make it possible to erect three or four units: these, when joined at the top, would form a self-supporting and self-centering nucleus. Then, if prefabricated, the remaining units could be easily swung into place. On the other hand, if the dome were to be concrete cast in place, forms for the first three blades could be rotated for casting the rest of the units.

Intuitively, the builders of
grasped this principle.
In their hands, it produced
a ribbed dome.

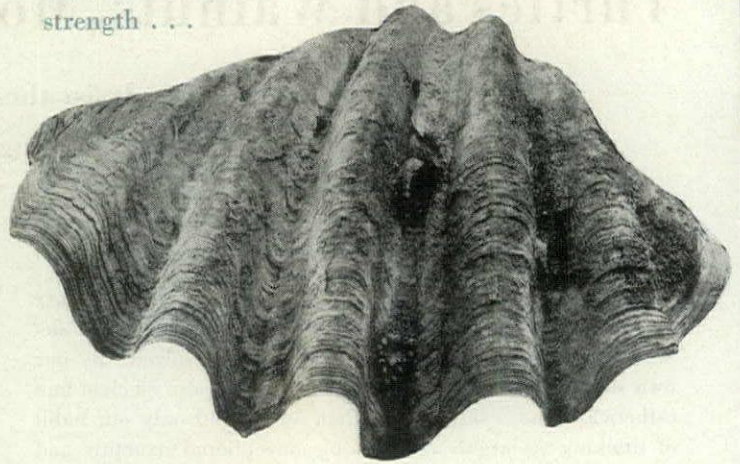
San Lorenzo



To get a modern ribbed dome, Severud revolves a
prefabricated fluted section around a vertical axis.



The fluted shell combines corrugated surface and compound curve to achieve relatively enormous strength . . .



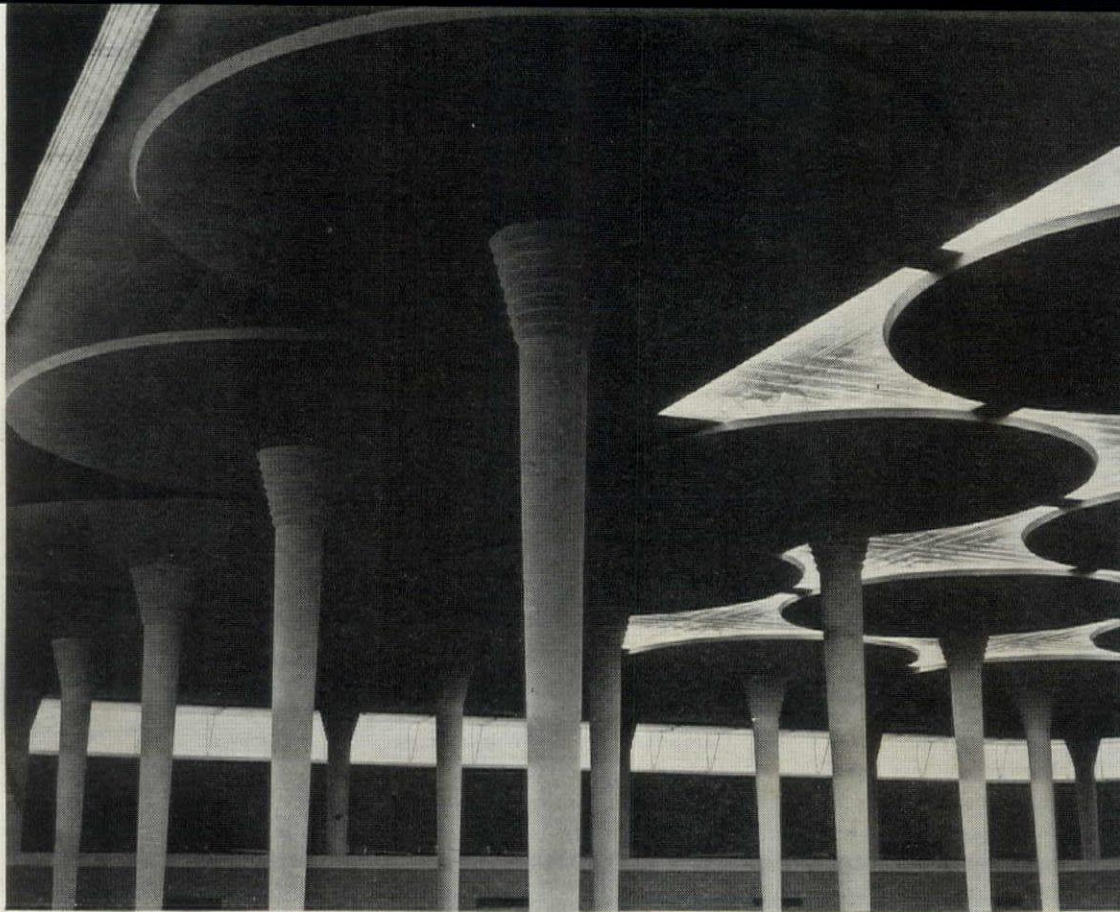
The simple and graceful form of the morning glory is also suggestive. In the first place, it too is composed of curved blade forms. These are highly specialized. The five which radiate from the center, though having the characteristic triangular cross section, function as ribs. Between these, but pointing toward the center, are five more fragile sections, also in the basic blade form. The curve at the lip of the flower provides a tension ring which prevents splitting when a bee makes a crash landing. Together these constitute an inverted cantilever shell of great strength; unequal loading is readily resisted by the design of the throat, and the whole assembly has a remarkable structural unity.

With his usual prescience, Frank Lloyd Wright has used the morning glory as a basis for his famous column in the Johnson factory in Milwaukee. Its hollow section quite consciously duplicates that of the blossom, and any whimsy attaching to its poetic origin was dispelled when it was tested before a skeptical group of engineers in 1938. In Wright's hands, however, the new form remained a column. No matter how efficient as a unit, it did not radically alter the over-all character of the structure. Where the column was used repetitively to support a concrete slab, a high degree of continuity was achieved between all elements. But where the column supported merely a glass roof and was only lightly joined to its neighbors it was reduced to the status of a beautiful tour de force.

Since columns nearly always occur repetitively, and since the morning glory itself eliminates the sharp traditional separation between vertical and horizontal members, a logical use would be to so shape and arrange the hollow caps as to alone constitute the roof. Continuity and stability would result, especially if the caps were square or polygonal. Both column and cap could be precast; construction would be further simplified if the interstices between columns were filled with inverted caps.

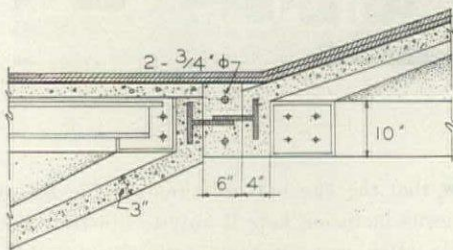
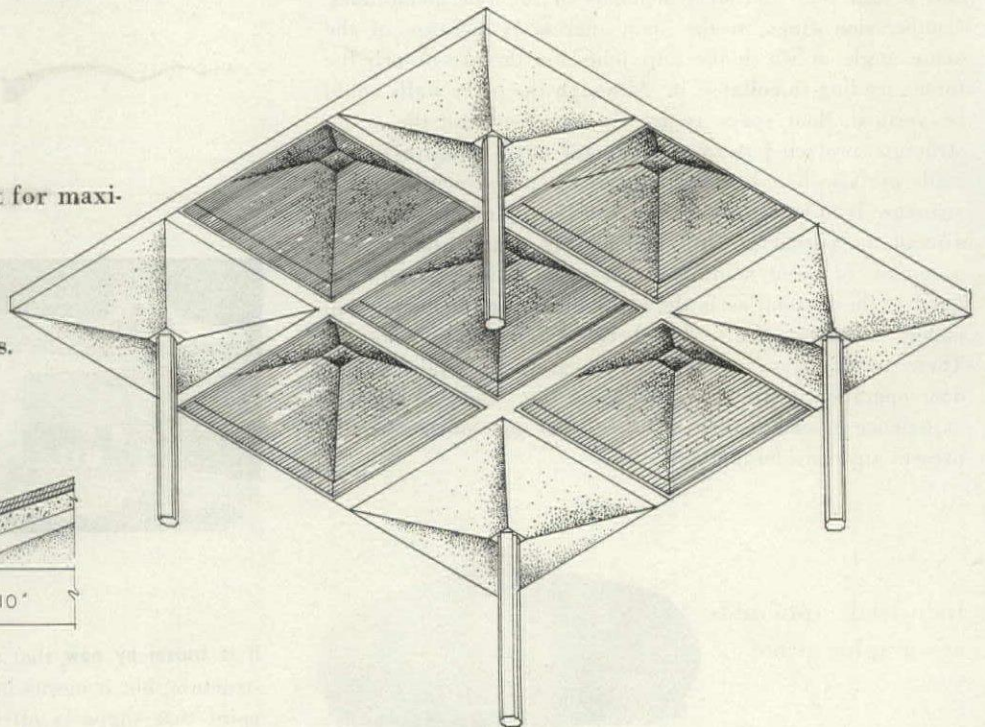
But all such uses of the morning glory form as a column should not blind us to the possibility of using it at a much larger scale to house entire operations. In many instances where

Equally beautiful
and efficient . . .

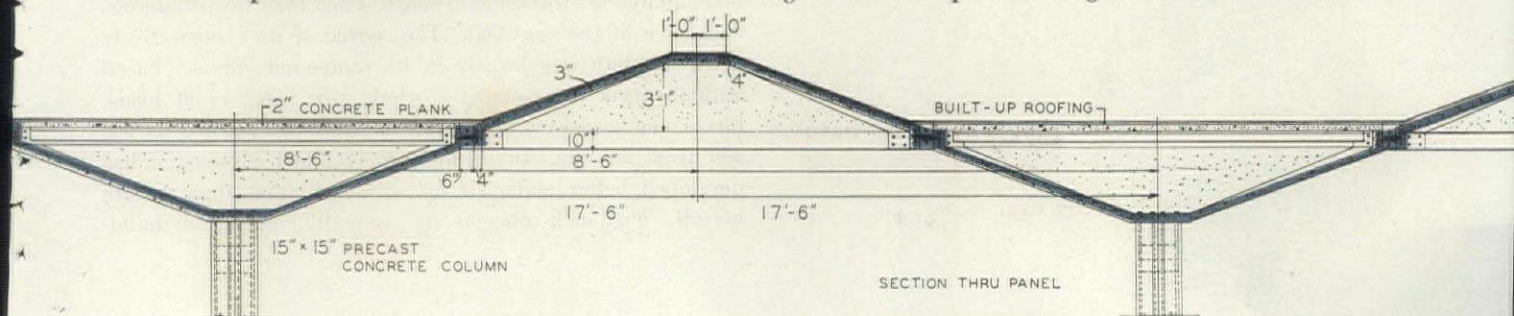


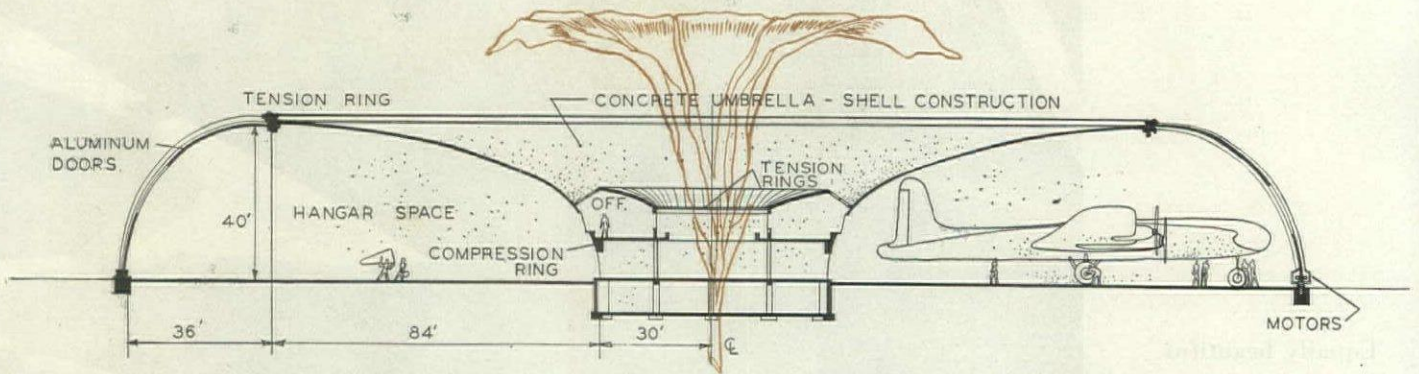
the morning glory inspired this famous column by Wright. A successful application of a natural design principle . . .

. . . Severud has rationalized it for maximum economy in this system of precast columns and caps.



Inverted caps fill the interstices between columns designed for unequal loading. William Lescaze, architect.

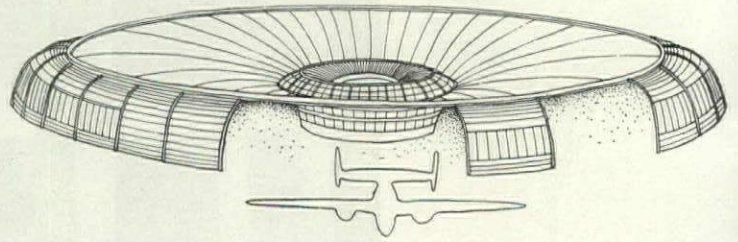




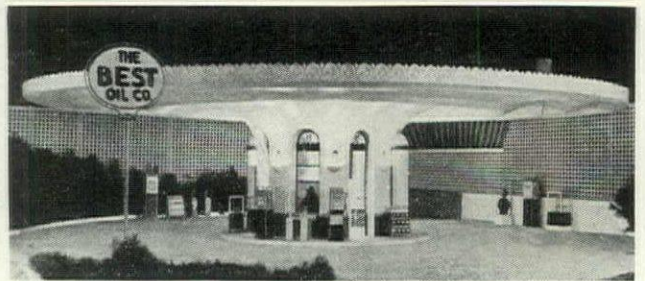
Full potentials of morning glory and curved blade are demonstrated in this hangar design by Severud.

clear span, great height and circular plan are desirable—as in a filling station or an airplane hangar, for example—the form offers almost unlimited possibilities. This was demonstrated before the war by James Workman in a 40 ft. concrete shell structure in South Carolina. Actually Workman's design was not based upon the morning glory (although he had studied it) but upon a stress analysis of concentric ripples in water. But however different the basis of his inspiration and computations, the result was a morning glory form of remarkable efficiency.

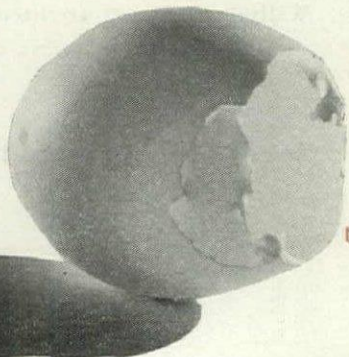
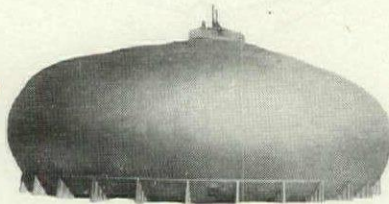
The inverted cantilever of the cup can extend almost indefinitely while the stem or throat of the morning glory form, widened and roofed over, can provide shop and office space. Tension rings at the perimeter prevent the shell from splitting and permit very thin steel members or concrete membranes. Compression rings in the stem—necessary because of the acute angle at which the cup joins the throat—absorb the forces tending to collapse it. Although the outer walls could be vertical, floor space is greatly increased and the entire structure protected against horizontal wind pressures if the walls are also based upon the curved blade principle. If the structure is to be a hangar there can be any number of doors around the perimeter, fixed and moving panels alike having a section of great stability. Instead of being a cantilever fixed at the bottom, as is the grass blade, the door and wall panels would practically float between rails top and bottom. There are of course many details which would require study: door operation, heating, roof drainage, etc. But our wartime experience in such matters indicates that none of them would present any considerable difficulty.



Although a ripple formed the basis of his design, Workman's concrete shell—40 ft. across, 2 in. thick at edge—shows the practicality of the principle.



Industrial spheroids are graphic proof...



that engineers have learned a lesson from the egg.

It is truism by now that the eggshell is a remarkable bit of structure, but it merits inclusion here if only to illustrate the point that shape is often more important than material in Nature's designs. It would be hard to imagine a material less suitable to stressed skin construction than the calciferous substance of the egg-shell. The source of its comparatively great strength lies largely in its compound curves. Faced with the task of resolving a whole new category of loads, forces and pressures, American industry has learned its lesson from the egg. In metals, concrete and plywood it has developed better materials for such structures than Nature herself. That such concepts are gradually entering the build-

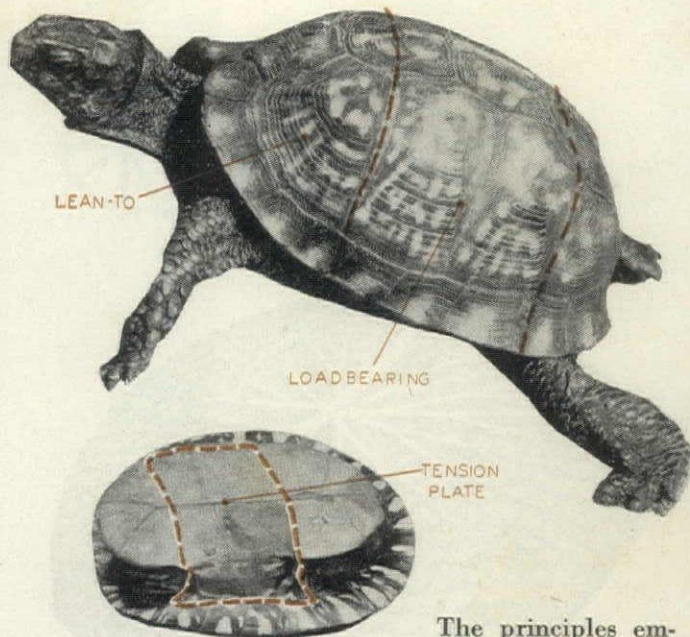
ing field is evident in the Navy's Quonset huts, in the concrete shell houses of Wallace Neff (ARCH FORUM, Feb., '43) and the steel shell houses of Buckminster Fuller (ARCH FORUM, June, '41, March, '45). It may be easy to ridicule such pioneering efforts in terms of their appearance but it is impossible to deny their structural efficiency. If simplicity and economy are any criteria, postwar architects and engineers will employ the shell form in many guises.

The turtle, moving in only half a shell, has replaced the missing half with a tension plate across his belly. This little device enormously extends the safety factor of his shelter. The middle portion of his shell, with the tension plate acting as a tie, forms the load bearing part of the structure. The ends of the shell covering head and tail are in the nature of lean-tos, resting against the main roof. Here is another principle with obvious application to building design. With very little modification it can be applied to structures such as theaters, auditoriums and arenas. In both plan and section, the turtle shell form is subject to wide variation to meet the demands of acoustics, sight lines and seating capacity. For such buildings as exhibition halls, circus tents or blimp hangars, the central tubular section could be indefinitely extended, its tension plate either in or beneath the floor. The lean-tos at the ends could be fixed or—for a hangar—mobile. In such a case, we could employ the ribbed dome again, hanging the curved blades from a central pivot so that they telescoped, or—with a flexible covering—folded accordion-wise. In either case, greater span and height could be achieved with less material than in conventional solutions to the same problem.

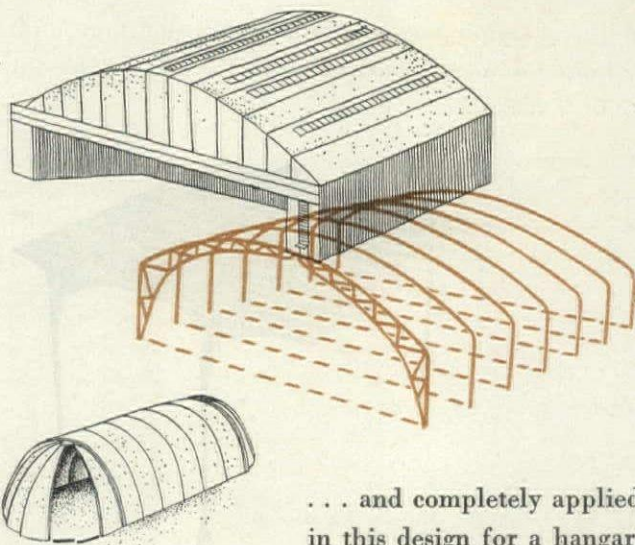
Another shell which merits scrutiny is that of the walnut. Here Nature has outdone herself. To the strength of the egg shape she has made several important additions: a much thicker skin, heavily corrugated; stiffening rings around the lips of the two halves; and two stiffening membranes internally, one on the plane of the joint, one at right angles to it. In the native Black walnut this results in an incredibly strong structure. In the English walnut the same design is evident in a more refined form: the shell is not nearly as thick and the diaphragm reduced to paper thinness, separating from the shell when ripe.

This double-diaphragm idea is something to think about: if applied to foundation design, it could yield great strength with a small amount of material. In such an application, we would use half the walnut shell, open side up, with both stiffening membranes—one on the plane of the

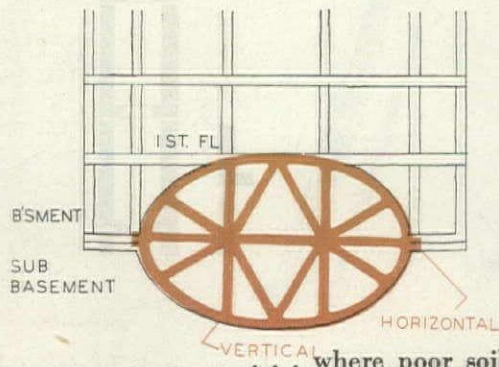
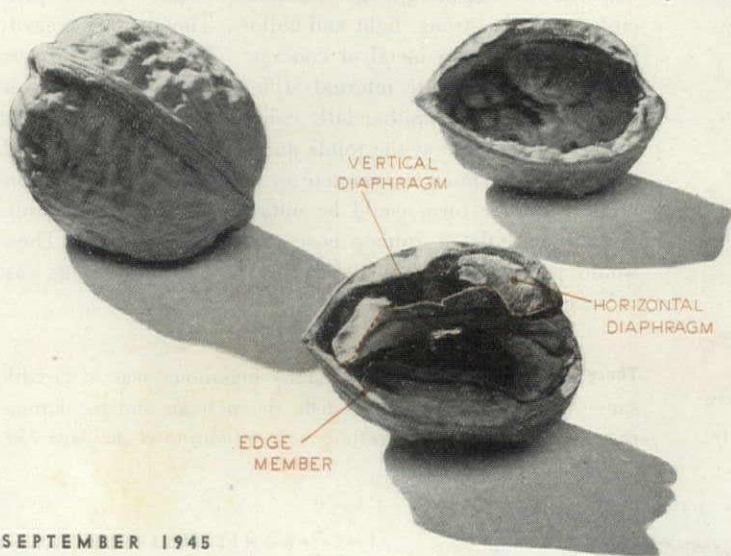
In the walnut shell, Nature has introduced two features—stiffening rings and transverse diaphragms—which increase its strength and suggest its application to heavy construction . . .



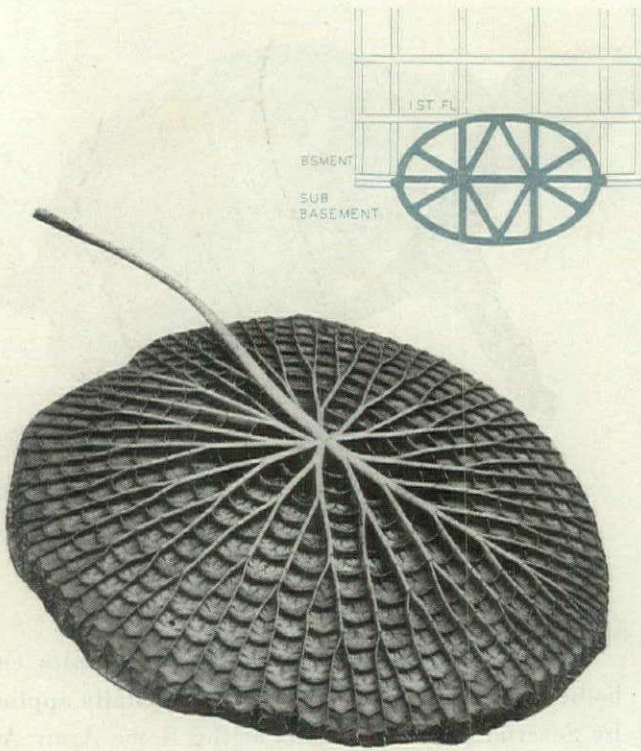
The principles embodied in the turtle shell have been partially applied by Severud in these hangars at the Rome Army Air Depot . . .



. . . and completely applied in this design for a hangar.



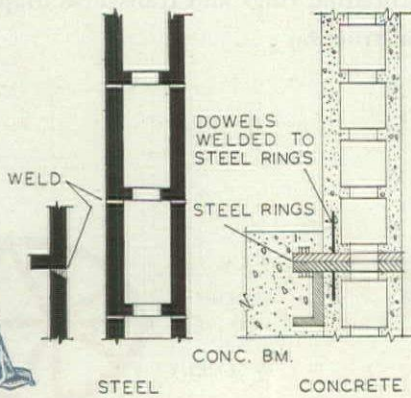
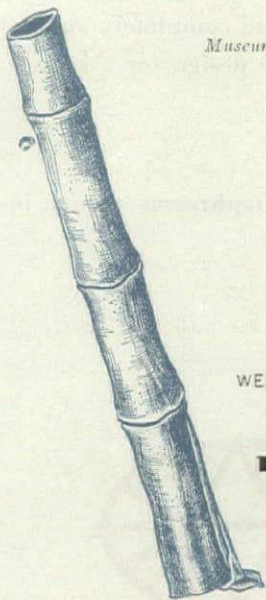
. . . where poor soil conditions make conventional foundations difficult.



The design principle of the lily pad—a system of rods and membranes in tension—has important implications for metal construction, as evidenced by this welded structure by Paul Nelson.



Museum of Modern Art



The longitudinal fibers and horizontal stiffening rings of bamboo can be easily simulated in columns.

earth's surface, the other one vertical to it. The stiffening ring around the shell's lip would be very important to such a design. It would correspond to the straight edge members already widely used in barrel roof systems. But it would have the obvious advantage of the continuity of the closed circle, which would increase the strength and rigidity of the entire assembly. The capacity of such a system would be so great that it would lend itself admirably to heavy foundations on poor soil, where almost the entire ground area is required for load distribution. Such a foundation would distribute its load as evenly as the hull of a ship afloat. Nor need it seriously interfere with conventional planning. The horizontal diaphragm would coincide with the basement floor. The vertical stiffening diaphragm need not be very heavy and could be designed so that only vertical members similar to columns would interrupt the floors they intersected. Obviously, the superstructure need not follow the foundation line: cantilever trusses in the basement story could handle any change from circular to square plan.

An equally fertile field of investigation lies in Nature's use of the rod as a stiffening member in conjunction with membranes in tension. Most leaves reveal this basic principle but none so daringly as that of the water lily. Because it is designed to float upon the water, this leaf needs a much smaller degree of stiffness than would be the case in a free-standing structure. Hence it can be much larger and in a single plane, with only the turned-up lip to serve as a tension ring. But it is apparent that this basic structural system can be curved to yield a structure of tremendous resistance to conventional loads. Indeed, Nelson in his Suspended House has not only made this adaptation but demonstrated that it can be executed in welded metal. An entirely new approach to the design of metal structures is indicated here, an approach whose more complicated engineering would result in simpler, handsomer and more effective structures.

Another form much used by Nature as an independent structural element is the tube. This is a slight over-simplification, since with characteristic economy she is seldom satisfied with single-function members. But she has employed the tube form in endless variety in both compression (bamboo) and tension (vines). Of these, the bamboo is perhaps the most notable. It conforms almost perfectly to the theoretical criterion of a column—that its effective area lie at the surface. To this end the structural material of the bamboo has been beautifully distributed and organized. Longitudinal fibers reinforce the hollow stem between the joints which act as stiffening rings. Columns designed on this principle would be strong, light and hollow. They could be easily fabricated in either metal or concrete. The bamboo form in steel would substitute internal stiffening rings for the concrete filling of the familiar lally column. These could be cast in sections, welded at the joints and fireproofed in place with one inch of vermiculite concrete or similar material. In concrete a similar form could be obtained by precasting units around an inflated rubber hose of suitable profile. These would presumably be full story height with steel rings cast in the ends for splicing.

There are, in the animal world, many ingenious uses of flexible sacs—the blowfish, the jelly fish, the pelican and the kangaroo. Here the material rather (Continued on page 158)

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COLOR STRENGTH:

Ask how colors are affected by Light—Soaps—Alkali. Be sure colors are not just on wearing surface, but go right through to back—as in Kentile.

GREASE RESISTANCE:

Ask whether grease will soften or stain the material. Tiles that are *absolutely* greaseproof are available in 17 Kentile colors (except when war shortages prevent).

MOISTURE—ALKALI:

Few floor coverings can withstand moisture and alkali but Kentile is so resistant to these destructive elements it can even be laid right on concrete in direct contact with earth.

MAINTENANCE:

Watch for these advantages:

1. Simple mopping with mild soap and water should *speedily* and *easily* remove most dirt. Occasional waxing, of course, improves the appearance of any smooth surface floor covering.
2. The material should be delivered with a factory-applied wax coating. Kentile is factory waxed as made, resulting in a coating "soaked" into the tile and easily maintained.

UNDERFOOT SAFETY:

Floors that are too smooth surfaced or do not absorb wax can be dangerously slippery. Kentile has an invisible surface granulation, so it is *never* slippery when properly waxed.

QUIET AND COMFORT:

These two factors are allied. When a floor is too hard it is both noisy and tiring. Kentile is resilient—it cushions sounds and is comfortable underfoot.

DURABILITY:

Most manufacturers claim durability. Kentile has *proved* unsurpassed durability by years of wear in such traffic-busy areas as in A & P and Woolworth stores, Rockefeller Center corridors, etc. Many 17 year old installations are still perfect.

COLORS—PATTERNS:

War conditions limit all lines, though even today hundreds of fine patterns can be created with Kentile.

Normally you should be unlimited in pattern choice. Kentile is usually offered in 26 tile sizes, each available in 44 colors. The number of patterns possible reach infinity.

ALTERABILITY:

If you ever move walls or fixtures, how much of the floor will have to be replaced? Kentile can be altered tile by tile.

ODORS:

Kentile has no odor, nothing can make it odorous, it is so close-textured it can't absorb odorous substances.

FIRE SAFETY:

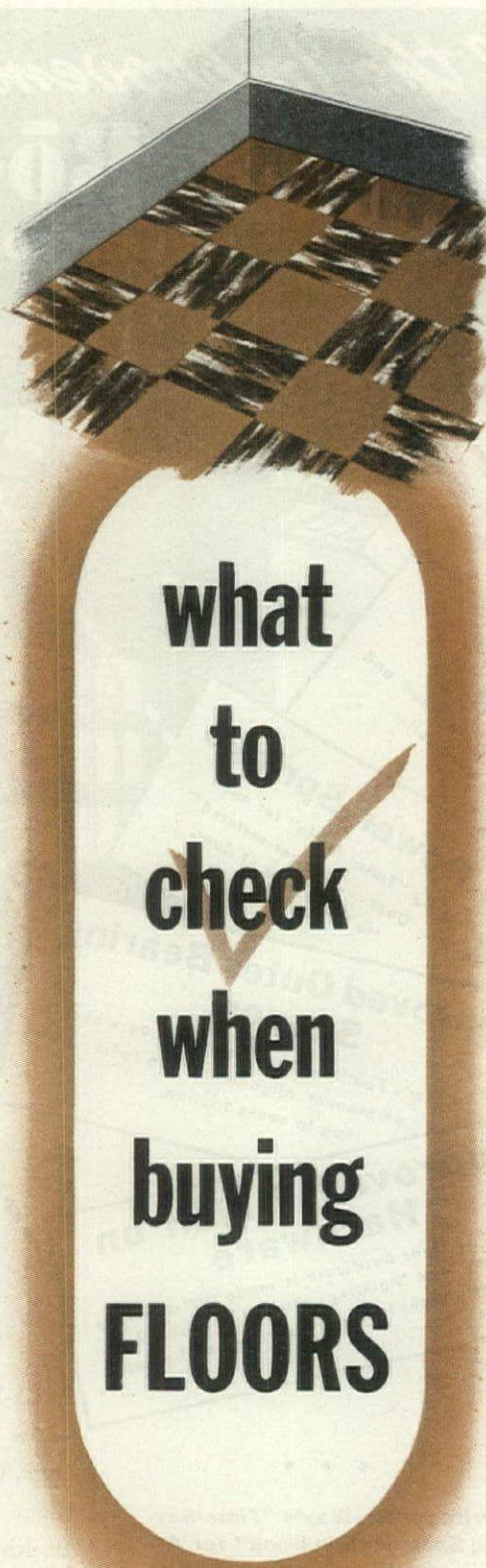
Kentile meets all requirements of every fire underwriting board in the country.

COST:

Compare. Ask your local Kentile dealer to give you an estimate on *your* floor requirements. If you don't know his name, we'll gladly send it to you. Just drop a post card to the nearest office of DAVID E. KENNEDY, INC.

Brooklyn 15, N. Y.
80 Second Avenue
(Home Office)

Chicago 2, Ill. 30 No. Michigan Ave.
Atlanta 3, Ga. 208 Bona Allen Bldg.
Cleveland 14, Ohio 1211 Nat'l Broadcasting Co. Bldg.
Boston 16, Mass. 452 Statler Bldg.
San Francisco 16, Cal. 2000 Ulloa Street
Pittsburgh 11, Pa. 614 Olympia Rd.



what
to
check
when
buying
FLOORS

Save this check list for reference
when buying flooring.

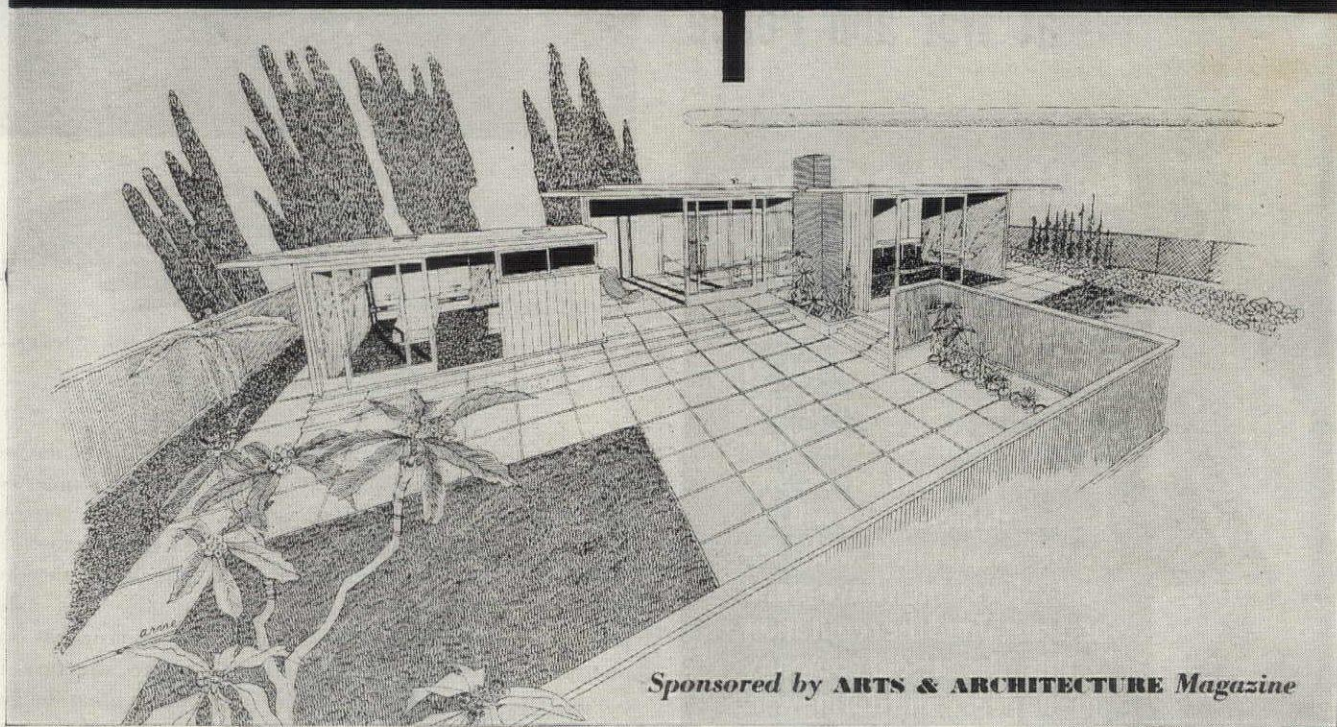
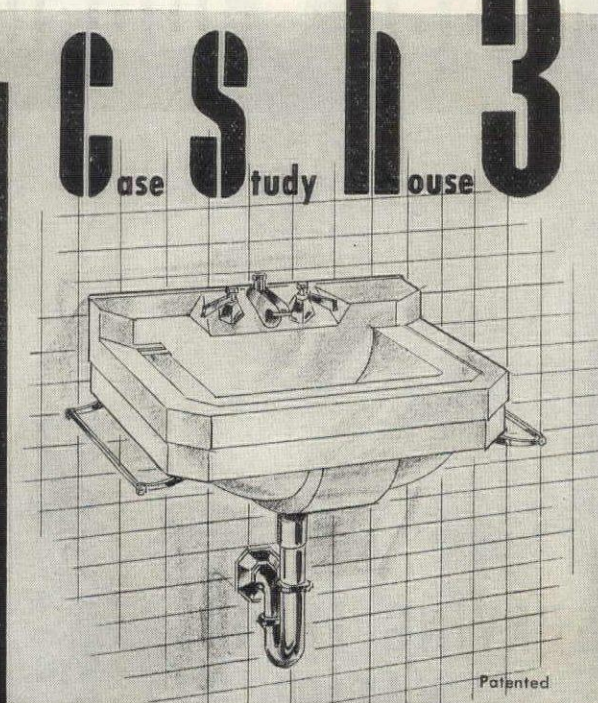
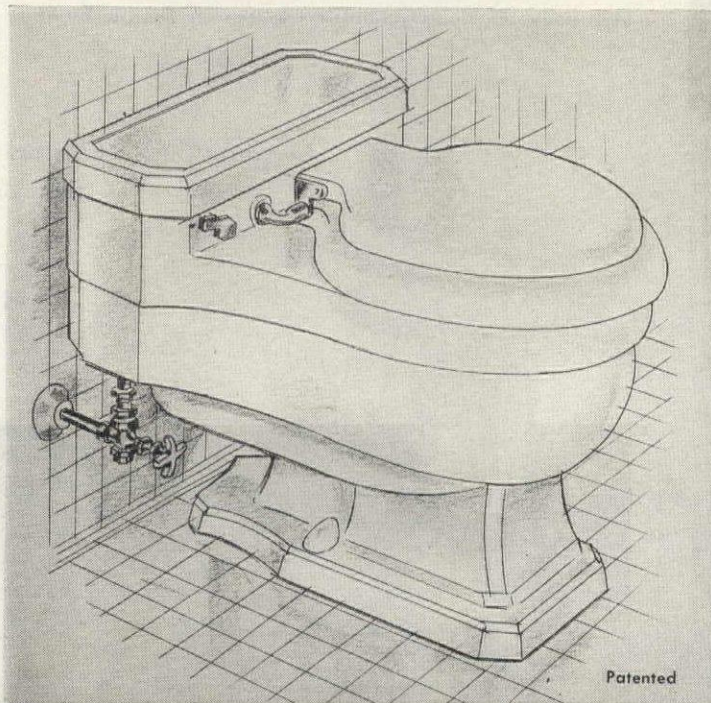
KENTILE
Asphalt Tile
Trade Mark Regd.



Case PLUMBING FIXTURES

Selected by WURSTER & BERNARDI, Architects for

Case Study House #3



Leading architects are giving special attention to the mechanical equipment of tomorrow's buildings. A minimum of care and upkeep is essential—one of many reasons why Case plumbing fixtures are so widely preferred. Case fixtures are of *vitreous china*—pleasing in appearance and easy to keep clean. Their excellent mechanical construction is an assurance of long, trouble-free service. For *Case Study House #3*, third in a series

to be constructed as soon as conditions permit, Architects Wurster and Bernardi have specified the famous "T/N" Water Closet and the Cosmette Lavatory. Beauty, utility and freedom from maintenance distinguish both fixtures.

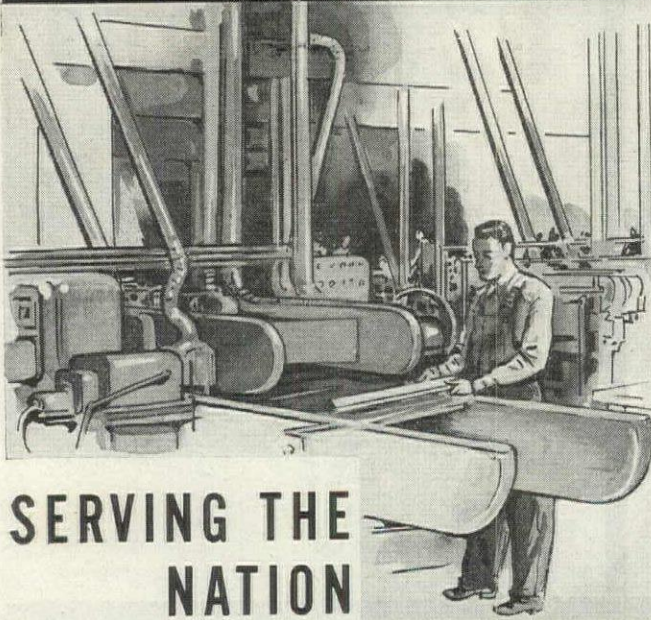
Case plumbing fixtures are distributed nationally. See your Classified Telephone Directory or write to W. A. Case & Son Mfg. Co., Buffalo 3, N. Y. Founded 1853.

TOP LEFT—Most popular of all water closets is the *Case T/N*. Modern in design, quiet in operation, non-overflow and non-siphoning. A precision-built free-standing fixture.

TOP RIGHT—Concealed front overflow, anti-splash rim, chrome finish accessories and convenient shelf are popular features of the *Cosmette* lavatory. Available also with adjustable legs.

BILT WELL WOOD WORK

REG. U. S. PAT. OFF.



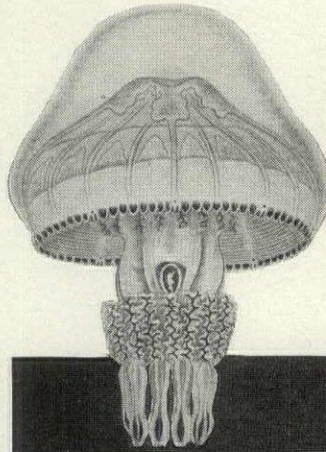
SERVING THE
NATION

at War and Peace

Natural Structures

(Continued from page 154)

than the shape is the critical factor and it must be light, strong, flexible and impervious. Until recently, we have had no material which even approximated these criteria available in large enough quantities to permit flexible buildings.



Flexibility in such natural structures as that of the jelly fish . . .



. . . can now be duplicated as is evident in inflated air supported roof of Stevens' design for the Baltimore Arena.

Now, in such materials as aluminum and magnesium we have the means: moreover, we already have air-supported roofs fabricated of them. Here a slight differential between outside and inside atmospheric pressure carries the roof. A Midwestern firm has designed and built a number of successful industrial storage tanks on this principle. And independently, Herbert H. Stevens, New York engineer, has patented a similar design for buildings. Here structure is reduced to its absolute minimum and where great height and span are required, the advantages are too obvious to require listing. Naturally many aspects of such a scheme require detailed investigation but the resources of modern technology guarantee that a safe and foolproof structure could be produced.

Tension structures like the spider web represent another whole field of natural forms with important hints for building design. Because of its simplicity and really startling efficiency, the spider web long ago attracted the attention of architects and engineers. Yet, despite the (Continued on page 162)

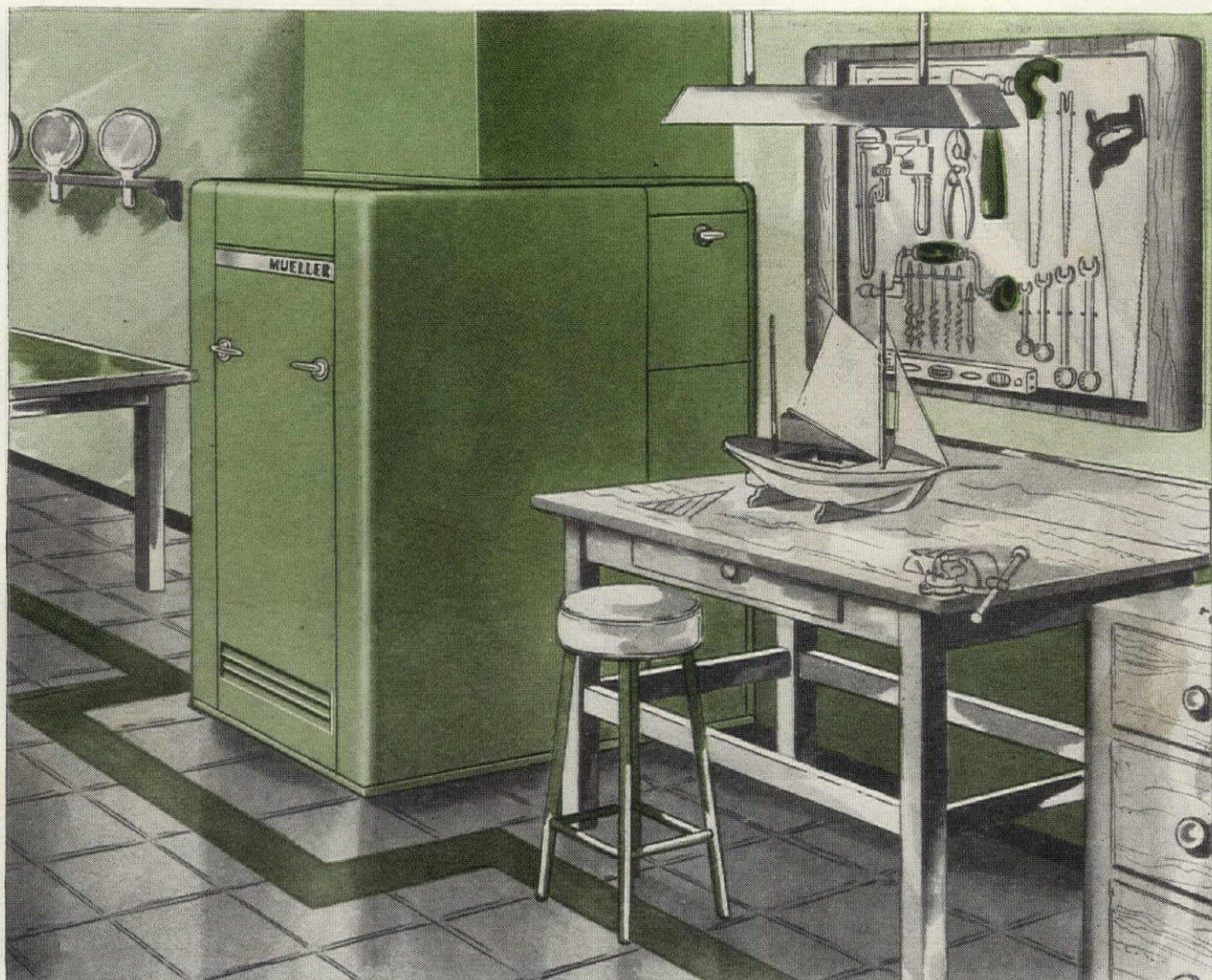
Better than ever after 79 years

In the quest for the ideal post-war home, millions of Americans will learn of Bilt-Well woodwork from their architects, contractors, and lumber dealers. They will become acquainted with the real values which have made and sustained the reputation of this 79-year-old company during peace and during war.

When Bilt-well's present war job is over, we shall be fully prepared for the task of providing the last word in woodwork for the home of tomorrow.

CARR, ADAMS & COLLIER CO.
Dubuque, Iowa.





... and that is why you are sure of delivering True Indoor Comfort when it's a Mueller Climatrol System . . .

The major "home
comfort factors"
depend upon conditioning
and handling of air

A home heating system is a "built-in feature." Its basic type is not easily changed. It is therefore important that your installations *start right* with a basic system that is not only modern today, but easily adaptable to the improvements of tomorrow.

To thousands of home-owners, that means a Climatrol system — product of Mueller, one of the oldest established concerns in the heating industry, and a leader in engineering advances toward the goal of true indoor comfort.

A Mueller Climatrol system provides the following essential "comfort factors":

- | | |
|---|--|
| 1. Temperature control. | 2. Humidity control. |
| 3. Proper movement of air. | 4. Introduction of fresh air. |
| 5. Removal of dust, pollen, and other foreign matter. | 6. Removal of bacteria conveyed on dust. |

The Climatrol line is the most complete on the market. It includes furnaces and winter air conditioners, especially designed for the chosen fuel — gas, oil, or coal — also gas-fired boilers — for old or new homes of every size, type, and price range. It pays to install Climatrol on *your* jobs. Write for bulletins. L. J. Mueller Furnace Co., 2001 W. Oklaboma Ave., Milwaukee 7, Wis.

Climatrol

REG. U. S. PAT. OFF.

B-25



SOMETHING BETTER TO SIT ON BY FIRESTONE

***VELON** for beauty ... ***FOAMEX** for comfort

Your design-and-construction problems end when you begin to use Foamex cushioning and Velon upholstery fabric.

Foamex replaces complex springs and padding with one light, easy-to-handle material—already molded to shape, or in blocks that can be quickly trimmed to any contour. It means that seats that used to sag and pack down can now stay comfortable indefinitely.

Foamex gives more comfort to your client. For each Foamex chair or sofa cushion is really millions of cushions . . . pin-point size, breathing cells of soft air and resilient foamed latex. The com-

bination conjures up so much cushioning power that the Army and Navy use Foamex seats to reduce flying fatigue, Foamex mattresses to rest the wounded.

Velon is the ideal covering for Foamex-cushioned chairs, sofas and built-in seats. It makes the smartest, lightest, brightest colors practical and wearable—not only in upholstery fabrics, but also in curtains, shades, wall trim to complete interiors of Velon (pronounced Vel-lon). You can use an almost unlimited variety of patterns, textures, weaves and styles with confidence.

Velon's non-porous threads shun dirt, grease, grime. Acids and alkalis

can't stain it. Hard-to-soil Velon instantly regains its colorful newness at a mere wipe of a cloth dampened with water or cleaning fluid. Its homogeneous threads will never snag, scuff or grow out of shape, although it has all the needed "give" for deep latex foam cushioning.

Both proved in use. Years of use in leading railroads, bus and air lines have yet to lessen the comfort of a Foamex-cushioned seat or the original beauty of Velon. Now electronic processing makes Foamex still more durable. Soon Foamex and Velon will be back from war to serve you. Will you be ready to serve your clients?



LISTEN TO THE VOICE OF FIRESTONE MONDAY EVENINGS OVER NBC

Firestone

*TRADE MARK

An Office Building that forecasts "postwar" planning

...designed around
air conditioning

Typical staircase in the Longfellow Building.
Note outlet duct above doors. Consulting Engineer
was Leslie J. Hart. General Contractors: John
McShain, Inc.



Facade of the Longfellow Building, Washington, D. C., showing novel sunshade balconies.
William Lescaze, Architect.

When William Lescaze, prominent New York architect, drew up plans for the 12-story Longfellow Building, early consideration centered upon air conditioning.

The structure was literally designed around this modern necessity, and it is a splendid "model" of what more and more postwar buildings will be like. It illustrates how unusual features—such as overhanging balconies—can be an integral part of year-round air conditioning systems.

Each of the twelve floors has an individual air conditioning unit.

These include water coils, humidifying sprays and filters. Chilled water for the coils is supplied by a Carrier centrifugal refrigerating machine located in the basement. Air is circulated throughout three zones on each floor... permitting close control of temperatures in the various exposures affected by solar radiation. In summer, temperature of 78° F. is maintained when outside readings approximate 95° F. Oil-fired steam boilers heat water circulated through the air conditioner coils during cold months. "Freon" refrigerants are used exclusively because they are

safe, dependable, non-toxic and non-explosive.

More and more architects and engineers are thinking in terms of air conditioned structures. War workers and employees in offices have experienced the advantages and benefits of air conditioning, and they'll want it as a matter of course. Naturally, they'll prefer a safe refrigerant such as "Freon". Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Delaware.



NOTE—Enlarged production facilities have increased the supply of "Freon" safe refrigerants. There is enough "Freon"—now—to meet all domestic requirements for comfort cooling and refrigeration needs.



FREON safe refrigerants

REG. U. S. PAT. OFF.

"Freon" is Kinetic's registered trade mark for its fluorine refrigerants and propellents.

CLAYTON & LAMBERT
MANUFACTURING COMPANY

have taken over
the MONARCH line of
BUILDERS FINISH HARDWARE
formerly manufactured by
MONARCH
MANUFACTURING COMPANY

Backed by the experience and facilities of the Clayton & Lambert organization, this new division will continue the production of the same quality line of Builders Hardware, including Panic Exit Devices, Sash Centers, Push and Pull Bars, Kick Plates, and associated items.

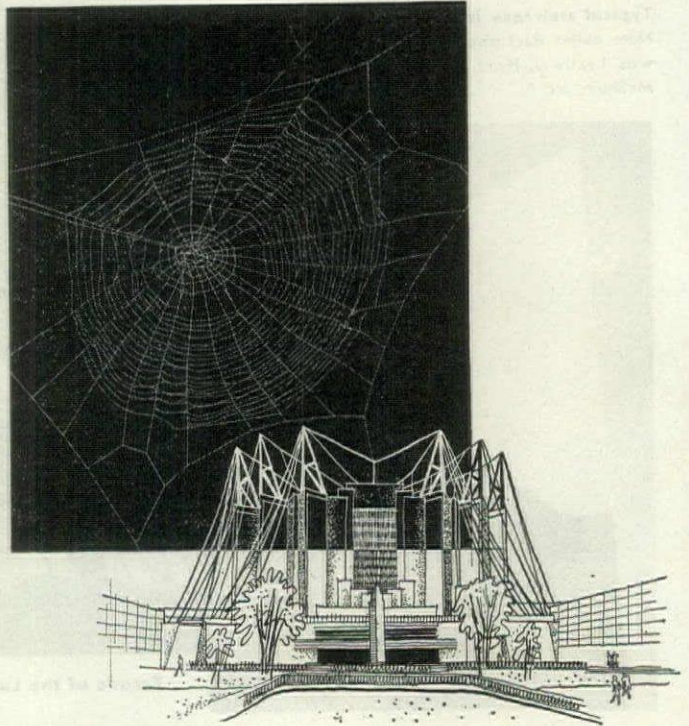
Distribution will be through jobbers, following the established policy of Clayton & Lambert.

Address inquiries to:

CLAYTON & LAMBERT MFG. CO.
Monarch Hardware Division
2525 Hart Avenue • Detroit 14, Michigan

Natural Structures
(Continued from page 158)

success of the principle in bridge design, few American buildings have employed the principle. The first and indeed only significant application occurred at the Century of Progress, where the Chicago architects E. H. Bennett, H. Burnham and J. A. Holabird employed the principle in their Travel and Transport Building (ARCH FORUM, Oct., '31). Also during the Thirties projects like Buckminster Fuller's Dymaxion House (ARCH FORUM, March, '32) and Simon Breines' prize-winning design for the Palace of the Soviets served to popularize the case for suspension structures. Little came of such projects, but this was due more to the general level of the building field than to any weakness in the principle.



The Transport Building at the Chicago Fair proved that the principle of the spider web is readily applicable to building design.

The examples cited above scarcely scratch the surface of Nature's reservoir of design solutions: but they serve at least to indicate its richness and variety. That we have already begun to tap this reservoir is clear from such familiar terms as "mushroom columns," "tree form cantilevers" and "shell structures." This trend, however, cannot rest upon mere intuition: to develop, it must be squarely based upon scientific investigation. Thus it is inconvenient to live and work on surfaces which are not flat and level, and in modern life it is often absolutely necessary to superimpose one such surface on top of another. We cannot, therefore, completely abandon right angles and straight lines in favor of Nature's curves. This fact alone would prevent any romantic attempts to slavishly mimic Nature's designs. What we can and should do is to understand that her use of curves is merely the expression of a principle of structural continuity: and this latter quality is what distinguishes her designs. We should study her principles, not attempt to copy her shapes. These are rich and bountiful, displaying everywhere the means whereby architects and engineers can achieve beautifully efficient form.



FOR YOUR
Masterpiece
 IN BUILDING DESIGN

Truscon Heavy Double-Hung Steel Windows

Truscon Series 145 Heavy Double-Hung Windows are designed especially for the modern treatment of large openings. The development of this heavy double-hung steel window culminates years of experience in the manufacture of plate type and tubular type double-hung windows. It incorporates the best features of both windows. This window is designed for either conventional counterweights or spring balances to meet particular requirements.

The sash stiles and rails are of tubular construction which assures strength and rigidity, yet maintaining the grace and appearance of a molded sash design. Slip-in glazing beads hold glass in place and eliminate unsightly screws.

Non-ferrous weatherstripping at all four sides of the sash assures minimum infiltration of air. Weight balance chains are concealed. The design of staff bead and frame gives ample rebate for screen and storm sash, and insures proper provision for all types of window cleaning bolts.

New-billet steel, electro galvanized, combined with bonderizing and baked-on prime coat of paint, assure long life and satisfaction.

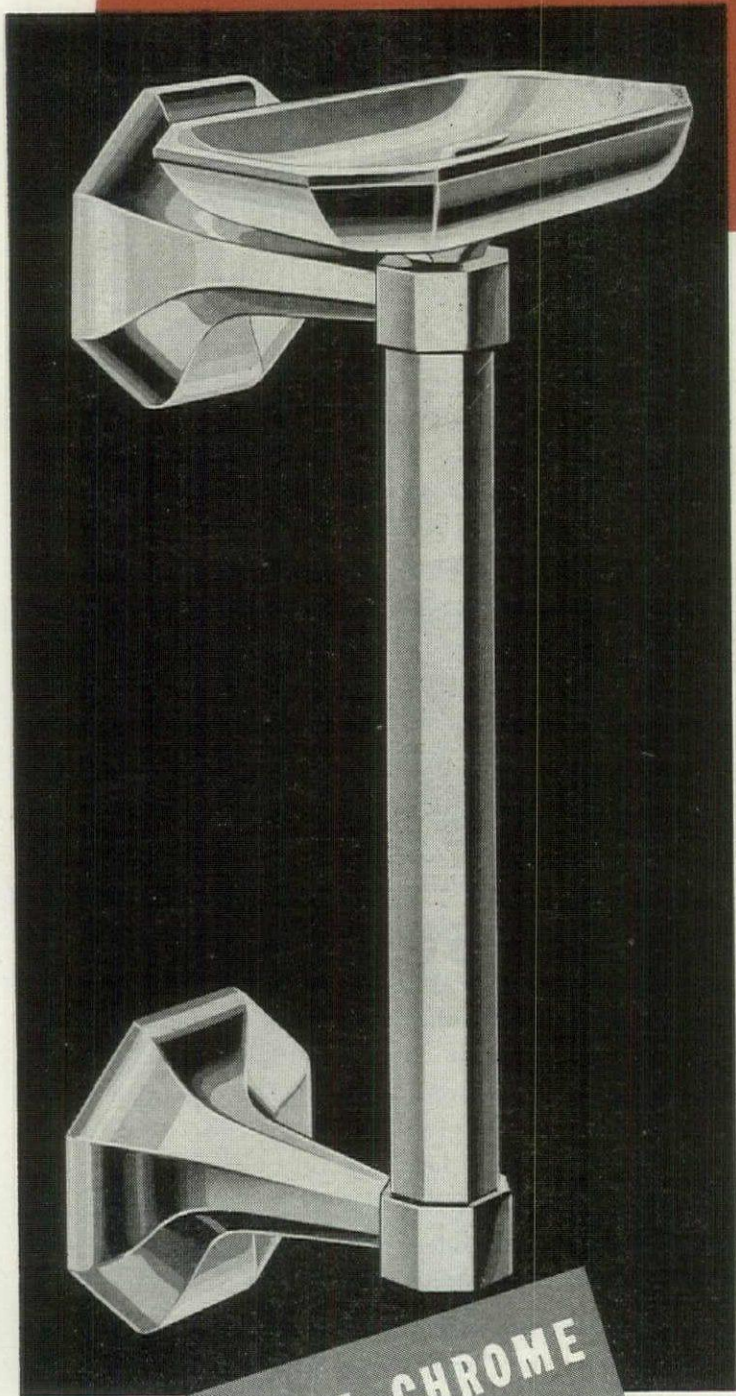
See Truscon's Steel Window Section appearing in the 1945 "Sweet's Architectural File." Request a Truscon window engineer to assist you with your postwar projects.



TRUSCON
Steel Company
 YOUNGSTOWN 1, OHIO
 Subsidiary of Republic Steel Corporation

Brilliant, NEW DESIGNS

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**GUARANTEED
FOR LIFE!**

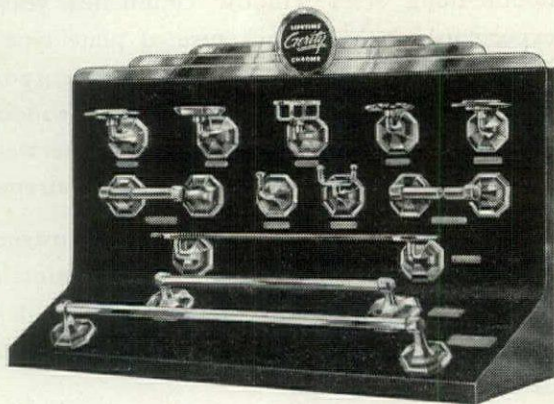


Gerity is ready! During the war we have developed, in cooperation with some of America's foremost designers, complete lines of beautiful new chromeware fixtures for use in baths and kitchens. Architects, builders and dealers all tell us these are the finest designs they have ever seen.

Furthermore, Gerity developments in plating now permit us to place an unconditional lifetime guarantee on every piece of Gerity household chromeware. *They will not break, crack, peel, check or tarnish.*

Another point! There is never any difficulty in "matching up" Gerity chromeware. Styling and color do not vary.

To Dealers—Gerity Helps You Sell
—with the finest wall, counter and window displays, brilliant modern packaging, dealer helps and strong trade and national advertising which keeps Gerity products moving.



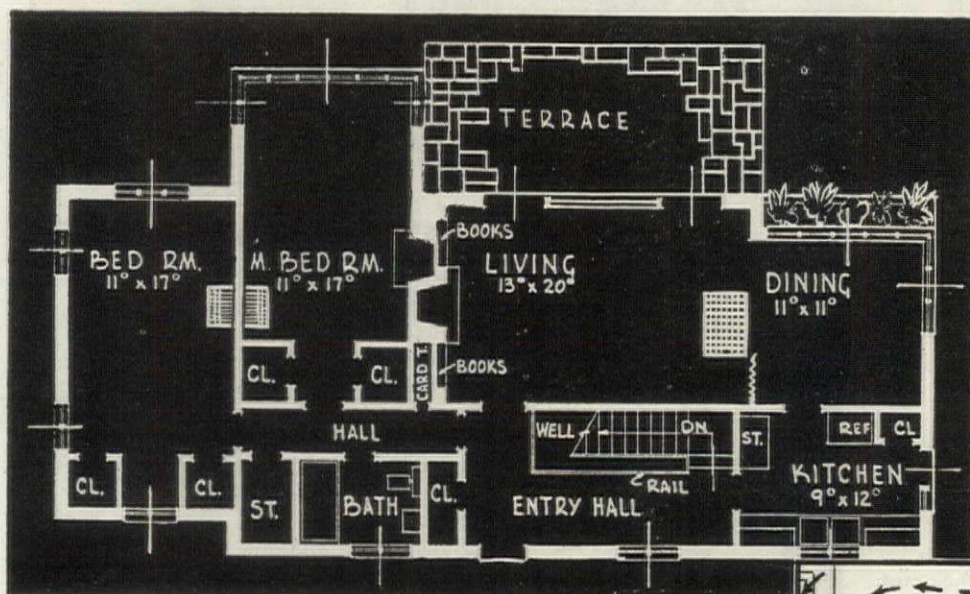
LIFETIME CHROME
by

Gerity

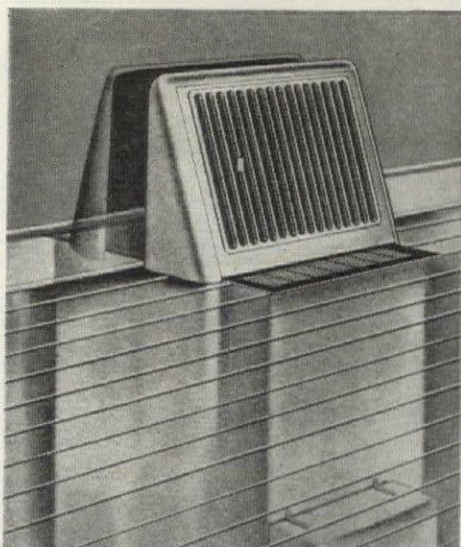
If you have not already placed your order with us, write today on your business letterhead for the complete Gerity Lifetime Chrome catalog and prices. We have every reason to believe that we will be one of the first in production on this type of merchandise. Buy now and cash in on the tremendous building activity which is coming.

GERITY-ADRIAN MFG. CORP.
ADRIAN, MICHIGAN

You May Give Your Skill, Your Ideas, A Wider Opportunity USING COLEMAN FLOOR FURNACE HEATING

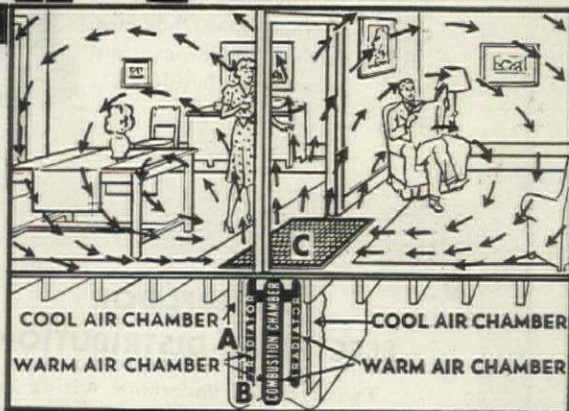


HERE'S A GRAND DESIGN! It's the June, 1945, Practical Miracle Design of Practical Builder—created by K. Whitney Dalzell. We have adapted it to show how perfectly the Coleman Floor Furnace can fit in with the ideas of masters of "livability," like Mr. Dalzell. Coleman Furnaces help you get more livability into your houses, especially where space is a problem, because Coleman sits in the floor with only the register at floor level—no wasted space. Each floor furnace is an independent automatic heating unit. Single or multiple installations are possible—a floor-furnace "battery" provides the perfect "area" heating.



← WHAT IT IS — WHAT IT DOES →

This "cutaway house" shows how a Coleman Floor Furnace is installed—it is an independent automatic heating unit, set in the floor, (not above it and not in the basement.) Floor-level air is drawn down through cool-air chamber (A); thoroughly heated in warm-air chamber (B); sent out through 78% open register (C) at top.



"WARM-FLOOR" COMFORT . . .

Coleman features, including exclusive streamlined bottom, 78% open register, large air chambers, speed warm-air flow and result in unusual warmth at floor level—a vital factor in the comfort of homes!

HOW A DUAL-WALL MODEL IS INSTALLED.

Coleman Floor Furnaces, in gas and oil models, are available with dual-wall head to fit under a wall and thus supply heat to either or both rooms or two sections of a home. "Phantom-floor" illustration, above, shows simplicity of dual-wall installation. Drawing indicates gas model. Flat-register models available for gas, oil or LP gas.

ANSWERS BUILDERS' PLEA FOR SERVICE-FREE, EASY-TO-INSTALL "PACKAGED" HEATING

Coleman Floor Furnaces come in one complete crated "package," easy to install. Sizes range from 25,000 to 70,000 BTU input per hour (or their equivalents). Advanced, simplified designs make for minimum service. Gas and Butane models have AGA seal of approval. Oil models listed by Underwriters' Laboratories. Find out more about these and other advantages, which are winning the interest of architects all over America—and who, more and more, are specifying Coleman Floor Furnaces in their designs. Write now, to The Coleman Company, Inc., Dept. AF-548, Wichita 1, Kansas.

THE COLEMAN COMPANY, INC. • Wichita 1 • Philadelphia 8 • Los Angeles 54 • Toronto, Canada

AUTOMATIC

Coleman

HEATING

G-E Wiring Material News

G-E WIRING DEVICES

For All Types of Buildings



Your clients are sure to be pleased with G-E Wiring Devices. They are neat looking, have high quality and will give long service. The line is complete including switches, outlets, plates, lampholders, combination devices, etc. Specify these devices for wiring systems in homes, factory buildings and commercial buildings.

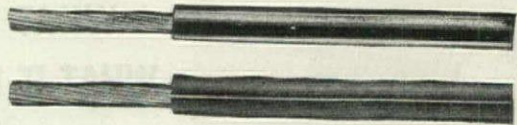


FLAMENOL*

Thermo-plastic Building Wire

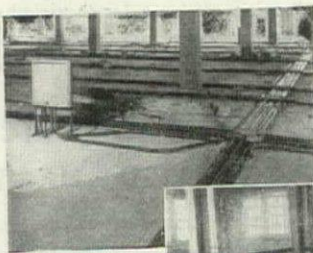
Here is a small diameter building wire developed before the war that is ideal for complete wiring installations. It is available in sizes 14 to 2,000,000 CM in two types: Type T (formerly Type SN) for general purpose wiring and Type TW (formerly Type SNW) for wiring in wet locations. This wire has high quality, long life, is flame retarding and resistant to oils, acids, etc. Type TW insulation, in addition, has low moisture absorption.

*Reg. U.S. Pat. Off

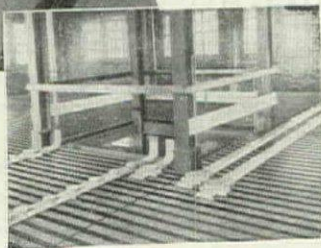


UNDERFLOOR ELECTRICAL DISTRIBUTION

Two types of underfloor wiring are offered by General Electric. Both give great electrical flexibility to factories, stores, offices, etc. Electrical outlets can be preset or added later, as needed:



Specify G-E Fiberduct with wood and masonry type construction

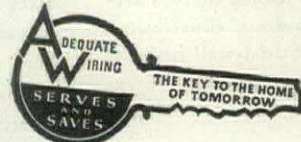


Specify G-E Q-Floor Wiring with Roberton Cellular Q-Floors

THE HOME OF TOMORROW



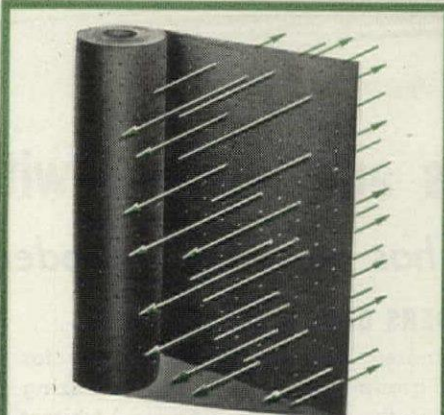
A. Wilson Barstow, merchandising manager of the New England Power System, says, "The home of tomorrow can only be as modern as its electric wiring system. Plenty of circuits and outlets should be installed so that the fullest use can be made of new electric facilities."



BUY WAR BONDS AND HOLD THEM

GENERAL ELECTRIC

WHAT'S
DIFFERENT
HERE?



Pin-point perforations form "Inlet" and "Outlet" valves...vapor escapes through perforations and helps prevent roofs from blistering, buckling.

● Here's a smooth surfaced roof—built like thousands of other smooth surfaced jobs—but absolutely blister-free! Why? Because it's made with Ruberoid Perforated Air-Vent Felt*, the roofing that halts blister troubles.

Patented Air-Vent Felt has pin-point perforations — punched alternately from top and bottom — that form "Inlet" and "Outlet" valves. When Air-Vent is laid, the air or vapor below is forced out through these tiny "Outlet" valves. At the same time, asphalt seeps through the

"Inlet" valves giving a better bond between the layers of felt. As a result Air-Vent adheres to the mopped surface much better than ordinary felt, and once down it stays put! No blister problems when there are no air bubbles to expand and lift the felt from below.

Ruberoid Air-Vent Felts are available in both Asphalt and Asbestos types — both proved in practical performance. Ask your Approved Ruberoid Contractor, or write for full specifications.

*PAT. NO. 2096784

The RUBEROID Co., Executive Offices: 500 Fifth Avenue, New York 18, N. Y.
ASPHALT AND ASBESTOS BUILDING MATERIALS . . . THERMAL INSULATIONS

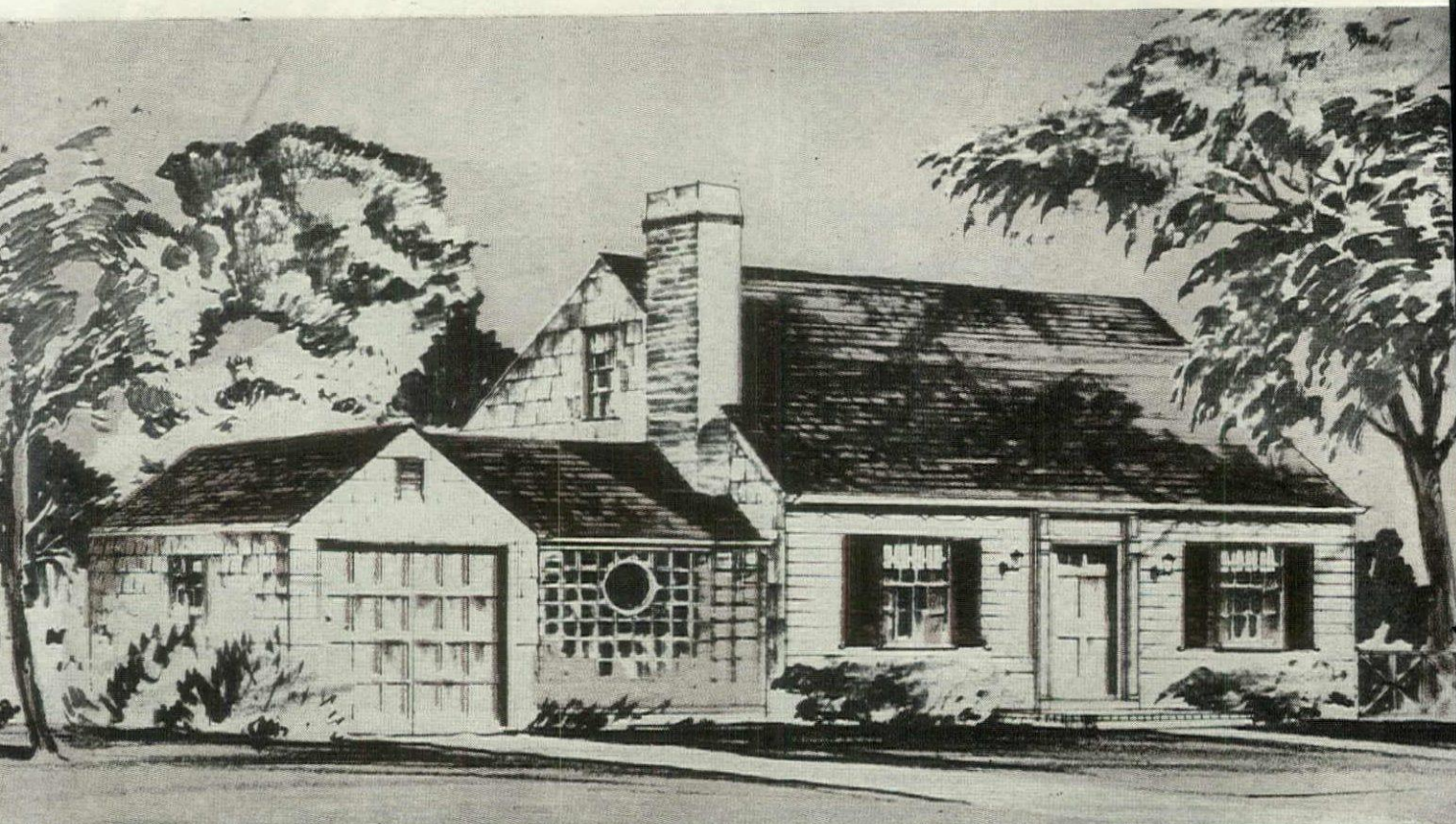
RUBEROID

PERFORATED

AIR-VENT FELT

Complete PREFABRICATION

BROOKLYN • NEW YORK • PEMBERTON • WASHINGTON • CONWAY •



Designed by McMurray and Schmidlin, Architects

We are preparing to serve Architects and Builders with
The building of 25,000 prefabricated homes has proven that modern

FOR ARCHITECTS AND COMMUNITY PLANNERS

For Architects and Community Planners desiring mass-production of housing, we are equipped to estimate on Panels or complete Units for volume orders. We can re-size off-module designs to standard modular sizes for quantity production.

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For Large Scale Operative Builders panelized modular design principle permits great flexibility of arrangement and style. Savings in time permit more extensive operations and more rapid turn-over of construction funds. Lower costs are inherent in highly developed prefabricating systems.

FOR BUILDERS OF LIMITED VOLUME

For Builders of Limited Volume the opportunity for several builders to group together — each specializing in a desirable model, the group retaining an Architect or Community Planner to correlate designs, arrangement and color scheme — offers a practical method of competing with the large-scale operator.

FOR REAL ESTATE AND FINANCING AGENCIES

For Real Estate Brokers, Mortgage Holders, Insurance Companies and other large-scale Equity Holders, highly-standardized construction and specifications assure more uniform quality with lower costs. Low-

PEMBERTON LUMBER & MILLWORK CORP. &

JOHN A. JOHNSON

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UNITS OF THE JOHNSON ORGANIZATION:

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FACILITIES for Architects

JOHNSON CITY • ATLANTA • AND AFFILIATED PLANTS



Designed for the Small Monthly House Club, Inc., by Chapman and Evans, Architects

mass-produced Panels and other Units in large volume ...
design, high speed and large savings will be assured progressive builders

ered costs allow a larger margin of safety for such loans.

LUMBER DEALERS & WOOD-WORKING MILLS

For Lumber Dealers and owners of Wood-Working Mills, large-scale operations and special services to their clients are made possible. High-speed construction also results in shorter "overhead" periods and more prompt collection of accounts.

PREFABRICATION ENLISTS COOPERATION

Large resources of capital, of experience, of equipment, and of local contacts are necessary to the maximum efficiency of a giant new industry that has

demonstrated its ability under difficult war-conditions. We have found it both advantageous and agreeable to cooperate with established units in the building industry and expect to keep many mills busy in the post-war era by adhering to this policy.

➤ IMPORTANT: Our ability to serve you is based on a check-up with you of local costs. Send us your favorite house design with a cost-break-down for local conditions, sub-contract items, etc., and we will quote you on panels, partitions and other units or entire "shell" of house. 1. F.O.B. nearest mill. 2. "Shell" transported to site. Or, 3. "Shell" transported and erected on your foundation. Write or wire for complete details.

JOHNSON PLANTS THROUGHOUT THE EAST

CONTRACTING CORP.

"A FIRM FOUNDATION SINCE 1896"

Headquarters: 270 Forty-first St., Brooklyn 32, N. Y.



Checker

COAT and HAT RACKS



**Now Available
in Steel**

**Complete
Checkrooms**

The same lifetime (PETERSON 1-check System) Checkroom Equipment that has always been standard in all fine hotels, institutions and public buildings, re-engineered strengthened, streamlined and available in more beautiful modern finishes.

Space-saving, sanitary, keeps clothes "in press". Portable and stationary units or in lengths to fit.



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Bulletin
No. G-19

VOGEL-PETERSON CO.

"The Checkroom People"

624 S. Michigan Ave., Chicago 5, Ill.



THE POST-WAR

PRECISION-BUILT HOMES PROGRAM

is now ready

There is a place in this plan for

- the architect
- the contractor
- the operative builder
- the lumber dealer
- the realtor
- the lending institution
- the insurance company
- local labor

Kindly write on your letterhead for the details—specifying your interest. Find out what has been accomplished through ten years of intensive research—originated by The Housing Division of Homasote Company and now continued by this corporation.

PRECISION-BUILT HOMES CORPORATION

TRENTON 3, NEW JERSEY

ANNOUNCEMENTS

COURSES

The schedule for the Town Hall Workshop on "Better Homes for Better Living," arranged in cooperation with the Citizens' Housing Council of New York, given at Town Hall, Wednesday evenings from 8:15—10:00 is as follows:

October 17—Housing is Your Business—Stanley M. Isaacs, City Councilman.

October 24—Can We Meet the Total Need? Should Government Build Homes for the Low-Income Group?—Leon H. Keyserling, General Counselor, NHA.

October 31—Do Equal Rights Extend to Housing—The Race Question—Lester B. Granger, National Urban League.

November 7—So You're Going to Buy a Home!—Folk Lore or Folk Wisdom—John P. Dean, sociologist, Queens College.

November 14—The Government Aids the Home Owner—What to Expect of FHA and HOLC and How to Deal with Them—Charles Abrams, lecturer, New School for Social Research.

November 28—New Design for Living—A Sound Home in a Sound Neighborhood—William Lescaze, member of the Architects' Advisory Committee to the Federal Public Housing Authority.

December 5—Tomorrow's Houses—How Modern Planning and Materials Can Improve the House Interior—Henry Wright, managing editor, THE ARCHITECTURAL FORUM.

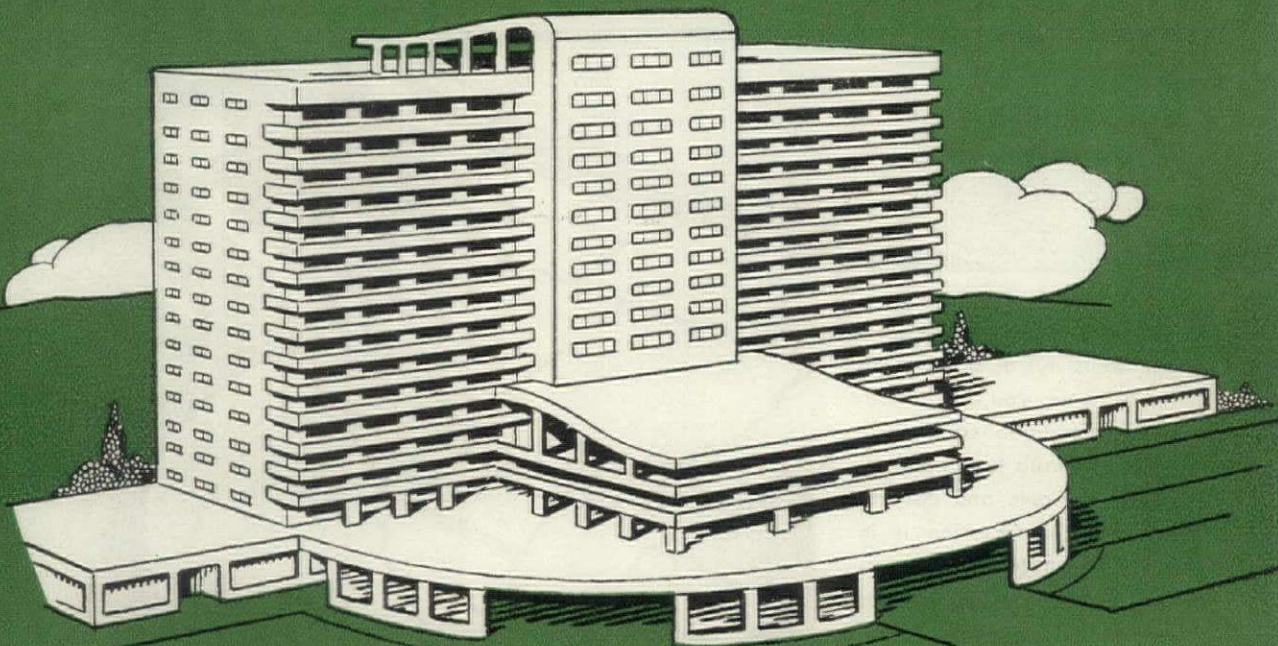
December 12—Where Do We Go from Here?—Communities are What You Make Them—A Panel Discussion—Edwin S. Burdell, director, Cooper Union; Harold S. Buttenheim, president, Citizens' Housing Council of N. Y. and editor of the AMERICAN CITY, and possibly Mark Starr.

Marion G. Greenberg, Editor, CHC HOUSING NEWS is the chairman and the registration fee is \$5.00.

The Massachusetts Institute of Technology announces that its ninth annual Conference on City and Regional Planning will be held from October 22 to November 2, 1945. It will be open to men and women who have had practical experience in planning or in a related professional field, including planning technicians, members of state or municipal planning commissions and housing authorities, and staff members of engineering or public works departments. Seminars will cover principles and techniques of planning legislation and administration. The staff for the Conference will consist of Frederick J. Adams, Professor of City Planning, Flavel Shurtleff, Associate Professor of Planning Legislation and Administration; Homer Hoyt, Associate Professor of Land Economics; and Roland B. Greeley, Assistant Professor of Regional Planning. The fee for the two-weeks' Conference is \$50.00. Applications should be sent to Professor Frederick J. Adams, Division of City Planning, Massachusetts Institute of Technology, Cambridge 39, Mass., not later than October 1, 1945. Following the Conference, a special ten-week training course will be held during which projects will be developed in the drafting room, supplemented by library research and roundtable discussions.

(Continued on page 174)

How Up-to-Date are you on ALUMINUM?



For the great postwar building projects all over the country, aluminum, through its new battle-tested alloys offers increased freedom of design combining beauty and lightness with great structural strength.

REYNOLDS ALLOYS GIVE GREATER STRENGTH... REDUCE LOAD ON WALLS AND FOUNDATIONS

ALUMINUM now takes its place as a modern structural metal. Thanks to R303* and other great Reynolds alloys, the advanced architectural ideas of today can be transformed into the structures of tomorrow.

Post-war projects—housing, office buildings, hospitals, stores—all will benefit through these new lightweight, high-strength alloys developed by Reynolds to meet the needs of war.

See catalog in Sweet's or write for Catalog No. 104, "Reynolds Aluminum. Its Important Role in Architecture." *Consider aluminum . . . consult Reynolds.* Reynolds Metals Company, 2528 South Third Street, Louisville 1, Kentucky.

Keep your dollars fighting—Buy More War Bonds

*To aluminum's recognized beauty R303 now adds greater strength. Reynolds famous aircraft alloy, R303, has a typical tensile strength in certain forms of better than 80,000 p.s.i. Developed primarily for extrusion and forging stock, it is available also in sheet form. High corrosion-resistance. Special Bulletin 54-A available upon request.



REYNOLDS

The Great New Source of

ALUMINUM

INGOT • SHEET • SHAPES • WIRE • ROD • BAR • TUBING • PARTS • FORGINGS • CASTINGS • FOIL • POWDER

WHAT ABOUT TELEPHONE OUTLETS?

You'll certainly want the telephone wires out of sight in the post-war homes you build or remodel. Conduit to carry them between the walls to handy outlets is inexpensive and easy to install while construction is in progress. Your telephone company will help you provide for adequate but economical layouts right on your plans.

**BELL
TELEPHONE
SYSTEM**



Why JOHNSON OIL BURNERS



*bring
Heating Costs down*

1. Because they use the lowest priced fuel.
2. Because they burn it *completely*.
3. Because perfect controls provide the most efficient firing for your particular conditions and needs.
4. Because Johnson boiler-burner units make gainful use of an exceptionally high percentage of the heat generated in combustion.
5. Because they are engineered to *stay* efficient for years.

That's the story in a nutshell. Ask your Heating Engineer. He can tell you that Johnson Burners stand up under the hardest usage you can give them whether you are heating a hotel or a private home. Get a Johnson Burner if you want lower heating bills.

...Johnson Oil Burners...
S. T. JOHNSON CO.
940 Arlington Ave., Oakland 8, Calif.
401 No. Broad St., Philadelphia 8, Pa.



WOOD Can Be Made a BETTER CONSTRUCTION MATERIAL



Wood preservation is a "Must" for new homes and buildings; it more than doubles the life and service of wood. It saves its small cost many times over in preventing construction defects and avoiding repairs and replacements.

WOODTOX, a wood preservative and moisture repellent, embodies the latest advances in the wood preservation field. It can be easily applied by any lumber dealer or contractor. It adds only insignificantly to the cost of construction. It protects against decay and termite attack; it controls warping and shrinking and dimensional changes. It is colorless and an aid in further finishing of the wood.

SEND FOR BULLETINS . . . sent to architects, building contractors, lumber dealers and property owners . . . fully describing WOOD-TOX and other of our standard wood preservatives and moisture repellents.

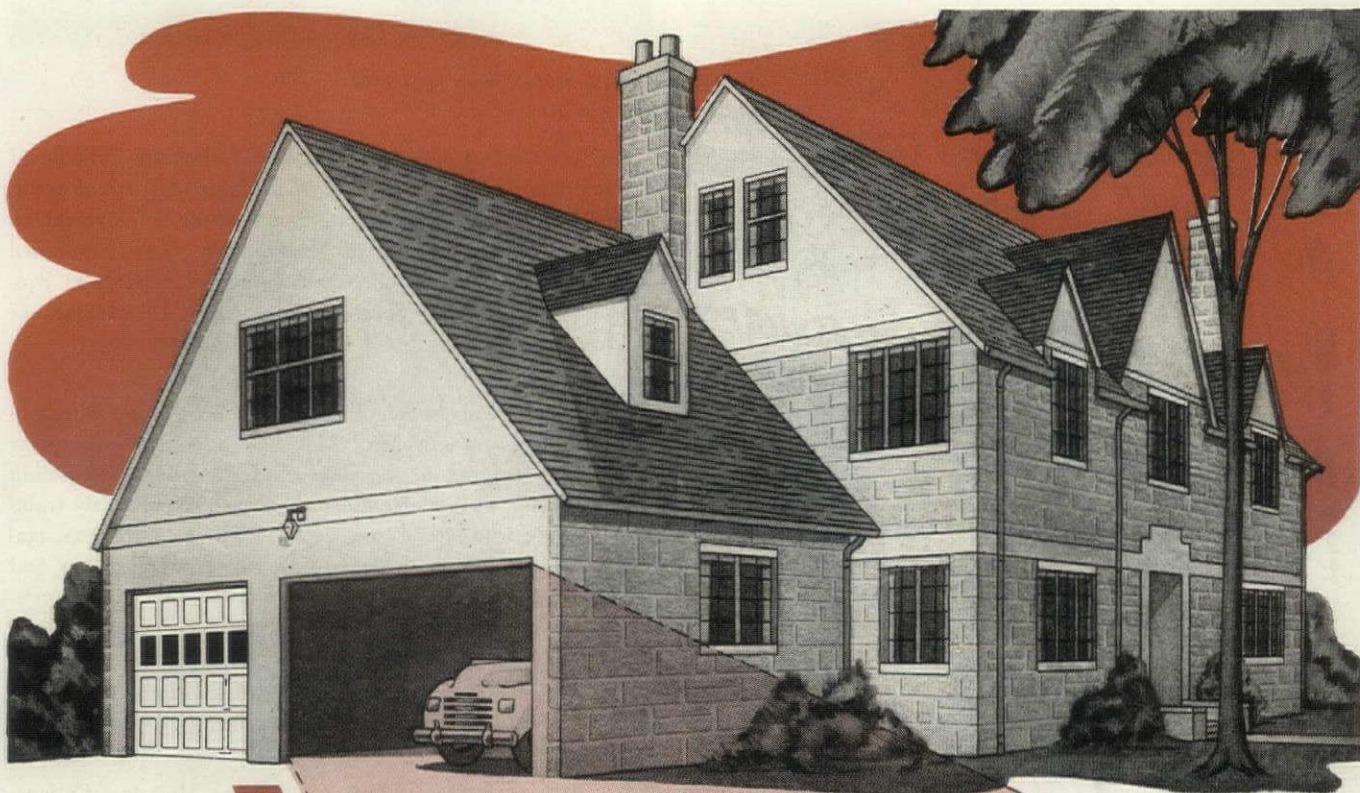
WOOD TREATING CHEMICALS CO.

5137 Southwest Ave.

Sales Agents for MONSANTO CHEMICAL CO.

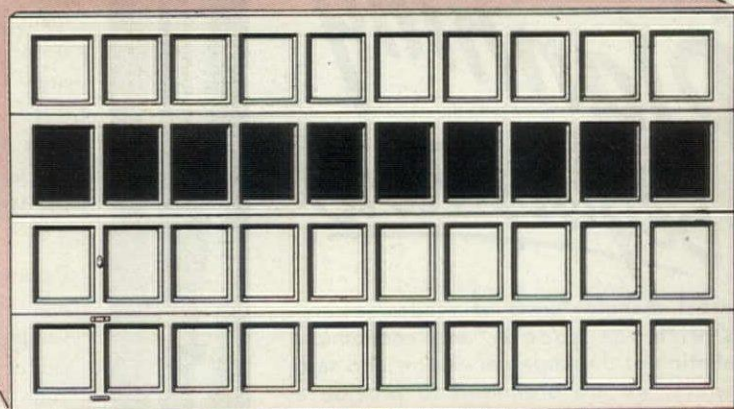
Santophen 20, Santobrite and Permasans

St. Louis, 10, Mo.



HERE'S OUR SLANT

The doors in this installation are the famous Crawford Standard 4-Section type, one single and one double, each with glass panels in section 3. Other combinations of wood and glass panels may be specified.



ON MODERN DOORS FOR THE 3-CAR GARAGE

Crawford

**UPWARD - ACTING
DOORS**

Residential Garage Doors
Commercial & Industrial Doors
Hand or Power Operated Doors
★ **Craw-Fir Doors** ★

The technique of handling doors for the multiple-car residential garage has long been familiar to Crawford because, logically, Crawford Doors have been specified equipment on many of the better-class homes requiring multiple-car housing.

Crawford was therefore among the first to design and build a double-width door and thus make possible the double-width opening that so many families prefer—and it is noteworthy that this was accomplished at no sacrifice in the sturdiness, durability or easy operating qualities for which Crawford Doors have always been known.

The combination of a standard Crawford Two-Car Door and a standard Crawford Single-Car Door makes a perfect ensemble for the three-car garage. It provides the convenience of the large opening for frequently-used cars, yet avoids the structural problems inherent in designing and enclosing a larger opening. This is a good combination to specify. Crawford Door Company, 401 St. Jean Ave., Detroit 14, Michigan.

(Continued from page 170)

The Secretary of the Association of Collegiate Schools of Architecture is compiling a list of available teachers of architectural subjects for immediate and postwar employment on teaching staff at schools of architecture. Those qualified and interested should send their personnel records to Professor Paul Weigel, Secretary, A.C.S.A., Department of Architecture, Kansas State College, Manhattan, Kan.

The Alabama Polytechnic Institute's School of Architecture and the Arts at Auburn, Ala. has adopted a four-year curriculum leading to the degree of Bachelor of Building Construction. This course aims to give sound collegiate training to those who intend to become building contractors, material manufacturers, dealers or service representatives and building inspectors for municipalities or insurance companies.

L. C. DILLENBACK, director of the School of Architecture, Syracuse University, has been named dean of the College of Fine Arts by Chancellor William P. Tolley.

PAUL BEIDLER is now affiliated with Black Mountain College, N. C., in the role of consulting architect. He will still maintain his business office at 40 Exchange Place, New York, N. Y.

B. KENNETH JOHNSTONE, professor and head of the Department of Architecture at the Pennsylvania State College, has been appointed Director of the College of Fine Arts, Carnegie Institute of Technology.

MAX SULLIVAN has become Dean of the Rhode Island School of Design. He will continue to be Director of Education in the Museum of Art, Providence, R. I.

PERRY COKE SMITH, of the firm of Voorhees, Walker, Foley and Smith, has been elected President of the New York Chapter, The American Institute of Architects. Mr. Smith succeeds Arthur C. Holden for the one-year term expiring June, 1946. Other officers elected include; Morris B. Sanders, vice-president; Theodore J. Young, secretary and Robert W. McLaughlin, treasurer. Mr. Smith is a graduate of Columbia University, class of 1923. He spent the following year in Europe as the winner of the Charles Follin McKim Travel Fellowship and later became chief designer in the office of Donn Barber. After Mr. Barber's death in 1925, Perry Smith remained with the successor organization, McKenzie, Voorhees & Grelin, which in turn has been succeeded by his present firm.

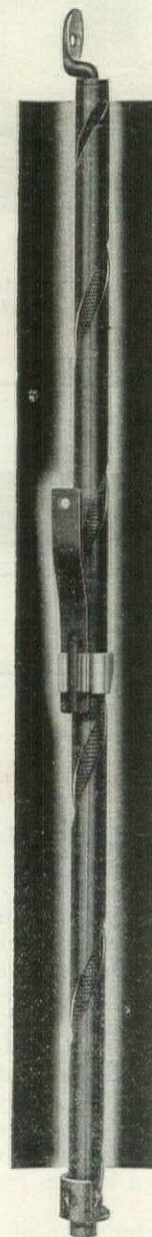
Three new members have been added to the staff of the Museum of Art, Rhode Island School of Design; Miss Mary DeWolf, assistant to the director; Herwin Schaefer, registrar and Wilfred Armstrong, acting superintendent. Miss DeWolf has worked for a number of years at the Museum of the Cranbrook Academy of Art where she was assistant to the director, Richard S. Davis and custodian of the Museum after he entered the service. For the past year she has been assisting the Curator of Textiles at the Museum of Fine Arts, Boston. Herwin Schaefer took the degree of M.A. in fine arts in 1941 at the University of Chicago

(Continued on page 178)

but...
Window
Planning
begins now

To assist manufacturers of window assemblies with the speedy and economical installation of dependable window and sash hardware, we are organized to provide a trained and competent engineering service to work with these manufacturers right on their home grounds. This service has been designed to point out the pitfalls of inexperience and to systematize and speed production in busy plants.

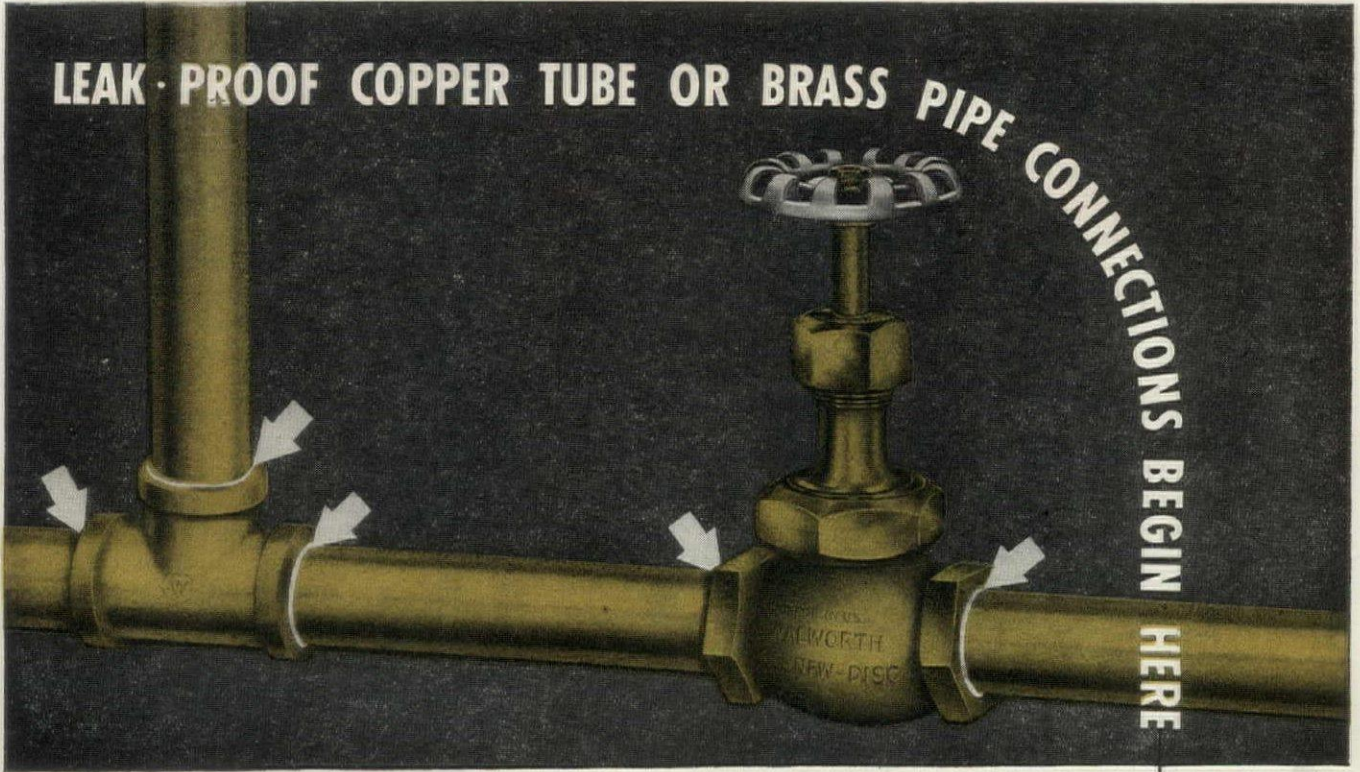
These men can be of assistance now to all manufacturers who are beginning their window planning. If definite plans have not been concluded, get in touch with us for some future appointment. This Engineering Service is offered without charge or obligation.



Send for catalog for information and delivery details.

GRAND RAPIDS HARDWARE COMPANY
GRAND RAPIDS • MICHIGAN

LEAK-PROOF COPPER TUBE OR BRASS PIPE CONNECTIONS BEGIN HERE



... WITH **THREADLESS**

Silbraz joints made with Walseal* valves, fittings and flanges "have what it takes" to provide the best service on I.P.S. copper tube or brass pipe lines.

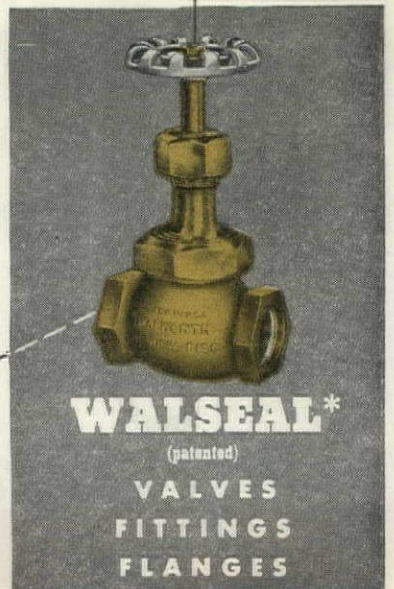
Threadless, every Walseal valve and fitting has a ring of silver brazing alloy incorporated in each port opening. This alloy, when heated with an oxyacetylene torch, flows out and makes a permanent bond between pipe and fitting — a connection that is stronger than the pipe itself. You can be sure that all Silbraz joints are strong and leakproof ... and require neither maintenance nor repairs.

During the past years, Silbraz joints made with Walseal products have established beyond doubt their ability to forestall piping trouble by withstanding shock, vibration, and corrosion in all sorts of severe piping services encountered by the armed forces.

For full information on Walseal products — as well as Walworth's complete line of valves and fittings — write for a free copy of Catalog 42.

* Patented Reg. U. S. Pat. Off.

SILBRAZ* JOINTS



Make it a "one-piece pipe line" with **WALSEAL**



14 AWARDS TO 4 PLANTS

WALWORTH
valves and fittings

60 EAST 42nd STREET, NEW YORK 17, N. Y.

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD

Heating and Maintenance Costs average only **\$65⁰⁹** a season per apartment

Here's actual proof of Janitrol's practicability and economy of operation for multiple dwelling units.

Factory-packaged, this type of Janitrol unit keeps installation costs down to a minimum. This ease and flexibility of installation also makes for savings in building costs.

When planning for the best in gas heat, for large or small housing units, be sure you have complete specification data on the complete Janitrol line. Remember, Janitrol sells by comparison. Write today for the latest descriptive literature. Surface Combustion Corporation, Toledo 1, Ohio.

CITY OF HAMTRAMCK

OFFICE OF
HAMTRAMCK HOMES COMMISSION
12025 Dequindre Ave.
Cal. Hamtramck Homes

July 24, 1945

Surface Combustion Corporation
2375 Dorr Street
Toledo 1, Ohio

Gentlemen:

In answer to your recent letter I would say that we are entirely satisfied with Janitrol Gas Furnaces.

As you know, we have 300 of these units, one to each housing unit, of our project, which were installed late in 1941. I would unhesitatingly recommend Janitrol heating equipment for multiple dwellings wherever there is a reasonable gas rate.

For your information, our records, over the last two years, show the following costs:

	Total Heating Costs	Cost Per Unit	Total Maintenance Cost	Maintenance Cost Per Unit
1943	\$19,765.74	\$65.89	\$930.38	\$3.10
1944	17,664.83	58.88	693.80	2.31

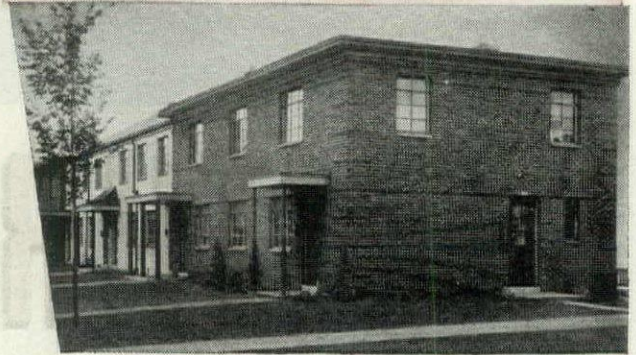
By including maintenance and labor with actual costs of fuel, I believe the above records will compare very favorably with any other type of heating. In addition, we secure the benefits of greater cleanliness, even temperature for our tenants, and the freedom from ordering and handling of fuel.

Yours very truly,

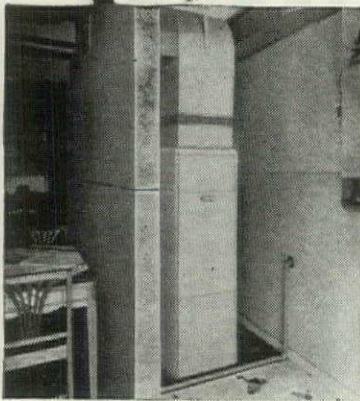
HAMTRAMCK HOUSING COMMISSION

Stanley Wojcik
Stanley Wojcik
Director-Secretary

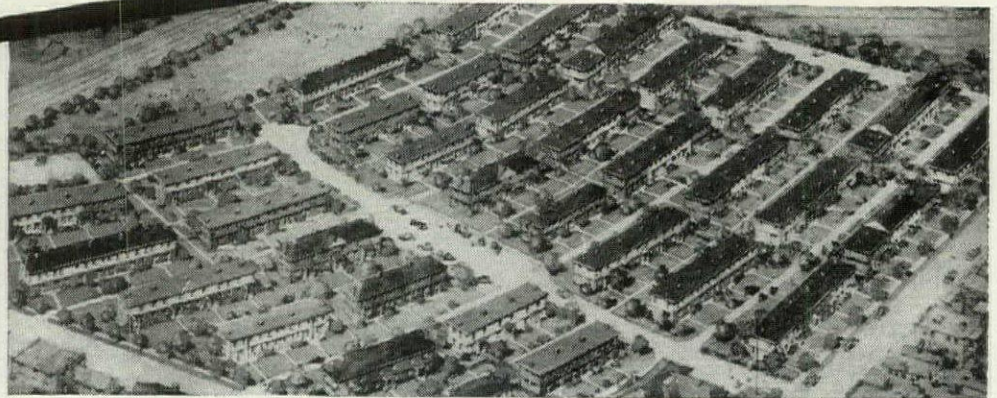
SJW:hh



Buildings are varied in size to contain modern, well planned dwelling units for 4, 6, 8, 10 or 12 families. Apartments vary in size from 3½ to 6½ rooms.



Compact Janitrol Forced Warm Air Furnace fits in "closet-size" space. Unit only occupies 18" by 27" floor area.



Hamtramck Housing Project completed in 1941 is located in industrial section northeast of Detroit, Michigan. Project covers 16 acres, provides modern housing for 300 families.

Janitrol

**GAS-FIRED
HEATING EQUIPMENT**



Winter Air Conditioner



Gravity Furnace



Conversion Burner



Unit Heater



Boiler



Floor Type Blower Unit

For "Minimum Space" Planning, the BENDIX is indispensable!

Architects are coming into universal agreement on the point that the Bendix automatic Home Laundry is pre-eminently suited to the adequate utilizing of space in modern home designing, especially when such space is limited.

And understandably so! It requires only four square feet of floor space. When a Bendix is used, it is only necessary to put in clothes, set switch, add soap—that's all.

The Bendix washes, rinses, damp-dries, cleans itself and shuts itself off—all automatically! It stays where it is placed, eliminates the extra room needed for "wringing," and does away with set tubs.

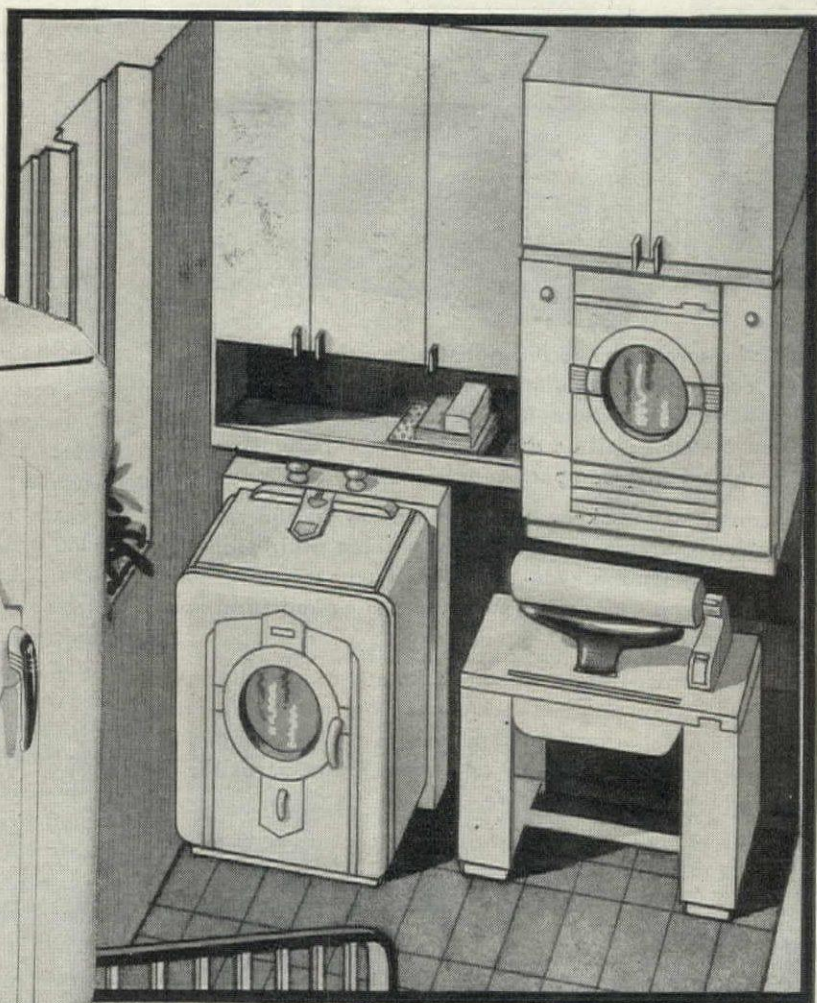
There are other advantages, too. We suggest you consult your Bendix dealer for helpful hints in your own planning. You'll find his name in the classified section of your telephone book. Write us direct, if you prefer.

BENDIX DE LUXE MODEL: 26" wide, 36" high work surface, 38" high to top of control panel at rear, 22 $\frac{3}{4}$ " deep.

BENDIX STANDARD MODEL: 25 $\frac{1}{4}$ " wide, 35" high, 22 $\frac{3}{4}$ " deep.



De luxe
Model



The above design for a "Minimum Space" laundry, from the drawing board of L. Morgan Yost, A.I.A., is an outstanding example of the careful, scientific usage of a limited area.

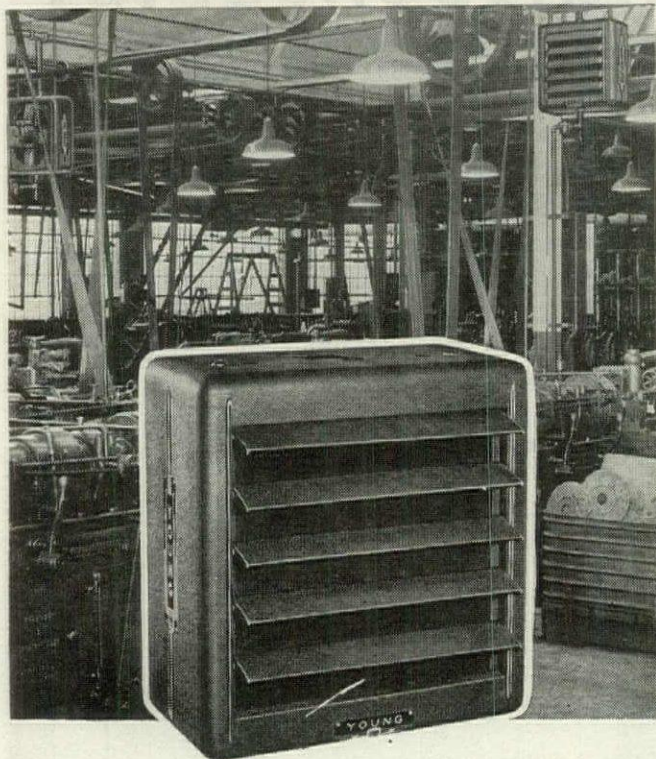
BENDIX^{automatic} Home Laundry

BENDIX HOME APPLIANCES, INC., SOUTH BEND, INDIANA • PIONEERS AND PERFECTORS OF THE AUTOMATIC "WASHER"

SPECIFY

YOUNG UNITS

FOR QUICKER, MORE EVEN HEAT



- To be sure your specifications call for the most efficient and economical installation of Unit Heaters—whether supplementing present heating equipment or installing a new system—call on the engineering experience of the Young Radiator Company representative in your city.
- Young will make a thorough survey of the specific heating requirements on any job, without obligation . . . will recommend to you the correct type, location and number of unit heaters needed for proper radiation and right amount of heat.
- Young Unit Heaters respond instantly to the slightest change in temperature. Thermostatic controls can operate an entire installation simultaneously or each unit individually. The modern design of Young Units harmonizes with any style of architecture.
- Write today for catalog showing types and sizes available in both wall (vertical) and ceiling (horizontal) units.

★

YOUNG

HEAT TRANSFER PRODUCTS

★

Oil Coolers • Gas, Gasoline, Diesel Engine Cooling Radiators • Intercoolers • Heat Exchangers • Engine Jacket Water Coolers • Unit Heaters • Convectors • Condensers • Evaporators • Air Conditioning Units • Heating and Cooling Coils • and a Complete Line of Aircraft Heat Transfer Equipment.

Young Radiator Co., Dept. 515-F, Racine, Wis., U.S.A.
Application Engineers in Principal Cities

OTHER POPULAR YOUNG EQUIPMENT



"VERTIFLOW" UNIT HEATERS FOR HIGH CEILINGS.



YOUNG AIR CONDITIONING UNITS OFFER ECONOMY AND EFFICIENCY.

ANNOUNCEMENTS

(Continued from page 174)

and after post graduate work at New York University and Harvard he received his Ph.D. at the latter university in 1944. He was instructor at Harvard for the year 1944-45. Wilfred Armstrong has just graduated from Rhode Island School of Design with the degree of Bachelor of Science in Industrial Arts Education.

HEGEMAN-HARRIS Co., Inc., New York builders, announce the consolidation in the firm of the G. Richard Davis & Co., Inc.

A Society of Industrial Designers has been formed to establish criteria for ethics, training and practice in the profession. The officers of the Society are: Walter Dorwin Teague, president; Raymond Loewy, chairman of the executive committee; Henry Dreyfuss, vice president; Harold Van Doren, treasurer; and Egmont Arens, secretary. The other founders are Donald Deskey, Norman Bel Geddes, Lurette V. A. Guild, Ray Patten, Joseph B. Platt, John Gordon Rideout, George Sakier, Jo Sinel, Brooks Stevens, and Russel Wright. The principal requirement for membership will be that each candidate must have successfully designed a diversity of products for machine and mass production, or must be professionally engaged in teaching in this field. Information, advice and assistance will be available to people and institutions engaged in teaching industrial design or in public education. A temporary office is now located at 55 W. 42nd St., New York 18.

AWARD

The Sperry Gyroscope Company and the Alumni Association of the American Academy in Rome have announced the prize winners in the collaborative competition for the design of a memorial to Dr. Elmer S. Sperry. They are first: Sperry prize of \$1,000 plus the students' prize of \$200 to Mary T. Wilcox, architect, Univ. of Penn., Helen Omansky Gross, painter and Richard Frazier, sculptor both of the Penn. Academy of the Fine Arts; second: Sperry prize of \$200 plus students' prize of \$75 to John Pile, architect, Univ. of Penn., Eda Castle, sculptor, and Marie-Celeste Fadden, painter, both of the Penn. Academy of the Fine Arts; third: Sperry prizes of \$100 each to the following teams; Eduardo Mejia, architect, Univ. of Penn., Bolton Morris, painter and Andrew Hawkins, sculptor, both of the Penn. Academy of the Fine Arts; William Henry Deacy, architect, Vincent Carano, sculptor and Ernest S. Leland, painter, New York City; Mayer and Wittlessey, Sgt. Edgar A. Tafel, architects and Amedie Ozenfant, painter, New York, N. Y. The jury of award was as follows: Paul P. Cret and Thomas H. Ellett, architects; Markley Stevenson and Fletcher Steele, landscape architects; Henry Kreis and Joseph Kiselewski, sculptors; and Ezra Winter and Francis S. Bradford, painters.

EXPOSITION

America's first annual "Products of Tomorrow Exposition" is expected to open early in 1946. The Chicago Coliseum, the North Hall Exhibition Bldg., the Armory and the Administration Bldg. are part of the group of buildings to be used. Plans are complete for the use of a million square feet. Gardner Displays Company of Pittsburgh, exhibit designers, has completed a design

(Continued on page 182)

Good Buildings Deserve Good Hardware



PROMOTING THE USE OF BRASS AND BRONZE HARDWARE

The lasting economy as well as the mellowness of brass and bronze hardware are being put before the people who will buy or build homes and all other types of structures in the postwar period.

Broad gauge advertising in national consumer magazines is an important element in the P. & F. Corbin merchandising pro-

gram to increase the use of stylish, durable brass and bronze hardware.

A Corbin representative will be glad to discuss our plans . . . which include the simplification of builders hardware design and specification and the co-ordination of activity to final installation . . . with designers, specification men and draftsmen.



P. & F. Corbin

THE AMERICAN HARDWARE CORPORATION, SUCCESSOR

NEW BRITAIN, CONNECTICUT • SINCE 1849

Good Buildings Deserve Good Hardware



THE P. & F. CORBIN Builders Hardware Merchandising Program includes these Elements of Specific interest to Architects:

- 1 Simplification . . . of designs and construction . . . and of catalogs.
- 2 Application of "war-precision" manufacturing methods . . . to assure deliveries of highest quality builders hardware on schedule.
- 3 Continuing Research . . . as to trends, architects' requirements, product improvement, packaging.
- 4 Co-ordination . . . from architects' specifications . . . through dealers' purchases . . . through factory production . . . to contractors' installation.
- 5 National Consumer Advertising . . . to families interested in buying, building, or modernizing homes.
- 6 Completely informing Corbin salesmen and dealers to qualify them to serve architects and their staffs most intelligently.



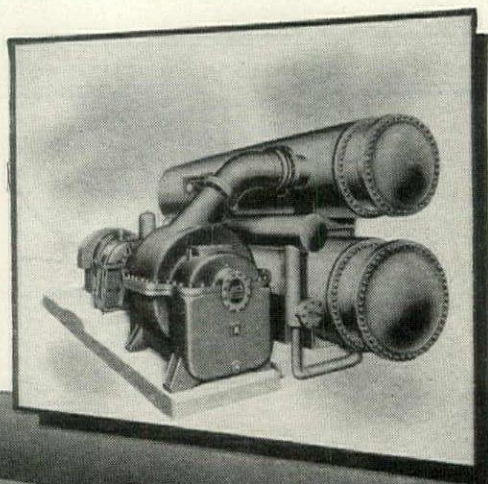
Reprinted from the above ad. in July magazine, indicates the wide-spread interest in the Corbin Program.

P. & F. Corbin

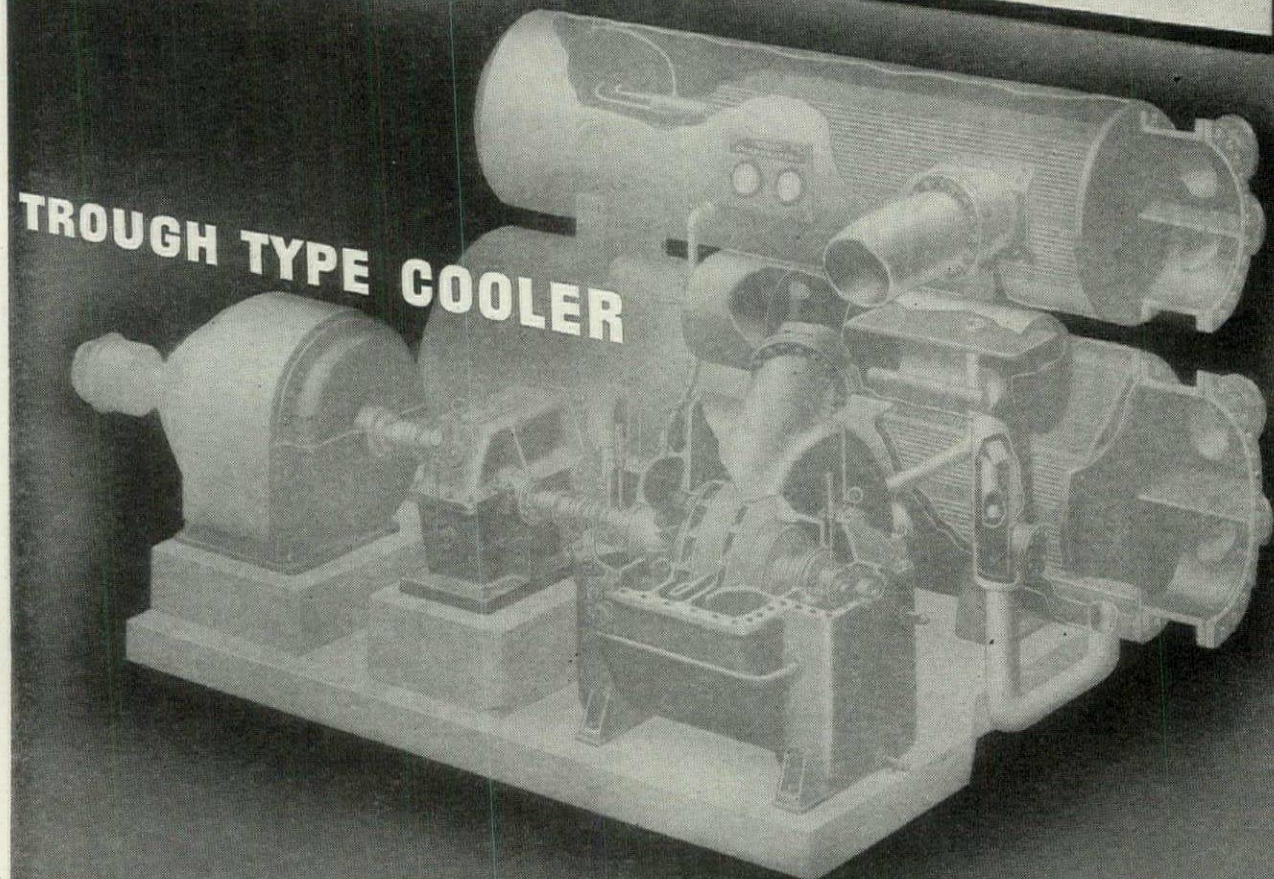
THE AMERICAN HARDWARE CORPORATION, SUCCESSOR
NEW BRITAIN, CONNECTICUT • SINCE 1849

Announcement of the P. & F. Corbin Builders Hardware Merchandising Program which appeared in August professional magazines.

**for accessible
operation
and less vibration...**



TROUGH TYPE COOLER



**The YORK Allis-Chalmers
Turbo REFRIGERATION Compressor**

Water cooler design embodies many unusual construction features. Copper tubes with extruded fins are contained in a trough which allows a low center of gravity for the entire compressor. Refrigerant fed at the bottom of the shell is admitted to the tube bundle through a diffuser plate welded to the trough. The fusion-welded water cooler shell is concentric with the tube trough, while the annular space between shell and trough carries off gas to the suction outlet. Eliminators above the tubes prevent the passage of entrained liquid refrigerant from the trough. York Corporation, York, Penna.

Other Outstanding features:

1. Stainless steel impeller blades resist erosion and corrosion assuring perfect wheel balance. Blade rivet heads are eliminated to provide unobstructed gas flow.
2. Balance piston to equalize wheel thrust makes necessary only a positioning thrust bearing, and results in less bearing friction losses.
3. Pre-rotation vanes permit greater capacity reduction (down to 10%).
4. Permanently silver-sealed condenser joints.
5. Simplified refrigerant shaft seal.



YORK REFRIGERATION AND AIR CONDITIONING

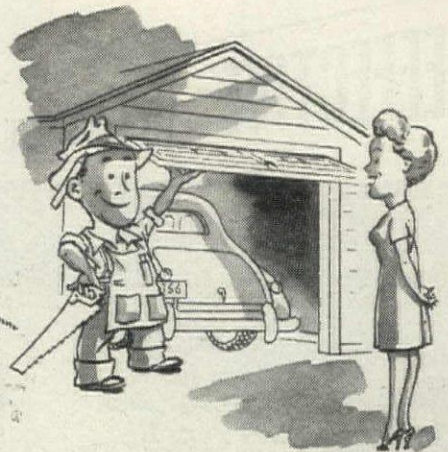
HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885



"Well, the instructions say it'll take less than an hour to install this Craw-Fir-Dor. Sounds too good to be true."



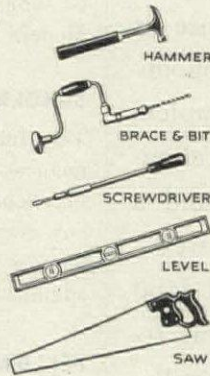
"What d'ya know? I'm almost through already. This job really turned out to be a lead-pipe cinch."



"Yes Ma'am! It works like a charm. Easy as falling off a log. And what's more—it took only 55 minutes to put 'er up!"

Any ordinary carpenter can install this overhead garage door quickly, easily, without special tools

A brief hour of time . . . a hammer, screwdriver, level, saw, brace and bit! That's all you need to install the beautiful, durable, easy-acting CRAW-FIR-DOR. The new, improved hardware, the sturdy, solid Douglas fir door, and the attractive new auto-type lock—all are designed for ease of installation, for long, trouble-free service.



Keep in touch with your dealer—for this new, improved postwar CRAW-FIR-DOR will soon be available for residential building. It's sold only through lumber dealers—and is available everywhere in the United States. Keep CRAW-FIR-DOR—the overhead-type garage door—in mind for all your postwar building.

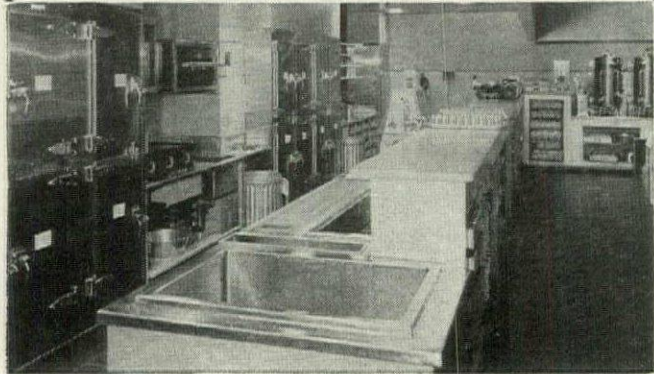
Craw-Fir-Dor

SELF-ENERGIZING • ONE PIECE • OVERHEAD TYPE

GARAGE DOOR

FIR DOOR INSTITUTE

The National Association of Fir Door Manufacturers, Tacoma 2, Washington

*(Continued from page 178)***EFFECTIVE - in Design and Service**

- POLHEMUS installations of commercial and institutional food serving facilities are noteworthy examples of careful planning. Every factor is given full consideration, and its importance is integrated in a manner that insures full economy of space and efficiency of operation. Complete service, beginning with consultation and preliminary layouts, insures thorough teamwork and a job that not only "looks well but works well".
- Whether your needs are for institutional food serving facilities, or for the highly technical requirements of an industrial or laboratory installation, you will find our years of experience an asset. Architects and Engineers desiring to make post-war plans now, are invited to consult with our engineering staff. Write or phone our nearest office.

Polhemus
ENGINEERS AND ARCHITECTS

specialized installations for

RESTAURANTS • HOTELS
 HOSPITALS • INSTITUTIONS
 LABORATORIES

ENGINEERING COUNSEL AND LAYOUTS
 DESIGN • MANUFACTURE • INSTALLATION

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 ROSELLE, NEW JERSEY

1010 Vermont Avenue N.W.
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11 Park Place
 New York 7, N. Y.

based on the scientific control of the movement of crowds past each exhibit for the group of buildings centering on the Coliseum. The Exposition will comprise two main divisions, consumer and industrial products, with the addition of others as the demand requires. Floor space is now being booked by exhibitors and the show will be kept open as long the weekly attendance warrants it.

REQUEST FOR EXHIBITION MATERIAL

The Museum of Modern Art proposes to hold an exhibition on war memorials, in both model and photographic form, and to publish a book on the same subject. Publicizing good examples will make available to American communities a broad coverage and encourage a wider use of architects, sculptors and landscape architects. The Museum is anxious to secure photographs, dates and full descriptions (including an exact account of location and material) of outstanding war memorials anywhere, but particularly in the U.S. Since the smaller monuments are the least known, it is these in which the Museum is especially interested. Material should be submitted to the Department of Architecture, Museum of Modern Art, 11 W. 53rd St., New York 19, N. Y.

SCHOLARSHIP

The Independent Lock Company, Fitchburg, Mass., announces the establishment of "The Morris Falk Engineering Scholarship" to be awarded a Fitchburg High School boy graduate amounting to \$2,000 for a college education to be paid at the rate of \$500 yearly and will be contributed and administered by the trustees of the Morris Falk Foundation.

FELLOWSHIP

Ten Graduate Fellowships in Traffic Engineering are announced by the Bureau of Highway Traffic of Yale University. These Fellowships amount to \$1,400 each and provide for a full academic year of graduate study beginning October 1, 1945. Additional information concerning the course and Fellowships may be obtained by writing to the Bureau of Highway Traffic, Yale University, New Haven, Conn.

NEW OFFICES

HENRY JOHN JEFFERSON, architect, has established his office at 362 Entrada Drive, Santa Monica, Calif.

ISADORE ROSENFELD, architect and hospital consultant, has opened an office at 19 W. 44th St., New York 18, N. Y.

GEORGE A. LETTS, AIA, announces the opening of his office in the Heights-Rockefeller Building, Mayfield Rd. and Lee Blvd., Cleveland Heights 18, Ohio.

MORRIS MILLER, widely known in the housing field has opened offices for the general practice of law at 710 14th St., N. W., Washington 5, D. C.

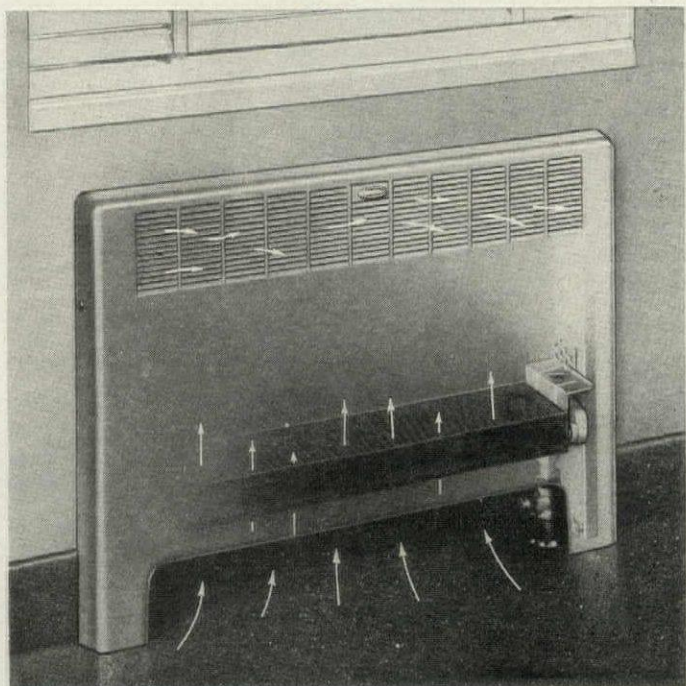
HUGH A. KELLY and B. SUMNER GRUZEN, architects-engineers have opened a branch office at 220 Broadway, 26th floor, New York, N. Y.

(Continued on page 186)

WHY

Convactor Radiation

IS BEING SPECIFIED FOR TOMORROW'S BUILDINGS



• Because of the many distinct advantages which so well adapt it to the most modern building design, Convactor Radiation with Modine *copper* convectors is being written into the specifications of more and more postwar buildings.

Day or night... in mild or severe weather... it insures the luxurious comfort and healthful benefits of *even-temperature* heating *automatically controlled*.

Made of copper—second only to silver in rate of heat conductivity—Modine convactor units are faster heating. And they respond almost instantly to automatic heat control.

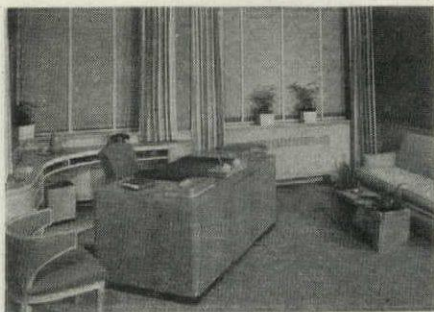
Rooms warm up without delay. The heated air is circulated speedily and evenly. No overheating. No discomfort. No heat wasted. Individual damper control permits further modulation of temperature to suit occupants' personal comfort.

FOUR TYPES OF STANDARD ENCLOSURE

include: *Projection Recessed* with self-trimming front forward of plaster line (shown above, and in each of installation views below); *Floor Cabinet* for open installation against a wall; *Regular Wall Cabinet* hung on wall for easy cleaning of floor under cabinet; *Sloping Top Wall Cabinet* has grille on top with a 30° pitch.

MODINE MANUFACTURING COMPANY

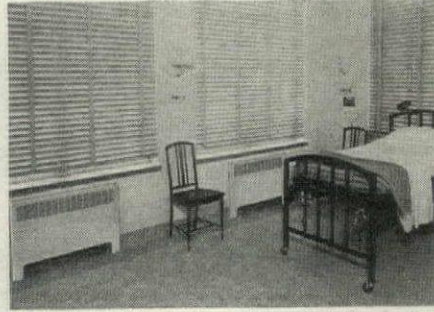
1736 RACINE STREET • RACINE, WISCONSIN



Space Saving... Modine compactness saves floor and wall space, giving complete freedom in arrangement of furniture and drapes; combines convenience with building economy.



Attractive in Appearance... Smartly modern in their streamlined simplicity of design and beauty of line and proportion, convectors blend harmoniously with any style interior.



Simple to Keep Clean... Easily removable enclosure front makes heating unit conveniently accessible. Smooth non-porous copper surface is not a catch-all for germ-laden lint and dust.



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Windowalls.

ANDERSEN HORIZONTAL GLIDING WINDOW UNITS COMMAND A PANORAMIC VIEW OF NEW YORK WOODLAND

When the home is perched at a vantage point overlooking a sweep of natural beauty, then Andersen WINDOWALLS can be "built in" to frame the scene.

These WINDOWALLS, of Andersen Horizontal Gliding Window Units, have been installed so that no wall space for furniture placement has been lost, yet their broad expanse opens up the room to sunlight and fresh air. Home is located in Binghamton, N. Y.

Andersen WINDOWALLS are aptly named, for they perform simultaneously the functions of a wall (since they insulate the home) and the functions of a window (since they bring light and ventilation into the home).

This WINDOWALL is formed by placing a series of Andersen stock-size Horizontal Gliding Windows in mullion arrangement on two sides of the room. Each unit (No. 34046) is 3' 4 $\frac{3}{16}$ " by 4' 6 $\frac{7}{16}$ " sash opening size.

For additional details, consult Sweet's Catalog.

Reprints of Andersen WINDOWALLS are available in convenient file size. Just write Andersen, asking for the WINDOWALL FILE.

Andersen Corporation

BAYPORT, MINNESOTA

FOR BUILT-IN BEAUTY



ANNOUNCEMENTS

(Continued from page 182)

GEORGE VERNON RUSSELL has established his office for the practice of architecture at 3275 Wilshire Boulevard, Los Angeles, Calif.

GEORGE H. SPOHN, architect, has recently opened an office at Winter Park, Fla.

ARTHUR J. LEE, announces the opening of a mortgage office at 90-04 161st St., Jamaica 2, New York.

CHANGE OF ADDRESS

ROY B. BLASS, AIA, architect, has relocated his office at 30 N. La Salle St., Chicago, Ill.

HUGH W. BROWN JR., AIA, architect, has reopened his office at 212 Petroleum Bldg., Shawnee, Okla.

MELVIN L. and HARRY A. KING, architects, announce the removal of their offices to 40 Herald Bldg., 332 S. Warren St., Syracuse 2, N. Y.

H. CLAY PRIMROSE, landscape architect and engineer has moved his office from 10 W. Chase St. to 5100 Roland Ave., Baltimore 10, Md.

DIED

GEORGE E. EVANS, City Councilman of Pittsburgh, chairman of Pittsburgh Housing Authority, in Pittsburgh at the age of 69. Mr. Evans started his career in the building construction and retail lumber business in 1905. He was a member of the board of the Retail Lumber Dealers of Pennsylvania and its president in 1920. As chairman of the Committee on Public Works of the City Council he was a pioneer in the field of promoting good housing. Mr. Evans was a member of the board of trustees of the Carnegie Free Library of Pittsburgh, Carnegie Institute of Technology, the Buhl Planetarium, and the Institute of Popular Sciences. He also held memberships in the following organizations: the Building Owners and Managers Association of Pennsylvania, the Pennsylvania Housing and Town Planning Commission, the Irene Kaufman Settlement and the Urban Land Institute. In 1941 he was president of the National Association of Housing Officials.

JAMES B. MUSICK, Secretary of the City Art Museum of St. Louis, Mo., in that city at the age of 53. Mr. Musick was known for his authoritative knowledge of the portraits of Washington and of the early days of St. Louis and was the author of *St. Louis as a Fortified Town*, published in 1941. He was a member of the board of directors of the Missouri Historical Society.

ERRATUM

In the July article on *Apartments, West Los Angeles, Calif.* designed by J. R. Davidson, credit for the design and manufacture of the furniture shown in the right hand corner on p. 123 to Mr. Hendrick Van Keppel of the firm Van Keppel & Green, Beverly Hills, Calif., was inadvertently omitted.



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Lo-"K"

For either new construction or improvements, cotton is the most profitable and satisfactory insulation you can recommend. It insulates from 4% to 36% more efficiently. It is the lightest in weight of all commercial insulations. It resists burning and moisture — remains permanently resilient, will not pack down, sag or settle. It is safe to handle — easy to install. Specify Lo-"K" with complete confidence in customer satisfaction.

Available in ample, priority-free amounts — in light, easily handled blanket type rolls to fit all standard construction.



Lo-"K" *flameproofed*
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Dept. AF-9, Lockport, New York

Gentlemen: Send me the facts about Lo-"K" Cotton Insulation for better building.

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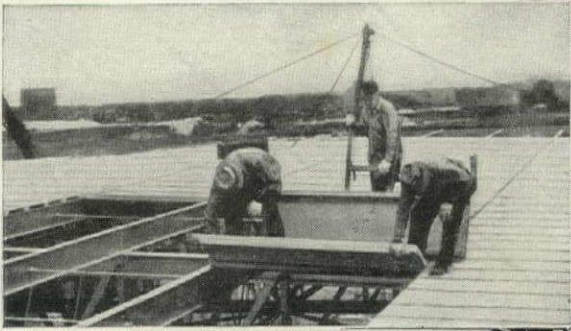
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CHANNEL SLABS for flat or sloping roofs (composition covering required) . . . NAILING CONCRETE SLABS, surface securely holds slate, tile, copper or other ornamental roof . . . RED INTERLOCKING SLABS for sloping roofs only, no covering required.

From the quantity of Federal Roof Slabs in service, it would be possible to construct a concrete road two feet wide and over 28,000 miles long . . . you could walk around the world on it! Here is tangible evidence that leading architects, builders and owners choose Federal "above all" for permanent, fireproof, trouble-free roof protection.

Featherweight Concrete Precast Roof Slabs also assure long-range economy because they never require painting, repairs or replacements. Channel or nailing slabs are speedily laid over light steel purlins in any weather, immediately ready for the composition or ornamental covering. No time loss is involved—no further attention is ever necessary.

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CONCRETE PRECAST
ROOF SLABS**

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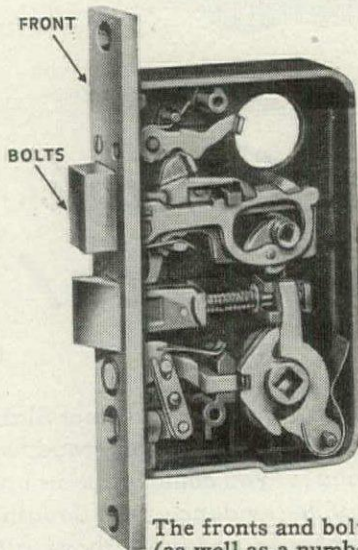
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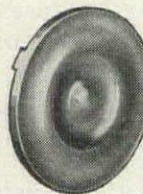
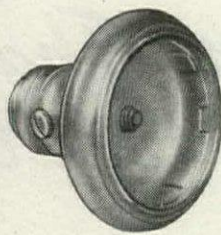
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WITH PROVED FEATURES FOR POSTWAR BUILDING

The Evidence



*A Lockwood feature knob incorporating interchangeable tops.



The fronts and bolts (as well as a number of interior parts) of Lockwood Standardized Locks are made of forged brass and bronze—providing reserve strength, excellence of finish and smooth operation. Hubs and stop work have been held closely to standardized dimension through the use of forgings.

Lockwood Polyflex* Knob with French type shank and tops provides a beautiful example of single brass forgings, accurate in detail and perfect in finish.

... brass forgings, for instance.

SUPERIORITY of forgings over castings is apparent in greater strength, finer detail, better finish.

The forging process increases tensile strength. Brass sand castings will test to approximately 23,000 lbs. per square inch, and brass forgings to well over 70,000 lbs. per square inch.

Forgings are held within closer limits in the die, resulting in greater accuracy of the finished part.


Tremendous pressures applied in forging produce a dense structure free from minute sand holes—a surface that takes and holds plated finishes.

For several years prior to the war, Lockwood employed forgings for many lock parts usually made of castings. This policy will be continued—and further developed wherever the superior features of forgings will provide you with more durable, better operating and better looking Lockwood Builders' Hardware.

You can always look to Lockwood for *hidden* values as well as for outstanding style and features in Builders' Hardware.

You will find Lockwood hardware specifications simplified in Sweet's Architectural File 17b1, 1945 edition. A limited number of additional copies is available. Write for yours, if interested.

A-7

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FITCHBURG, MASSACHUSETTS

Division of Independent Lock Company

PATRICIAN

POLYFLEX

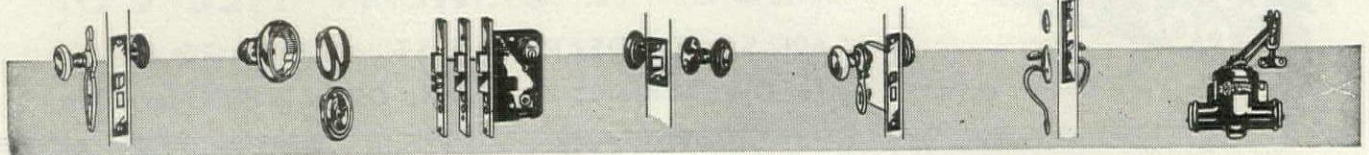
MORTISE LOCK

BOR-LOC

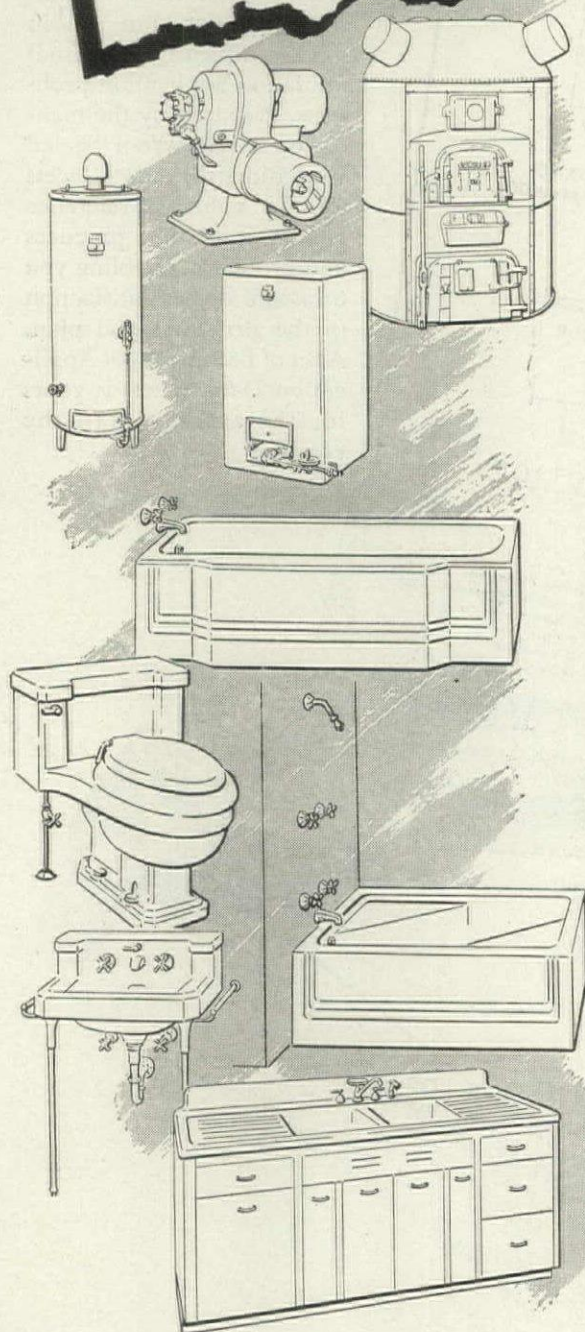
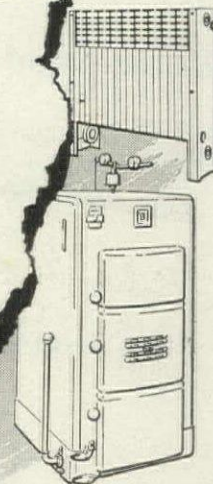
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RECONVERSION is under way at American-Standard.

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Not all products will be ready immediately, but we will increase production as rapidly as conditions permit.

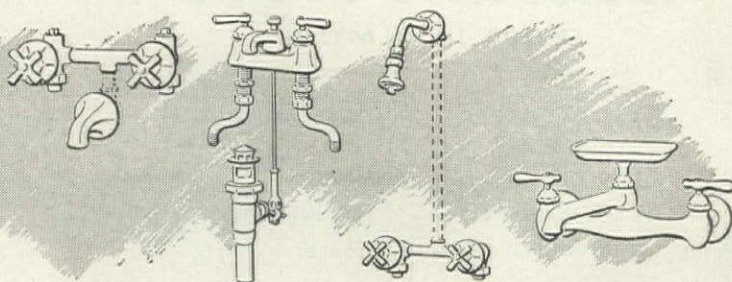
Whatever the new construction or modernization plans on your board call for, you will find that there are American-Standard products designed and engineered to fit your needs. And they cost no more than others.

To keep posted on available products, contact your Heating and Plumbing Contractor who is being currently informed by American-Standard Wholesale Distributors. American Radiator & Standard Sanitary Corporation, Pittsburgh 30, Pa.

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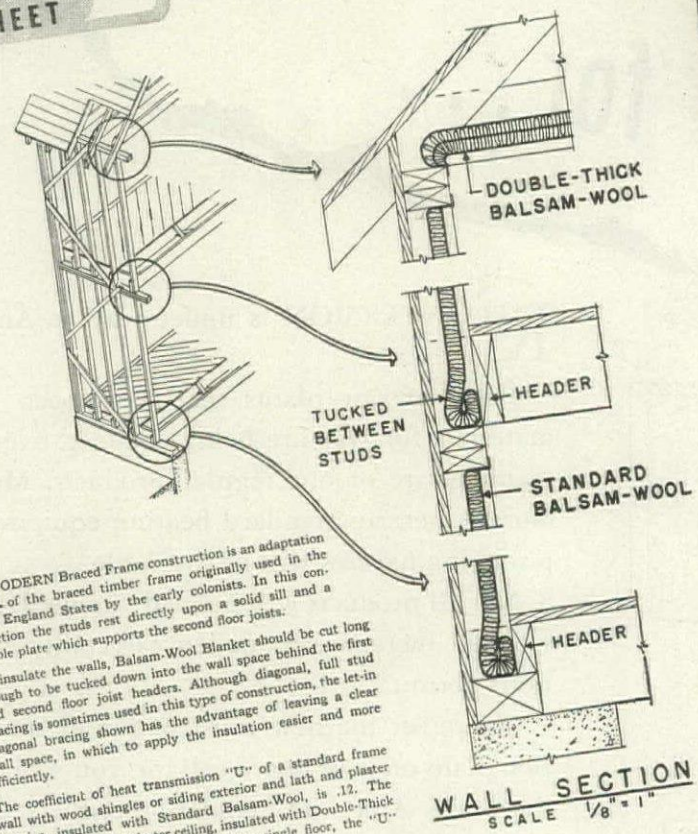
HEATING PLUMBING

Serving the Nations' Health and Comfort



Balsam-Wool
APPLICATION DATA SHEET
 SEC. B No. 1

APPLICATION OF BALSAM-WOOL TO A MODERN BRACED FRAME



MODERN Braced Frame construction is an adaptation of the braced timber frame originally used in the New England States by the early colonists. In this construction the studs rest directly upon a solid sill and a double plate which supports the second floor joists.

To insulate the walls, Balsam-Wool Blanket should be cut long enough to be tucked down into the wall space behind the first and second floor joist headers. Although diagonal, full stud and bracing is sometimes used in this type of construction, the let-in diagonal bracing shown has the advantage of leaving a clear wall space, in which to apply the insulation easier and more efficiently.

The coefficient of heat transmission "U" of a standard frame wall with wood shingles or siding exterior and lath and plaster interior, insulated with Standard Balsam-Wool, is .12. The second floor lath and plaster ceiling, insulated with Double-Thick Balsam-Wool, is .11. If the attic has a single floor, the "U" factor will be .089.

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 BALSAM-WOOL Products of Weyerhaeuser NU-WOOD

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Here's valuable, authoritative data you can use in solving difficult or unusual insulation application problems. Prepared by the makers of Balsam-Wool Sealed Insulation, these data sheets form a valuable reference file on insulation practices and problems, enabling you to assure owner satisfaction in the structures you plan. A set of Balsam-Wool Application Data Sheets is yours for the asking—mail the coupon!

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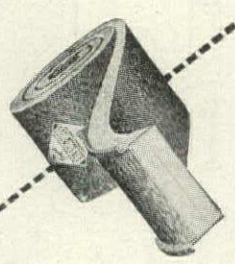
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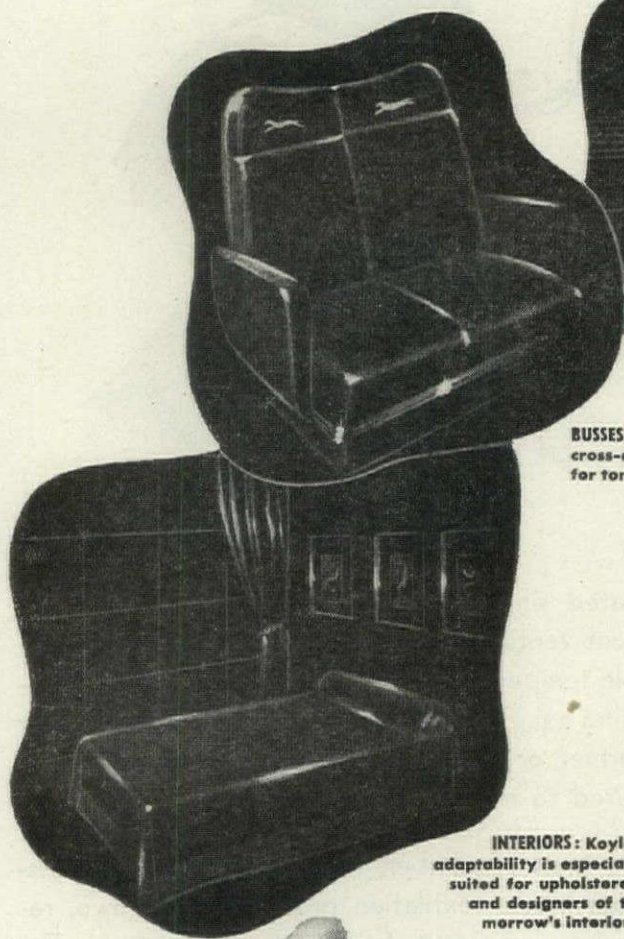
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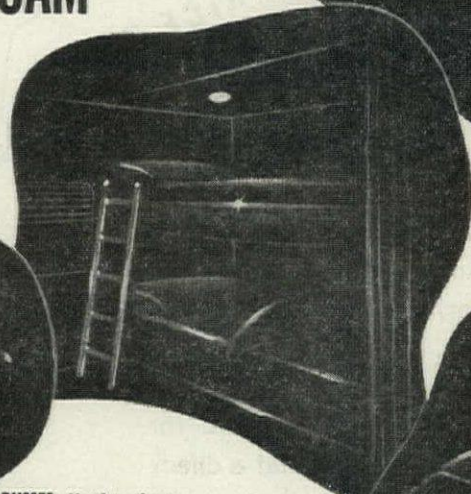
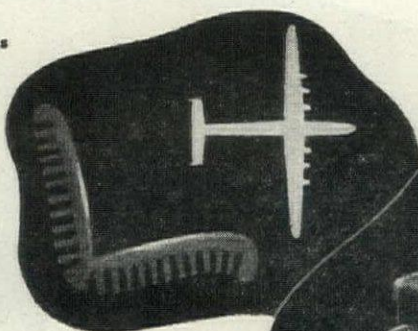
PLANES: Koylon lightness fits plans for tomorrow's plane interiors.

HOTELS: Koylon comfort meets schemes for room, lobby and restaurant furnishings in tomorrow's hotels

Planners of the future plan with "U.S." KOYLON FOAM

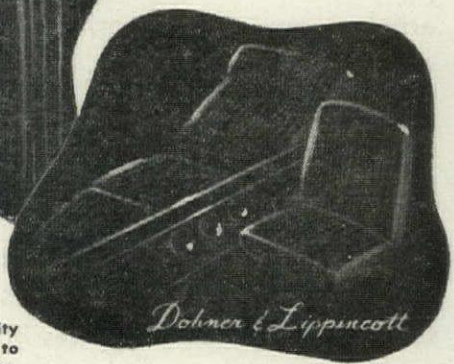


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For ten years, Koylon has proved the ultimate in comfort. To sit or lie on Koylon means to be caressed in bottomless comfort that only a combination of pure air and buoyant rubber latex can give.

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Comfort Engineered "U. S." Koylon Foam merits a place in your future plans.

Comfort Engineered
"U.S."
Koylon
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Serving Through Science

UNITED STATES RUBBER COMPANY

Shall we put a price tag



IN a recent issue of a heating and ventilating publication, two well-known Engineers wrote articles about the importance of temperature control in school buildings.

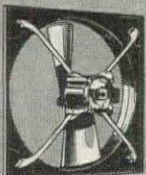
One of the Engineers questioned the need for exact control in schoolrooms, stating that a check should be made to determine whether results obtainable would justify the cost. The other Engineer stated that modern automatic temperature regulation not only saves in fuel, but is important to comfort and health.

School Authorities, who have been given the responsibility of training and protecting the bodies as well as the minds of this country's children, must decide if a price tag is to be placed on this protection or if the children are to have the best.

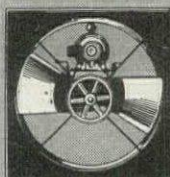
If School Authorities decide that the best possible temperature control must be used, they will install unit ventilators which make possible **INDIVIDUAL CONTROL** in each classroom. This is easily understood when one considers the fundamentals of schoolroom ventilation and the required functions of ventilating equipment.

Stated simply, the primary purpose of schoolroom ventilation is the maintenance of a desirable temperature for pupils and teachers. Ventilating equipment must be able to introduce either warmer or cooler air into the classroom as required to maintain the desired air temperature.

We must remember, however, that each classroom has a ventilation problem all its own, requiring individual treatment or control. The temperature of a schoolroom on the west side of a school will often be raised considerably by solar heat during the afternoon, while the sun's rays will affect the temperature of a classroom on the east side only during the morning.



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Direct Drive
Propeller Fans



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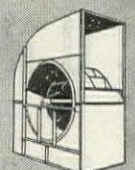
Herman Nelson Horizontal
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Herman Nelson Vertical
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Type HB
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on the school child's health?

Wind, driving cold air through window frames and other openings into a classroom on one side of a school, and thus lowering the temperature appreciably, may have no effect on a schoolroom on the other side. Later in the same day, the situation may be exactly reversed.

Then, too, a classroom which is fully occupied during the entire day has an entirely different ventilation problem from one which is used only for certain periods.

The increase in temperature from body heat given off by pupils themselves will differ depending upon the number, age and activity of the occupants. A classroom used only for several

periods on one day may have a complete schedule the next.

Thousands of School Authorities, Architects and Engineers in all parts of the country have learned through actual experience that only the unit system of ventilation for classrooms provides the INDIVIDUAL CONTROL required to meet these changing conditions in each room of a school without adversely affecting the air conditions in other rooms.

We invite you to contact the nearest Herman Nelson Branch Office or Product Application Engineer for assistance in solving your heating and ventilating problems most satisfactorily.

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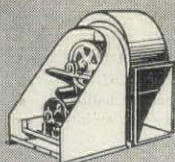
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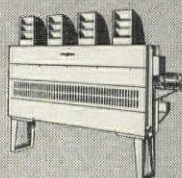
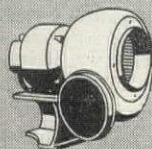
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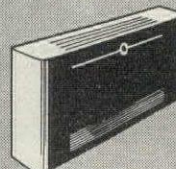
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Belt Drive
Unit Blowers

Herman Nelson
Direct Drive
Unit Blowers



Herman Nelson
Blower-Fan Type
Unit Heaters

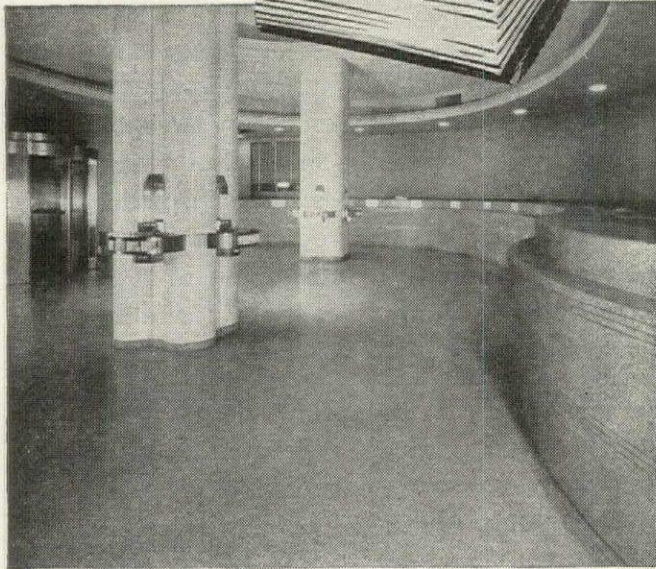
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"draws interest
at the Bank!"



THE CHASE NATIONAL BANK, New York, made a wise investment . . . they ordered Terrazzo for their establishment in Rockefeller Center! Floors, counter fronts, risers and stair treads are all made of this versatile material that provides both *beauty* and *utility*.

FINE TERRAZZO is made with a matrix of Atlas White Cement. Experience shows that this true white cement furthers an accurate reproduction of the color combinations and designs that you specify. As a painter's canvas, it sets off the full, rich beauty of the marble aggregates and mineral pigments to best advantage.

* * *

Send for further information. Write to Atlas White Bureau, Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Bldg., New York 17, N. Y.

The matrix is as important as the marble chips

AF-T 9



ATLAS WHITE CEMENT

for FINE TERRAZZO

G.I. JOBS

FREE SERVICE FOR DISCHARGED VETERANS

To aid discharged veterans secure professional and executive employment in the building industry, The FORUM will publish without charge classified ads giving applicants' qualifications, stating preference in occupation and location. Ads may be run with name and address or with box number.

Employers seeking personnel are urged to make known their requirements. Address: G. I. Jobs

THE ARCHITECTURAL FORUM
350 Fifth Avenue, New York 1, N. Y.

POSITIONS WANTED

LICENSED PRO. ENGINEER—Age 55, long experience construction field, industrial work, development of precise instruments. Knowledge of mgt.—records, production, procurement. Open to offers abroad for American firm. Widely traveled, versatile. Box E-109.

COMMUNICATION OR CONSTRUCTION ENGINEER—27 years old, unmarried Signal Corps vet now employed. Will travel, go aboard. Wide background, business administration, practical construction—communications work. Pleasing personality, likes people. Box E-110.

PERSONNEL—Veteran, 31, now employed in war industry personnel dept. wants placements in peacetime role. Experienced in job analysis, veteran placement, interview, etc. Box E-111.

PLUMBING—N. J. man, age 37, married, with 14 years plumbing experience, interested in position in charge of plumbing for large building, or as plumbing appraiser for large real estate concern. Location preferred—N.Y. or Phila. Box E-112.

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SALESMAN—Ex-Seabee, 20 years experience in sales and sales promotion, wants to enter building industry sales field. Box E-115.

VETERAN—Age 33, married, now living in N.Y. holds wood, wire and metal lather's union card. 15 years contract experience, knowledge blueprints. Wants construction job. Box E-116.

ARCH. DRAFTSMAN & RENDERER—32, B. of Arch. 10 years varied professional experience in N.Y. area, housing, public wks., residential, commercial; seeks responsible position with young firm with possible future partnership. Prefers East or Midwest. Box E-117.

DESIGNER-DRAFTSMAN—Married, age 53, two yrs. college, 20 years designing exper. now employed by large chain store organization. Box E-118.

ESTATE MANAGEMENT—War I vet., age 52, grad. Fordham, member N.Y. Bar, wide exper. title examining, realty mgt., now employed. Wants exec. position with large law firm or estate. Box E-119.

SALESMAN—26 year old N.J. vet., high school grad., some exper. retail sales. Interested in exploring poss. in bldg. construc. field. Box E-120.

ENGINEER MANAGER—Registered Pro. Engineer, 15 yrs., heating and ventilating, air conditioning, sanitary elec-

trical fields; 5 yrs. consulting, design, supervision; 7 yrs. sales contracting engineering, operating franchise. Desires engineering, sales for mfg., distributor or large contractor in South or West. Box E-123.

VETERAN—42, single, exper. brick contractor-carpenter; knowledge engineering, plan reading, estimating; bus. admin. Wants connection with contracting firm as estimator, general office assistant. Box E-122.

MEN WANTED

Arch., Draft., Design.

DRAFTSMAN—Position open for senior draftsman in N.Y. manufacturing firm. Architectural experience preferred. Box R-150.

ARCH. DRAFTSMAN—Kentucky firm of architects-engineers wants exper. draftsman; prefer returned service man. Box R-151.

ARCH. DESIGNERS & DRAFTSMEN—Exper. in hospital work wanted immediately by large architectural and engineering firm in Atlanta, Ga. Write particulars relative to education and experience. Give refs., address and tel. no. Box R-142.

DRAFTSMEN—N. Y. architectural firm wants a senior and a junior draftsman. Specialize in college and school architecture. Box R-143.

EXPER. DRAFTSMAN—Wanted in Calif. store designing firm. Man competent in architectural working drawings, detailing of store fixtures and store fronts. Perm. position with good salary. Box R-144.

DRAFTSMAN OR REGIS. ARCH. in N.Y. for 35 hour week on major oil company service station and bulk plant work. Perm. position with advancement opportunity. Give particulars on age, education, experience, checking drawings, etc. Box R-145.

DRAFTSMAN—Worcester, Mass., small office, prospect of future partnership. Opportunity for all phases of work, long exper. not necessary. Salary dependent upon ability. If single and desired, living quarters available with architect's family. Box R-146.

ARCHITECTURAL DESIGNERS—Experienced men for nationally known Midwestern firm of architects and engineers. Box R-147.

ARCHITECT-DESIGNER wanted. Must be topnotch with successful background in modern design. Capable of handling complete projects from conception to finish. Rendering and styling important. Ability to meet clients and handle accounts desirable. Excellent and permanent future. High salary. Box R-149.

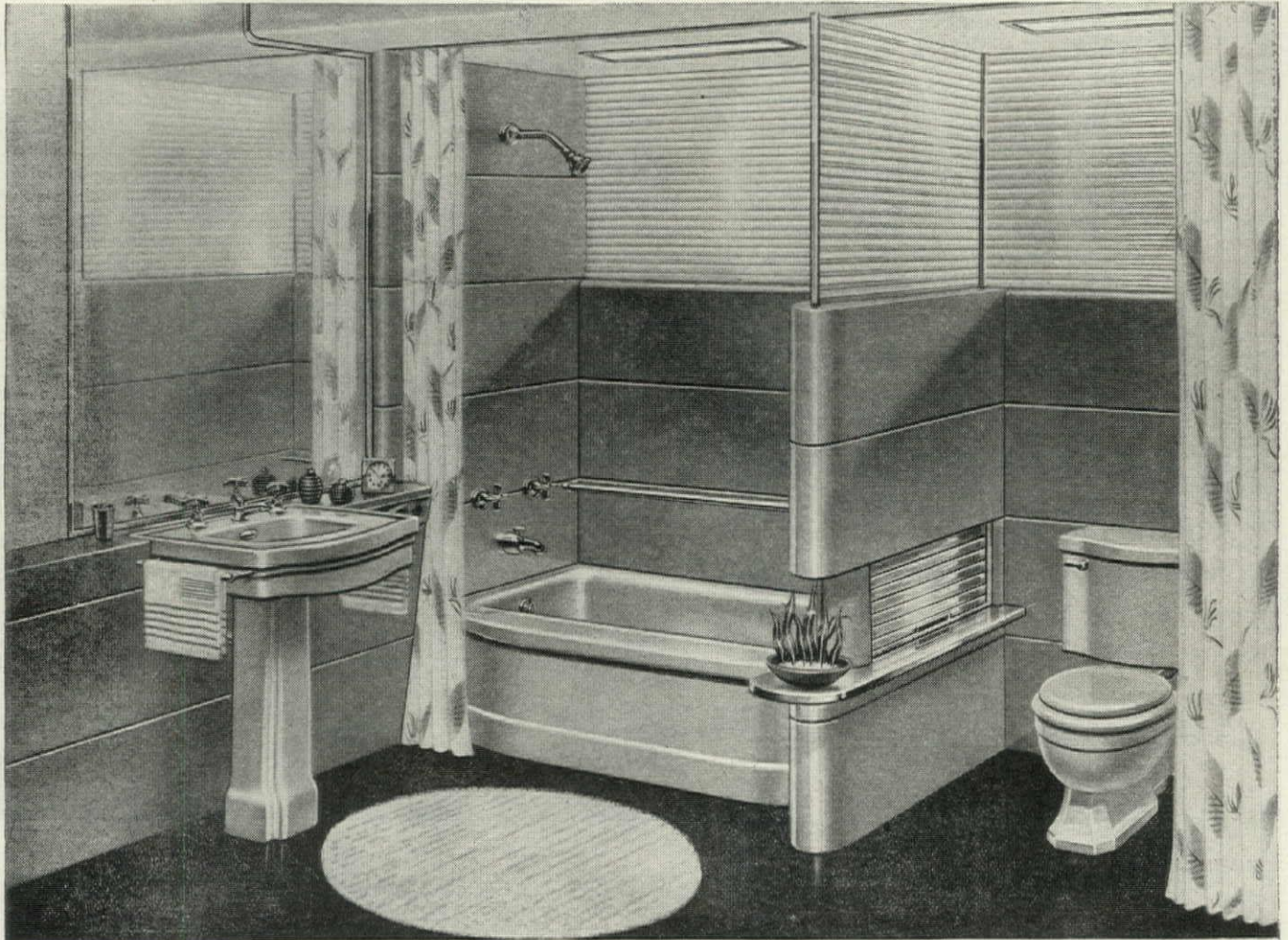
STRUCTURAL, HEATING AND VENTILATING, AND ELECTRICAL ENGINEERS. Experienced men for nationally known Midwestern firm of architects and engineers. Box R-147.

Beautiful Bath . . . jam-packed with bright ideas!

"WHAT A LAYOUT for a growing family! Built-in fixtures so there's plenty of 'dressing' room on chilly mornings . . . a wonderful safety-bottom bathtub to protect my pair of roughnecks . . . and easy-to-clean Briggs Beautyware throughout, to make my follow-up job a breeze!"



"AT LAST! The inspiration I've been needing to modernize our family 'horror'. For instance, that ceiling-high mirror over the towel-rack lavatory . . . and the fluted glass top over the 'privacy' partition . . . would be a real start on a bathroom I'd be proud-as-punch to own!"



DESIGNED AND ILLUSTRATED BY BRIGGS DESIGN RESEARCH DEPARTMENT

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"CUSTOM-MADE LOOK at ready-made cost . . . that's what gets me! Furthermore, my local plumbing contractor tells me that the smartly styled Briggs Beautyware designs come in a variety of decorator-colors! Um-m! I'm going to start planning my new bathroom. today!"



YOU CAN START PLANNING, TODAY. For Briggs designers are already planning for you. They're working on the slickest . . . swankiest . . . most durable and convenient fixtures that ever glamorized a new—or re-newed—bathroom! And what's more . . . they're going to offer Briggs Beautyware plumbing fixtures in both formed metal and vitreous china. Two very good reasons why you can count on Briggs Beautyware to fit-like-a-glove into any blueprint or budget!

COPYR. 1945

BRIGGS Beautyware

BRIGGS MANUFACTURING COMPANY, PLUMBING WARE DIVISION, DETROIT 11, MICHIGAN

"PLAN FOR TOMORROW—BUY MORE WAR BONDS TODAY"

This advertisement, in full color, appears in:

Saturday Evening Post, October 6

American Home, November

Better Homes and Gardens, October

PRATT & LAMBERT PAINT AND VARNISH



Conversion of an old loft into an attractive, commodious cafeteria was accomplished here not merely for the sake of creating something different, but was the result of very definite requirements of servicing and traffic.



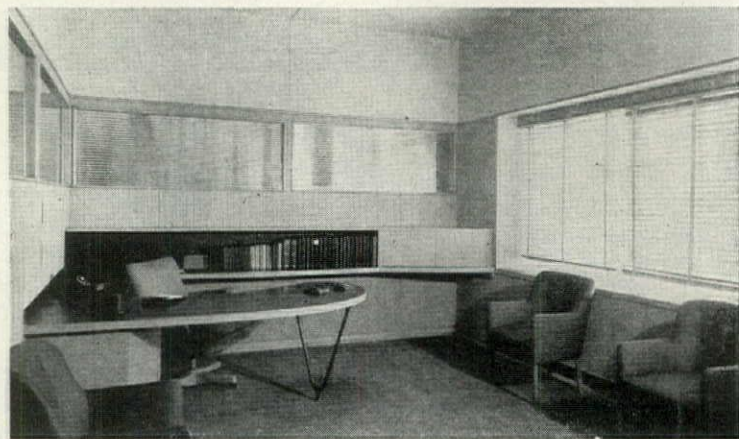
CAFETERIA, INTERNATIONAL DETROLA CORP., DETROIT.

ALEXANDER H. GIRARD, Chief Designer and Architect, Detrola Radio Division. Photos, left: General view of Cafeteria, showing rear of circular stage-storage unit; below: Cashier's desk and serving counter; Office of Vice-President in charge of manufacturing.

Photos by Elmer L. Astleford, Detroit.

FACILITIES for serving 1400 workers, in addition to executives' conference dining rooms, are provided in this cafeteria which has an inviting, restful atmosphere. The old steel columns, now encased in round, elliptical and rectangular boxes, became subdued elements of the decorative scheme. In the converting procedure, only simple materials were used: natural wood for the wall surfaces, asphalt tile for the floors. Red, gray, green and beige are the predominant colors.

Here, Pratt & Lambert Paint and Varnish were used to decorate and to insure low maintenance costs. In your work, the Pratt & Lambert Architectural Service Department can be of practical assistance in obtaining outstanding decorative results.



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

ZONOLITE INSULATION USED IN WASHINGTON D.C. GAS LIGHT COMPANY NEW BUILDING



Beautiful New Building of Washington, D. C. Gas Light Company.
Winner of Award of Merit by Washington Board of Trade.
5,000 cu. ft. Zonolite Concrete—18,000 cu. ft. Zonolite Plaster.
Architects—Leon Chatelain, Jr. and Jarrett C. White.

Zonolite Fireproof Plaster and Concrete Greatly Reduce Dead Load . . . Insulates Against Heat, Cold and Sound

In this new addition to Washington's superb modern structures the floors and roof are insulated with Zonolite Concrete, and the walls are plastered with Zonolite Plaster. This use of Zonolite again follows the precedent rapidly being established by leading architects and engineers in scores of America's finest buildings.

Zonolite Concrete

Zonolite Concrete Aggregate replaces sand to make a permanent, fireproof, sound-deadening, lightweight insulating concrete for floors and roofs. It is easily poured, easily formed into cants, saddles, and slopes to give proper roof drainage.

Zonolite Plaster

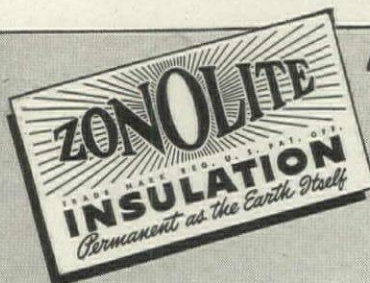
Zonolite Plaster Aggregate replaces sand to make a fireproof, crack-resistant, lightweight plaster of high insulating and sound-deadening qualities.

1 INCH OF VERMICULITE* PLASTER PASSES 4-HOUR UNDERWRITERS' FIRE TEST

In a recent fire test by Underwriters' Laboratories, Inc., 1 inch of Vermiculite* Plaster successfully fireproofed a steel floor and primary steel beam for 4 hours. 1 cubic foot of this Plaster Aggregate weighs 8½ lbs. as compared to 100 lbs. for sand.

*Vermiculite is generic name for Zonolite
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Gentlemen. Send me 86-page Manual on Zonolite Concrete; Copy of Underwriters' Laboratories Report; Literature on Zonolite Plaster and Granular Fill Insulation.

Name.....

Address.....

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Please check: Architect Engineer Draftsman Contractor

Why one husband kissed his wife four times!



"Here's a Kiss for the money you're saving ... while it's coming in faster through the war years. I know in my bones jobs like mine may not last forever. Who can tell what's going to happen day-after-tomorrow? Thank God you've got sense enough to see that today's the time to get a little money tucked away.

"Here's a Kiss for the War Bonds you're making me hold on to! I'd never do it without you, honey; it's too easy to find reasons for cashing 'em in—but when it comes time to put the children through school or pay for an emergency operation, we'll be thankful.

"Here's a Kiss for the insurance you talked me into buying. I've felt a lot easier ever since I've known our future is protected—you and the kids would be safe if anything happened to me—you and I won't have to spend our old age living on someone's charity. And every cent we put in insurance or War Bonds or other savings helps keep prices down.



and
here's a kiss for being you—a woman with brains enough in your pretty head to make sure we don't buy a single thing we *don't* need in times like these—because you know a crazy wave of spending in wartime would march America straight into inflation. Baby, I sure knew how to pick 'em the day I married you!

ONE PERSON CAN START IT!

You give inflation a boost

- when you buy anything you can do without
- when you buy above ceiling or without giving up stamps (Black Market!)
- when you ask more money for your services or the goods you sell.

SAVE YOUR MONEY. Buy and hold all the War Bonds you can afford—to pay for the war and protect your own future. Keep up your insurance.

**HELP
US
KEEP**

PRICES DOWN

SPOT NEWS

about **WATROUS FLUSH VALVES** from the **Chicago Daily News Building**



"The Watrous Flush Valves operating in the Chicago Daily News Building have given excellent service. The building was opened in 1929 and since that date the maintenance cost on these Watrous Flush Valves has been so extremely low that we haven't bothered to maintain a yearly record. We like their simple method of adjustment and their durability."

*L. T. Schultz, Superintendent
Chicago Daily News Building.*



For complete information on Watrous Flush Valves see Sweet's Catalog or write for Catalog No. 448-A. Also ask for Bulletin No. 477 giving a summary of Architects' Views on Flush Valve Applications.

From the thousands of buildings where Watrous Flush Valves are installed, evidence similar to this report from the Chicago Daily News Building is constantly flowing in about the fine performance of Watrous Flush Valves.

The sound design and careful workmanship built into Watrous Flush Valves make their selection a source of constant satisfaction over the years to everyone concerned.

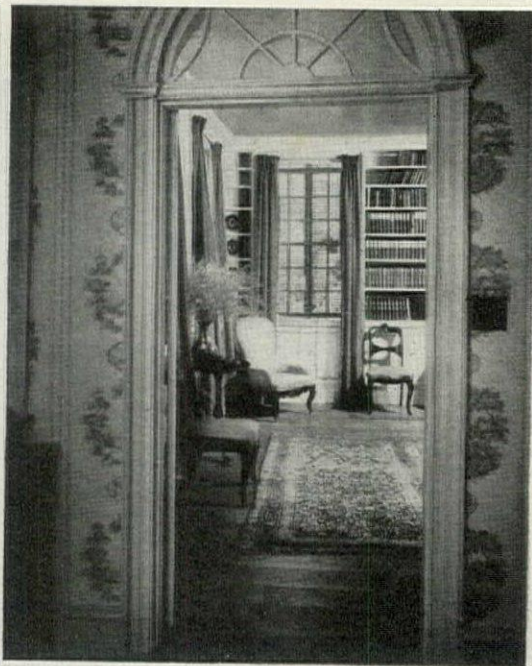
THE IMPERIAL BRASS MANUFACTURING CO.
1238 West Harrison St., Chicago 7, Illinois

*Holabird & Root, Architects
O'Callaghan Bros., Plumbing Contractors*

Watrous Flush Valves

A REPORT on the Performance of **WOOD FINISHES—**

"Appearance improves with customary polishing"—Cameron Clark



Photos: Residence, New Canaan, Conn., Cameron Clark, Arch., N.Y.; Minwax Flat Finish on floors

"We have specified your product for the past 20 years"

THE success of any building product is measured by the service it renders to the owner. On this, as proved by performance on the job depend its acceptance and specification by the architect.

With a history of more than 30 years, MINWAX Wood Finishes have had ample time to be judged by both owner and architect. How they are regarded by the architectural profession is forcefully expressed in the letter reproduced here, written by Mr. Cameron Clark, one of America's foremost residential designers.

The demands of the post-war owner require a floor finish that provides the beautiful appearance of natural wood yet does not require costly rescrapping and re-finishing. Because it is a *penetrative, stainwax* finish, MINWAX has been living up to today's demands for more than a quarter of a century.

On the basis of its long service and its consistent specification by outstanding architects, MINWAX Wood Finish is presented for your careful consideration. For further information we refer you to Sweet's, or invite you to make inquiry direct. MINWAX Company, Inc., 11 West 42nd St., New York 18, N. Y.

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For the 27th consecutive year our
COMPLETE CATALOG is in SWEET'S

CAMERON CLARK
ARCHITECT
10 PARK AVENUE
NEW YORK CITY


July, 15, 1945

Minwax Company, Inc.
New York City

Gentlemen:

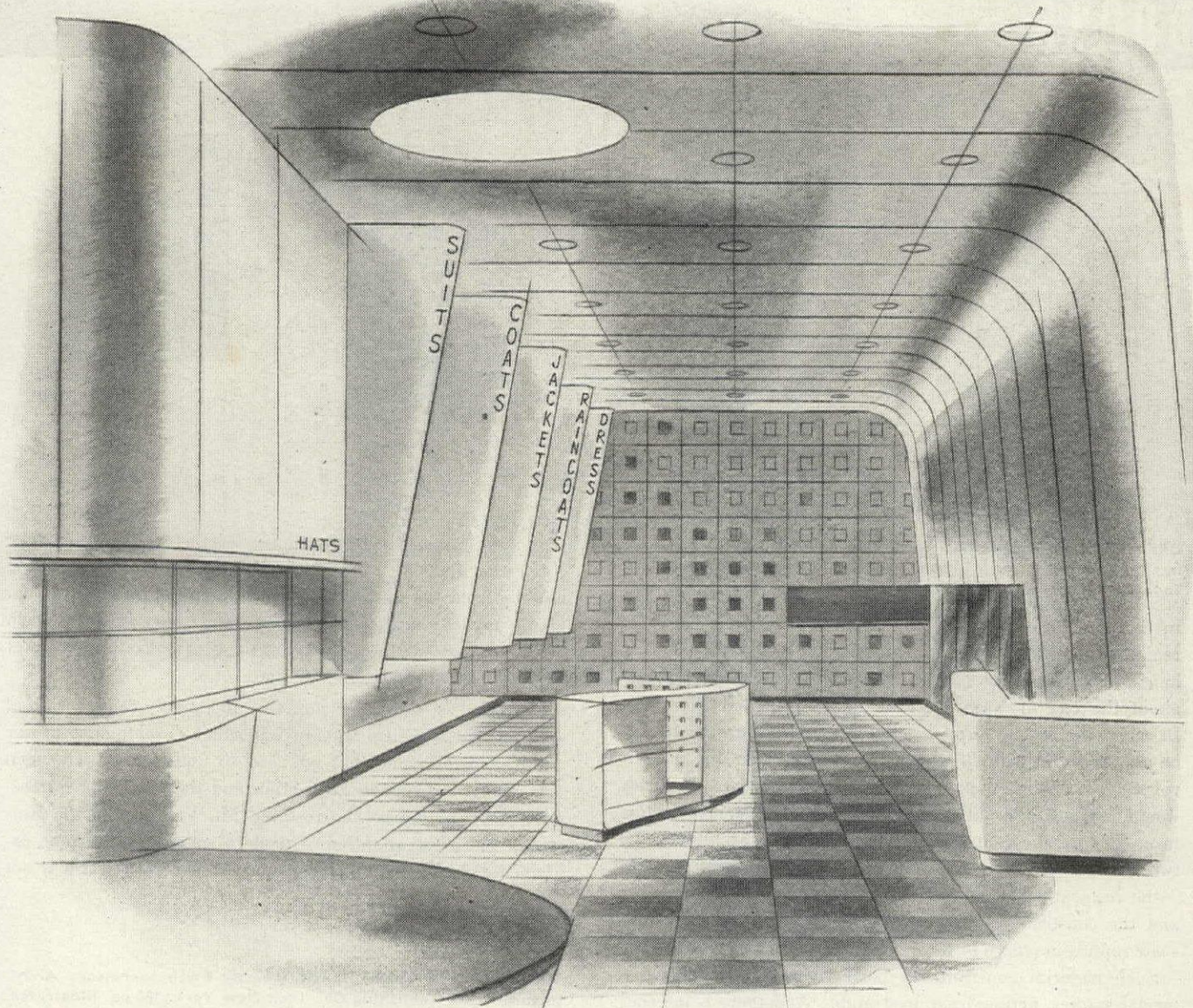
I am pleased to respond to your inquiry as to our experience with Minwax floor finish in our residential construction. As you know we have specified your product for the past twenty years. Our clients have never been let down, for the reason that Minwax does not become a coating to be worn off and therefore difficult to patch. Traffic wearing through a surface coating requires costly resanding. Minwax sinks into the wood and is easily touched up where excessive wear occurs. Its appearance improves with the customary polishing. Yes, I can heartily recommend Minwax.

Very truly yours,
Cameron Clark



WOOD FINISHES
Floors • Paneling • Trim

OTHER MINWAX PRODUCTS
Waterproofings • Dampproofings • Caulkings • Protective Coatings



Short-cut to designing sales appeal

There's no quicker way to give a store interior that smart, modern, sales-stimulating appearance than to use durable Masonite* Presdwoods from top to bottom and front to back.

These handsome, smooth, splinterless hardboards can be used flat or curved in an infinite variety of shapes and designs. Furthermore, they take practically any kind of finish. So in the smartest stores you find Masonite Presdwoods used for walls, partitions, ceilings; in decorations, showcases, cabinets, platforms and displays.

In homes, restaurants and offices, too, these Masonite

hardboards are ideal for dry walls, panels and furniture because of their strength, beauty and durability. For counters, closets, cabinets and work surfaces, Presdwood is the best answer for architect and builder — and the best buy for the owner.

The Presdwoods go up easily and quickly — save time and labor on new construction or alteration work. They will come smooth or in tile pattern. For data on all the Masonite building products, write to Masonite Corporation, Dept. AF-9, 111 W. Washington Street, Chicago 2, Illinois.

**"Masonite" is a trade-mark registered in the U. S. Pat. Off., and signifies that Masonite Corporation is the source of the product.

MASONITE

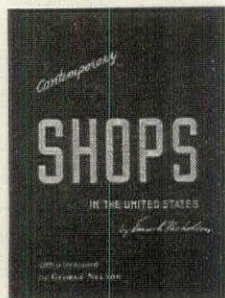


BRAND PRODUCTS

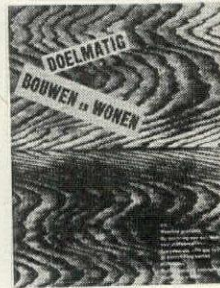
PRODUCTS OF THE STATE OF MISSISSIPPI



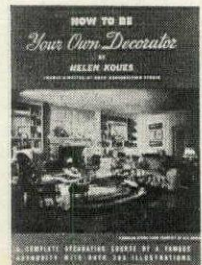
Review this page



Review this page



Review page 206



Review page 210

BREAKFAST AT THE HERMITAGE: A Novel of Nashville Rebuilding. By Alfred Leland Crabb. Bobbs-Merrill Co., Indianapolis, Ind. 312 pp. 5¾ in. by 8¼ in.

In reading this incredible book about incredible people, one realizes more than ever that history is never safe in the hands of antiquarians. Third in a series of historical novels about the city of Nashville—the first was called *Dinner at Belmont*, the second *Supper at the Maxwell House*, so it may be assumed that with *Breakfast* the trilogy ends—the present volume deals with the post-Civil War period. As the titles would indicate, the author has a strong interest in architecture. In fact, the central character is a young architect; and two of the many plots deal with actual architectural projects—the restoration of Andrew Jackson's home, the Hermitage; and the construction at the Tennessee Centennial of a full-scale replica in stucco of the Parthenon.

Such material constitutes a perfectly valid basis for historical studies, fictionalized or straight. And there is internal evidence that Mr. Crabb has taken his research seriously. Unfortunately, neither of these facts saves his work from monumental failure. The tale creaks from incident to incident, his characters—historical and imaginary—speak with an affected formality, a studied provincialism, which makes them unbelievable even as Victorians. The fault is not

that the characters are Romantics of the fin-du-siecle type; it is rather that the author himself is one. Far from throwing new light on the motivations of these ancestors of ours, Mr. Crabb makes them even more obscure, burying them even deeper in that shallow rosy fog of the Starke Young-Margaret Mitchell school of historical fiction.

Whether we like it or not, the nineteenth century's final splurge in Classicism was an important development in our cultural history, one that we need to understand. The men who built the Chicago Exposition and the Nashville Parthenon, the good ladies who restored Mt. Vernon and the Hermitage merit the attention of modern scholars. But to be explained they must be understood. Clearly, Mr. Crabb is not the man to do it.

CONTEMPORARY SHOPS IN THE U.S. By Erich Nicholson. Architectural Book Publishing Co., Inc., New York. 188 pp. Illustrated. 8½ in. by 11 in. \$10.

Here is a book that will not require any highpowered promotion gags to boost its sales. Its title alone guarantees a wide circulation, for if there is one aspect of contemporary architecture that has been systematically ignored by authors and critics, it is store design. Except for a few works that are thoroughly out of date this volume occupies the field alone.

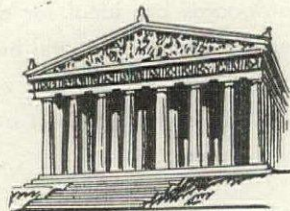
Despite the prewar activity and intense interest of architects and designers in store design, they have been literally starved for written and pictorial data on the subject. However, Mr. Nicholson's book is no treatise on design fundamentals. It is a photographic review of recently completed jobs accompanied by a brief explanatory text. Emphasis is primarily on store character—the architectural tricks and details that set one commercial establishment apart from its competitors. This very fact, however, should make *Contemporary Shops* as appealing to merchants as to architects and designers.

Taken as a whole, the collection is smart and impressive though in a number of instances the glamor results from a few superficial interior embellishments rather than from the structural treatment. For the most part, the stores selected are high priced specialty shops and department stores—the most notable exception being John Hatton's excellent design for a Boston grocery.

(Continued on page 206)



The Hermitage



The Parthenon

One was restored, the other reconstructed—both by Romantics.



SECRETARY'S CHAIR

in Aluminum
(Fully Adjustable)

No. 2123



A HIGHER LEVEL OF EFFICIENCY THROUGH COMFORT

YOU buy office chairs for COMFORT. Otherwise office workers would stand, as do lathe operators. Increased comfort improves office production—more work and better work. Increasing office chair comfort requires designing the chair for the job and making it fully adjustable to the user. • There is a Goodform Adjustable Aluminum Chair for each different kind of office work, and each model is adjustable to any individual. The fact that Goodform . . . light-weight, durable, deeply cushioned, smartly upholstered . . . became America's largest selling adjustable office chair indicates that it does increase worker comfort, improve worker performance and bring management satisfaction.

METAL DESKS—GOODFORM ALUMINUM CHAIRS—METAL FILING CABINETS—STEEL SHELVING—FILING SUPPLIES—STORAGE CABINETS



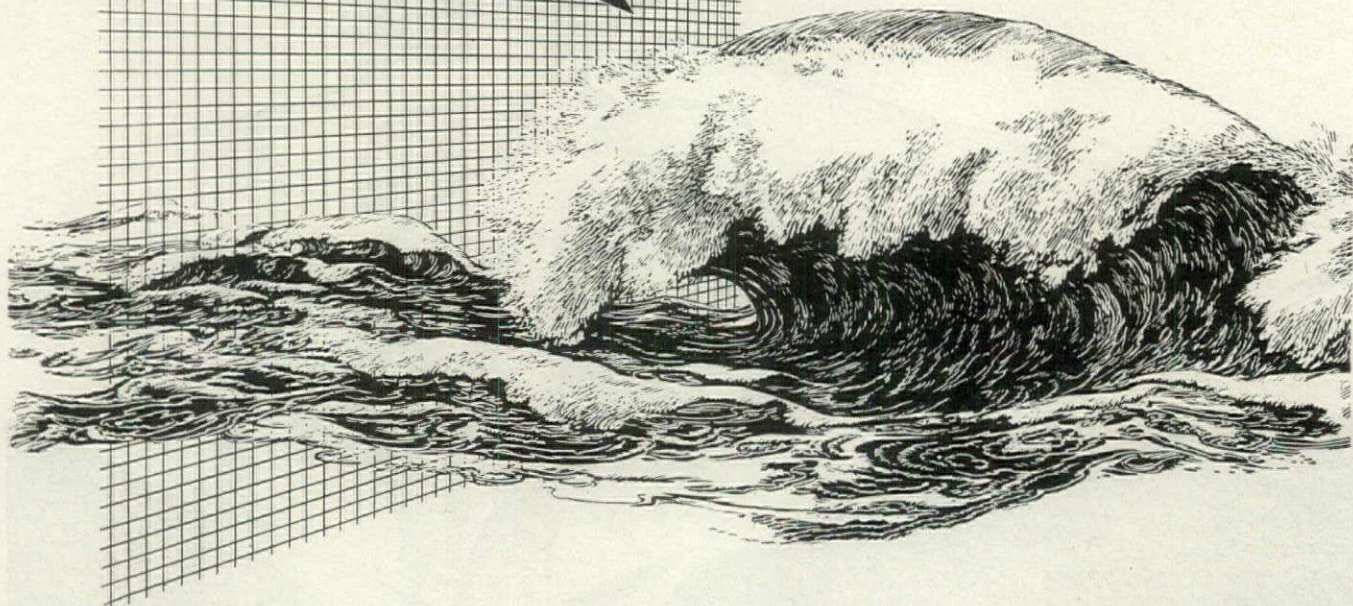
THE GENERAL FIREPROOFING CO.

YOUNGSTOWN 1, OHIO

*Write for a Goodform Aluminum Office Chair Catalog
and the location of your nearest G-F dealer or branch.*

ALL-WEATHER PROOF

WON'T CORRODE



LUMITE—the screen that lasts!

Nothing can “eat” a screen faster than salt air!

But here's one screen not even salt spray can corrode . . . nor can rain, snow or smoke! LUMITE* (modern plastic insect screen cloth) *never* stains sills or side-walls, and needs no painting . . . a few rubs with a damp cloth quickly renews its “sparkle.”

LUMITE resists punishment, too! It has unusual resilience and tensile strength; never dents or bulges in ordinary use.

LUMITE outlasts ordinary screens because it can *never* wear out through natural causes.

Tested daily under savage weather conditions on world battlefields, LUMITE is a natural for *your* postwar plans!

FREE SAMPLES ON REQUEST

Although we are not able to re-lease LUMITE Plastic Insect Screen for general use until after V-J day, prepare yourself *now* for tomorrow's building boom! Write to us today for further information about this revolutionary new plastic screen. We'll send you complete descriptive literature, as well as free samples of LUMITE.

*WOVEN FROM SARAN. PRODUCT OF DOW CHEMICAL CO.

Tested in War — Ready for Peace

Many millions of feet of LUMITE screening have been used successfully to protect the Armed Forces against disease-bearing insects. Today's fighting men are your tomorrow's customers . . . and they're sold on LUMITE already!

- ★ 100% Rustproof under *any* conditions.
- ★ Cannot stain sills or sidewalls.
- ★ Strong, resilient . . . can't dent or bulge.
- ★ Never needs painting . . . non-inflammable.
- ★ Not affected by humidity or salt air.
- ★ Will be *competitively* priced with better grades of wire screen cloth.

Chicopee Manufacturing Corp., Lumite Division

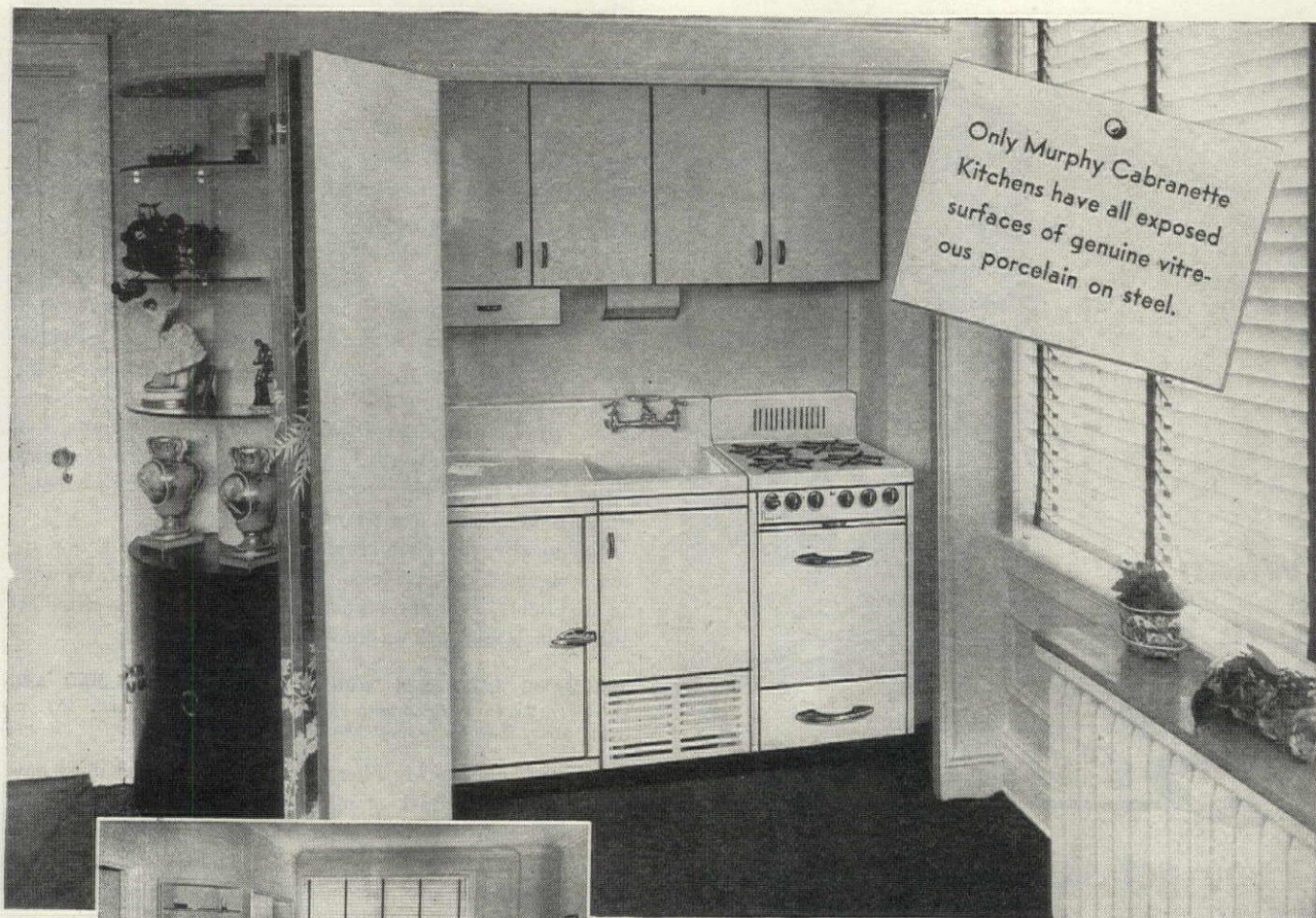
40 Worth Street



New York 13, N.Y.

*World's largest makers
of Plastic Screen Cloth*

LUMITE



Behind the richly decorated doors is concealed the efficient No. 60 Murphy Cabranette Kitchen. Opened, they reveal full kitchen facilities in a 60-inch recess a littl over two feet in depth.

Full Kitchen Convenience **IN A SPACE FIVE BY TWO!**

For space saving that cuts construction costs, for the glamour that lures tenants, for the convenience that holds tenants . . . choose Murphy Cabranette Kitchens!

The installation shown above is a Murphy Cabranette Kitchen No. 60. This assembly, only five feet wide, includes an efficient range (electric or four-burner gas) with oven and broiler of standard size, electric refrigerator with sealed-in unit, porcelain cast iron sink, under-sink storage cabinet, 12 cu.ft. wall cabinet and convenient cutlery drawer. There are other complete assemblies from 48" wide to any desired width.

Best of all . . . all exposed surfaces are porcelain

. . . permanent beauty that laughs at dirt, returns with the use of soap and water and never requires redecoration.

Murphy Cabranette Kitchens are designed, engineered, manufactured and guaranteed by one organization which devotes its full peace-time operation to the manufacture of apartment kitchens. Over forty thousand of these remarkable kitchens were installed pre-war. We believe every one of them to be in use today and that owners and users will bear witness to their beauty and efficiency.

Architects, who will be responsible for America's design for post-war living, should be on our list to receive detailed literature when it is issued.

Space Saving **MURPHY CABRANETTE KITCHENS** *of Porcelain*

DWYER PRODUCTS CORPORATION



MICHIGAN CITY, INDIANA

(Continued from page 202)

Though the author says that "... to put forth any theory on 'How to Design a Successful Store' would be presumptuous," a little more stress on the importance of such basic elements as circulation, service and storage would have added to the value of the book. Even if he chose not to deal with them objectively, the descriptive text would have been of more value if it had indicated more fully just how, in each case, these problems were handled, and why. In his introduction Mr. Nicholson states that he believes it best for the photographs to tell their own stories leaving the reader free to draw his own conclusions but in doing so he limits himself to a readership already well acquainted with merchandising and store design—a readership which does not include students, laymen and most prospective merchants.

Technically, the photographs are excellent and a few are accompanied by floor plans. The publishers have also done an excellent job in presentation in view of the restrictions under which this book was brought out.

DOELMATIG BOUWENEN WONEN (PRACTICAL BUILDING AND LIVING). By Paul Bromberg. Querido, Inc., New York. 153 pp. Illustrated. 8 in. by 10 in. \$3.50.

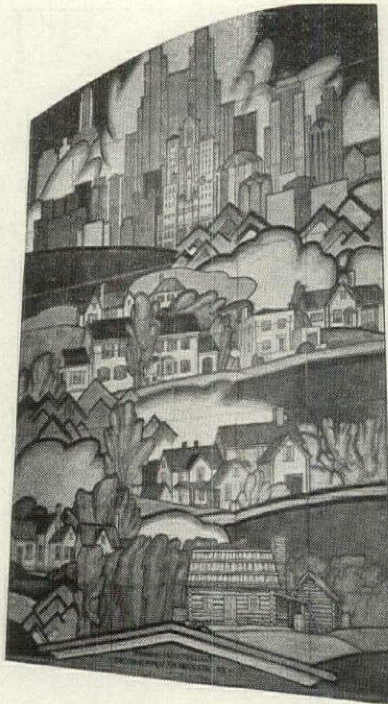
Like many other newly liberated nations, Holland must now face its enormous task of material and spiritual reconstruction. This will require a great deal of preparation, caution and foresight in order to ensure stable conditions in the future. Such measures apply particularly to housing, which is not only an emergency situation but also a problem whose immediate solution will exercise great influence on architecture and the building industry in the future. Mr. Bromberg's is a study of American building methods and their future application in his own country. Holland and many of her sister nations can look nowhere but to the US to make up for their long years of bondage which completely arrested the development of their national architectural vocabulary. Building restrictions notwithstanding, this country has realized many important advances in building techniques during the war years, particularly in the fields of public housing and prefabrication. As might be expected, the latter subject receives the author's closest scrutiny. He presents an intelligent evaluation of most recognized methods. His close acquaintance with prewar conditions in his native land lends authority and practicability to the work.

The over-all plan of execution advocated by Mr. Bromberg calls for close, active collaboration on the part of architects, city planners, artists and representatives of the education and public health fields in coordinating the building industry. While Americans are apt to smile knowingly at such a utopian program, Holland is starting her reconstruction virtually from scratch. If under these conditions broad vision cannot reap its reward, the ideas of our own planners are no more than pipe dreams.

There is no doubt but what Mr. Bromberg's book, addressed primarily to Dutch architects, will be received with interest and seriousness. It is the first of numerous yet-to-be-written works on this subject for Holland and many other devastated countries which herald an era of unprecedented prestige for American design, planning and building techniques. Their crystallization, carried out on a world wide basis, should be one of the most interesting developments of the years to come.

(Continued on page 210)

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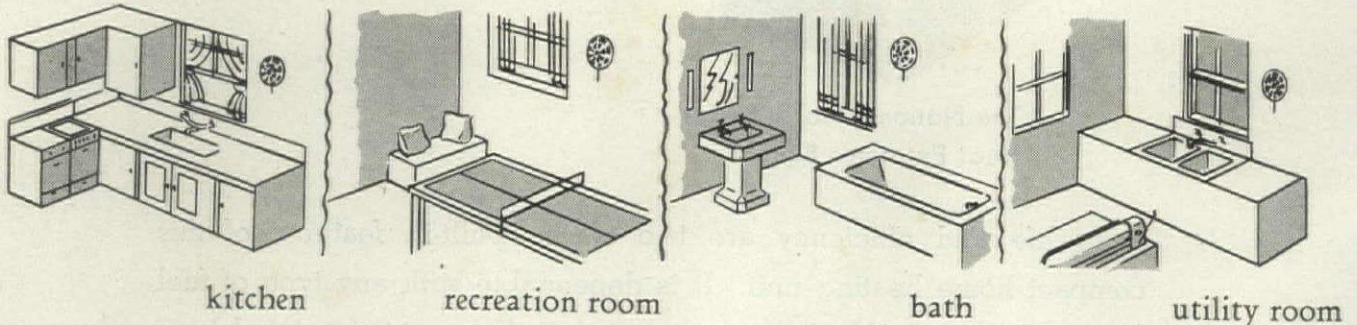
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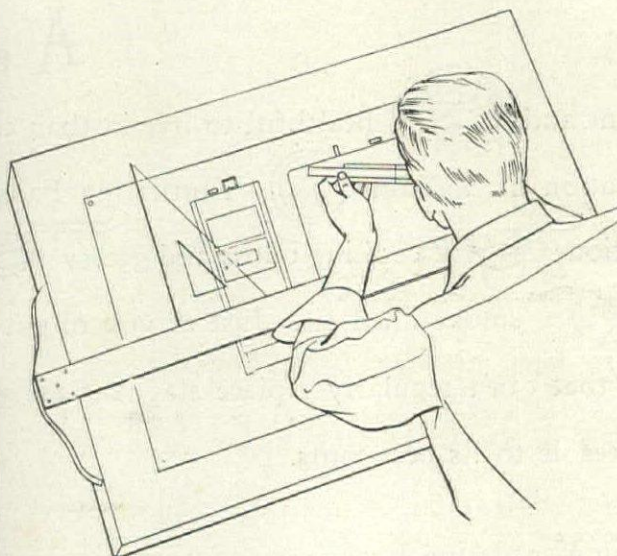
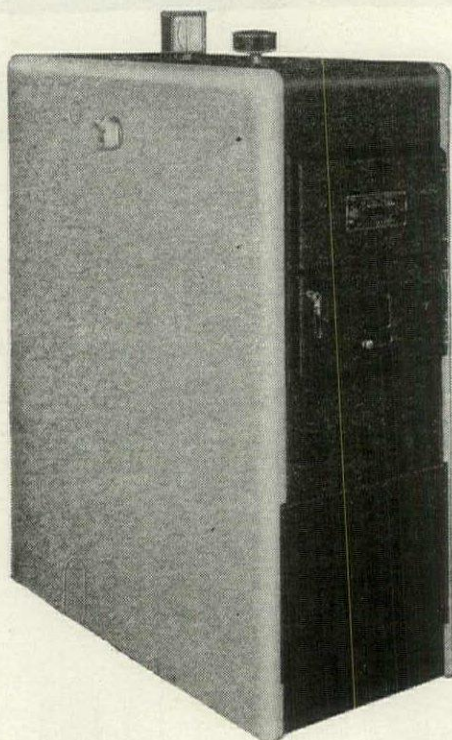
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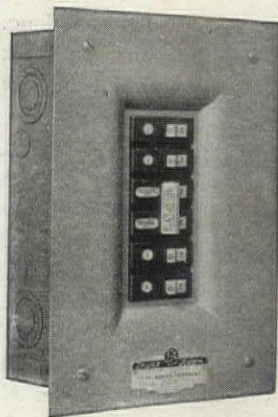


The NATIONAL RADIATOR Company

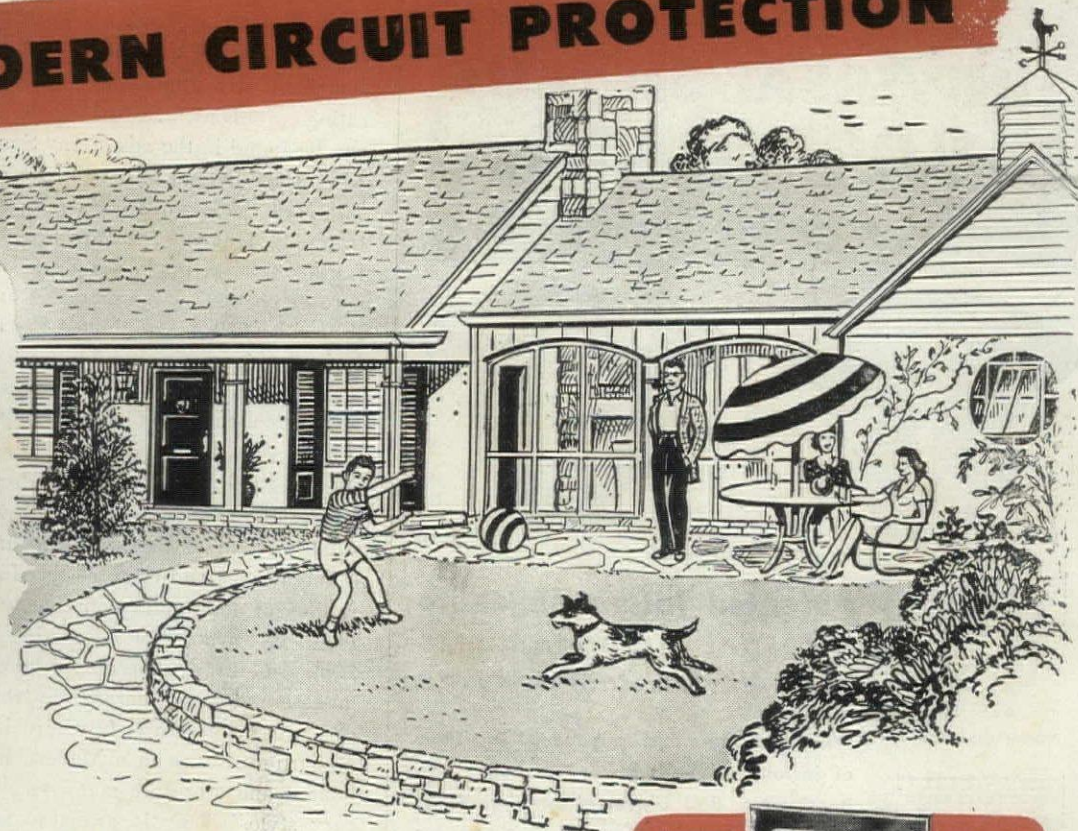
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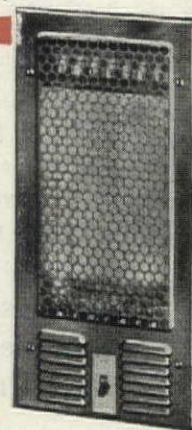


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(Continued from page 206)

HOW TO BE YOUR OWN DECORATOR. By Helen Koues. Tudor Publishing Co., New York. 128 pp. Illustrated. 8 in. by 11 in. \$1.

Though architects are apt to deny it, the fact still remains that most of them are completely baffled and intrigued by the reasoning of Mrs. American Housewife and her complex decorating problems. Disturbing hints of the little-known art can be found in the ads of any Sunday newspaper. It is dealt with erotically and at length by a number of home magazines. The frail shadow of Elsie de Wolf is by no means dead, the trouble is that most modern architects just haven't taken the trouble to look up her record. However, short of this measure or consulting the oracle in any "decorating shop," Miss Koues' book is as enlightening as anything yet to come along. It is the decorating counterpart of the Boston Cook Book and like the Boston Cook Book, is tantalizingly uninformative about the net result of a given recipe.

The author's introduction furnishes the first clue: . . . We build our houses and decorate our rooms to suit the way we live and the climate where we live. We choose what we like of the fine furniture of different periods and different ages and combine this furniture with the colors and fabrics of today and consciously or unconsciously create a fresh, direct style of decorating which is 'Contemporary.'" It must be firmly emphasized here that in Miss Koues' world, modern and contemporary are two very distinct formulae. As she puts it, "Colonial furniture is used in a Colonial house. Modern furniture in a Modern house, etc. The nondescript house—and there are many—may well follow the Contemporary style." This is probably as clear an analysis of the situation as can be found without considerable research and probably a stiff initiation fee.

However, the most alarming part of the book is its treatment of the "Modern" room. This, Miss Koues claims, is designed to meet the functions of living as the Modernists see it. "Basic in the planning are sweeping horizontal lines, a sense of spaciousness, the conservation of space, and large windows which are like glass enclosed walls." By this odd statement we assume that the author refers to enclosing walls of glass but you never can tell.

No matter how lightly we may take such a pot pourri of thought and theory, it must be realized that a book like *How to Be Your Own Decorator*, both for its price and its association with *GOOD HOUSEKEEPING*, will be widely read and just as widely swallowed. While Chippendale, Hepplewhite and Sheraton seem to have survived in spite of such friendly agents as Miss Koues, they were fortunate enough to have been created before the day of interior decorators. Neither Miss Koues nor anyone else has ever been able to instill a design sense where it doesn't exist and it is her particular type of publicity that will render contemporary interior design as static as the Early American room on the fifth floor of any department store. We wonder, however, whether it could have been a coincidence that Miss Koues picked the Tudor Publishing Co.

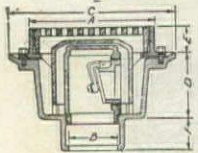
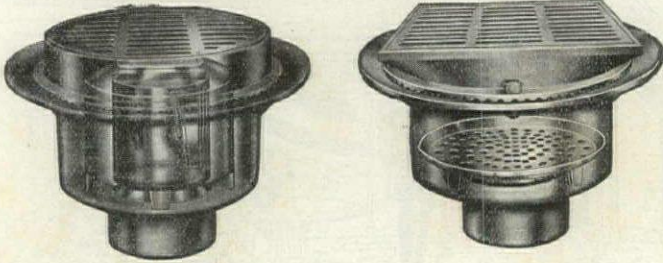
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FORUM'S FREE PLACEMENT SERVICE FOR DISCHARGED VETERANS (see page 194)

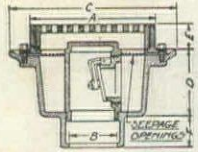
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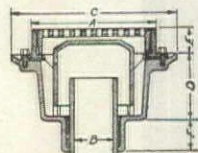
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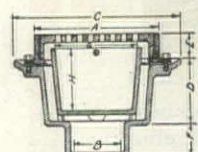
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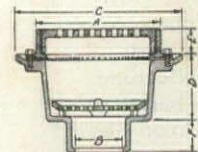
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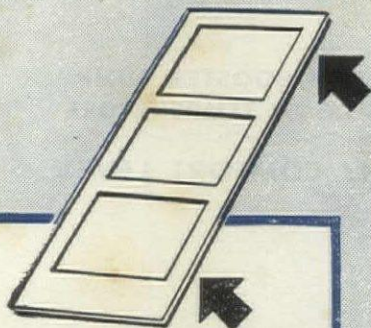
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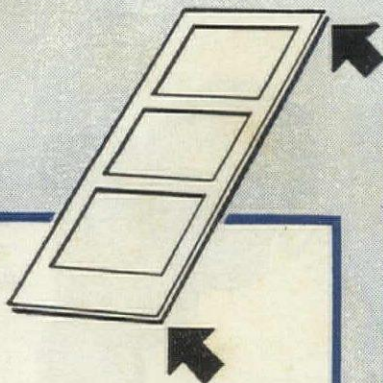
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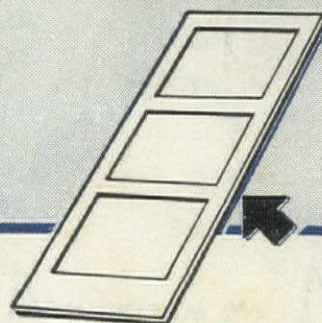
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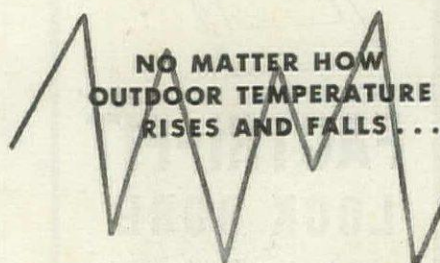
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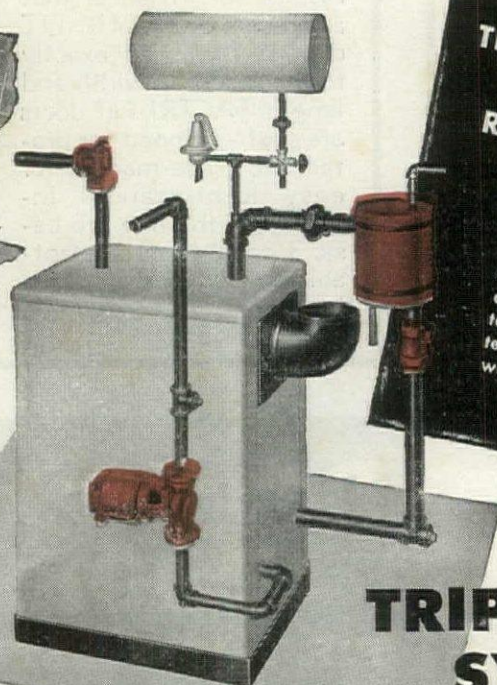
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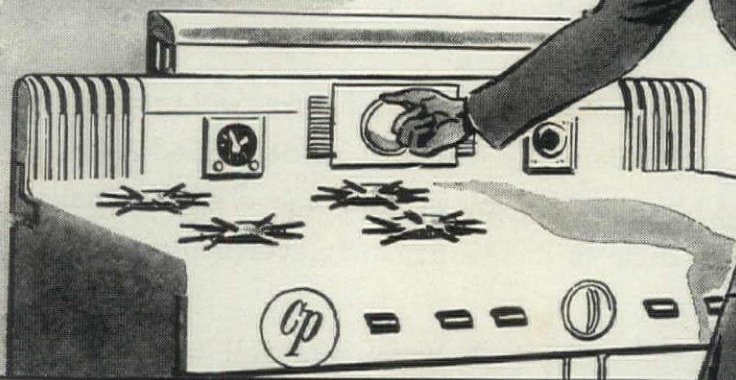
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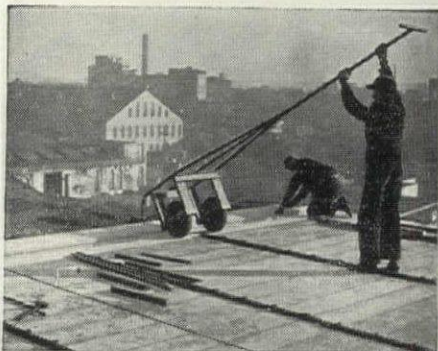
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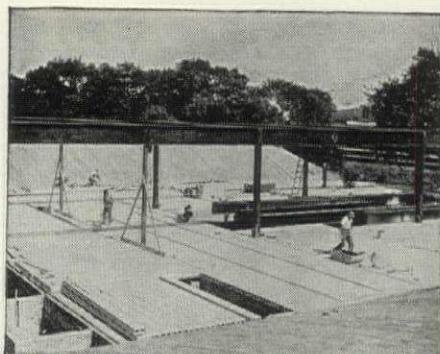


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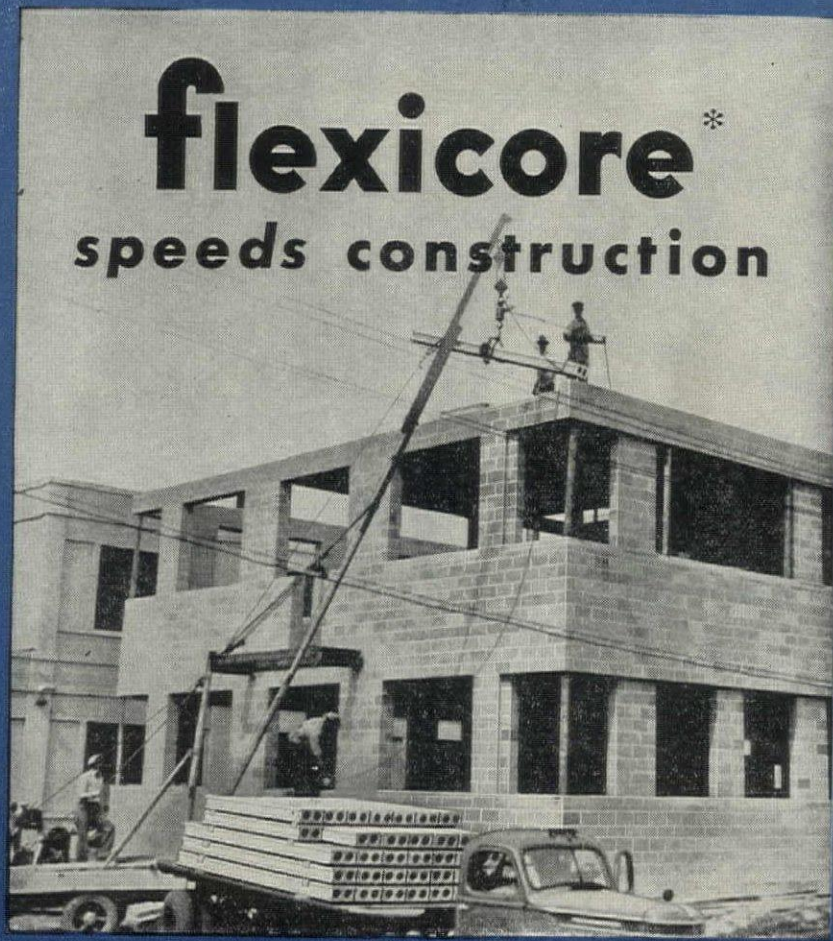
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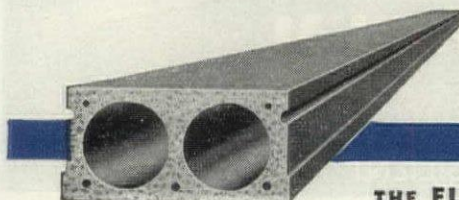
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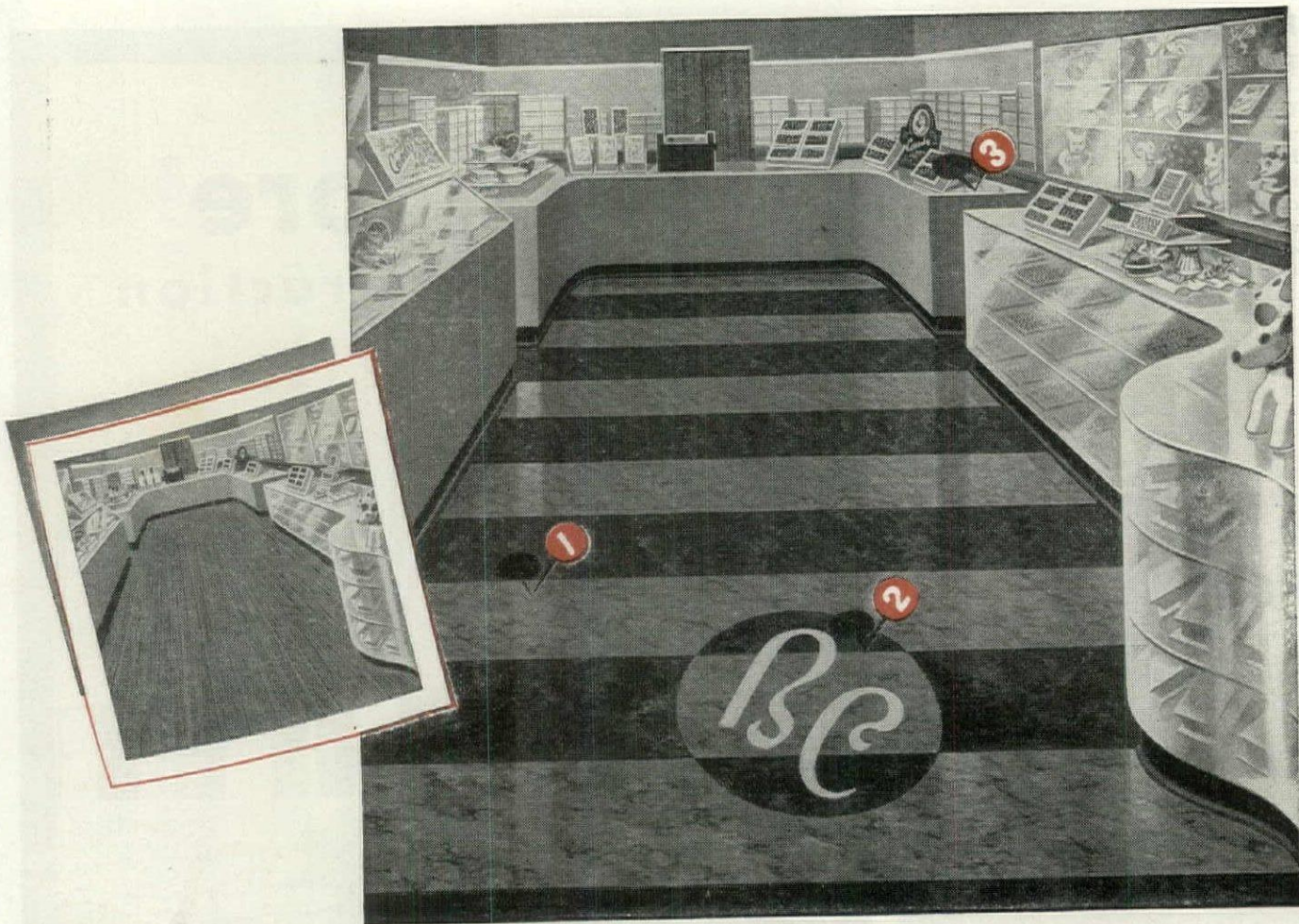
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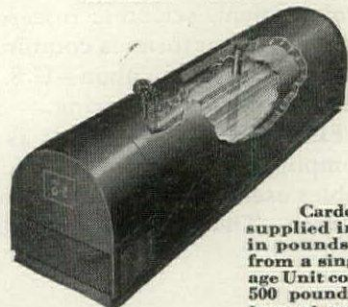
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How Cardox CO₂ Provides Enhanced Extinguishing Performance

The enhanced extinguishing performance of carbon dioxide, as controlled and applied in Cardox Systems, is due to these four basic factors: (1) It has uniform extinguishing characteristics regardless of plant or atmospheric temperatures; (2) It is available in ample quantity for application at high rate and for total flooding (when necessary) of large areas; (3) It provides high CO₂ "snow" yield for increased cooling effect; (4) It achieves effective projection through relatively great distances—even outdoors.

For further information and typical examples of the broadened performance scope of carbon dioxide as applied in Cardox Fire Extinguishing Systems, write for Bulletin 695.

CARDOX CORPORATION
 BELL BUILDING • CHICAGO 1, ILLINOIS
 District Offices in New York • Washington
 Detroit • Cleveland • Pittsburgh • Seattle
 San Francisco • Los Angeles • San Diego
 Houston • Philadelphia



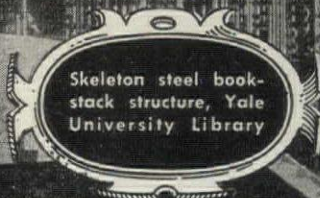
Cardox CO₂ is supplied instantly in pounds or tons from a single Storage Unit containing 500 pounds to 125 tons at controlled low temperature of 0° F. and 300 p.s.i.



For huge multitier bookstacks or shelving for small libraries Call on SNEAD & COMPANY



- Typical
SNEAD Library
Installations
- U. of Alabama
 - U. of California
 - Cal. State Library
 - Leland Stanford U.
 - Library of Congress
 - Army War College
 - U. of Illinois
 - U. of Notre Dame
 - U. of Colorado
 - Loyola U.
 - Harvard U.
 - Dartmouth College
 - Columbia U.
 - Ohio State U.
 - U. of Philippines
 - U. of Puerto Rico
 - Library of Hawaii
 - Vatican Library
 - Nat'l Museum Nat. Hist., Paris
 - Joint Universities



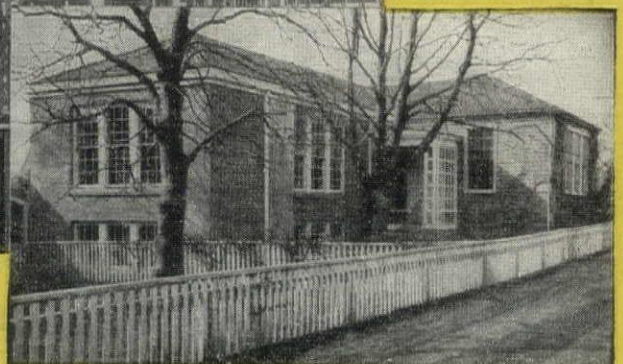
Skeleton steel bookstack structure, Yale University Library

JAMES GAMBLE ROGERS, *Architect*

For many generations Sneed & Company has been the leader and pioneer in the design and construction of library equipment. Whether you are planning a large multitier bookstack or a library of modest size, it will pay you to contact us for a free consultation.

We will gladly assist in the preparation of plans and specifications, and submit a mutually protective bid. Since proper planning takes time, we suggest that you let us start now, so that your project will be ready for construction when materials are available.

Write for the Sneed bookstack catalog containing engineering data.



Maria Mitchell Library, Nantucket, Mass., built completely by Sneed & Company, including book ranges and other equipment.

Since 1849, the Sneed symbol of lasting quality, beauty and progress in metal construction



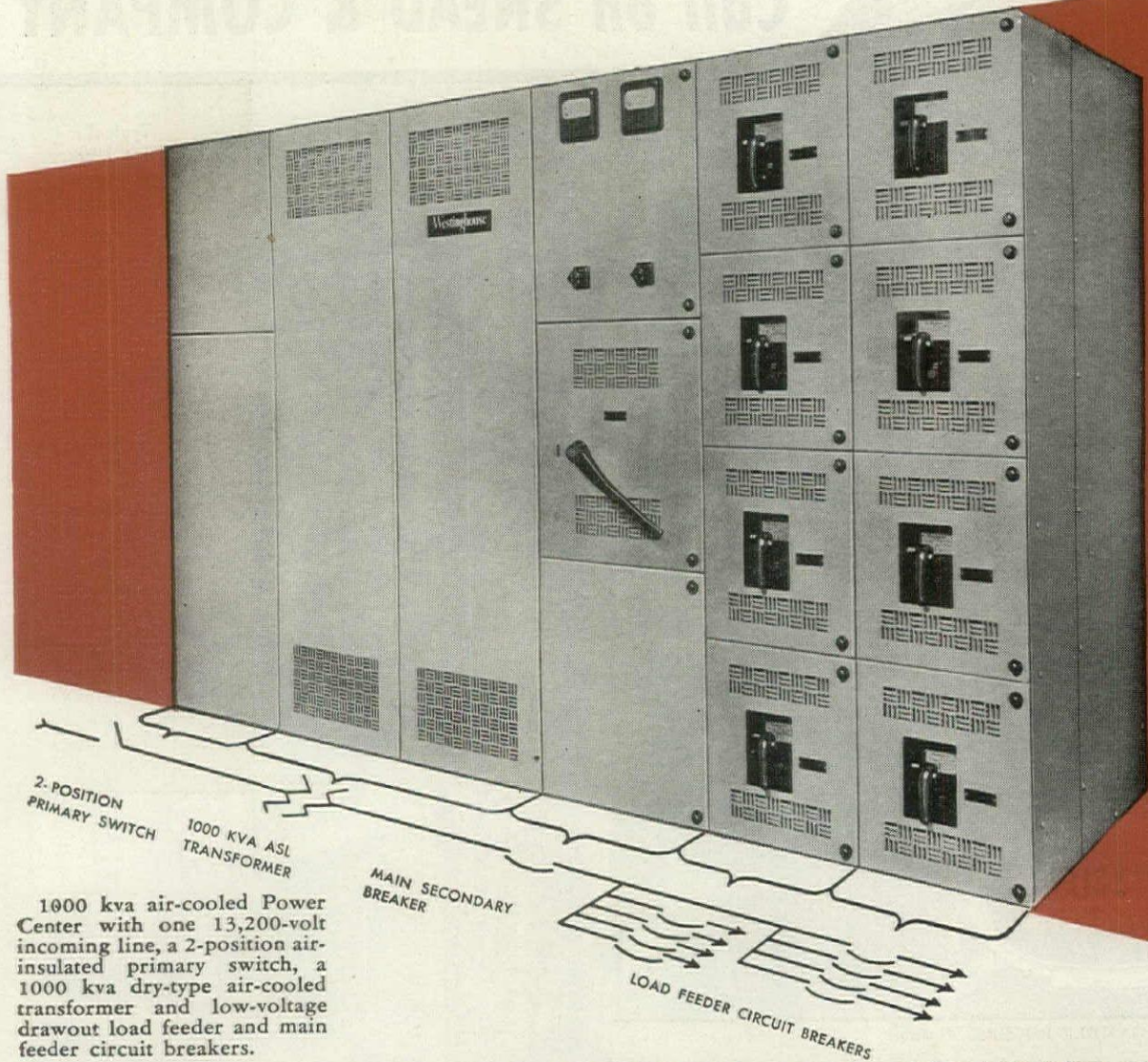
SNEAD & Company FOUNDED 1849

Designers, manufacturers and erectors of metal equipment

Sales Office: 94 Pine Street, JERSEY CITY 4, N. J.

Main Office and Plant: ORANGE, VA.

a new air-cooled unit power center for your electrical distribution system



1000 kva air-cooled Power Center with one 13,200-volt incoming line, a 2-position air-insulated primary switch, a 1000 kva dry-type air-cooled transformer and low-voltage drawout load feeder and main feeder circuit breakers.

ORDERED—INSTALLED—OPERATED AS ONE COMPACT UNIT

Here is a new heart for your plant's power distribution system—the *Westinghouse Close-Coupled Air-Cooled Power Center*. It saves time in ordering, installation and operation. It eliminates piecemeal assembly on the job! It can be installed anywhere indoors without a vault—because it is completely air-cooled. It can be installed in the immediate vicinity of working personnel with complete safety, or it can be placed overhead to save valuable floor space.

This completely metal-enclosed air-cooled Power Center results in substantial savings in materials and labor, and cuts down service interruptions, reducing your production losses. It permits location of the Power Center at or near the centers of load.

The Westinghouse Air-Cooled Power Center is only one item of the complete electrical equipment Westinghouse can supply. Others are: control centers, switches, breakers, capacitors, protective devices, switchgear—in fact, all the requirements needed for any industrial power distribution system. By ordering from *one* supplier, you place responsibility in *one* place . . . save time in ordering and installation and get co-ordinated operation.

Complete specifications on all equipment are available to help you **PLAN NOW** for postwar construction. Phone your Westinghouse Office, or write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.



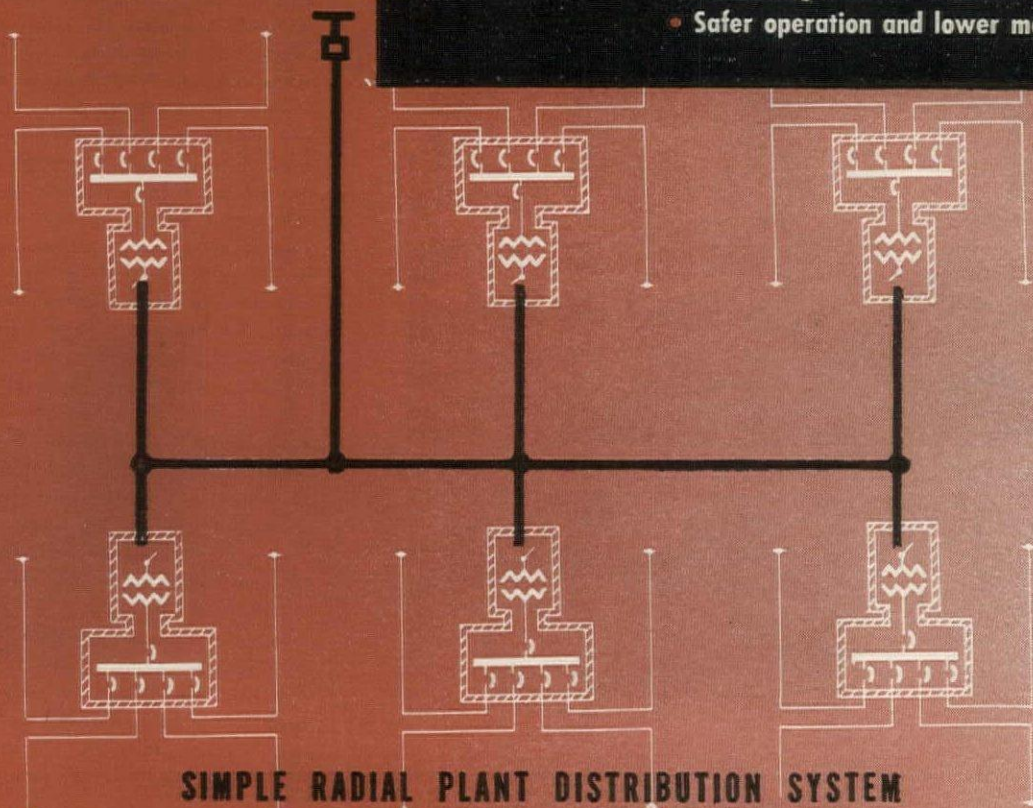
J-94689

Blueprint
FOR TOMORROW'S NEEDS
Now!

Remember This:

Westinghouse Air-Cooled Power Centers pay for themselves by

- Reducing installation costs
- Saving floor space
- Permitting location at center of load
- Safer operation and lower maintenance



SIMPLE RADIAL PLANT DISTRIBUTION SYSTEM

Since the first installation of Westinghouse Air-Cooled Power Centers, we have been receiving comments like these:

● "Our air-cooled Power Centers, by removing the fire and explosion hazard, have paid for themselves in the elimination of the need for expensive fireproof vaults."

● "We like the unit construction, without throats, because it makes a much smaller and more compact Power Center. It saves us a lot of floor space."

● "The absence of insulating and cooling liquids permits us to locate the Power Center at the center of the load. This reduces the length of our feeders and saves copper."

We sincerely believe that wherever good voltage regulation, high efficiency and safety are "musts", the Westinghouse Air-Cooled Power Center is best suited for tomorrow's profitable production of peacetime goods.

Westinghouse also supplies equipment for all types of electrical distribution systems, and will recommend the one system best suited to your requirements.

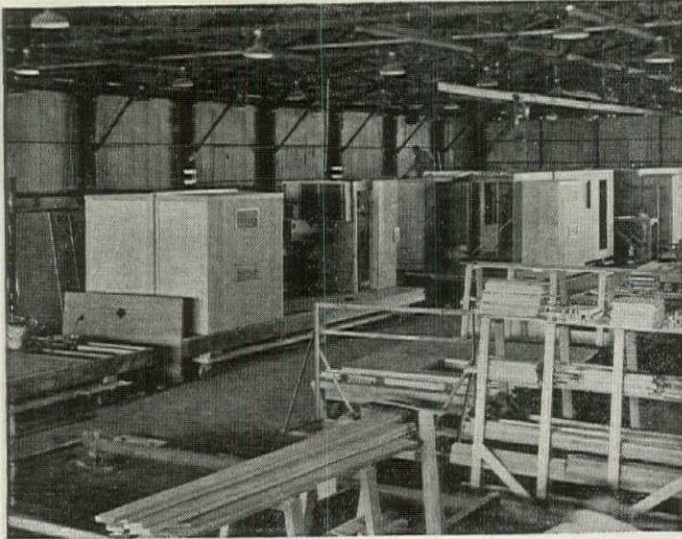
Call your Westinghouse representative today for advice and *practical* help in laying out your postwar industrial power distribution and control systems. It pays to *blueprint now for tomorrow's needs*.

Westinghouse
PLANTS 'N 25 CITIES . . . OFFICES EVERYWHERE

AIR-COOLED POWER CENTERS

PREFABRICATION

Wingfoot Homes Inc. offer mobility, efficiency and low cost to capture secondary and recreational house markets.

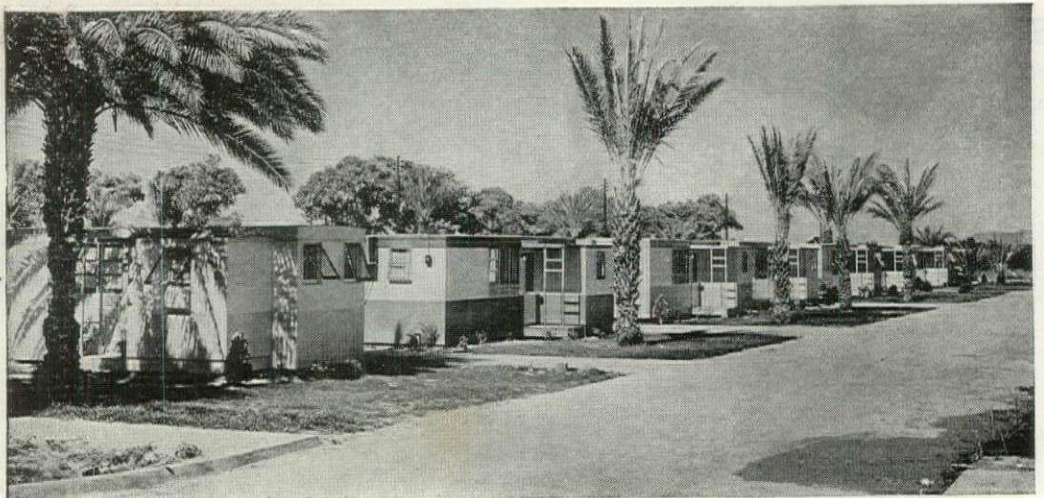


TELESCOPED for highway travel (center) the Wingfoot pre-assembled house rolls off the assembly line (top) and is delivered direct to the Goodyear war-workers housing development at Litchfield, Ariz. (bottom). Extreme mobility and relocation features may provide an answer to the quick rehabilitation of war-torn countries.

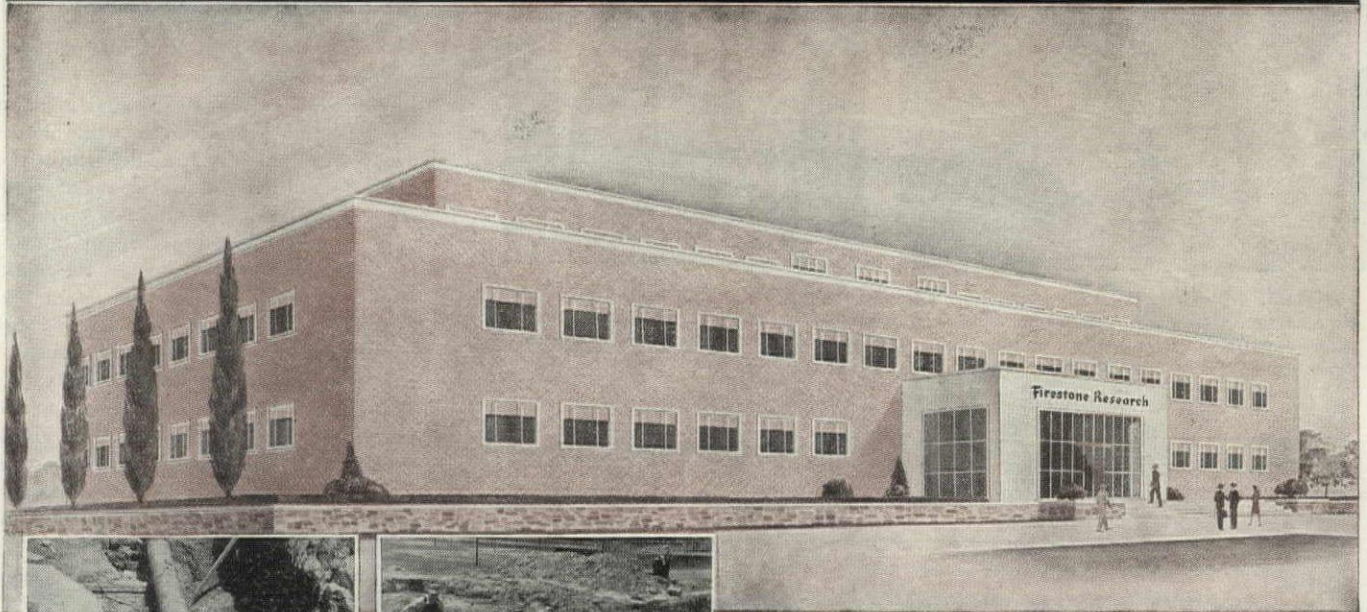
Houses transported on highways will be a common sight when Wingfoot Homes Inc. (a subsidiary of The Goodyear Tire and Rubber Co.) begins to roll its product off assembly lines direct to building sites on flatbed trailers. This is possible and practical because the dimensions of the Wingfoot house (telescoped) are within the limits of the largest commercial truck body, eliminating the need of special transportation permits. Off the highway and on the site the telescoped wings are extended like drawers to give additional floor space. This exclusive feature provides two separate enclosed bedrooms with a total dimension of 15 ft. at the extended end. Wingfoot's operation should convince the last skeptic that the assembly line method is as sound for small houses as it is for jeeps or bomber — and here to stay. However, of greater importance to the general public is the nationwide Wingfoot program which will merchandize this packaged home like an automobile, refrigerator or radio. Assembled as a complete unit, designed and priced for low income families as a year-round dwelling, the Wingfoot home sales program is also aimed at the secondary and recreational markets — tourist hotels, fishing camps, farm tenant houses, garden apartments and similar uses.

To achieve belt line perfection to meet expected mass delivery demands, the Wingfoot pilot plant at Litchfield, Ariz. was patterned on Goodyear's aircraft plants. In fact, the management of the house building plant was drawn from the Goodyear Aircraft Corp. factory which turns out complete Corsair fight-

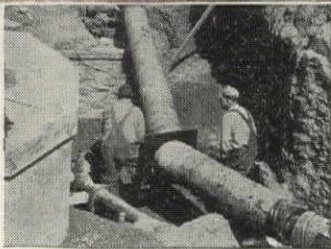
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RIC-WIL STEAM CONDUIT CONNECTS NEW Firestone RESEARCH LABORATORY TO CENTRAL BOILER PLANT ONE MILE AWAY



Architects, Voorhes, Walker, Foley and Smith, New York City. Engineered by Firestone.



Installing Ric-wil Prefabricated Insulated Conduit on steam line to Firestone Laboratory. Note pipe and casing anchored at 45° offset.

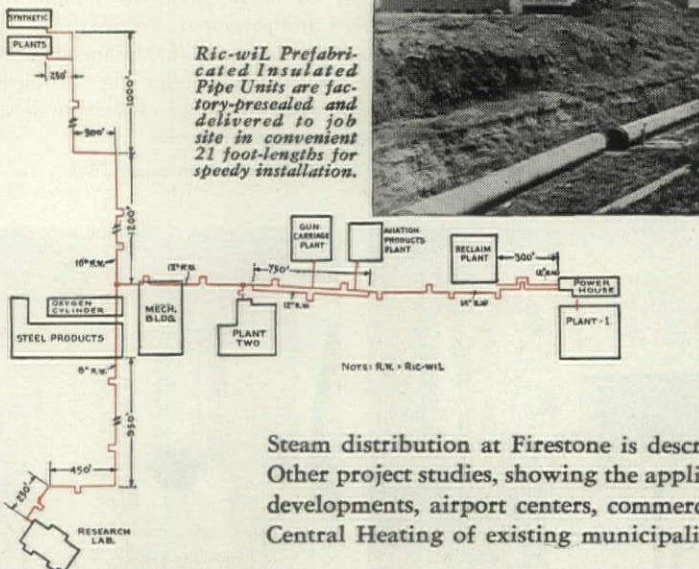


Ric-wil Prefabricated Expansion Loop "cold sprung" into position. Loops are fitted with drive couplers for easy assembly to straight runs.

The very latest developments in building design and services have been incorporated in the magnificent new Firestone Research laboratory. The objective was to provide the utmost in comfort for the chemists, physicists, engineers and technicians, and to supply those many services required in research work.

After an exhaustive study, it was determined that instead of a boiler plant at the site, it would be more practical to extend a steam line from the nearest factory building 2100 feet away, and thus obtain heat and power from the main power plant over a mile to the north. Steam is delivered to the laboratory in 8" Ric-wil Prefabricated Insulated Pipe, at 180 P.S.I.

Every building in the vast Firestone Akron industrial community obtains its steam from one central plant. Schematic plot plan at left shows distribution lines—practically all of which are now in Ric-wil Prefabricated Insulated Pipe Conduit.

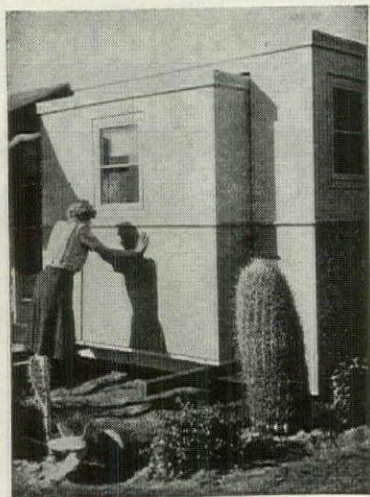
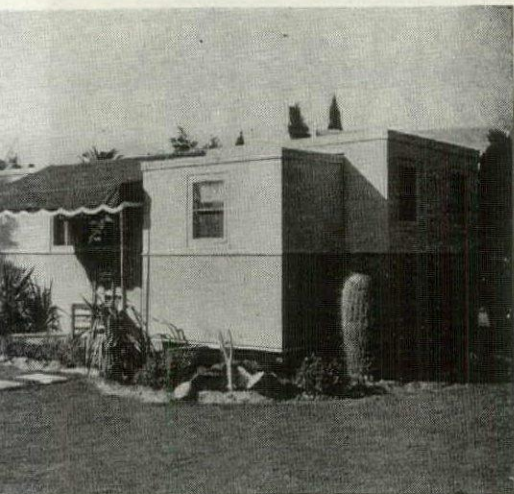


Ric-wil Prefabricated Insulated Pipe Units are factory-pressed and delivered to job site in convenient 21 foot-lengths for speedy installation.

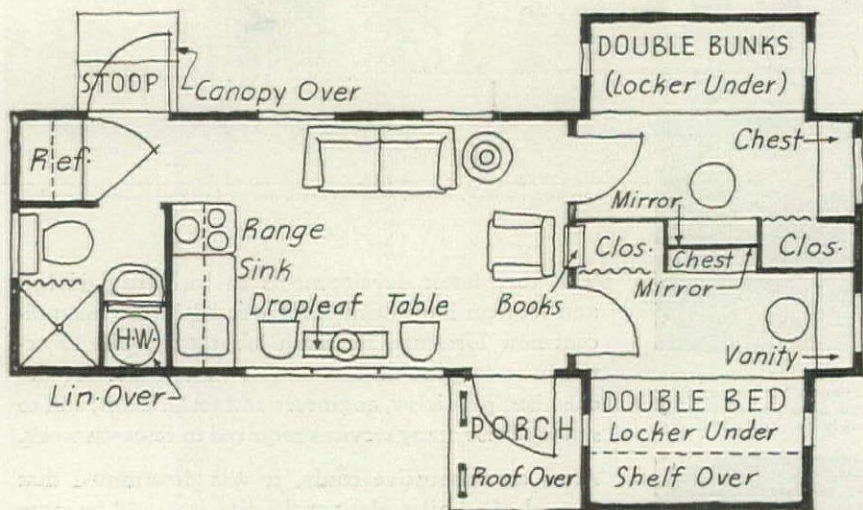
Steam distribution at Firestone is described in detail in a booklet now in preparation. Other project studies, showing the application of Central Heating to community housing developments, airport centers, commercial groups, shopping centers and conversion to Central Heating of existing municipalities or neighborhoods, are available on request.

RIC-WIL INSULATED PIPE CONDUIT SYSTEMS
THE RIC-WIL COMPANY · CLEVELAND, OHIO
AGENTS IN PRINCIPAL CITIES

(Continued from page 222)



COMPLETE HOUSE (left) may be placed on eleven standard building blocks or a continuous foundation wall. Bedroom wings (right) telescope easily for transportation to a new location. Extended, the wings create two enclosed bedrooms capable of sleeping a family of four, plus storage space.



PLAN (above) has working efficiency of a three room apartment. Living-dining space (below, left) shows bedroom doors in background. Kitchen (center) has one-wall convenience. Bedroom (right) shows double bed, dressing table, storage drawers and closet. Floors are covered with linoleum cemented to plywood.

ing planes for the U. S. Navy. With few exceptions the methods that gave top production results in fighter plane production have been used in the assembly. Added to this was the factual data gained from the every day experience of those who lived in 29 experimental Wingfoot homes over a period of two years.

THE PROGRAM

The idea for the Wingfoot pre-assembled home was conceived by P. W. Litchfield, Goodyear board chairman, on the basis of his conviction that home ownership could be brought within the reach of millions of Americans if modern mass production methods could be applied to the manufacture of houses. Low cost and mobility were the main objectives. Mobility, an important feature in mass distribution, is also believed to be a selling feature because of easy relocation and high salvage value. Delivered from the factory direct to the site, the house can be set on a solid, continuous foundation, piers or standard building blocks. Only plumbing and utility connections at the site are necessary.

The nation-wide price has not been determined but to test selling and finance methods a retail price of \$2,000 has been established in Arizona. It is hoped that the \$2,000 figure will become the nation-wide price. The Valley National Bank at Phoenix, with branches throughout the state, is handling the current financing on a basis of 1/3 down and approximately \$30 a month. Included in the price are a gas range, ice refrigerator, space heater and hot-water heater. Monthly payments include insurance and principal; delivery is a separate item but may be financed along with the house. Under the proposed finance plan complete ownership is attained in about five years.

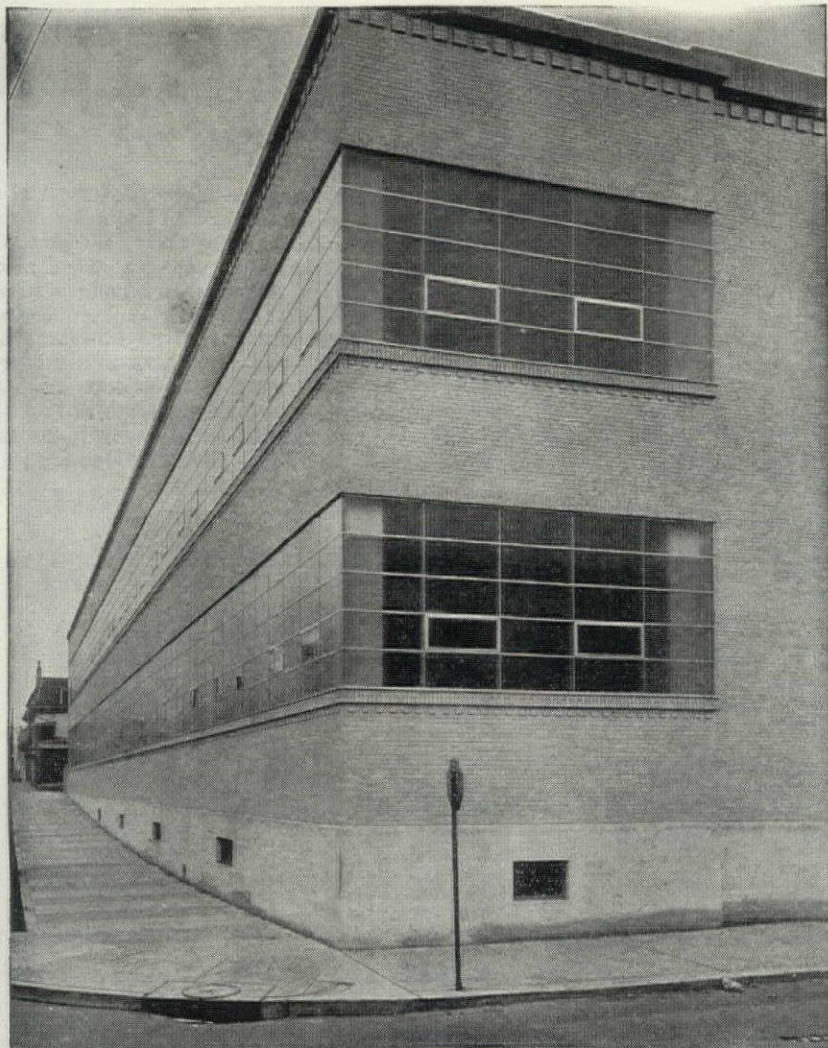
(Continued on page 228)



Good for the Long Run -

GEYSER BAR WINDOWS OF ALCOA ALUMINUM

Note the trim neatness and narrow lines of these all-aluminum Geysers Bar Windows



Horizontal members of these very practical windows have the appearance of running continuously from jamb to jamb. Actually, these members are broken only at inconspicuous but effective expansion joints. All members are shop-fabricated to fit wall openings. Assembly is done on the job.

The narrow lines of this window construction disguise the sturdy character of its Alcoa aluminum members. Strong when in-

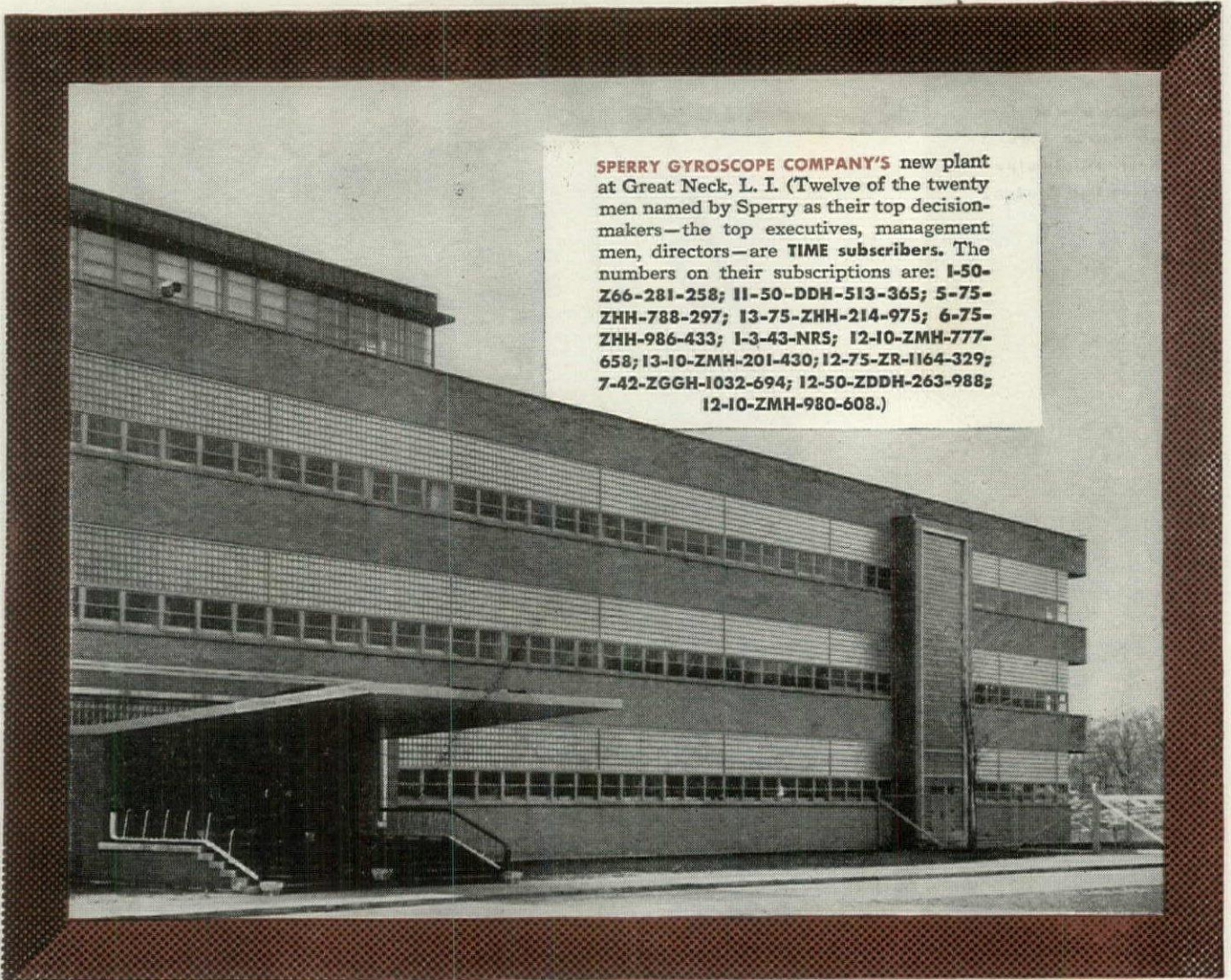
stalled, they stay that way. There's no rusting or rotting to cause deterioration. No need for protective painting.

Years of experience with aluminum windows of various types in industrial plants, office buildings and residences have proved that they are durable and economical. It pays to include windows of Alcoa Aluminum in your plans. ALUMINUM COMPANY OF AMERICA, 1866 Gulf Bldg., Pittsburgh 19, Pa.

Windows of **ALCOA ALUMINUM**



Who are the Men who **OK** the Plans for the SHOW-ROOM PLANTS of the Nation?



SPERRY GYROSCOPE COMPANY'S new plant at Great Neck, L. I. (Twelve of the twenty men named by Sperry as their top decision-makers—the top executives, management men, directors—are **TIME** subscribers. The numbers on their subscriptions are: **1-50-Z66-281-258; 11-50-DDH-513-365; 5-75-ZHH-788-297; 13-75-ZHH-214-975; 6-75-ZHH-986-433; 1-3-43-NRS; 12-10-ZMH-777-658; 13-10-ZMH-201-430; 12-75-ZR-1164-329; 7-42-ZGGH-1032-694; 12-50-ZDDH-263-988; 12-10-ZMH-980-608.**)

WHEN YOU BUILD, you build from the ground up—but when you want to sell new building plans and specifications, you start from the top down. In any company, a handful of higher-up men are the prospects you have to satisfy and sell first, before they will OK any building, remodeling, or reconverting.

By and large, men like these—and their chief

executives, architects, purchasing agents—are regular week-after-week readers of **TIME**. For instance, a study of 588 of the best-known U.S. corporations shows that the names of almost exactly half of all the directors and top management men can be found recorded on **TIME**'s subscription list. And again and again these men vote "**TIME** is our favorite magazine."*



THE GATEWAY TO THE BUILDING INDUSTRY

{*"TIME is our first-choice magazine," say Officers and Directors of Leading U. S. Corporations . . . Architects . . . Industrial Research Engineers . . . Chain Drug Store Executives . . . Key Executives in Washington . . . Federal, State and City Planning Commission Boards—and 110 more groups of America's most important people. }

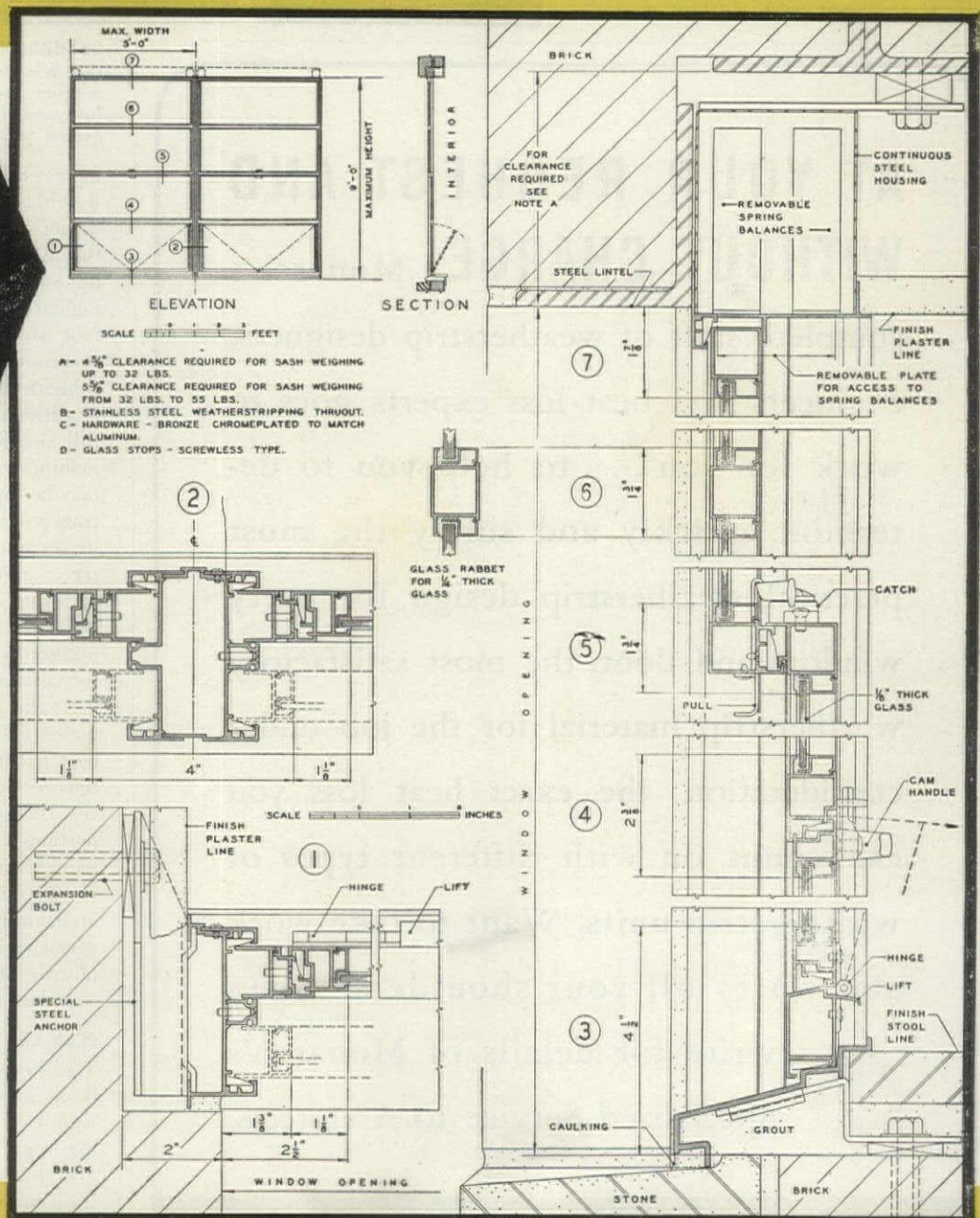
ADVERTISING OFFICES • NEW YORK • CHICAGO • BOSTON • PHILADELPHIA • CLEVELAND • DETROIT • SAN FRANCISCO.

GENERAL BRONZE PRESENTS ITS NEW LINE OF PERMATITE

Windows

for hospitals, schools and commercial buildings

DETAILS OF
PERMATITE
ALUMINUM
DOUBLE HUNG
HOPPER VENT
WINDOW
SERIES DHA-3HV



IF you would like a complete set of details of this and other new PERMATITE windows for your files, write us today on your letterhead.

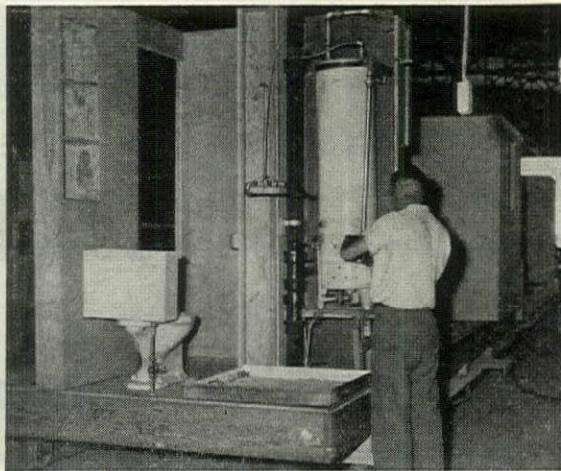
SPECIFY
GB
BUILDING
PRODUCTS

Detailed above is the second of a series of new and improved PERMATITE windows. It embodies all the patented and exclusive features that have made the name PERMATITE representative of the finest in window design and construction. The integral in-swinging hopper in the lower sash is of particular importance in hospital design.

GENERAL BRONZE CORPORATION
34-17 TENTH STREET
LONG ISLAND CITY 1, N. Y.

(Continued from page 224)

Postwar distribution plans are not complete but certain principles have been formulated. The sales department of the company does not intend to sell the product direct to the consumer. It is planned to appoint distributors or agents with definite territory assignments to handle consumer sales. The distributor or agency will receive a discount from the retail price sufficient to warrant extensive solicitation. The types of sales outlet which Wingfoot will use may include real estate dealers, depart-



BATHROOM (right) being constructed on the Wingfoot assembly line and finished product (left). The mechanical plant is fully assembled and need only to be connected to utilities.

AT YOUR REQUEST AND WITHOUT CHARGE,

Monarch's complete staff of weatherstrip designers, engineers and heat-loss experts goes to work for you . . . to help you to determine quickly and surely the most practical weatherstrip design for every window and door, the most satisfactory weatherstrip material for the job under consideration, the exact heat loss you can count on with different types of weatherstrip units. Want to take work and worry off your shoulders? Then



write for details of Monarch's Specialized Service to Architects.

MONARCH

METAL WEATHERSTRIP CORP.

6331 Etzel Avenue

St. Louis 14, Mo.

ment stores, large furniture stores, building supply dealers, automobile dealers and others. This does not mean that all of these outlets will be used but an area will be studied and the most logical outlet selected. Since the Wingfoot Home is a completely assembled factory-to-site unit it becomes a convenient merchandising package. With or without furniture, it may be displayed full size in a department store or automobile dealer's showroom as easily as it may be displayed at a land site. To keep transportation costs to a minimum and to serve markets throughout the country a number of strategically placed factories will be established. A national advertising program will support the marketing when the company is ready for nation-wide sales.

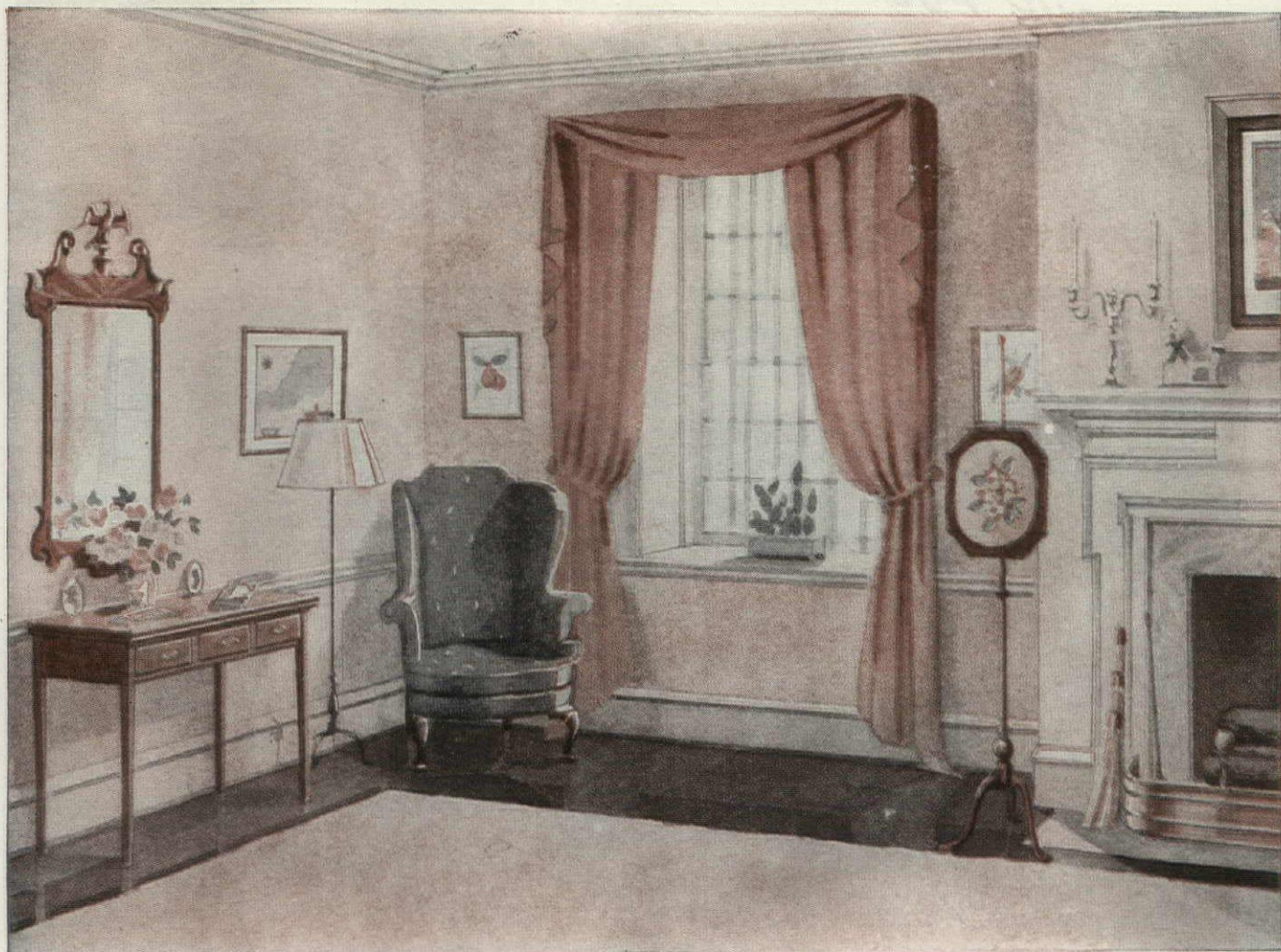
At the present time, Wingfoot Homes makes all parts needed for the house except fixtures and equipment. In its extensive program the company recognizes the possibilities of subcontracting portions of the work to specialized companies and have already received offers for the manufacture of cabinets, chests of drawers and other assemblies. It is also considering the possibility of permitting other firms to manufacture the complete house under license.

PLAN AND EQUIPMENT

The house was designed around the basic unit of a family of four people, with two private bedrooms, living-dining room with apartment-type kitchen area and a shower-equipped bathroom. Built-in furniture and storage cabinets make use of all space efficiently with emphasis on ease of housekeeping. Single beds—upper and lower bunks—are located in one of the expanding wings. If only three persons are to be housed, the upper bunk is removable and can be placed overhead to form a storage drawer. Storage space is pro-

(Continued on page 232)

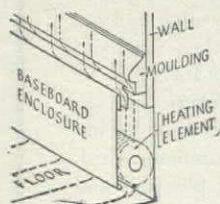
Where is the Radiator?



In developing *your* plans for the Home of Tomorrow, you can figure the Radiator "out of the picture"—for that is exactly where it belongs.

This new Webster Baseboard Heating reduces the "radiator" to something so small that it fits behind the baseboard—completely out of sight. Nothing to mar the beauty of the room or to limit your plans for interior decoration or furniture arrangement. (And the absence of radiators from the room adds considerably to the usable space.)

In this new Webster Baseboard Heating, the heating element—a copper tube around which are coiled fins of fine copper—runs behind the baseboard in a continuous line all around the exposed walls of the room. (Baseboard enclosure is removable for cleaning.)... The Webster Baseboard Unit supplies heat to the room using "forced" hot water. Air goes in at the floor line, passes



over the heating element, is warmed and comes out at the top—a constant, even circulation.

No cold corners. No hot spots. No hot-or-cold levels. Tested installations of Webster Baseboard Heating show a variation of less than 2° from floor to ceiling.

Webster Baseboard Heating has been under development for several years and has met the most severe operational tests. It will be available to home owners and home builders when war conditions permit... A leading architect, collaborating with a noted interior decorator, is preparing a series of paintings showing application of Webster Baseboard Heating to different types of rooms. When completed, these paintings will be reproduced in full color. We will be pleased to put your name on the list to receive a copy of this brochure on Webster Baseboard Heating. Write us today.

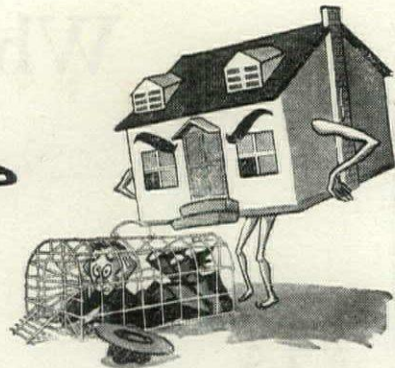


Make this test: Cut out illustration of radiator at right. Place cut-out picture in position under window in the illustration above. See how the presence of a radiator in the room interrupts the whole scheme of decoration. Dept. AF-9

WARREN WEBSTER & COMPANY, Camden, New Jersey
Pioneers of the Vacuum System of Steam Heating: : Established 1888
Representatives in principal cities : : Darling Brothers, Limited, Montreal, Canada

WILL YOUR POST-WAR HOME SOMEDAY CATCH YOU IN A TRAP?

... here's one way to prevent it!



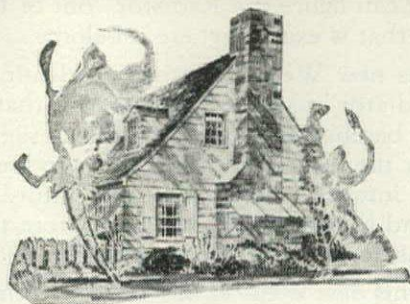
● If the new home you build or buy should someday turn out to cost too much to heat—you may find yourself *trapped* when you try to sell or rent it.

To safeguard yourself against that possibility, it's smart to make sure you get an *adequate* chimney. That simply means a chimney with a flue big enough to handle, efficiently, not *only* the expensive fuels but *also* Bituminous Coal—which is the most economical of all.

Then, when other fuels become scarce or go still higher in price—you'll be free to switch to Bituminous Coal. The extra cost of providing such a chimney flue is only about \$16 for the average 7-room house!

And consider this: Bituminous Coal is not only the lowest-cost fuel—but, when burned in a modern stoker, it is also an "automatic" fuel—clean, odorless, smokeless.

Better than 4 out of every 7 homes in the United States heat with coal. Even if you don't plan to use it now—make sure you will be able to switch to coal any time you wish in the future. Talk it over with your architect or builder! It will pay you to do so.

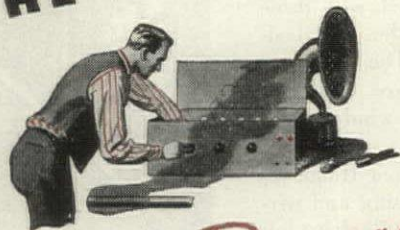


AN ADEQUATE CHIMNEY—with a flue efficient for burning Bituminous Coal—is also efficient for any other fuel you might choose. And, when you consider that today's costly fuels may be even more so in the future, you see why it's so sensible to provide for being able to burn Bituminous Coal, which will always be plentiful and economical, because America has a 3,000-year supply!

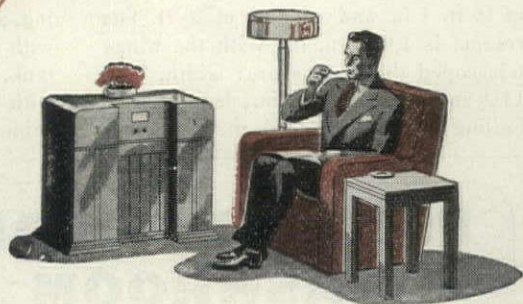
BITUMINOUS COAL INSTITUTE, 60 EAST 42ND STREET, NEW YORK 17, N. Y.

(This is one of a series of advertisements now appearing in home-makers' magazines)

LIKE THE RADIO



Electrical Raceways have gone modern, too!



STREAMLINED RACEWAYS OF REPUBLIC ELECTRUNIT E.M.T. RATE TOP RECEPTION WITH ARCHITECTS AND CONTRACTORS ALIKE

There are four excellent reasons why both architects and electrical contractors are enthusiastic about ELECTRUNIT E.M.T.—the modern streamlined raceway for wiring. Here they are:

ELECTRUNIT E.M.T. IS SAFE

Inspection by Underwriters' Laboratories and approval by The National Electrical Code for exposed, concealed or concrete slab con-



Simply spot the outlet and mount the box with necessary connectors already attached. Then run in the tubing at some later convenient time. On E.M.T. installations it is not necessary to turn the pipe—every connector is a union.

struction is your assurance that ELECTRUNIT E.M.T. offers adequate mechanical and electrical protection at every point of the installation. Its tightly adherent zinc coating provides continuous rust and corrosion protection—unbroken by threads . . . unmarred by vise or pipe wrench teeth.

ELECTRUNIT E.M.T. IS THREADLESS

Eliminates dirty, tedious thread cutting. A pair of pliers and two simple compression-type fittings create strong water-tight joints which will not work loose—even under vibration. Can be easily and quickly combined with existing threaded conduit installations and fittings, too.

ELECTRUNIT E.M.T. IS LIGHT IN WEIGHT

Because no excess metal is needed as a base for thread cutting, it actually weighs less than half as much as ordinary threaded conduit. Makes installation easier . . . and faster in installations where runs are in hard-to-reach locations.

ELECTRUNIT E.M.T. BENDS EASILY

With the patented one-piece ELECTRUNIT Bender, all types of predetermined bends may be made rapidly and accurately—in the shop or on the job.

Your nearest Republic ELECTRUNIT Distributor, or Republic Steel and Tubes Division Representative, will gladly give you full information on this up-to-date, rigid steel conduit.

REPUBLIC STEEL CORPORATION
STEEL AND TUBES DIVISION • CLEVELAND 8, OHIO
 Export Department: Chrysler Building, New York 17, N. Y.

SEE SWEET'S FILE

or write us for detailed information on these Republic Steel Building Products

- Pipe—Sheets—Roofing
- Enduro Stainless Steel
- Toncan Enameling Iron
- Electrunit E. M.T.
- Fretz-Moon Rigid Steel Conduit
- Taylor Roofing Ternes
- Berger Lockers, Bins, Shelving, Kitchen Cabinets
- Truscon Steel Windows, Doors, Joists and other building products



Republic
ELECTRUNIT E. M. T.
 Reg. U. S. Pat. Off.

LIGHT WEIGHT THREADLESS RIGID STEEL CONDUIT

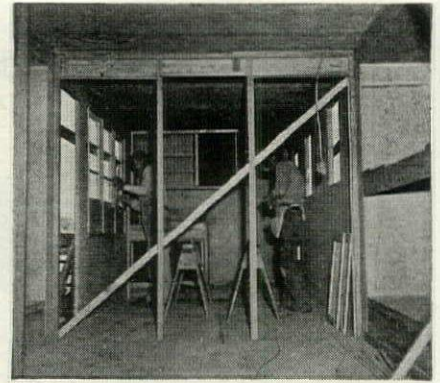
(Continued from page 228)

vided beneath the lower single bunk and under the double bed in the opposite wing. In addition to this storage space there is one five-drawer vanity, one seven-drawer dresser, two bookcases and two bedroom closets.

With wings extended, the gross floor area is 253 sq. ft. with an over-all width of 15 ft. 4 in. and a length of 26 ft. The volume is 1,981 cu. ft. With the wings telescoped dimensions are: width, 7 ft. 11½ in.; height, 8 ft. 3 in.; length 26 ft. Ceiling height 6 ft. 11¾ in. The com-

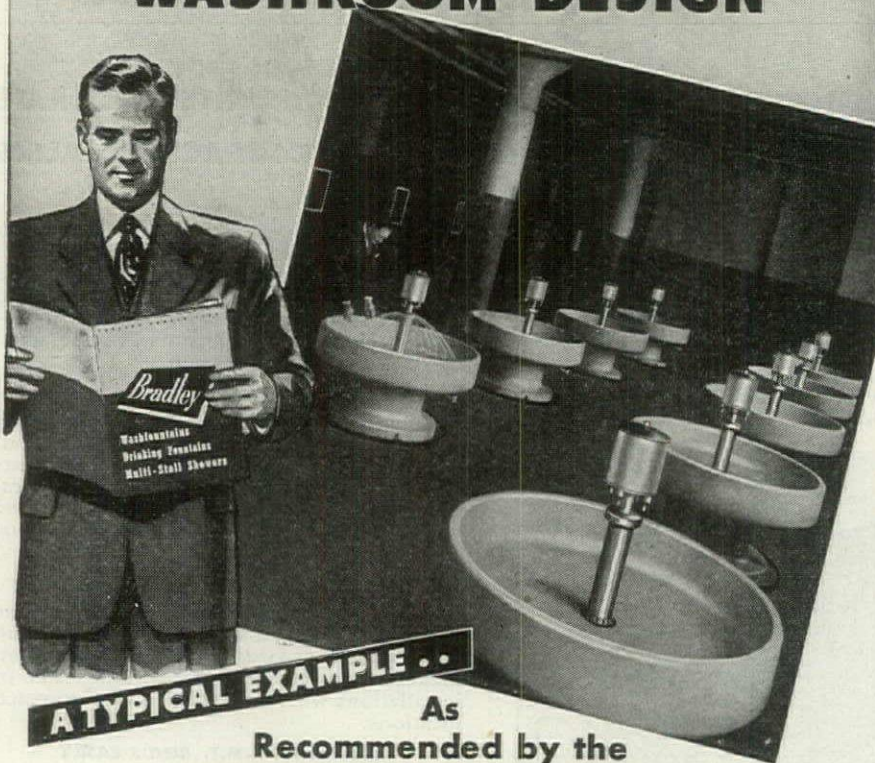
pletely assembled house weighs 5,800 lbs. The house has a total window area of 30.6 sq. ft. and no room has less than 10 per cent glass to floor area. Front and back doors are provided, with three interior doors enclosing the two bedrooms and the bathroom. The bedrooms and living-dining room are equipped with louvers. All hinged windows are weatherstripped.

Equipment in the Wingfoot Home includes all necessary plumbing and wiring, shower, lavatory, toilet, kitchen sink with water mixing bib, 20 gal. hot water tank, space heater, 4 burner gas range with insulated oven and broiler, kitchen cabinet of 12½ cu. ft. capacity, ice re-



WALLS are constructed of exterior plywood, 1 in. of insulation and interior plywood. The roof, made in five sections, is the same except for 2 in. of insulation and exterior mastic coating.

PSYCHOLOGY APPLIED TO WASHROOM DESIGN



As Recommended by the Country's Foremost Architects

Factory employees have preconceived ideas of washroom standards based on home facilities. These ideas add up to a picture of cleanliness, convenience and sanitation. Anything less than this creates disappointment which is revealed in dissatisfaction and carelessness. This reaction occurs in all cases where inadequate employee facilities exist, but is especially noticeable in such a personal matter as washrooms.

For many years, leading architects have recognized the human side of production by recommending only the most modern wash facilities in all remodeling, expansions and new constructions. Specifications have invariably called for Bradley Washfountains, America's accepted group washing fixture.

Bradley's claim to preference is credited to many unusual features: One Bradley does the work of 8 to 10 "single-person" wash basins; piping connections and plumbing fixtures are reduced by 80%—16 to 20 faucets are eliminated. Records also reveal a 70% reduction in water consumption; savings of valuable space and a worthwhile promotion of cleanliness and health.

For interesting information on how to Apply Psychology to Washroom Design, write for Bradley Catalog 4308 and Washroom Survey Sheet to help you make preliminary plans. BRADLEY WASHFOUNTAIN CO., 2235 W. Michigan Street, Milwaukee 1, Wisconsin.

BRADLEY
Washfountains

Write today for Catalog 4308 and Washroom Survey Sheet.

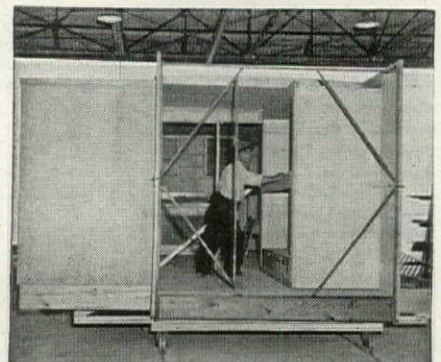


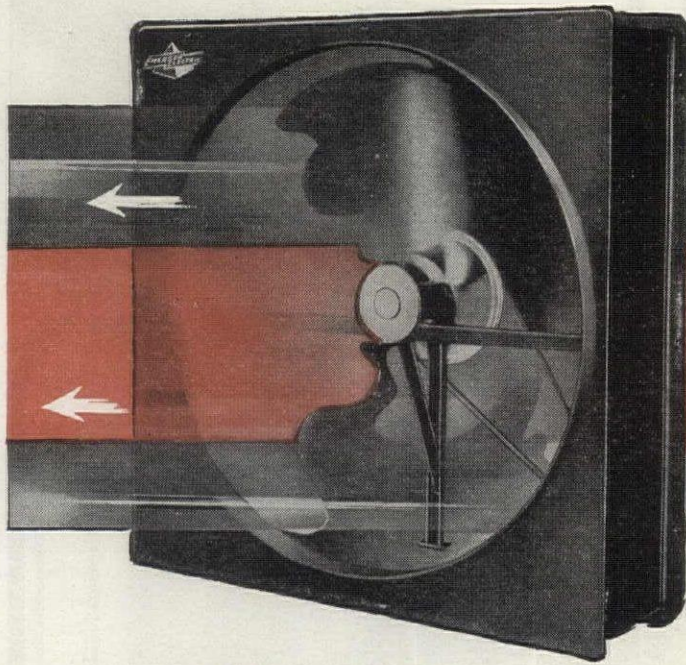
frigerator, broom closet, towel cabinet, medicine cabinet with mirror, one double bed and two single beds. The 20 gal. hot water tank, insulated and automatic, can be used with either natural or petroleum gas. The space heater is of 15,000 Btu. capacity equipped with a 110-volt circulating fan and cold air duct from the floor giving forced air circulation.

To date, 29 experimental houses have been in use since the spring of 1943 and 35 houses of an improved model were manufactured in the spring of this year. The early group form a village near the Litchfield Park plant of the Goodyear Aircraft Corporation, the others make up an attractive development at Goodyear Farms, nearby. Research is still continuing in Akron, Ohio and the pilot plant in Arizona to improve the product.

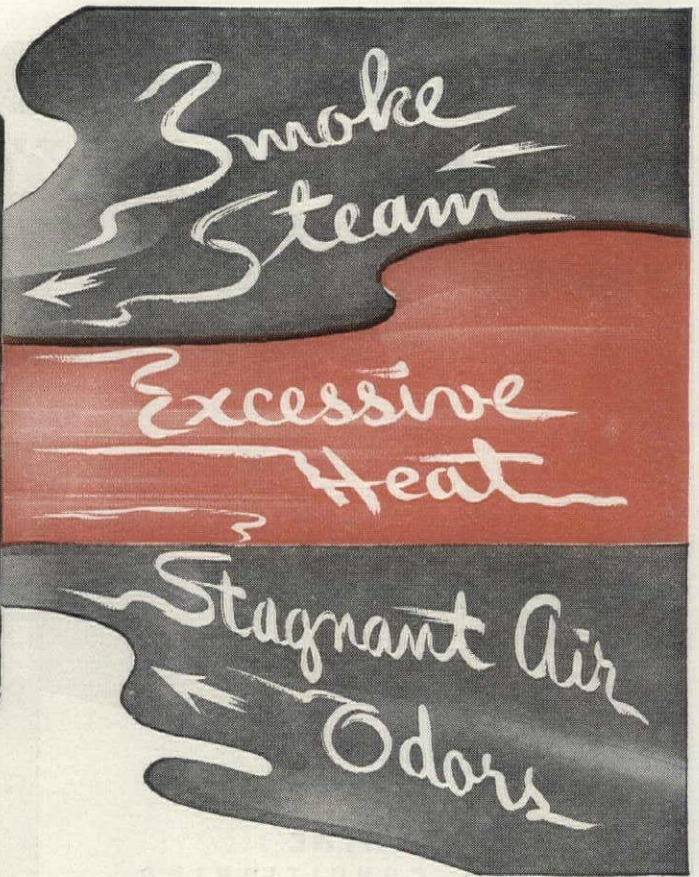
A problem for city planners may arise if the widespread public acceptance of mobile houses creates mushroom settlements on the periphery of established communities. Such quick growth will far outstrip the comparatively slow processes of providing streets, schools, fire and police protection as well as public utilities. Progressive communities must plan a method of including these low tax-producing properties in the community plan.

BEDROOM end with bunk unit (right) in transportation position. Double-bed unit (left) is extended. In the foreground is a corner braced angle-iron jig holding house rigid during construction.

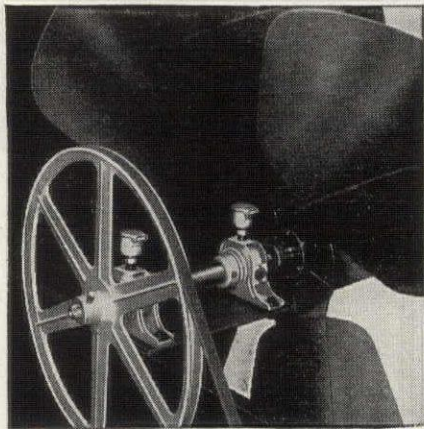




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Production of these quiet, powerful air movers is under way on three popular belt-drive models, sizes—48 in., 42 in. and 36 in.—and also in 5 sizes, 12 in. to 30 in., direct-drive models.

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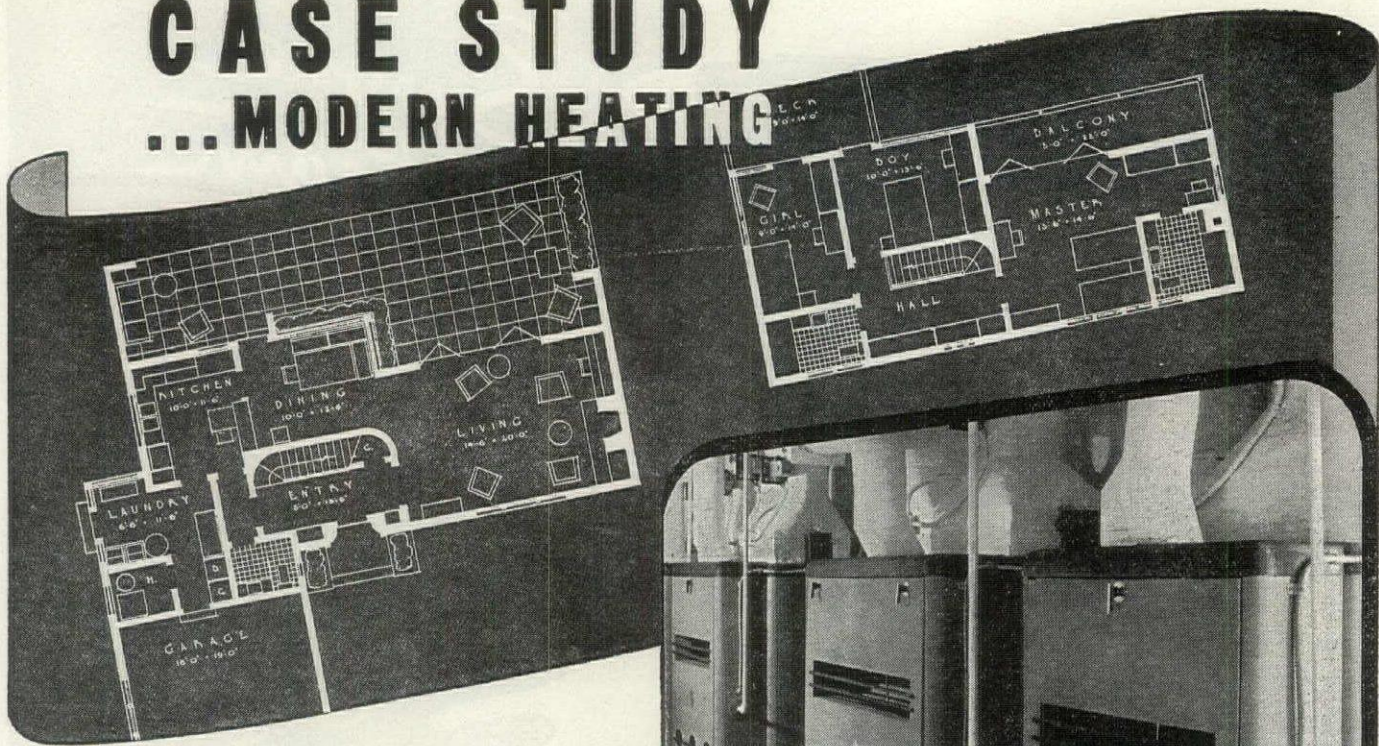
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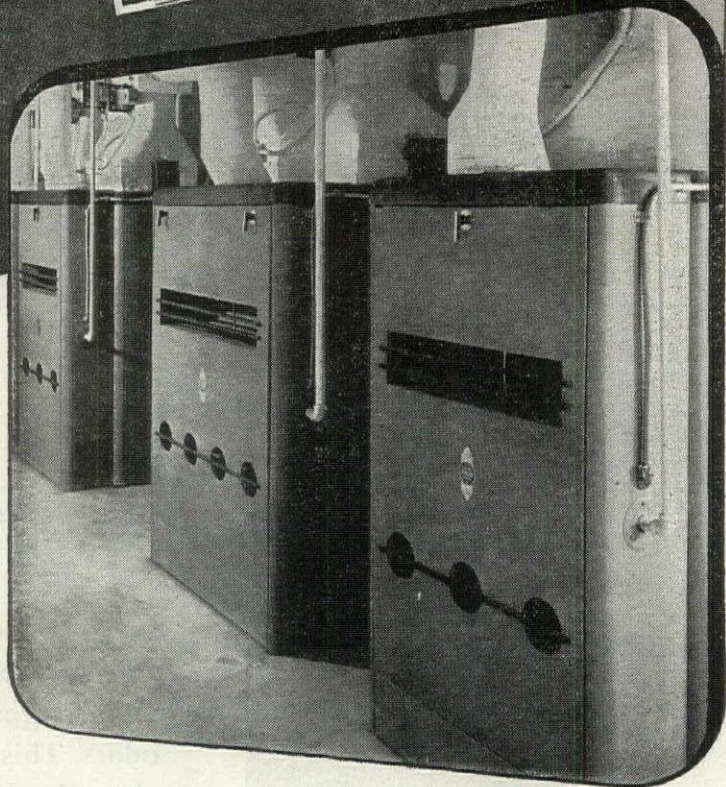
APPLIANCES

CASE STUDY ... MODERN HEATING

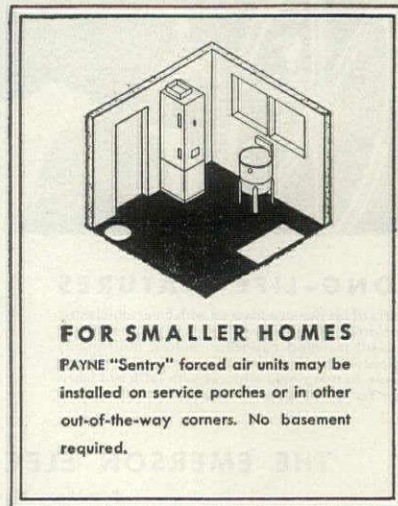


PAYNE ZONE-CONDITIONING INSTALLATION

For the floor plan shown above, a "battery" of three compact PAYNE "ZONEAIR" units (right) would provide ideal flexibility. The entire first floor could be one zone, with the second floor divided into two zones, or vice versa . . . each zone with a separate control.



The problem—to provide winter air conditioning and cooling summer ventilation adapted to modern living. *The solution*—PAYNE ZONE-CONDITIONING, successor to old-fashioned central heating. ★ Any house, large or small, can be divided, according to natural grouping of rooms, into two, three, four or more zones; and any of the time-tried PAYNE models, when again available after victory, can be employed for ZONE-CONDITIONING. ★ Before planning any postwar building or remodeling, request new ZONE-CONDITIONING booklet. Write today.



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PAYNE "Sentry" forced air units may be installed on service porches or in other out-of-the-way corners. No basement required.

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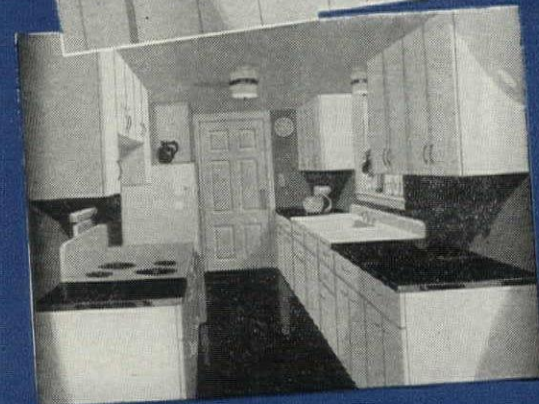
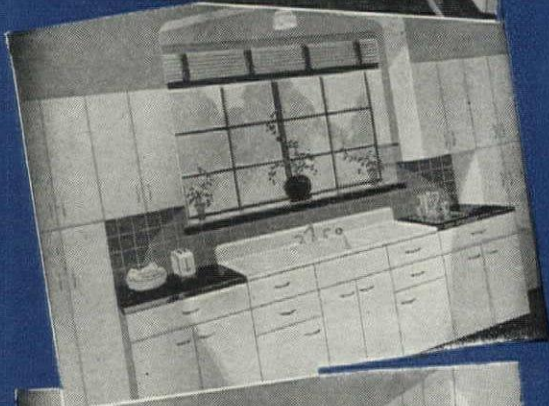
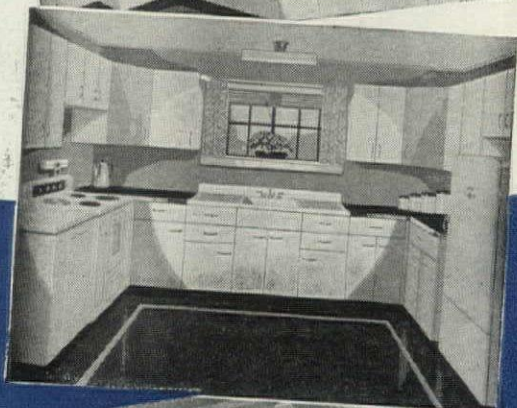
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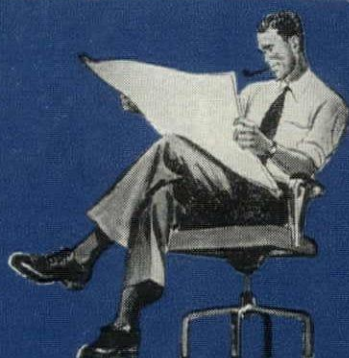


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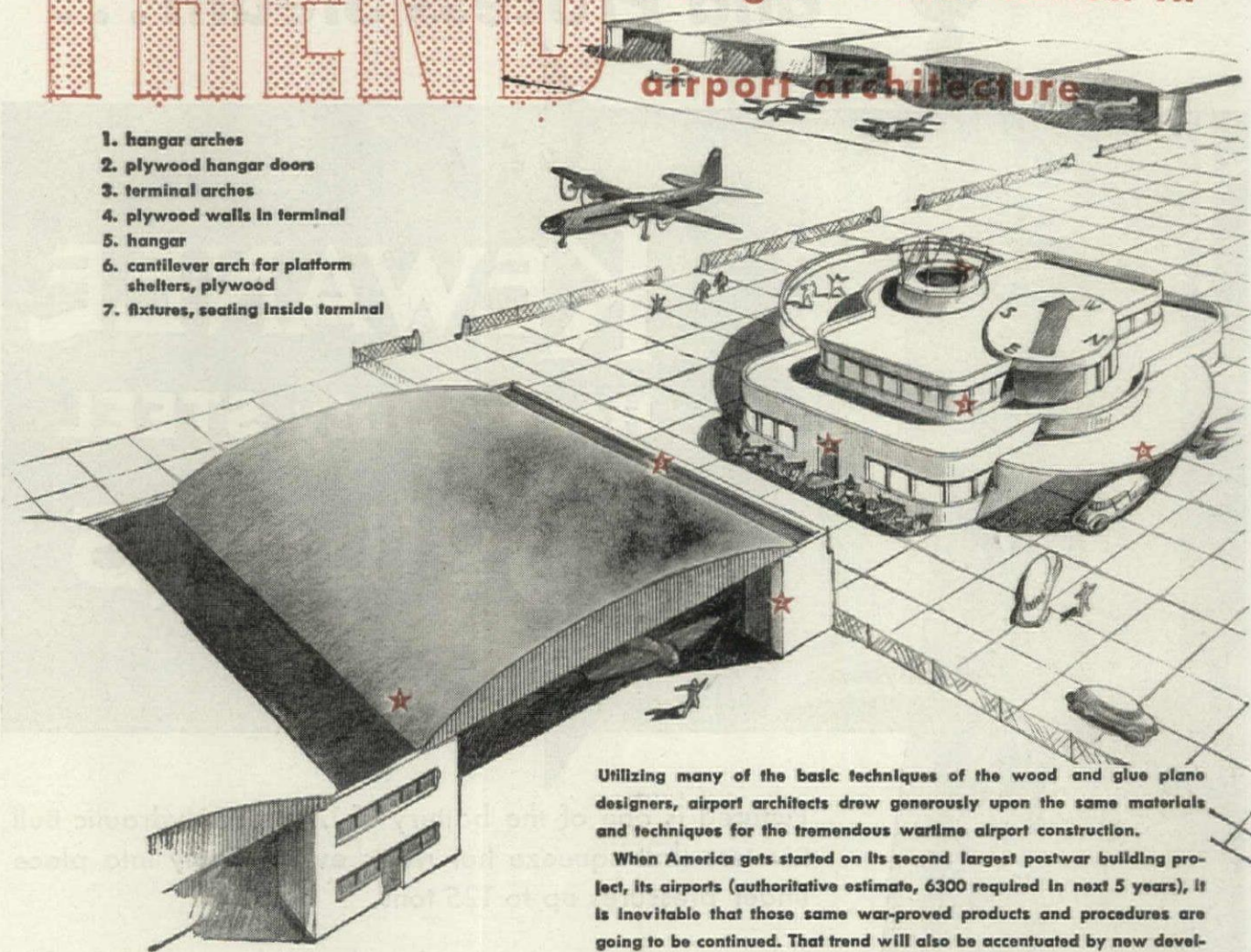
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TREND

more plywood, more wood
and glue construction in
airport architecture

1. hangar arches
2. plywood hangar doors
3. terminal arches
4. plywood walls in terminal
5. hangar
6. cantilever arch for platform shelters, plywood
7. fixtures, seating inside terminal



Utilizing many of the basic techniques of the wood and glue plane designers, airport architects draw generously upon the same materials and techniques for the tremendous wartime airport construction.

When America gets started on its second largest postwar building project, its airports (authoritative estimate, 6300 required in next 5 years), it is inevitable that those same war-proved products and procedures are going to be continued. That trend will also be accentuated by new developments in the field, i.e. Lauxite* phenolic resin glues for construction, permanent, decorative overlays for plywood surfaces, and many other research developed improvements in industrial glues and plywood.

*Reg. U. S. Pat. Off.

Where are Laucks glues used in airport construction?

In laminated arches and beams with spans up to 150' and more, especially for hangars, also for passenger stations, and for the shopping, eating, living and medical facilities included in modern airport plans.

In Plywood . . . bonded with modern synthetic resin glues, waterproof, boilproof, fungusproof . . . for every type of airport building — management, maintenance, or operations in giant commercial airports in "country-club" private airports . . . for strong, rigid walls, at ceiling, for hangar doors, for reception room paneling, fixtures, seating, etc.

In stressed-cover and dry-built construction . . . affixing wallboards, exterior or interior, to structural members, for more rigid, stronger, lightweight construction.

For information on these techniques and the proper glues to be used, address your inquiry to "America's Glue Headquarters," where more than a quarter of a century's experience with plywood and other industrial glues gives us a "know-how" from which you may profit.

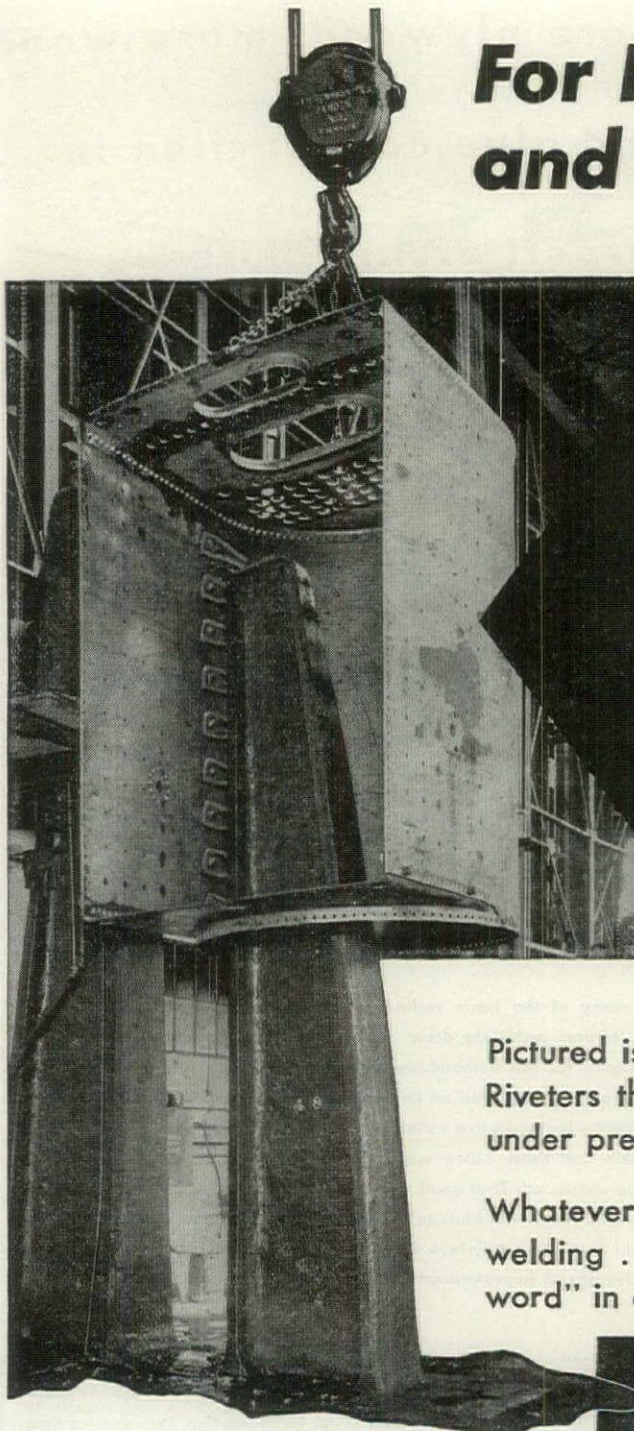


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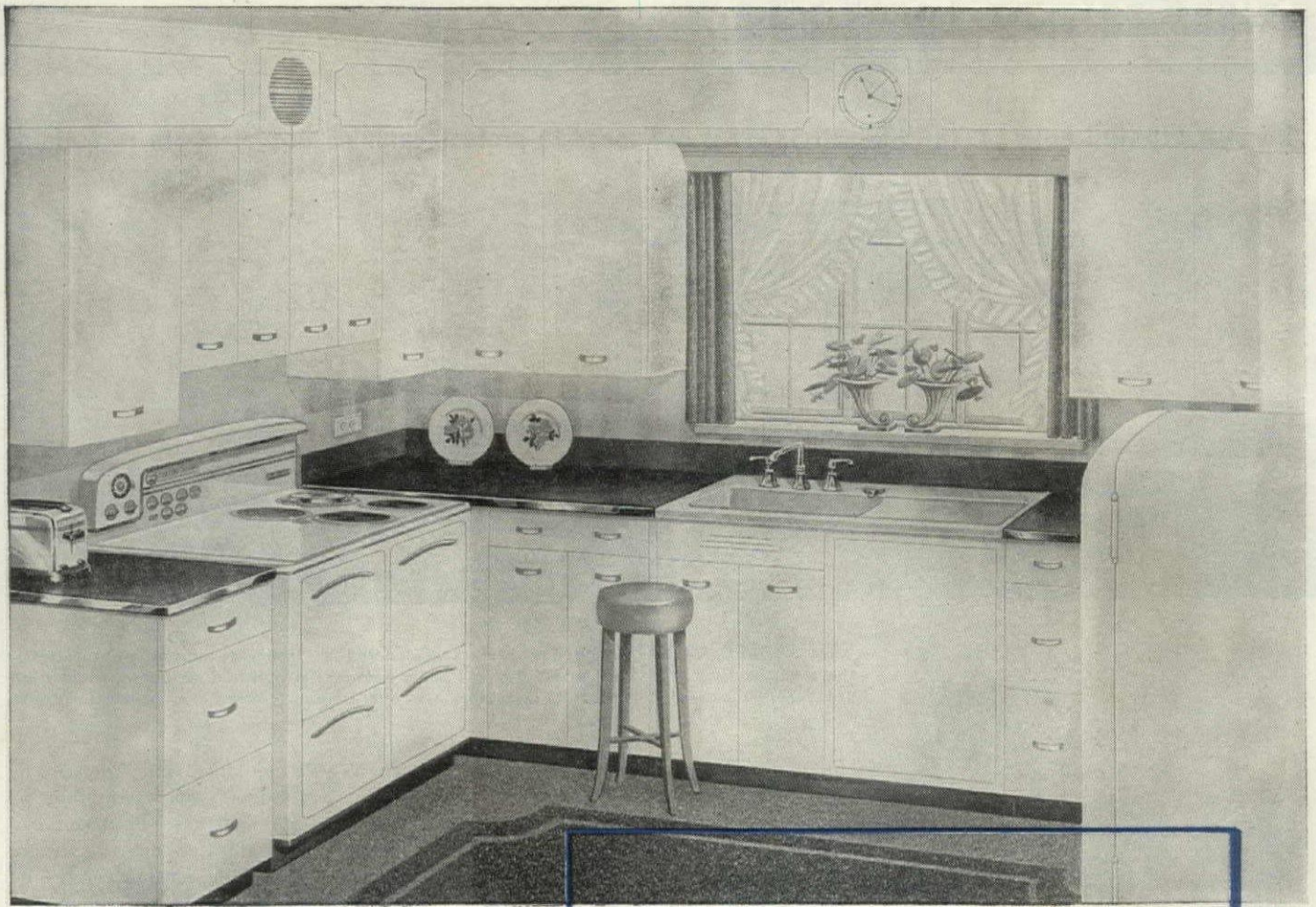


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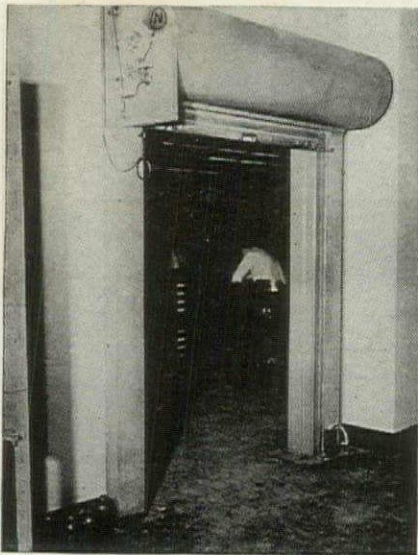
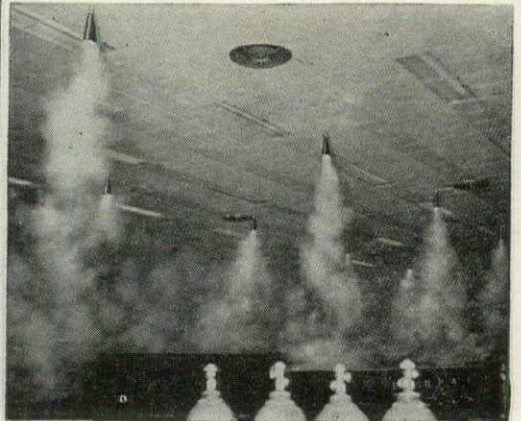
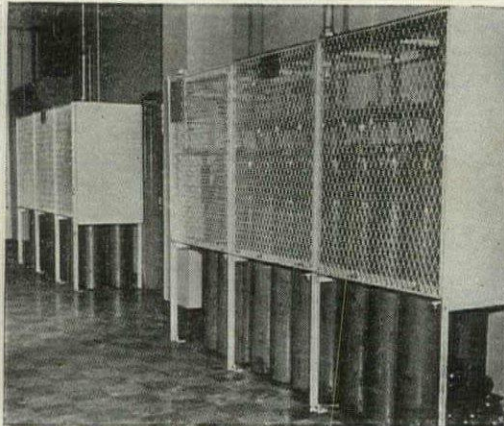
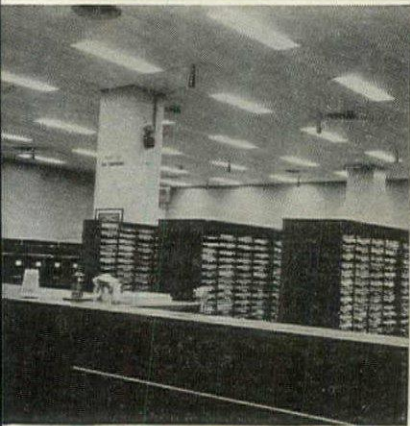
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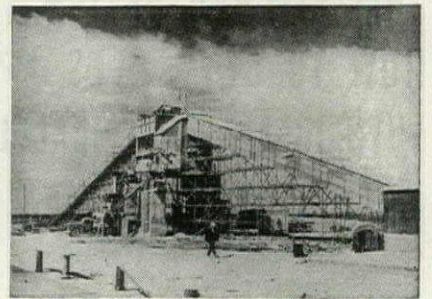
NOZZLES ARE ACTUATED by heat detectors located at intervals across ceiling (left); these release gas from central storage cylinders (center) which is distributed under high pressure through special nozzles. Detectors also operate door closing mechanism (bottom).

closed metal shelving and ordinary filing cabinets and extinguishes fires in their contents.

When fire breaks out the upward drift of the heat is picked up immediately by heat detectors located at intervals about the ceiling. Expansion of the air within them sets up a wave of pressure which travels through tubing to a release mechanism. This causes weights to drop, opening valves on the storage cylinders of highly compressed carbon dioxide. Through the force of its own expansion upon release, the gas pours from multiple discharge nozzles at the ceilings, flooding an entire room in a few seconds, and speedily reducing the percentage of oxygen in the air to a point where combustion is no longer possible. To give employees a chance to vacate the premises before the gas is discharged the release is postponed by the addition of a time-delay device in installations guarding rooms where personnel may be at work. At the Sperry plant this time-delay is set at twenty seconds during which an alarm gong sounds a continuous warning. The delay can be set at any time interval dictated by the accessibility of exits or other conditions. Carbon dioxide, in itself, is non-toxic. Nevertheless it is lethal because the proportion of oxygen in the air is lowered to a point at which breathing becomes impossible.

When released, the passage of gas through the distributing pipes operates pressure switches that shut off the ventilating and electric systems and also operates pressure trips that close ventilating ducts and steel doors. The sys-

tem is self contained and supplied by storage cylinders each containing 50 lbs. of compressed gas. Banks of cylinders may be located any convenient place in the building as they require no special housing. Little maintenance is needed as carbon dioxide does not freeze, deteriorate with age or corrode its cylinders or piping. Routine inspections are required as a safety measure but since the system is self contained its operation is not affected by failure of the power system or water supply.



WARTIME CONSTRUCTION of military airfields during the battle of Europe called for speed and durability. This unusual concrete batch-mixer was erected to hurry construction on an RAF airport. The ramps erected on light scaffolding were used to haul materials to the hopper. The covered ramp was used to transport cement from the warehouse and the uncovered ramp to haul light and heavy aggregates from stock piles. Concrete was efficiently delivered from the batch-mixer to the pouring areas by means of a narrow gauge railway.

(Continued on page 244)

CARBON DIOXIDE fire extinguishing system is a new development in industrial vault protection installed in the Sperry Gyroscope Company plant at Great Neck, L. I., by Walter Kidde and Company, Inc. The use of water in the fire protection of master prints, documents and plans often proves as damaging as the fire itself. In comparison with water, carbon dioxide is dry, leaves no residue and is not damaging to materials on contact. For this reason the carbon dioxide system is particularly well suited to the protection of libraries, museums and places where large values are concentrated in relatively small areas. However, there is no limit on the size of installation and the Federal Fire Council after conducting numerous exhaustive tests announced, "Extinguishment of fires in large spaces can be regarded as presenting no added problem other than the amount of gas required." Further tests indicated that the gas penetrates



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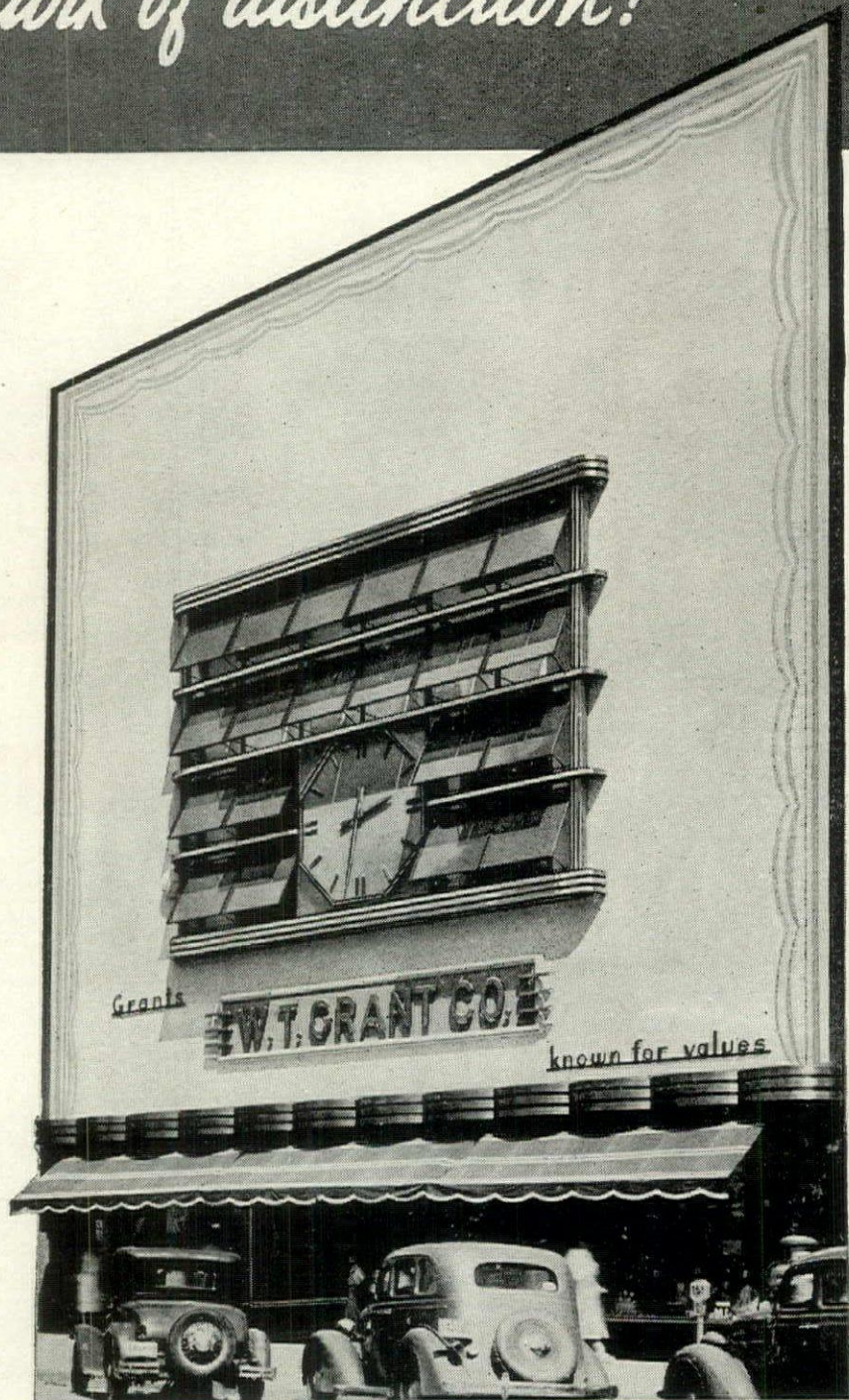
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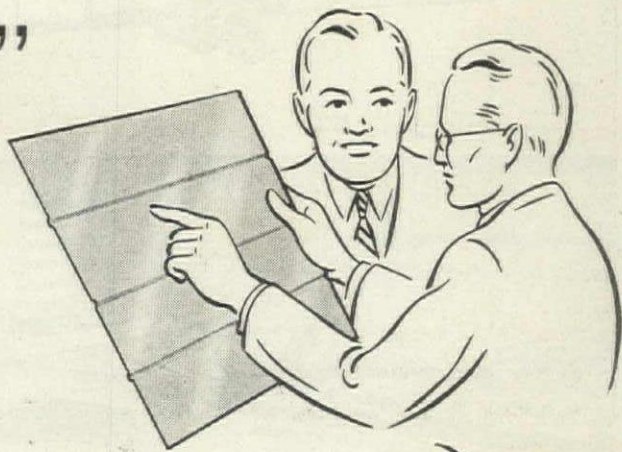
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✓ Mid-summer tests made by a testing laboratory in a group of insulated houses revealed that those insulated with Ferro-Therm showed not only a far *lower* average temperature both day and night but also a more *constant* temperature.

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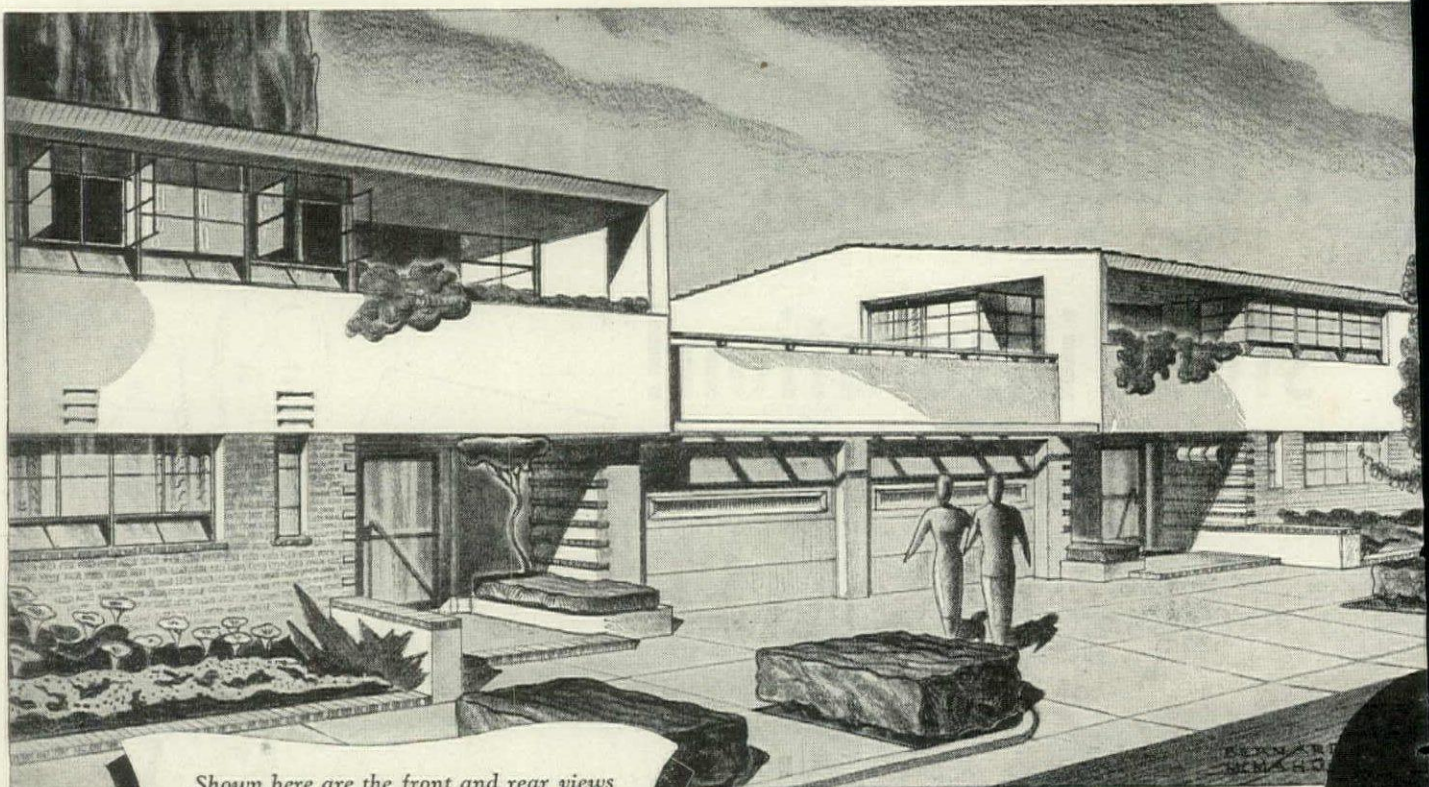
Please send me, without obligation, complete information on Ferro-Therm Steel Insulation.

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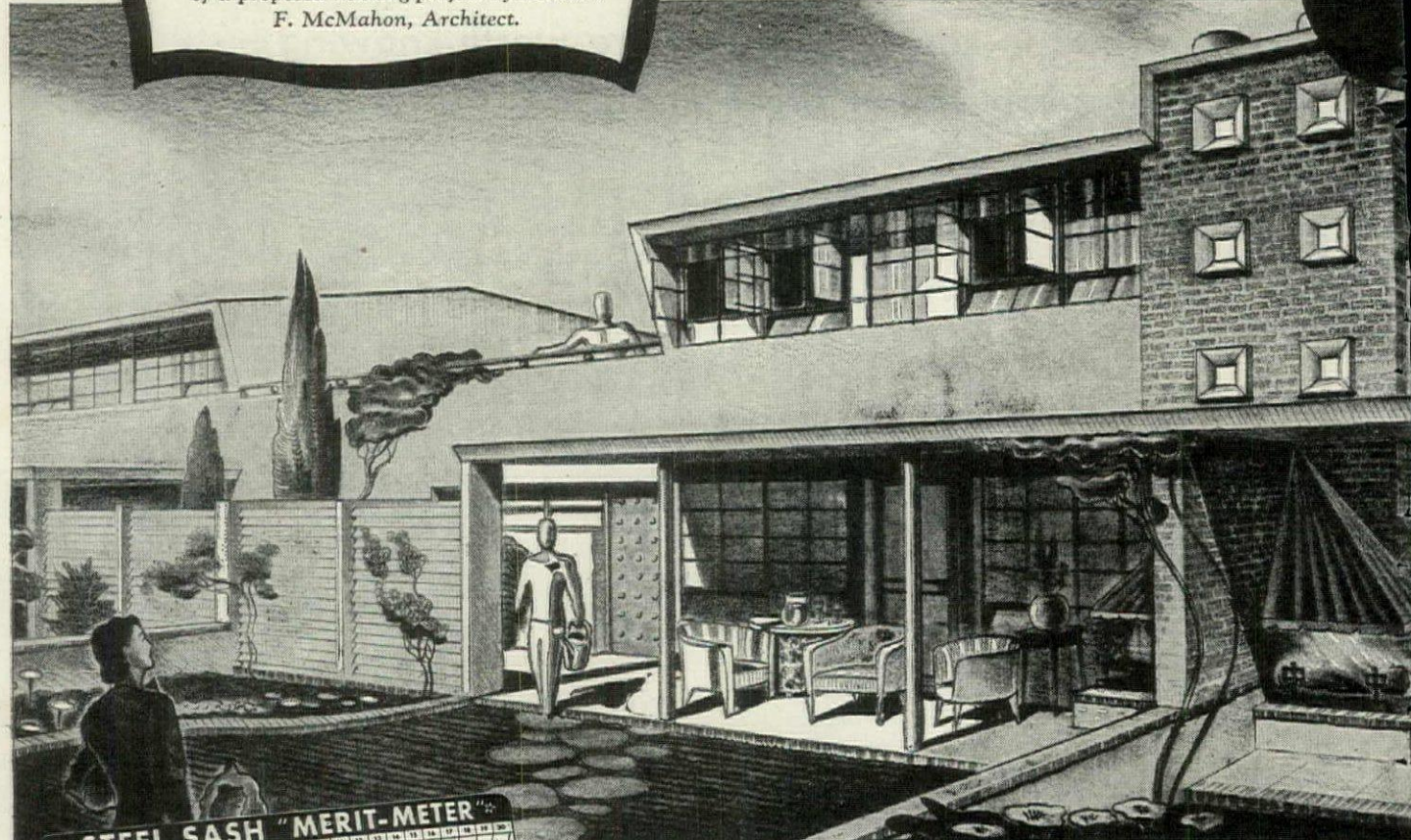
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Shown here are the front and rear views of a proposed housing project by Bernard F. McMahon, Architect.



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SWEET CATALOG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
MESKER	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
SASH-A	YES	YES	YES	NO	NO	YES	YES	YES	NO	YES	NO	NO	NO	NO	NO	YES	NO	YES	NO	85%
SASH-B	NO	NO	NO	NO	NO	YES	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO	30%
SASH-C	NO	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	25%
SASH-D	NO	NO	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	35%
SASH-E	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	

• Sworn facts from Sweet's Catalog have time and time again proved the quality supremacy of Mesker Steel Windows. Quality the architect can depend on.

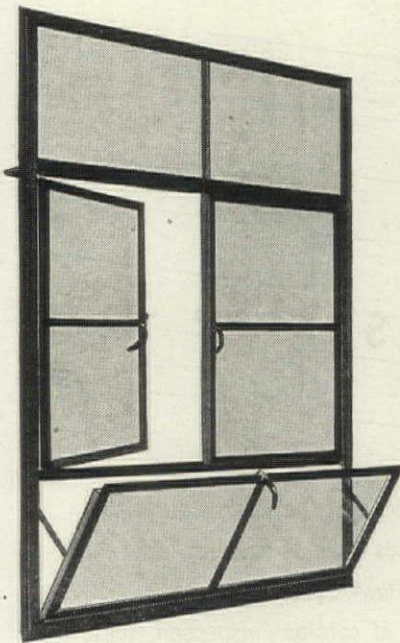


If you have not as yet received your copy of the Mesker Brothers Book of Apartment Windows, write for a copy TODAY. There is no obligation.

★ ★ ★ Mesker Steel Windows are ideal for *all* housing projects. Engineered specifically for large-scale projects, in conjunction with government and insurance company authorities, these windows are easily installed at low first cost, provide year-in-year-out minimum maintenance cost. Steel frame and inside casing, designed for utmost strength and durability, guarantee no costly splintering, shrinking and rotting . . . reduce plaster cracks...eliminate wood trim and plaster troubles. Simply storm sashed and installed, they assure perfect weathertightness, help conserve fuel. Blending artistically with any style architecture they conserve wall space, contribute to larger looking, brighter interiors by providing maximum glass area in a minimum of wall space.

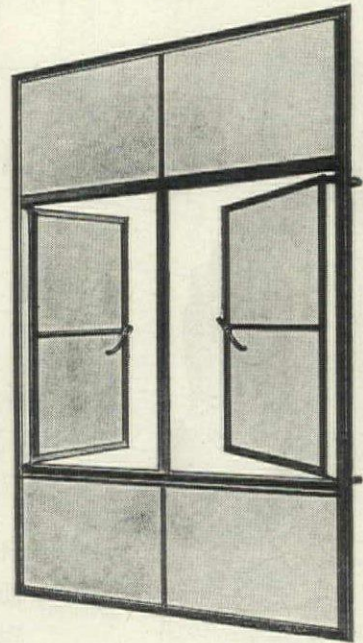
Mesker Steel Windows have additional functional advantages that appeal to tenants, increase rental possibilities. For example, they admit 30% more daylight, are simple to operate. A mere *flick* of the finger opens them . . . allowing 100% draftless ventilation. There's no swelling, sticking, broken sash cords or sliding friction with which to contend. And especially important, Mesker Steel Windows are SAFE...for they're easily cleaned and screened from *inside*. Attachment of screens from the inside eliminates the yearly nuisance and expense of storing, cleaning and painting. All of which is why you, like so many leading American architects, will want to specify Mesker Steel Windows for all your housing projects.

Specify MESKER STEEL WINDOWS FOR YOUR NEW HOUSING PROJECTS



Mesker Windows For Housing Projects

The standard sizes of Mesker Steel Casements (Series 300) can be used singly or in combination to achieve almost any size window opening required to suit any particular detail. For large picture windows, stationary (non ventilator) sizes are available in all widths and heights. Both windows shown are made on special order, and will be available only on large scale housing projects. For smaller projects, the Mesker Series 300 Residence Casement is more suitable.

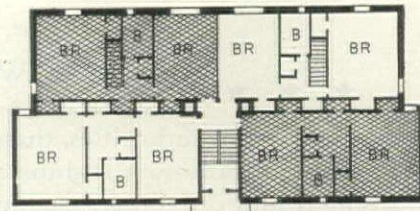
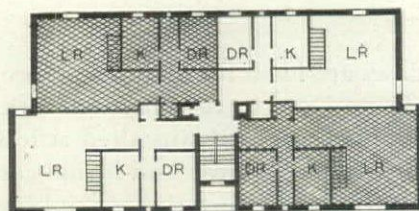


Mesker
STEEL WINDOWS

MESKER BROTHERS • 426 SOUTH 7th STREET (2) SAINT LOUIS

(Continued from page 240)

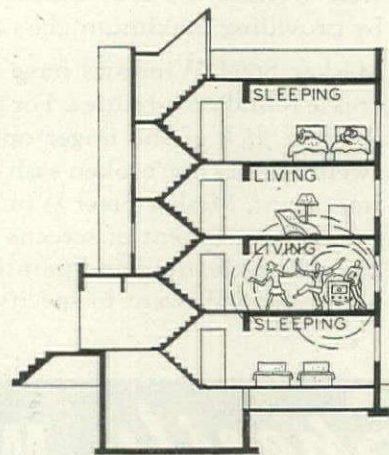
SOUNDPROOFING apartment houses by careful planning instead of expensive sound-deadening construction is proposed in a duplex apartment arrangement by Charles H. Sacks, architect, of New York. An annoyance to real estate owners and tenants, sounds transmitted through apartment walls and floors constitute one of the most disturbing factors in urban living. To overcome this, each apartment in the proposed scheme has two floors connected by a private interior stair. Living levels are sandwiched together creating a quiet sleeping zone remote from levels of active living. The stair between levels is an added expense over usual planning requirements and may be termed the price of the scheme. However, it is a small price since sound transmission has proven difficult to control in low cost apartment houses because of the light construction employed. This is especially true of slow-burning construction with wood joist floors and stud walls. In more expensive construction, as a rule, there is less sound transmission due to the sound reduction characteristics of masonry floors



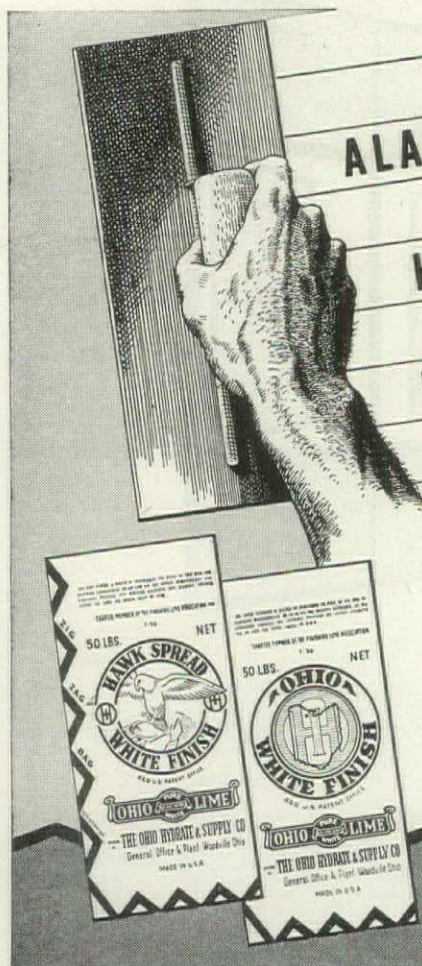
PLANS of living level (left) and sleeping level (right) in duplex sound control scheme.

and partitions. In the Sacks scheme sound transmission is interrupted through floors from one sleeping level to the next by two living levels. Assuming that the living level is the source of most noise—dancing, loud radios and piano practice—you move to a quiet zone when you go upstairs or downstairs to sleep. Actually, when you vacate your living room it becomes an effective sound barrier between your sleeping quarters and your potential sound producing neighbor. On the bedroom level the double row of partitions forming closets insulate one set of sleeping rooms from the next. Correspondingly, on the living room level the apartments are sound-separated by a double partition. Vulnerable spot in the scheme is the floor separating the living spaces.

(Continued on page 243)



SECTION through duplex apartments with living levels sandwiched between sleeping levels. Family in upper duplex have retired placing their living space as a sound barrier between them and the source of noise below.



ALABASTER WHITENESS . . .

HIGH PLASTICITY

UNIFORMITY . . . FRESHNESS . . .

From the heart of the world's purest deposit of dolomitic limestone come these two brands of white finishing lime: the original Ohio White Finish and its identical twin, Hawk Spread.

Made at the quarry, under the watchful eye of constant inspection, these brands are as nearly perfect as the purest dolomitic rock and modern scientific processing can make them.

Sold through dealers everywhere, both brands are always packed in the well-known distinctively marked red zig-zag bags.

THE OHIO HYDRATE & SUPPLY CO.
WOODVILLE, OHIO

HOSPITAL PLANNING?

The second in a series of six advertisements prepared to help you plan effective communications for new or modernized hospitals.



How Connectacall Helps Relieve The Nurse Shortage

The headache of "not enough nurses" may linger long after the war ends. More than 800 hospital construction projects are in the designing stage right now, *exclusive* of new government hospitals. Translate that in terms of the country's nursing requirements, consider the importance of making the fullest use of each nurse's professional skill.

The approach to this problem is through modern communications ... with *Connectacall*, two-way

nurse-patient communicating systems. With *Connectacall*, the nurse at her duty station is, in effect, sitting at the bedside of every patient. When her services are required, she knows what is wanted at once, by actual conversation, without making a trip to the patient's room. Thus she can act more promptly, with no wasted steps. At night, the nurse may "tune in" each bedside, using *Connectacall's* Silent Supervision feature, to assure herself

that each patient is resting quietly.

By stepping up the efficiency of each nurse, *Connectacall* enables fewer nurses to do a better job of patient care. Make use of this and other "*Connecticut*" hospital communicating and signalling systems. For more information on the complete line, write for Bulletin 102. Our free advisory planning service places our twenty-five years of engineering experience in hospital communications at your disposal.



CONNECTACALL

product of

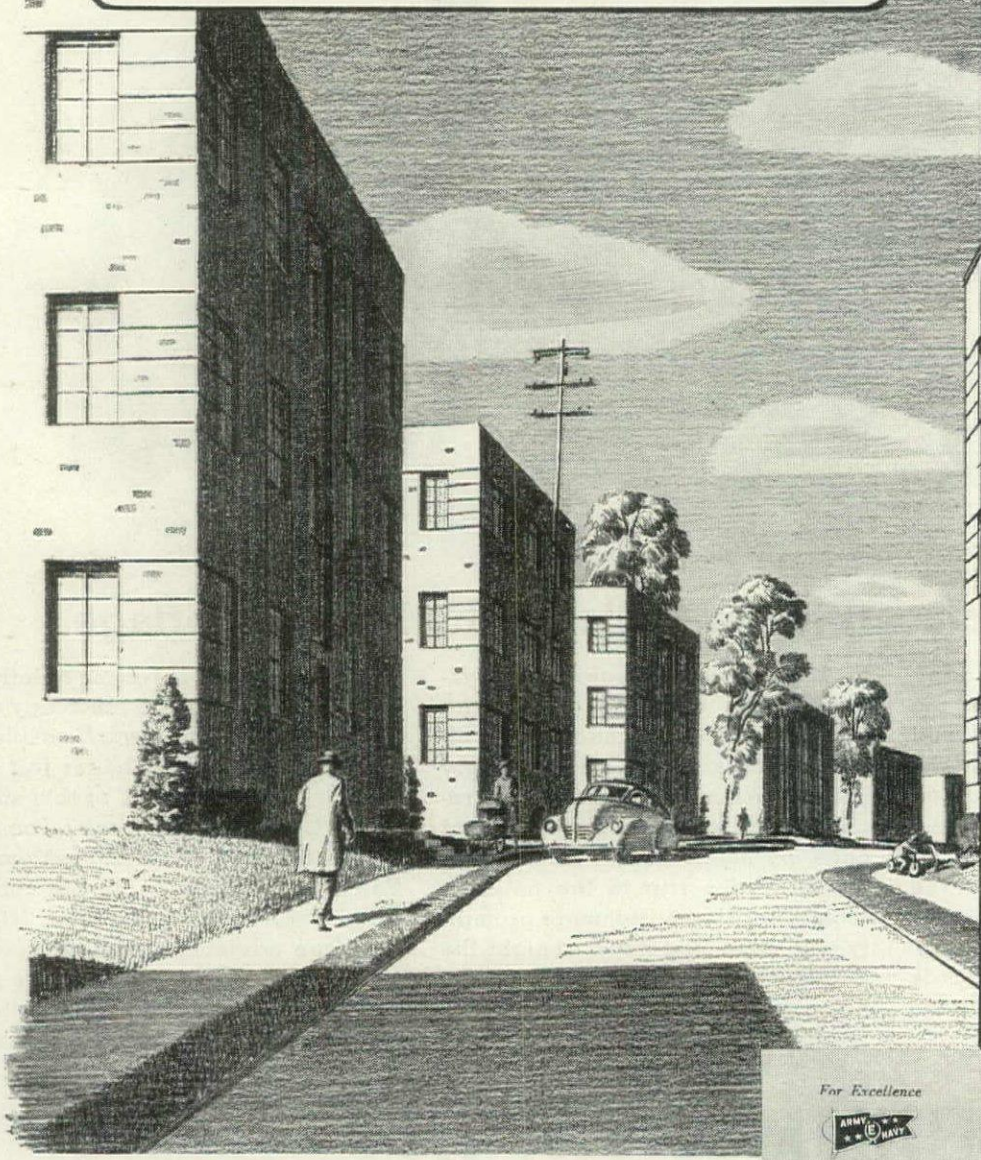
CONNECTICUT TELEPHONE & ELECTRIC DIVISION
GREAT AMERICAN INDUSTRIES, INC.
MERIDEN, CONNECTICUT



NURSES' CALL SYSTEMS • DOCTORS' SILENT AND AUDIBLE PAGING • DOCTORS' REGISTRY • INTERIOR TELEPHONE SYSTEMS • NIGHT LIGHTS • NURSES' HOME TELEPHONE AND RETURN CALL SYSTEMS

Whether it's electric kitchen
equipment for apartments or
for a single home

*Specify the favorite
Specify Frigidaire*



GREENWAY APARTMENTS, one of Washington's most modern apartment developments, turned to Frigidaire for electric kitchen equipment when this group of seventy-two eleven-family apartment buildings was completed by the Cafritz Construction Company in 1942. A total of 800 Frigidaire Electric Refrigerators and 800 Frigidaire Electric Ranges provide tenants of Greenway Apartments with all the benefits of modern electric refrigeration and electric cooking.

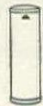
**Frigidaire
Peacetime Products**
FOR HOMES AND APARTMENTS,
OFFICES AND BUSINESS
ESTABLISHMENTS



Household Refrigerators
—in all sizes and models
—including the famous
Frigidaire Cold-Wall.



Electric Ranges—from
small apartment models
to full size deluxe cabinet
models.



Fully-automatic Electric
Water Heaters—in many
capacities and models.



Home Freezers for freezing
foods and storing
frozen foods in the home.



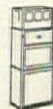
Portable self-contained
type Air Conditioners—
for window installation.



Home Air Conditioners
—complete in a single
package.



Water Cooling equip-
ment for all applications.



Self-contained, large ca-
pacity, Air Conditioners.



Refrigeration Cooling
Units and Compressors
for large refrigerators.

Whatever your requirements—
home appliances, commercial re-
frigeration or air conditioning—
consult your Frigidaire Dealer.
He will be able to tell you about
the kind of equipment that will
meet your needs most effectively
...give you the latest information
on when this equipment may be
available. Find his name in clas-
sified section of telephone book.
Or write Frigidaire, 422 Amelia
St., Dayton 1, O. In Canada, 334
Commercial Rd., Leaside 12, Ont.

VICTORY IS OUR BUSINESS!

For Excellence



in War Production

FRIGIDAIRE

Made only by

GENERAL MOTORS

Peacetime Products

COMMERCIAL REFRIGERATION • AIR CONDITIONERS
BEVERAGE, MILK, AND WATER COOLERS
REFRIGERATORS • RANGES • WATER HEATERS
HOME FREEZERS • ICE CREAM CABINETS

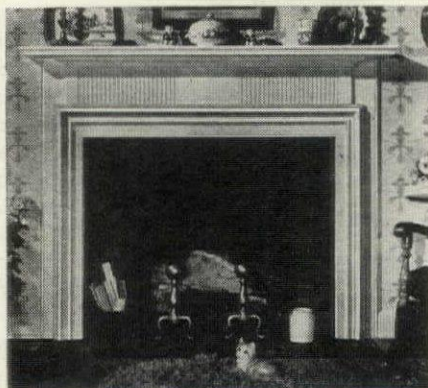
MAIN ENTRANCE to a Dream-Come-True!

For thousands of home planners, the "home of their dreams" has an entrance like this . . . or another Curtis stock design. Inside, there's a Curtis china closet . . . a Curtis mantel . . . a graceful Curtis stairway. In the kitchen, there are Curtis stock cabinets.

How do we know? Because thousands upon thousands of inquiries prove that Curtis Woodwork looms large in the dreams and plans of home-builders-to-be everywhere.

Since 1866, Curtis has been famous as a manufacturer of *fine* woodwork . . . authentically designed, soundly made, yet moderate in price. Today, Curtis authentic styling spells beauty and charm for home-hungry America. To you, Curtis Woodwork affords greater scope in giving home-owners greater comfort and value for their money when they build or modernize.

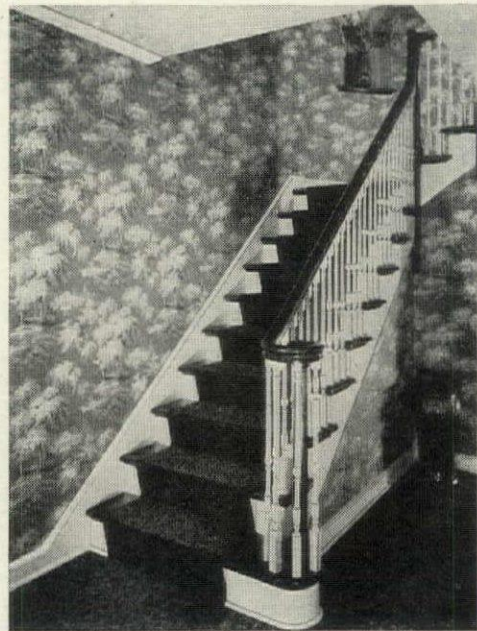
To keep abreast of modern woodwork developments, keep in touch with Curtis. Mail the coupon for latest information and literature.



Fidelity of design—expert craftsmanship—make Curtis mantels a No. 1 choice for the homes you plan. This is only one of many Curtis styles. All have Curtis quality construction.



The desire for beauty—plus the need for extra storage space—are both met by Curtis china closets, made with or without doors, and available either for corner or flat wall installation. Curtis china closets will add extra distinction and character to your plans.



Stock parts make up this Curtis stairway, correct in design and staunch in construction. Several Curtis styles will be available to help you meet owners' needs exactly as well as economically.



With Curtis kitchen cabinets you can make that new kitchen compact—step-saving—efficient—and beautiful! Curtis sectional units are easily installed in any type of space—are made in a wide variety of sizes to fit every need.

★
MAIL THE COUPON
FOR INFORMATIVE
LITERATURE!



Curtis Companies Service Bureau
Dept. AF-9W, Curtis Building
Clinton, Iowa

Gentlemen: Please send me information on Curtis Stock Woodwork for post-war homes.

Name.....

Address.....

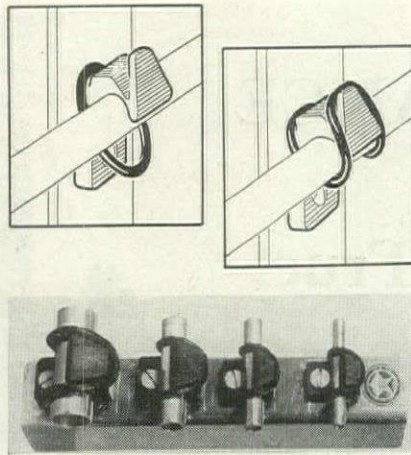
City.....State.....

(Continued from page 244)

CLAMP

Adaptable to all types of tube and conduit installations.

This durable, extremely light, new type of clamp is being used in plane installations for fastening hydraulic and pneumatic tubing, wire bundles and electrical conduits, but could be readily used for such purposes as fastening plumbing in housing by substituting a fiber-glass clamping ring to obtain durability. The clamp is shaped like an inverted lateral

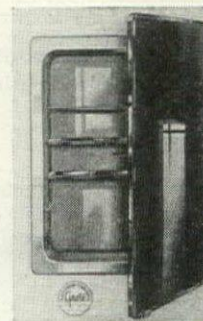


S and is fastened to the wall or frame with an ordinary screw. The tubing to be fastened is placed in the open side of the curve and the clamping ring passes around the back of the base, over the top of the tubing and down the front where it is hooked under the curve at the front of the S to form a simple locking device. The clamping ring can be made of high grade synthetic rubber or other elastic material. The clamp proper can be molded from a fabric base phenol fiber material or fabricated from formed sheet metal. No tools are needed for installation, and there are no loose parts to be lost or broken. When installed in a series, any single conduit can be removed without disturbing the others. *Manufacturer: Glenn L. Martin Co., Baltimore 3, Md.*

MEDICINE CABINET

New line offered by Grote Manufacturing Company, Inc.

The Grote Mfg. Co., Inc. offers a complete selection of bathroom cabinets including both recessed and wall surface



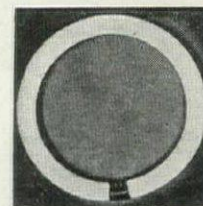
types as well as electrically lighted cabinets. Most of the units are of drawn, one-piece steel construction, with rounded easy-to-clean corners, and finished in either vitreous porcelain or baked enamel. Mirrors are available in various grades of glass, and can be furnished plain or with a one-piece stainless steel or chromium plated frame. Illustrated is Cabinet No. SF-162 which has an "A" quality plate glass mirror with one-piece chromium plated frame. *Manufacturer: The Grote Mfg. Co., Inc., Bellevue, Ky.*

various grades of glass, and can be furnished plain or with a one-piece stainless steel or chromium plated frame. Illustrated is Cabinet No. SF-162 which has an "A" quality plate glass mirror with one-piece chromium plated frame. *Manufacturer: The Grote Mfg. Co., Inc., Bellevue, Ky.*

LAMP BASE

Plastic bases for Circline fluorescent lamps.

Engineers who developed the Circline fluorescent for postwar production, have joined the ends with a new four-pin plastic base as shown on the 12 in. ring. About 1 in. in diameter, the base contains two pins from each of the two connecting ends of the lamp. For convenience in installation, particularly when nesting with the 16 in. and 8 1/2 in. Circline, the pins are mounted at a 45° angle to the plane of the circle. *Manufacturer: Westinghouse Electric Corp., Lamp Div., Bloomfield, N. J.*



(Continued on page 252)

**NO SLOWDOWN
IF YOU USE
CALCIUM CHLORIDE
IN ALL CONCRETING**

BELOW 50 DEGREES

When the temperature drops from 70 degrees to 40 degrees, it takes twice as long for normal concrete to acquire safe weight-bearing strength. But by using 2 pounds of calcium chloride for each bag of cement, this difference in strength is overcome, and normal strength is attained in the same time as during the summer months.

Why waste this valuable time when the use of calcium chloride will compensate for the reduction in temperature and put you back on normal 70 degree summertime operating schedules for placing, finishing, removal of forms, and opening for use.

Concrete with calcium chloride has greater strength at all ages tested.

Use calcium chloride in all Portland Cement Concrete placed at 50 degrees Fahrenheit or lower. Get your copy of the new book, "Early Strength Concrete," explaining methods, amounts to use and results of tests by the National Bureau of Standards.

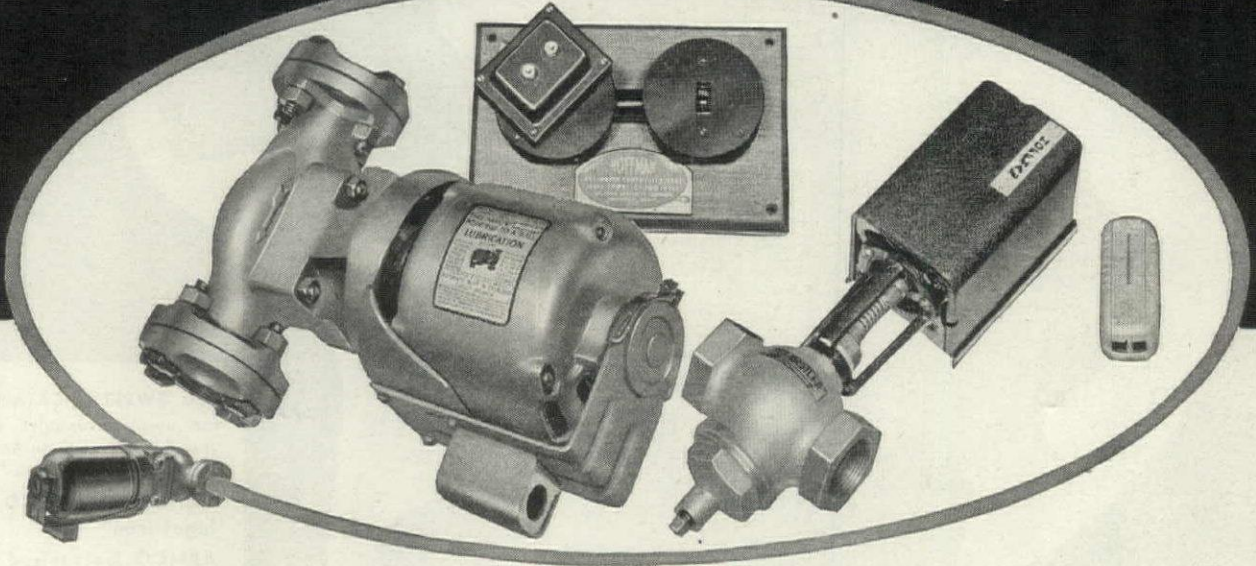
CALCIUM CHLORIDE ASSOCIATION
4145 Penobscot Bldg. • Detroit 26, Mich.

CALCIUM CHLORIDE

FOR BETTER CONCRETE CONSTRUCTION



A NEW HOFFMAN HOT WATER *Comfort Package*

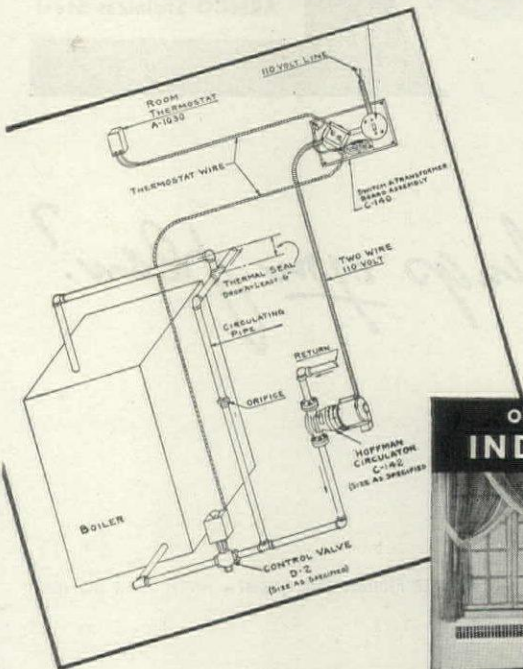


A POPULAR-PRICED CONTINUOUS CIRCULATION SYSTEM . . . THERMOSTATICALLY CONTROLLED

All the advantages of a continuously circulated forced hot water heating system can now be obtained with simplified and inexpensive equipment. The new Hoffman Comfort Package combines a Circulating Pump, Control Panel, Control Valve and Thermostat—adaptable to any hot water heating system.

In operation, the Comfort Package effects a constant balance between heat loss and heat supply, so that home temperature is held uniform, regardless of weather variations. Note in the diagram that the boiler is bypassed from the rest of the circulating system. Hot water from the boiler is admitted *only* when the temperature of the circulating water drops below the temperature required by weather conditions. Hence the system keeps pace with the actual need for heat and never delivers a fuel-wasting excess.

The Hoffman Comfort Package offers heating at its best, yet the cost is within the budget of even modest homes. Send the coupon for booklet.



OUTDOORS 30°
INDOORS 70°

OUTDOORS BELOW 0°
INDOORS 70°

OUTDOORS 40°
INDOORS 70°



Hoffman Specialty Co.
1001 York St., Dept. AF-9, Indianapolis 7, Ind.
Send at once your booklet on the new Hoffman Comfort Package.

Name..... Title.....

Firm Name.....

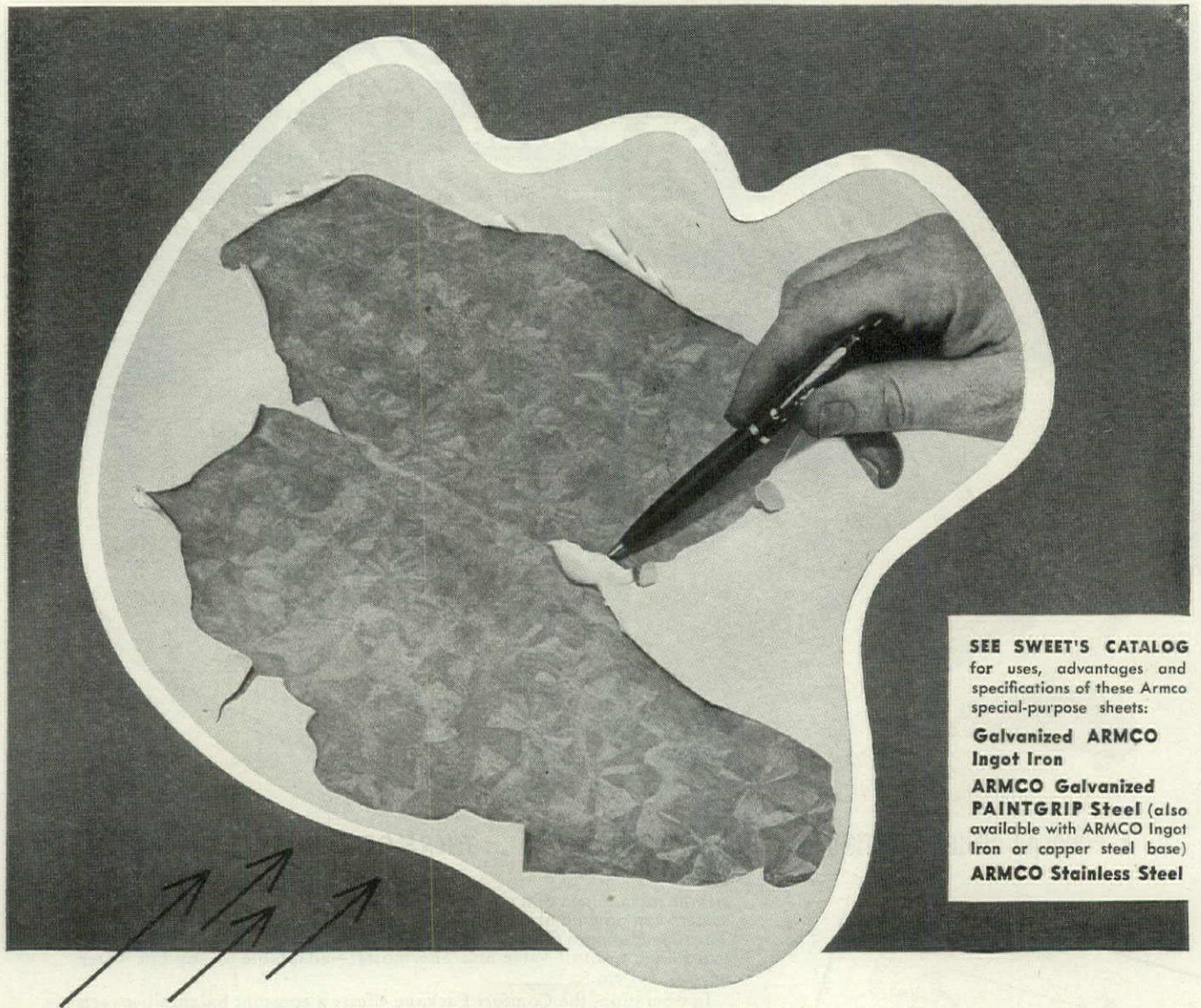
Address.....

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

HOFFMAN SPECIALTY COMPANY

1001 York St., Indianapolis 7, Indiana

Makers of Valves, Traps, Vacuum and Condensation Pumps,
Forced Hot Water Heating Systems . . . sold everywhere by
wholesalers of Heating and Plumbing Equipment.



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

Could this happen to buildings you plan?

A good galvanized sheet is entirely satisfactory for many uses, but it has one limitation. It can't be painted satisfactorily without weathering or acid-etching. Even when the sheet is treated before painting, the raw zinc sets up a chemical action that dries out the essential oils and causes early paint failure. The photograph shows what happens.

But sheet metal work made of ARMCO Galvanized PAINTGRIP Steel takes and *holds* paint without any treatment on the job. Bonderizing at the Armco mills gives this metal a neutral surface film that insulates the paint from the galvanizing. Experience shows that paint lasts several times longer on PAINTGRIP than on ordinary galvanized or uncoated steels.

You'll want to include this *special-purpose* metal in your plans for post-war buildings. It can be obtained with an ARMCO Ingot Iron, copper steel or plain steel base. Write for the ARMCO PAINTGRIP booklet, which gives complete information on fabricating, finishing and applications of this steel. The American Rolling Mill Company, 2161 Curtis St., Middletown, Ohio.

EXPORT: THE ARMCO INTERNATIONAL CORPORATION

★ HELP FINISH THE FIGHT—WITH WAR BONDS



SPECIAL-PURPOSE SHEET STEELS FOR TOMORROW'S BUILDINGS

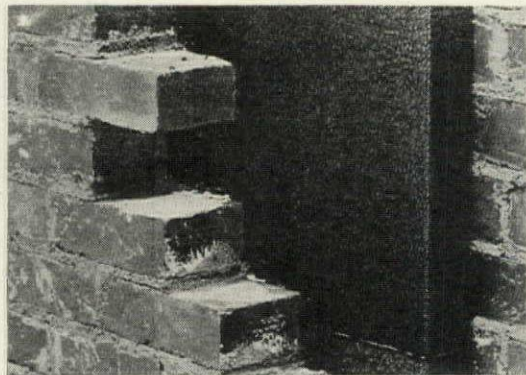


PC FOAMGLAS, the permanent insulating material, helps to maintain desired temperature and humidity levels, to prevent condensation. It is fireproof, moistureproof, verminproof and proof against most acids.

Consisting of millions of air-filled glass cells, PC Foamglas is light in weight, rigid and strong. The big pieces are conveniently packaged, easily handled, quickly installed.



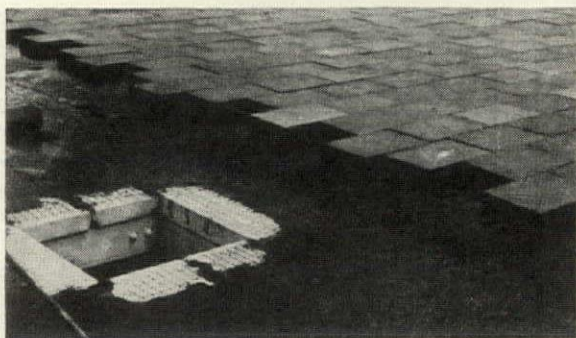
In core walls, PC Foamglas becomes an integral part of the structure, can be tied in to brick, tile or other backing and facing. This material made of air-filled glass cells, does not pack down, slip, warp, or rot.



PC Foamglas has proved the most efficient and truly economical insulation material for use on tanks and other large containers in the processing, chemical and petroleum industries.

FIRST COST IS LAST COST

When you are figuring on insulation for roofs, floors, walls, tanks or plant equipment, learn why the most efficient, the most *economical material* is PC Foamglas. Free booklets are yours for the asking. Send in the convenient coupon today. Pittsburgh Corning Corporation, 632 Duquesne Way, Pittsburgh 22, Pa.



A firm, level base for roofing felt, PC Foamglas helps to maintain desired temperature and humidity levels, to prevent condensation.

It needs no expensive repairs or replacements, insulates efficiently, permanently.



• Also makers of PC Glass Blocks •

Pittsburgh Corning Corporation
Room 664, 632 Duquesne Way
Pittsburgh 22, Pa.

Dear Sirs:

Roofs..... Walls..... Floors.....
Please send along my *free* copies of the booklets I have checked. It is understood that I incur no obligation.

Name.....

Address.....

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

PC FOAMGLAS *Waterproof Fireproof* **INSULATION**
T. M. REG. U. S. PAT. OFF.

(Continued from page 248)

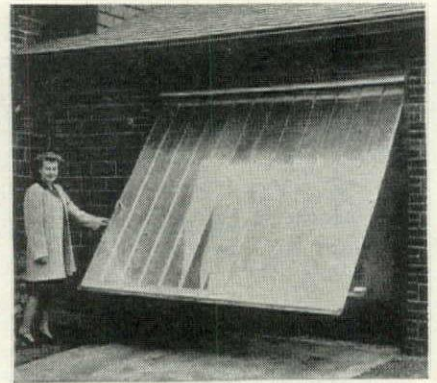
GARAGE DOOR

Aluminum garage door with compact operating mechanism allows lower garage styling.

This reinforced all-aluminum overhead garage door, weighing less than 60 lbs., has its operating mechanism installed in a metal box, 6 in. by 6 in. by 24 in., thus eliminating cumbersome hardware inside the garage. This makes it possible to lower the roof line to the top of the door opening. The box weighs only

18 lbs. and is placed on the back of the door in an upper corner out of the way. The door is of aircraft type construction eliminating sagging or buckling. The standard size door can be installed in an opening 8 ft. wide and 7 ft. high, between the jambs, and multiple installations of 8 ft. doors can be used without installing breaker strips or posts to separate the doors. The new operating principle allows for lower cost installations, and the door can be hung, weather-stripped and ready for use in half an hour.

Manufacturer: The Berry Door Co., Birmingham, Mich.



INSULATING PLASTIC

Combines high heat resistance with unusual electric insulating properties.

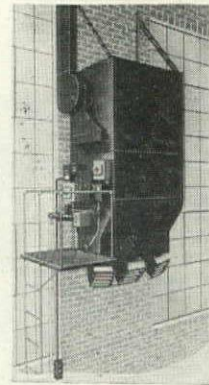
Seen as a boon to development of electronic devices, Styramic HT is a new thermoplastic with remarkable electrical insulating properties. Its manufacturer predicts that it will contribute substantially to the development of electronic devices, and that it is also noteworthy in that it holds shape and strength at relatively high temperatures, yet can be molded by the fastest and most economical means.

Manufacturer: The Monsanto Chemical Co., St. Louis 4, Mo.

INDUSTRIAL HEATER

Designed for suspension from walls or roof trusses.

The Dravo Direct Fired Heater, suspended type, is a compact, heat-producing and distributing unit intended for use where space for the conventional floor-type unit is not available.



Burning either gas or oil, warm air from the heater can be discharged in any direction by adjusting the nozzles, and directional louvers on each

nozzle channel the flow up or down. Hot air is driven from the nozzles at velocities of 1,800 to 2,000 ft. per min., enabling the heater to be located 30 ft. or more above the floor and still deliver sufficient heat to the working area. Combustion takes place in a tear-drop shaped combustion chamber, the lower half of which is lined with plastic refractory molded to the metal wall. An unusual system of passes brings the air to be heated in contact with the heating elements four times. Heaters are shipped complete with refractory lining and all wiring in place which simplifies installation. Btu. output per hr. ranges from 300,000 to 1,650,000.

Manufacturer: Dravo Corp., Pittsburgh 22, Pa.

(Continued on page 256)



This is the exclusive **WORKING FORCE** that operates **White-Rodgers Temperature Controls** quickly, accurately and automatically

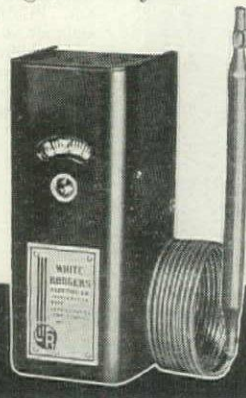
This is the powerful Hydraulic-Action element used exclusively on White-Rodgers automatic temperature controls. It is compact and easily adjustable to any use. It may be mounted at any angle or position. Controls equipped with it need no recalibration no matter where installed. Predominantly used in heating, refrigeration and air conditioning. Readily adaptable wherever applications require accurate control of temperature. Write today for engineering data for your present or post-war products.

Here's How It Works:

CONTRACTED
At left is a cross-section of the diaphragm and part of the liquid-filled capillary. The liquid has contracted, the diaphragm moving inward, causing the switch to function.

EXPANDED
In view at left, the liquid charge of the capillary has expanded with a rise in temperature. This positive force moves the diaphragm outward and causes the switch to function.

WHITE-RODGERS ELECTRIC CO.
ST. LOUIS 6, MISSOURI
Controls for Refrigeration • Heating • Air Conditioning



NEW OR REMODELING

What **STREAMLINE** TRADE MARK REG. U. S. PAT. OFFICE **COPPER PIPE AND FITTINGS**

Mean to

A plumbing or heating system of STREAMLINE Copper Pipe and Fittings, installed under normal water conditions, means efficient, trouble-free performance without repair bills year after year for the life of the building.

It means that there will be no leaky joints and rust-clogged pipes, and that plumbing and heating fixtures in the building will function perfectly as they are intended to do by the manufacturers. It assures the home owner and renter the satisfaction to which they are entitled in comfortable living conditions. It relieves the building manager, or agent, of ceaseless argument, troublesome explanations and costly repair bills. After all, efficient plumbing and heating are two of the main factors in keeping tenants satisfied—and in keeping satisfactory tenants.

The post-war home, with its modern and handsome bathroom, laundry and kitchen fixtures, must be supplied with hot or cold water or steam through a piping system that is equally as modern and reliable—otherwise, these fixtures cannot continue to give efficient service year in and year out.

Rust-stained water, corroded, clogged and leaky pipes have never yet rented a house or sold a building. On the other hand, a STREAMLINE Copper Pipe and Solder Fittings installation can be a most effective closer for either selling or renting.

When you remodel or build investigate STREAMLINE before you decide.

Send for copy of our Home Owners' Book.

STREAMLINE
PIPE AND FITTINGS DIVISION
MUELLER BRASS CO.
PORT HURON, MICHIGAN

HOME OWNERS

RENTERS

AGENTS

COMMERCIAL

AND

INDUSTRIAL

LEASE BUILDERS

for

PLUMBING

HEATING


REFRIGERATION

AIR

CONDITIONING

The Name **HOPE'S** Guarantees
WINDOWS

1818 — 1945



*...“magic casements, opening on the foam
of perilous seas” ...*

Keats “Ode to a Nightingale”

WHEN John Keats, more than 125 years ago, was penning the beautiful lines brought to mind by this picture, we were making our first steel casements. Over the passing of years we have learned to construct casements that can safely be used so close to the seas that, even when reached by the salt spray, they are weathertight, and when hot-dip galvanized, rust-proof.

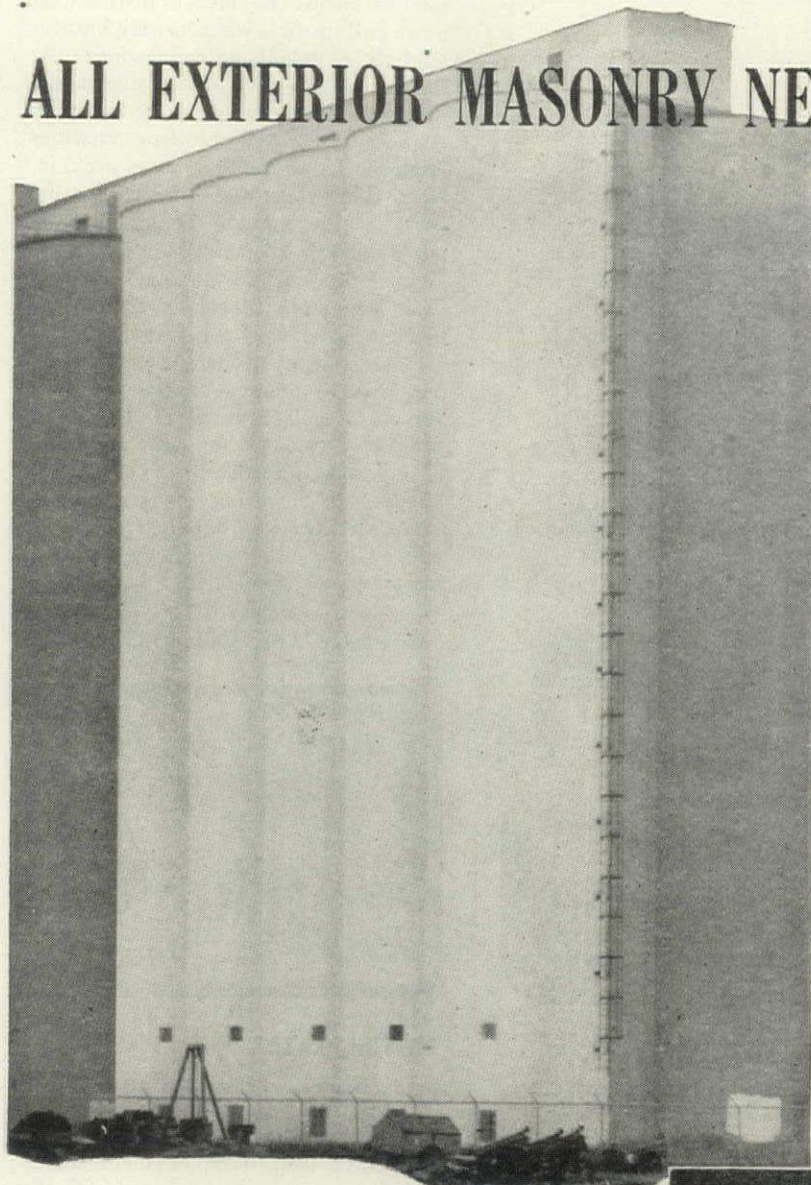
When an architect creates a room with a view such as this one he wants it to endure. To specify HOPE'S steel windows—protected in positions of ocean exposure by hot-dip galvanizing—is the first right step in building for permanence.

Illustration: Residence at Cohasset, Mass. . . . Gropius & Breuer, Architects.

HOPE'S WINDOWS, INC., Jamestown, N. Y.

BUY WAR BONDS  AND HOLD THEM

ALL EXTERIOR MASONRY NEEDS A RAINCOAT...

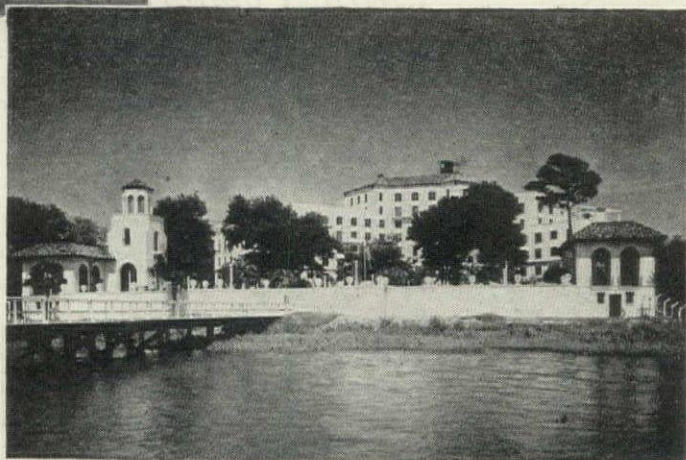


*from Northwest Flour Mills
to Southern Resort Hotels*

To extend the life of your property you must impede water penetration into concrete, brick or stucco walls, prevent reinforcing bar rust, spalling or disintegration. All this is accomplished by Waterfoil which is unlike any other protective coating. Waterfoil is manufactured of irreversible inorganic gels which bond chemically and physically to form a dense, hard protective outer layer on masonry surfaces.

PROTECT YOUR PROPERTY NOW!

Shabby structures treated with Waterfoil undergo an amazing change in appearance and condition. Waterfoil is available now. It is easily applied. It took ten years to develop and test. Send today for the Waterfoil literature. It's important.



*Horn Products and Methods Protect Millions of
Square Feet of Surface Throughout the Nation*



WATERFOIL

THE UNIQUE TREATMENT FOR EXTERIOR MASONRY SURFACES

A. C. HORN COMPANY

Established 1897

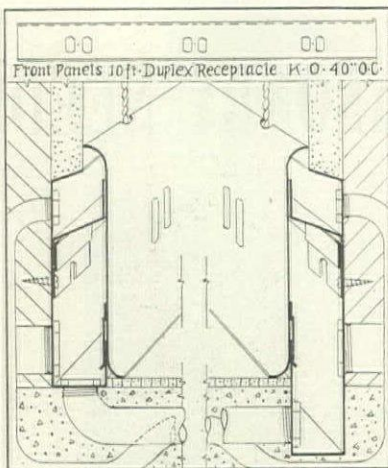
Manufacturers of Materials for Building Maintenance
and Construction • Long Island City 1, N. Y.
Houston, Texas • San Francisco, Calif

(Continued from page 252)

ELECTRICAL RACEWAYS

Accessible and expandable raceway baseboards for light, power and telephone wiring.

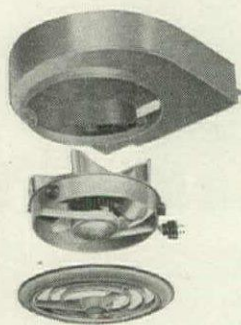
Ample and accessible facilities for light, power and telephone have been worked out in the twin raceway baseboards illustrated. At the left is the all steel utility model which meets requirements of hotels, hospitals, airports, office buildings or industrial plants because it is designed to connect with all makes of



"Smiths don't have these odors in their new home"

SPECIFICATIONS FOR
Clean, Comfortable Homes

PLAN those postwar homes for cleaner, more comfortable living by the elimination of greasy, grimy cooking vapors, stale tobacco smoke and liquor fumes.



EXPLODED VIEW OF

Blo-Fan
"SPOT" VENTILATOR

Blo-Fan "SPOT" VENTILATORS

get rid of this unwanted air *at the source* -- before it spreads and leaves its deposit of grease on drapes and furniture. Blo-Fans are *installed in the ceiling*, directly over the origin of steam or smoke. Combining the principles of both breeze fan and blower, the Blo-Fan is twice as effective as an ordinary sidewall fan of equal size across the room. The Blo-Fan scoops up and whisks away the vapors as they rise.

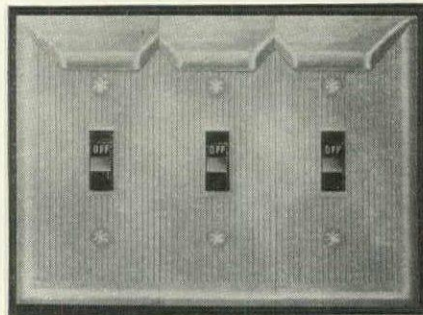
PRYNE & CO., INC.

1245 E. 33rd STREET, LOS ANGELES, 54
BRANCHES (TO BE RE-ESTABLISHED AFTER THE WAR)
NEW YORK • CHICAGO • SAN FRANCISCO • SEATTLE

"Spot" Ventilation MEANS Blo-Fan

riser or buried conduit and does not require pull-in wires when making branch-off light or telephone connections. At the right is a replica of the other model designed to be used as a feeder or by itself where extra-heavy wiring facilities might be required. Both bases are 5 in. high. Other closures such as rubber tile, ceramic tile, asphalt tile or linoleum may be used. All metal base fronts are 10 ft. long and have duplex knockouts on 40 in. centers, but can be at any specified intervals. No factory built corners are necessary as inside and outside corners can be mitered on the job. The slip-on slip-off feature of the front panels, with no splicing plate or screws, is important when there is need of expanding or repairing the systems. A ratal file is the only tool necessary to make a semi-circular opening for making telephone connection.

Manufacturer: Charles E. Barnes & Son, 4320 Osage Ave., Philadelphia 4, Pa.



SWITCH PLATES

Automatically lighted plates are easy to locate in the dark.

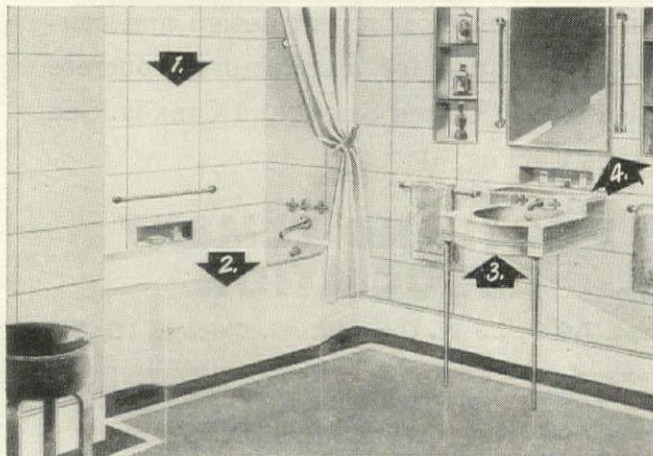
Panels of two, three or more toggle switches can now be equipped with the new LumiNite Electrically Lighted Wall Switch Plate. Instead of an inflexible single plate, a multiple of any number is built up of matching sectional plates, right hand, left hand and center sections. These are sized to match and are matched to maintain the attractive appearance offered in a single plate. Each switch has its individual pilot light operating independently of the other, which is an exceptionally convenient provision in hallway panels or room panels containing switches to outdoor lights. The LumiNite Switch Plate features a tiny glowlight located behind the plastic lobe at the top of the plate. It lights automatically when room lights are turned out and remains off when lights are burning, making the switch easy to locate in the dark and serving as a safety or pilot light at night. It operates for less than 2 cents per year for current and will burn for years without bulb failure.

Manufacturer: Associated Projects Co., 80 East Long St., Columbus 15, Ohio.

(Continued on page 260)



"It does everything but kiss your wife good-bye!"



NEW STEEL BATHROOM. Porcelain enamel on a U·S·S VITRENAMEL base has many advantages for (1) walls, (2) bathtubs, (3) lavatories, (4) cabinets. It is extremely durable, easy to clean, withstands medicines and cleaning compounds, doesn't break, is light in weight, comes in beautiful permanent colors.

YES SIR, with a 194X model "Lavatorium" like this, John Q. won't have any trouble making the 8:15. All he'll need will be a first-class mechanic to keep the gadgets going.

But there *is* something new and eminently practical for the modern bath—porcelain enamel on steel construction. Colorful porcelain enamel on a U·S·S VITRENAMEL base gives a permanent, waterproof wall and ceiling that never cracks, never has to be painted. Bathtub, lavatory and bathroom cabinets are made from the same durable material.

Improved methods of making and applying porcelain enamel paneling or tile make it a superior material that can be installed at low cost.

Our new booklet, "85 Ways to Make a Better Home," will give you many usable ideas on how to build better houses at low cost with steel.



ONLY STEEL
CAN DO SO MANY
JOBS SO WELL

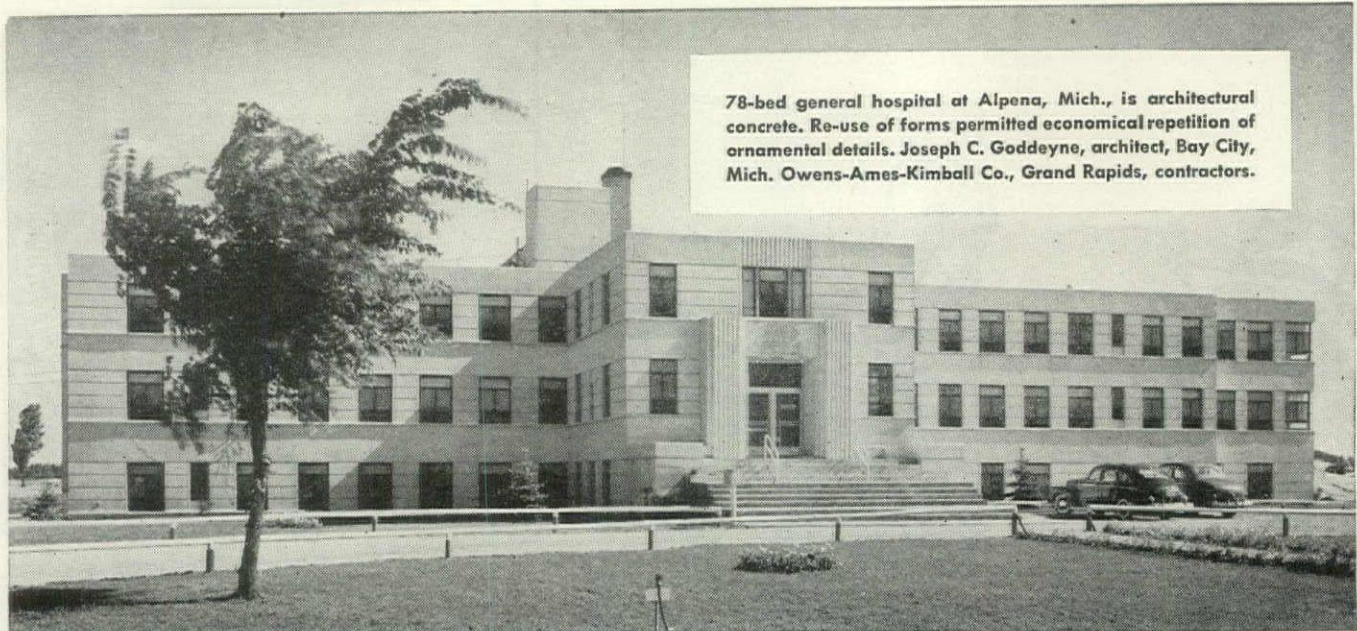
CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh and Chicago
COLUMBIA STEEL COMPANY, San Francisco

TENNESSEE COAL, IRON & RAILROAD COMPANY, Birmingham, Alabama

United States Steel Supply Company, Chicago, Warehouse Distributors

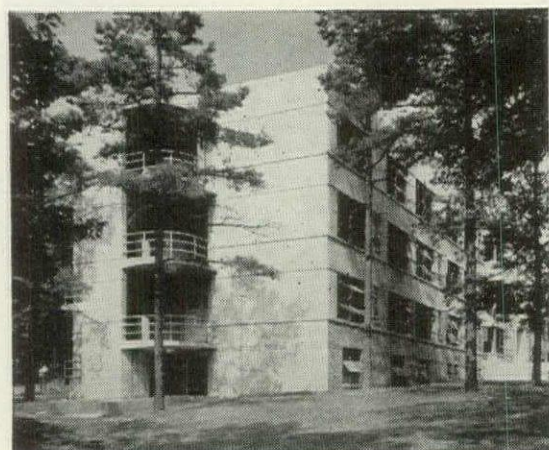
United States Steel Export Company, New York

UNITED STATES STEEL



78-bed general hospital at Alpena, Mich., is architectural concrete. Re-use of forms permitted economical repetition of ornamental details. Joseph C. Goddeyne, architect, Bay City, Mich. Owens-Ames-Kimball Co., Grand Rapids, contractors.

ARCHITECTURAL CONCRETE *for* HOSPITALS



Piedmont Sanatorium, Burkeville, Va., is one of several concrete hospitals designed by Williams, Coile and Pipino, Newport News, Va., John T. Wilson Co., Richmond, Contractor.

Dormitory No. 10, one of newest of 35 architectural concrete buildings at Texas Tuberculosis Sanatorium, near San Angelo. Smooth walls formed against plywood are finished with white portland cement paint. Leonard Mauldin, architect, and Templeton & Cannon, contractors, both of San Angelo.

enables architects to stay within limited budgets; design attractive, firesafe, rugged buildings; insure low maintenance expense and low annual cost.

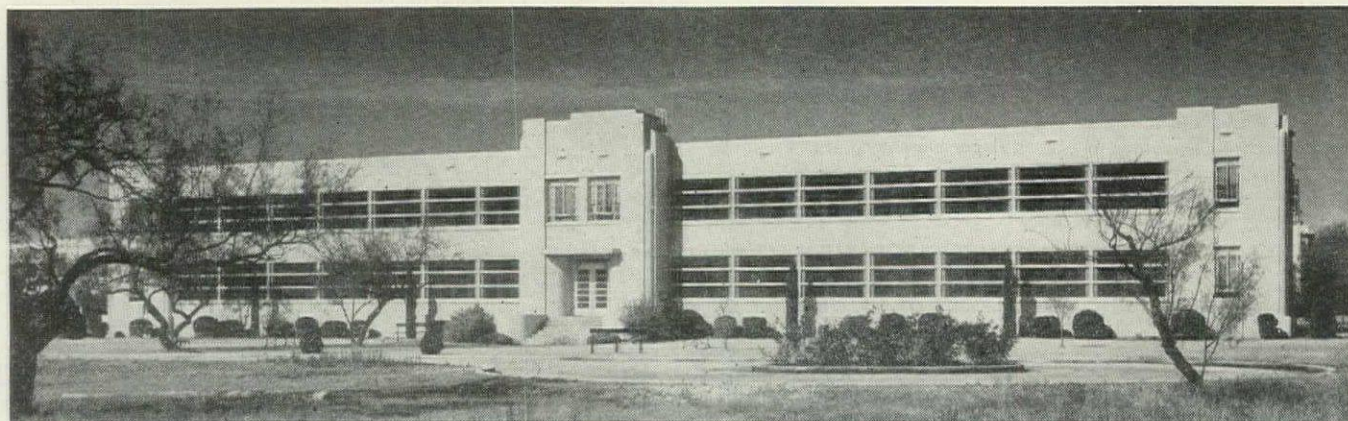
Literature on most recent design and construction practice for architectural concrete mailed free in United States and Canada. See Sweet's Catalog, 4F/3.

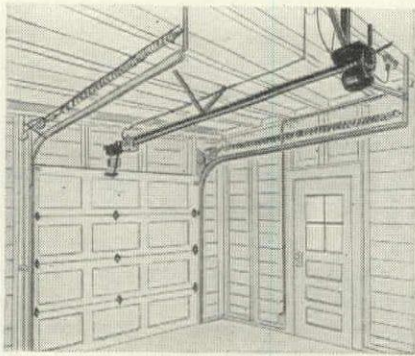
PORTLAND CEMENT ASSOCIATION

Dept. A9-7, 33 W. Grand Ave., Chicago 10, Ill.

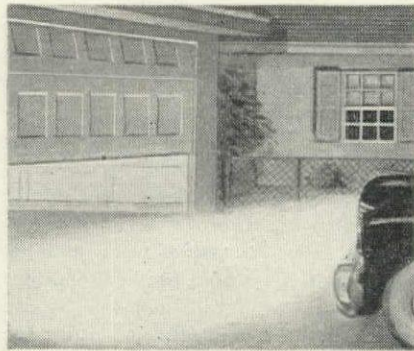
A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

BUY MORE WAR BONDS

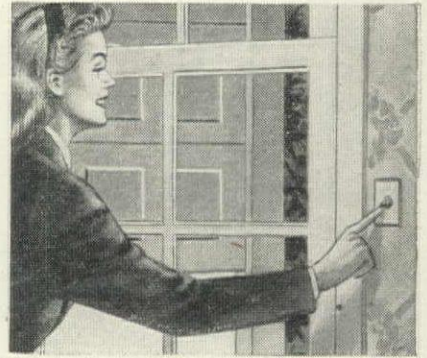




YOU CAN APPLY the Avco Automatic Door Operator to any standard type garage door. It is simply designed, sturdily built, easily installed. It operates automatically by a button in the car and another in the house . . .



GOING OUT OR COMING IN, the garage doors are opened or closed automatically at the touch of the button. Garage lights go on or off at the same time. Yard lights and house entrance lights may be included at slight extra cost.



PLANNERS OF POSTWAR HOMES are showing lively interest in this new convenience. It makes sense for the home owner. It makes sales for the planner and builder. We will gladly send you full details upon inquiry. Write now.

"It makes SENSE...and it makes SALES!"...

"No really modern improvement you can feature in homes you plan or build for postwar sale will show up more clearly . . . appeal both

to men and women more directly . . . or

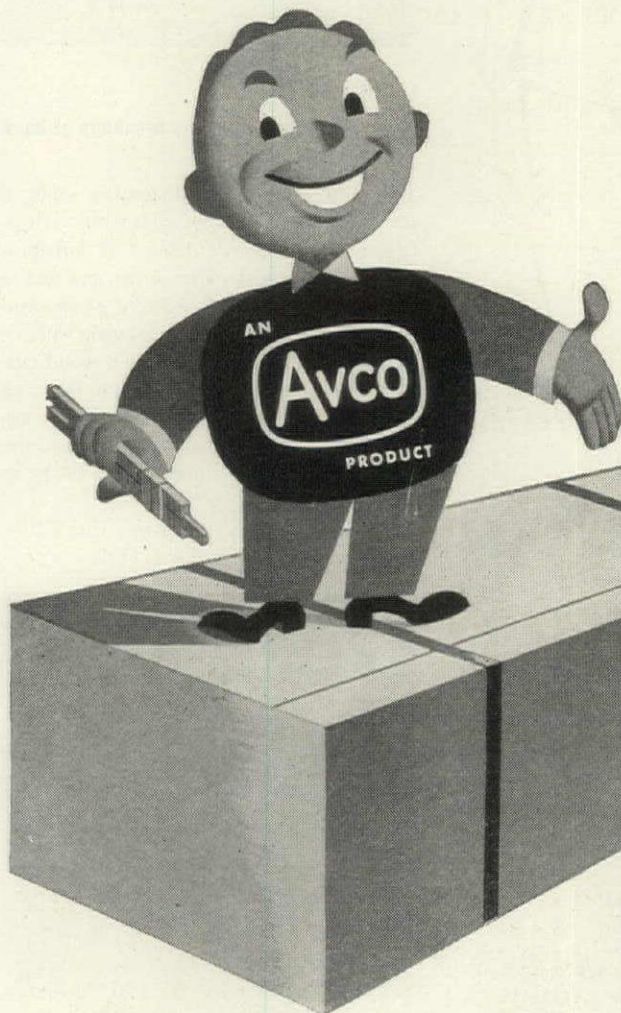
give you more added sales

appeal for so little more

investment . . . than the

Avco Automatic Door

Operator! . . ."



**AVCO Automatic
DOOR OPERATOR**

THE HORTON MANUFACTURING DIVISION
The Aviation Corporation
2486 Scotten Avenue, Detroit 9, Mich.

(Continued from page 256)

BATTERY SEPARATORS

Glass fiber battery separators used successfully in war effort.

When the WPB amended the rubber order limiting the use of rubber in the manufacture of battery separators for all types of batteries except those used in submarines, glass fiber battery separators assumed greater importance. In making these separators, which are used



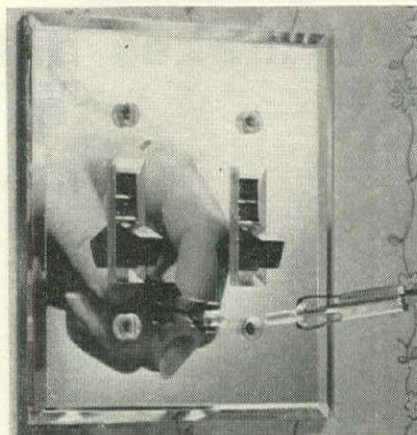
between the feed plates of storage batteries, sand, soda ash and lime are melted into small glass nuggets and fed into a forming machine. The use of Glasfloss as a substitute for rubber was approved by the armed forces after exhaustive tests, and now 10 million glass fiber battery separators are being produced monthly by this company for use in all types of military vehicles. These separators are most important in batteries being sent to remote locations, for such batteries can be charged before shipment and are ready

for immediate use by filling with acid at point of destination.
Manufacturer: Glasfloss Mfg. Co., 155 E. 44th St., New York, N. Y.

SCREWS

Transparent plastic screws for securing mirrored switch plates.

Injection molded, Tenite plastic screws are replacing metal screws for securing mirrored switch plates. The plastic exerts less pressure on the plate during installation thus cutting down on breakage. Available now in standard size #6-32, 1/2 in. in length with oval head, they will be available in sizes ranging from 1/4 in. to 1 in., with oval, flat and round heads.
Manufacturer: S. S. White Plastics Div., New York, N. Y.

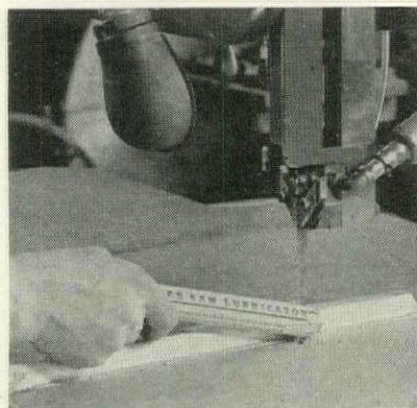


LUBRICANT

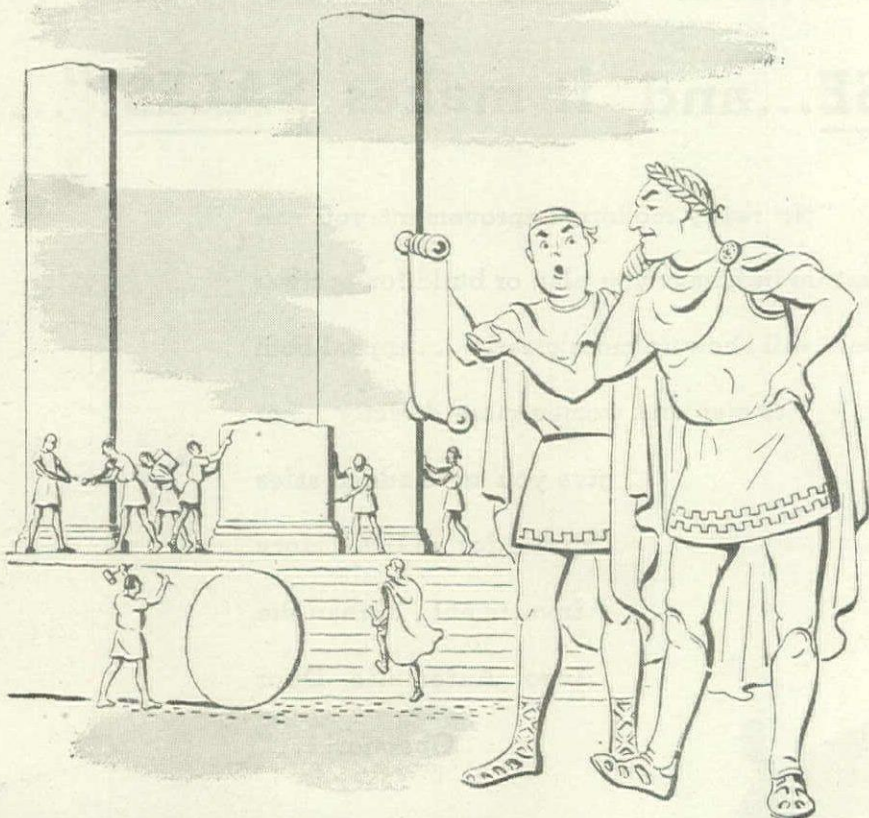
In stick form, prevents breakage of band saw teeth.

This new band saw lubricating stick, 6 in. long and 1 in. in diameter, allows easier and faster cutting. It substantially increases the life of the saw blade when used on metal cutting saws, and prevents chips from clogging hence breaking the teeth. Used on a wood cutting saw, it prevents pitch from forming on the saw blade. The lubricant is applied by pushing the stick against the teeth of the saw blade while it is in motion.

Manufacturer: Kindt-Collins Co., 12651 Elmwood Ave., Cleveland, Ohio.



(Continued on page 264)



What's a few denarii more, Hadrian, this building must last 2000 years*

Sure, Hadrian, we know you built the Pantheon to last. It is still in use as a temple of worship. But, Hadrian, think how much easier your job would have been if you had been able to get Sisalkraft.

Just a few denarii* more, Hadrian... and you would have gotten a hard, dense concrete floor slab, fully protected against drip, and at a tremendous saving in labor cost.

Of course, you didn't have that labor problem — you used slaves.

We realize, Hadrian, you didn't know about Sisalkraft. That's where present-day architects have an advantage. They know Sisalkraft is ideal for concrete curing — how it keeps out wind, moisture and dirt on other construction jobs. That's why you'll find that almost invariably they include Sisalkraft in their Master Specifications.

*Roman copper coin comparable to the U. S. penny

Manufacturers of SISALKRAFT, FIBREEN, SISAL-X, SISALTAPE AND COPPER-ARMORED SISALKRAFT

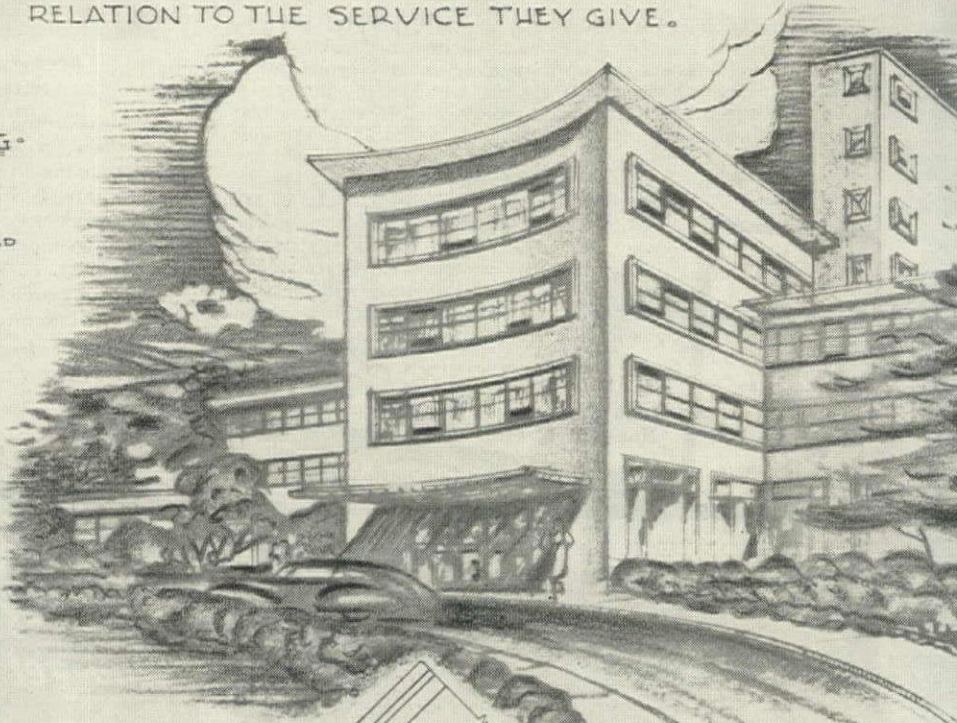
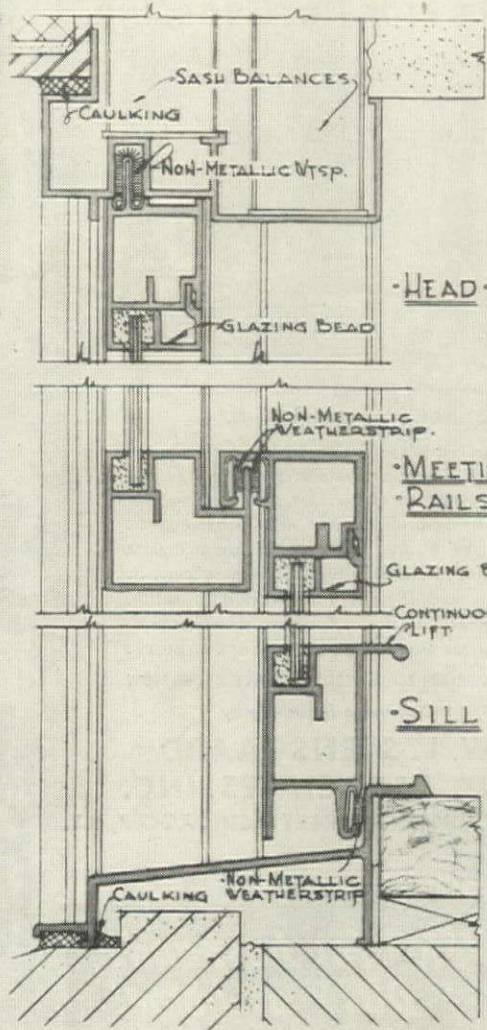
THE SISALKRAFT CO.
 205 W. WACKER DRIVE - CHICAGO 5, ILL.
 NEW YORK - SAN FRANCISCO - LONDON - SYDNEY
 In Canada Write to Alexander Murray & Co., Limited, et
 Montreal - Toronto - Halifax - Saint John - Winnipeg - Vancouver

POSTWAR DETAILS

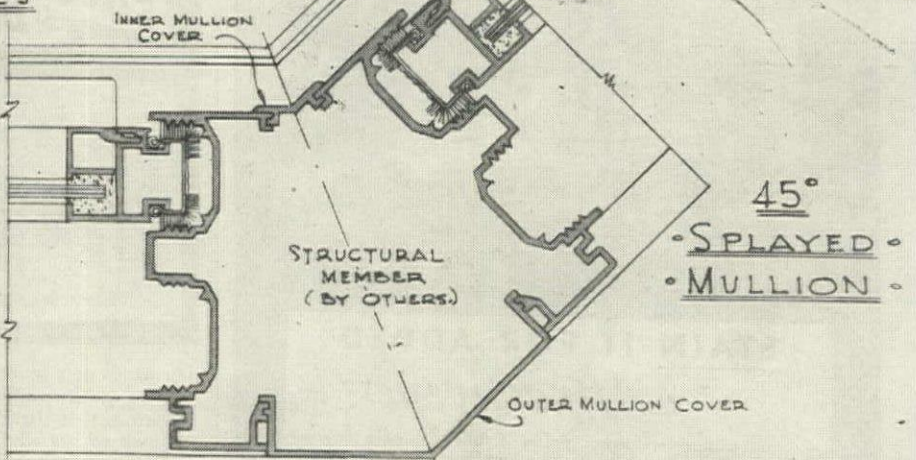
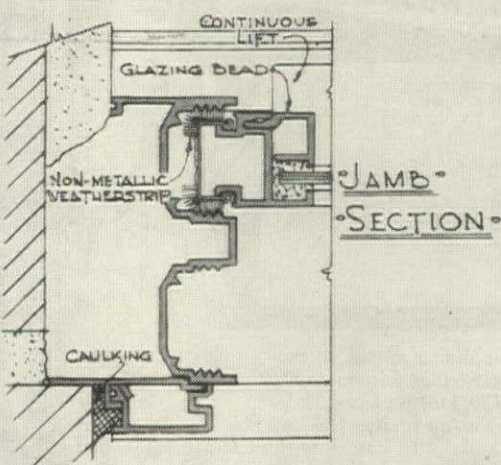
ADLAKE ALUMINUM DOUBLE-HUNG WINDOWS ARE ESPECIALLY SUITABLE FOR HOSPITALS... SHADES, DRAPES AND VENETIAN BLINDS ARE READILY ADAPTABLE, SO THAT LIGHT AND VENTILATION CAN BE EASILY CONTROLLED

ADLAKE ALUMINUM WINDOWS GLIDE SO EASILY ON THEIR NON-METALLIC WEATHER STRIPPING THAT THEIR OPERATION IS PRACTICALLY EFFORTLESS . . .

ADLAKE ALUMINUM DOUBLE-HUNG WINDOWS ARE CORROSION RESISTING--REQUIRE NO MAINTENANCE EXCEPT OCCASIONAL WASHING . . . THEIR COST IS REASONABLE IN RELATION TO THE SERVICE THEY GIVE.



HALF-SCALE DETAILS



SPECIFY AND DETAIL

Adlake

ALUMINUM DOUBLE-HUNG WINDOWS

THE ADAMS AND WESTLAKE CO.

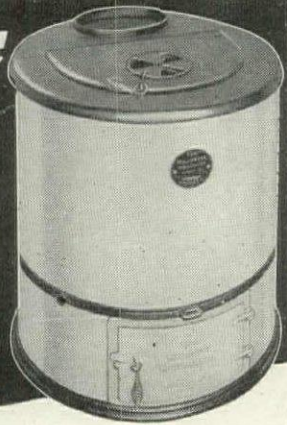
ELKHART, INDIANA, U.S.A.

Majestic

Fuelless

Home Incinerators

for Quick disposal
of garbage and
refuse



For modernization or new buildings, the MAJESTIC Portable Incinerator is the answer to the home garbage and rubbish disposal problem. This sanitary, up-to-date incinerator features MAJESTIC's ingenious down-draft system, which easily burns wet or dry garbage without the addition of fuel other than that usually contained in the refuse itself. The MAJESTIC Portable Incinerator is modernly styled and ruggedly built to give many years of carefree service. Odors from the refuse accumulated in the incinerator are dissipated up the chimney; none can escape into the house. The MAJESTIC Portable Incinerator may be connected direct to any 8" flue—it does not interfere with the furnace draft. Also available in built-in and gas-fired types. Write for complete details.

Also Outdoor
Fireplaces
Underground
Garbage
Receivers
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Fireplaces
Dampers
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Many Others

The MAJESTIC Co.
1020 Erie St.
Huntington, Ind.

Nationally Known and
Advertised for 40 Years

GENUINE STRUCTURAL BENDS ORIGINAL

REGISTERED TRADE MARK
OF TEMPERED MASONITE

For MODERN WINDOW BACKGROUNDS AND INTERIOR STORE REMODELING



Interesting Treatment of Difficult Corner Window
HILLS BROTHERS, FOND DU LAC, WIS.

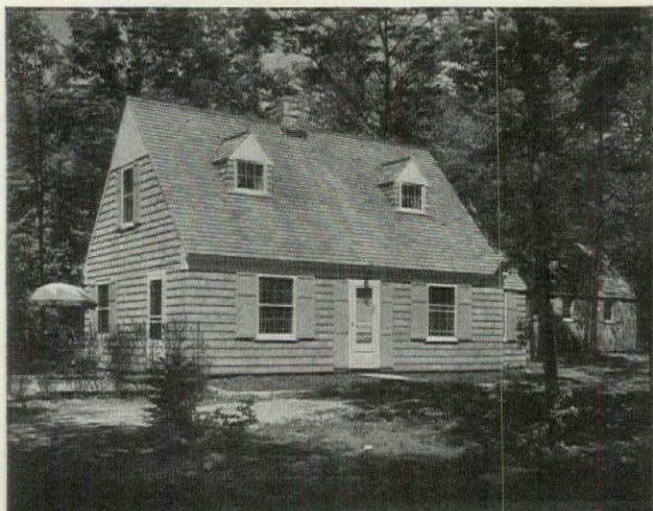
Made of strong tempered masonite presdwood, Structural Bends are a practical, inexpensive material for creating outstanding display treatments for smart, modern window backgrounds, interior remodeling or new construction. Seventeen basic shapes, 8' and 12' lengths, any size area can be economically treated. Flexible . . . easy to cut . . . construct . . . finish and install. Time tested, durable, modern, extremely practical, they afford unlimited opportunities to create outstanding effects at low cost. In stock.

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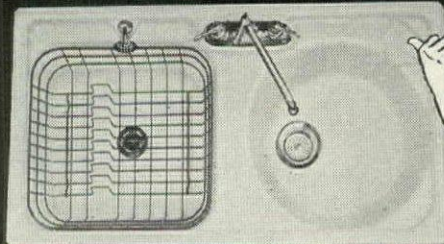
Leading architects prefer Cabot's Shingle Stains because they bring out all the natural beauty in a house. Treat any wooden building with one of these superior stains and watch it grow more lovely with age. Cabot's quality Stains penetrate deep—enhance the natural character and texture of the wood—protect for years—won't peel or blister even on green lumber. And they cost less than paint!

FREE BOOKLET, "Stained Houses," contains complete details on Cabot's Creosote and Heavy-Bodied Stains. Write for your copy and color cards today! Samuel Cabot, Inc., 1273 Oliver Bldg., Boston 9, Mass.

CABOT'S SHINGLE STAINS
Creosote Heavy-Bodied

"WIFE-SAVER" for husbands who get K-P DUTY at home!

EBCO Dishwashing Sink



Husbands left with the dinner dishes to do will be quick to appreciate the "wife-saving" advantages of the EBCO Dishwashing Sink—quick to see why so many housewives call the EBCO "America's most desirable sink." It has a battery of features that reduce dishwashing to three quick, easy steps—washing, rinsing, racking. EBCO's exclusive round bowl replaces the dishpan. Its long swing-spout mixing faucet ends dish-breaking by swinging safely out of way. The "retracting" hose spray simplifies rinsing of dishes stacked in the handy draining basket. The large lift-out, cup-type strainer keeps the sink tidy. Installation is equally simplified. The flat backledge assures a watertight fit with minimum preparation, and no in-the-wall piping is needed. Write for details today!

The **EBCO** MANUFACTURING COMPANY
401 W. Town St., Columbus 8, Ohio



Whether you build Radio Stations or Homes . . .



**your product can be improved with
a Kimpreg* Surface**

A revolutionary new alloy-like material is achieved by fusing to plywood's surface a cured plastic skin of KIMPREG. This resultant material is not a plywood in the ordinary sense, not a conventional plastic laminate. It is a brand new, better structural medium with countless applications in many products—including, very probably, those *you* plan for post-war production.

With KIMPREG, plywood is converted into an improved substance which can be machined, formed and fastened like ordinary wood—yet has a plastic's smooth, tough surface and beautiful, permanent, paintless finish.

KIMPREG adds the following advantages to plywood: 1) increases durability and flexural strength; 2) provides resistance to moisture and vapor; 3) armor-plates against extreme abrasion; 4) diminishes grain-raising effects; 5) makes the material scuffproof, splinterproof, snag-resistant;

6) affords a stainproof, washable, "wipe clean" surface; 7) creates resistance to chemical action, decay, temperature-extremes, fire, vermin, and mold. Moreover, it is warm to the touch, does not have the chill "feel" of metal surfaces.

Today all KIMPREG is required for military needs, ranging from airborne "pre-fab" huts to glass-smooth tables for packing parachutes without snagging. Hence,

the wartime color of KIMPREG is a soldierly olive-drab. Post-war, however, it will be offered in a variety of appealing hues.

Now is the time to investigate the possibilities of KIMPREG-surfaced materials for your *peacetime* requirements.

Write us for further information and names of those plywood manufacturers who are currently using KIMPREG plastic surfacing material.



Send Coupon for FREE KIMPREG Book to:
Kimberly-Clark Corporation, Neenah, Wis.

AF-945

Name _____

Firm _____

Type of Business _____

Address _____

City _____ State _____

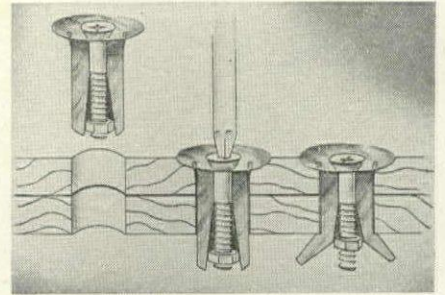
(Continued from page 260)

PLASTIC BLIND BOLT

Blind features offers many building and equipment uses.

Des-Bolt, a blind bolt assembly, offers advantages for various applications. Used in the fabrication of laminate sections for partitions and walls, the unit prevents marring of the surface, and can be used where hardness of the material being fastened would prevent use of nails or screws. Used in small assembled units such as electronic equip-

ment improved fastening is accomplished in locations inaccessible to the nut by normal methods. Des-Bolt is composed of a molded plastic expansion sleeve and any matching size standard nut and bolt assembly. The sleeve is composed of 3 thin fingers with an inside taper extending approximately three-fourths of their length from the flanged head. The head is a flange with a cored hole to accommodate the bolt shank and countersunk to receive standard countersink type of bolts, with three sharp ribs attaching the flange and sleeve. These ribs wedge into the work and prevent the sleeve from turning. To apply, the assembled unit is in-



serted in a drilled hole and the bolt tightened. The nut is restrained from turning by the inside tapered surface of the sleeve prongs. As the bolt is turned the nut is drawn into the prongs forcing them outward. Pressure is increased by turning the bolt, thus the work is drawn together. Sizes range from 1/4 in. to 3/4 in. in diameter by 1/4 in. to 3 in. in length. Slot or Phillips type bolt heads may be used.

Manufacturer: Victory Mfg. Co., 1105 So. Fair Oaks Ave., So. Pasadena, Calif.

How Much Efficiency Can Be Engineered Into 1 Elevator?



THE TRUE MEASURE of an elevator's efficiency is the quality of the job it does—the way it stays in service day after day moving men, material and merchandise up and down without breakdown and with minimum maintenance.

Sedgwick elevators are designed to give an extra measure of service. Believe us? We hope you don't. We hope, instead, that you're skeptical—that you want to see for yourself. Let's take a look at a Sedgwick Electric Freight Elevator.

Many Safety Features

At the top of the hoistway is a worm geared V-groove traction machine with internal spur gearing — special steel gear and sheave shafts — and an electro-magnetic brake to stop the car if the current is interrupted from any cause.

A centrifugal speed governor operates the car safety which stops the car should it descend at excessive speed or should the cables break.

Self-Aligning Motor Cuts Costs, Simplifies Installation

An efficient single speed, reversible type motor, designed for heavy duty service, provides the power to operate the elevator. Its high starting torque and low starting current help cut operating costs. And the self-aligning motor mounting facilitates installation.

Made in Any Size to Lift Any Load

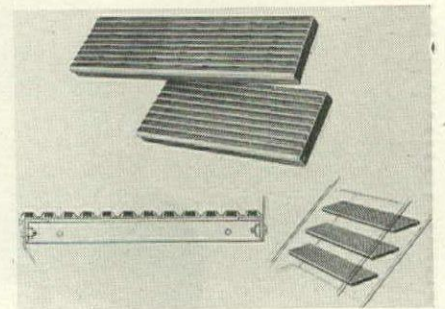
Sedgwick makes five *standard* freight elevators with capacities from 2500 to 8000 lbs. But Sedgwick designs and manufactures elevators to lift any load. Fact is, today, on many aircraft carriers, fighting planes are lifted from hangar deck to flight deck on Sedgwick elevators — capacities, 85,000 lbs. and more.

Sedgwick Line Offers Wide Choice

The complete line of Sedgwick Elevators and Dumb Waiters includes Electric and Hand Power Freight, Passenger, Hospital, Residence, Invalid and Sidewalk Elevators—Electric and Hand Power Dumb Waiters — Electric Stair-Travelors—all designed to solve "man" handling and materials handling problems through greater operating efficiency.

New Elevator and Dumb Waiter Specification Book Available

If you have not yet reserved your copy, write now for this easy-to-read, 24-page booklet, "Sedgwick Standard Specifications for Elevators and Dumb Waiters," compiled to assist the architect and engineer in the specification-phase of his work.



STAIR TREAD

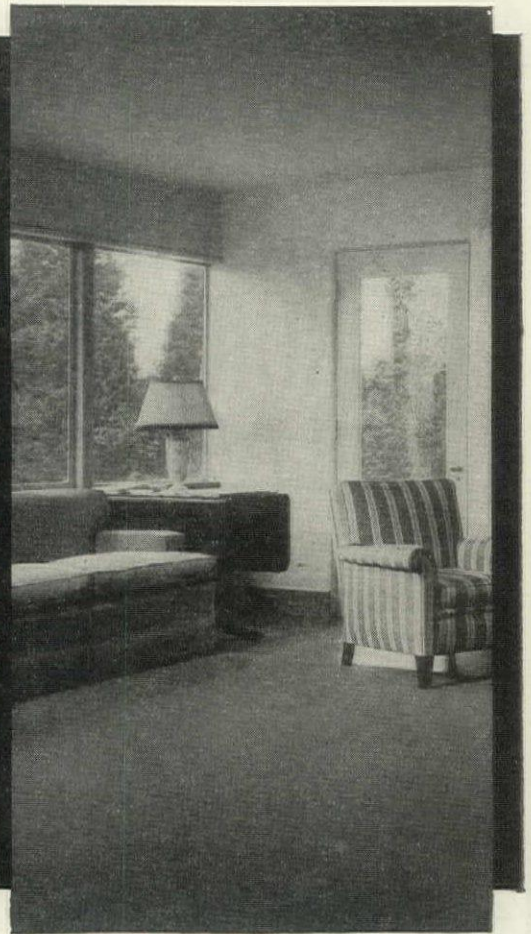
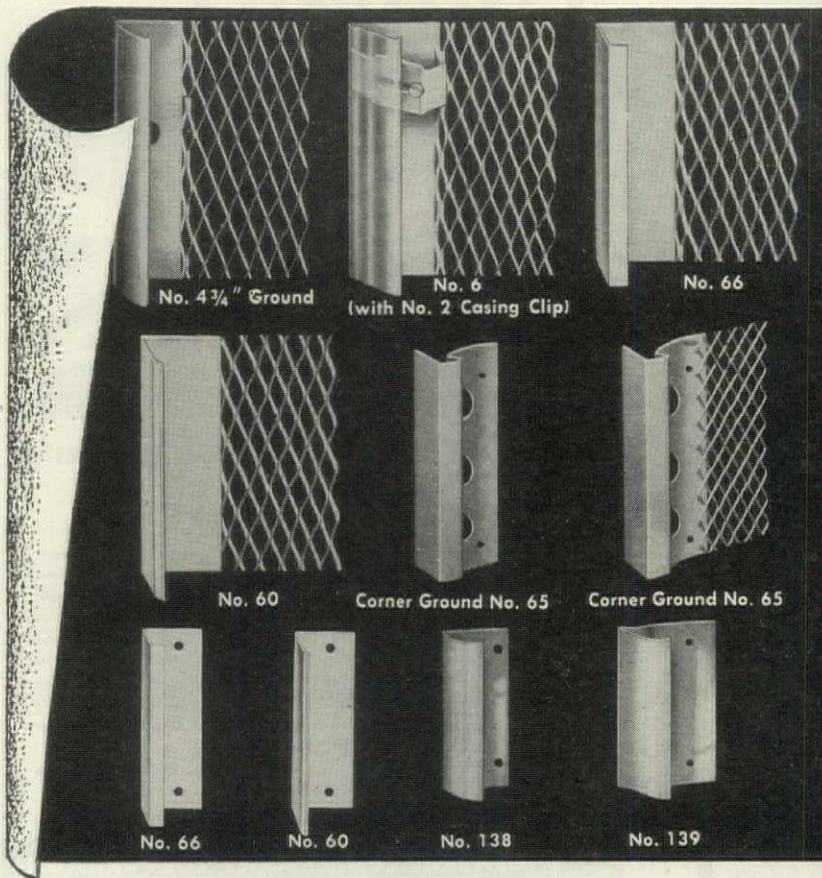
All steel tread offers safety with minimum dead load.

This all steel groove tread and stair step, suitable for the construction of steel stairs of the open riser, or steel riser type, is bolted or welded to the steel stringers making it unnecessary on many jobs to construct steel sheet pan type stairs with the disadvantage of a dead load of concrete. This tread is suitable for fire escapes and stairways in power plants, industrial buildings, warehouses, subways, chemical plants and wherever stairs of steel construction of the ordinary types have been regarded as standard. This stair construction has the safety tread integral with the steel step thus differing from ordinary stair construction such as concrete filled stairs where the safety tread is applied. The tread affords a firm foothold due to its safety grooves, and the tread surface being comprised of non-slip, abrasive grip filler. The grooves are interlaced with slots which permit ready drainage, thus keeping the surface free of clogged materials and making them practically self-cleaning.

Manufacturer: Wooster Products, Inc., Wooster, Ohio.

(Continued on page 268)

SEDGWICK MACHINE WORKS, 140 W. 15th St., New York 11, N. Y.
ELEVATORS • ROTO-WAITERS • SPECIAL LIFTS • DUMB WAITERS



*These advantages support your
good judgment in specifying*
MILCOR Metal Door and Window Casings
for your postwar homes

- 1** **A practical medium for good-looking interiors** — Where "heavy" types of trim appear to "shrink" a room, Milcor Metal Casings give a feeling of spaciousness — exposing only a thin strip of casing flush with the plaster surface.
- 2** **Protection of plaster against cracks** — Milcor Metal Casings are tied into the plaster around doors, windows, and other wall openings by expanded metal wings which provide a secure bond and key as reinforcement against cracks.
- 3** **The permanence of steel** — Milcor Metal Casings free home owners from the "headaches" of warping, shrinking, rotting, etc. The trim remains straight and attractive — and is easy to keep clean, without frequent painting.
- 4** **Favorable to building budgets** — The final cost of installing Milcor Metal Casings is no more than for a well-finished job with less durable materials.

For years Milcor Metal Casings—like other Milcor fireproof steel building products—have been the first choice of many architects, for homes . . . as well as for apartment buildings, office buildings, hotels, schools, and public buildings.

Include Milcor Metal Casings in *your* specifications for post-war construction of all types.

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Los Angeles 44, Calif. • Rochester 9, N. Y.

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F-266



GENUINE CAST BRONZE

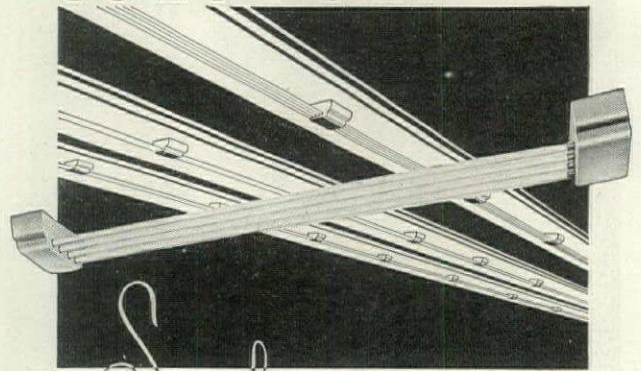
TABLETS HONOR ROLLS PLAQUES MEMORIALS

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Industrial Concerns... Commercial
or Organization*

Write For Details To Division 11
EMPIRE BRONZE

BETHESDA 14, MARYLAND
N.Y. OFFICE 475 5TH AVE.

*COLOVOLT



Simplicity LIGHTING UNITS

Cold Cathode Low Voltage

Long continuous lines of light, possessing all the recognized advantages of Colovolt Cold Cathode Fluorescent illumination, come to you in these "Simplicity" assemblies. Distinctive in design—easy to install—simple to maintain—no gingerbread attachments—no dust collecting areas—"Simplicity" units give balanced illumination with comfortable, easy-to-look-at light for every commercial installation. Units available to make individual 8 foot fixtures or continuous line lighting in multiples of 8 feet. Colovolt 93" 10,000 hour lamps (1) are guaranteed for 1 full year except for failure due to breakage, (2) require no starters—do not flicker, (3) are practically free of intermediate burn outs.

Contact your electrical wholesaler or jobber, or write us for full details and prices.

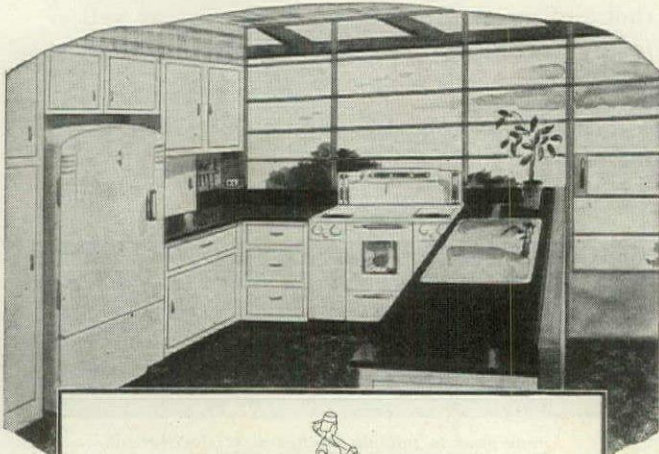
* Trade mark registered U. S. Pat. Off.



GENERAL LUMINESCENT CORPORATION
662 So. Federal St. CHICAGO 5, ILL.

Kitchen Cabinets DESIGNED FOR BETTER LIVING

Here is a typical example of the many arrangement possibilities afforded by Kitchen Maid Cabinetry—designed for better living—perfected during 22 years' progressive experience and the production of 60,000 kitchens for war housing. Kitchen Maid's *composite construction* combines all the advantages of the best materials available. Standard units assure remarkable flexibility. Ask your Kitchen Maid dealer for new portfolio of kitchen designs planned by Virginia Hart, eminent kitchen consultant—or write *The Kitchen Maid Corp., 459 Snowden Street, Andrews, Indiana.*



FOUNDER OF MODERN KITCHEN UNITS

- SAVE RATIONED FUEL
- PROVIDE GREATER COMFORT

Specify Chamberlin Metal Weather Strips



Architects:
Albert Kahn, Inc.
Builders:
*Thompson-Starrett
Co., Inc.*



Like many other prominent buildings throughout America, Detroit's immense General Motors Building is equipped with Chamberlin Metal Weather Strips. Chamberlin assumes full responsibility from manufacture to installation. For complete details, write for the address of the nearest Chamberlin branch.

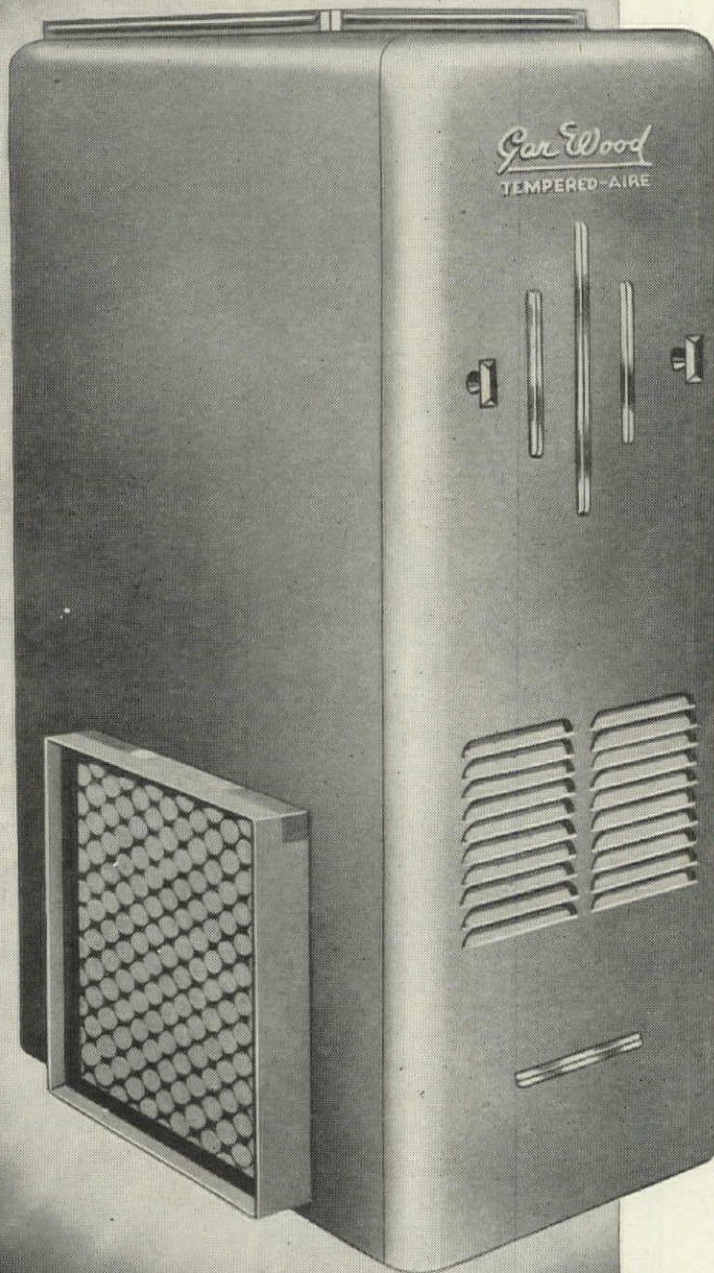
**"Proper
Installation
Is Half
the Job"**



Formerly Chamberlin Metal
Weather Strip Company

Home Office: 1234 LaBrosse Street, Detroit 26, Mich.

NEW! . . . first time shown!



Gar Wood

**GAS-FIRED
or OIL-FIRED
TEMPERED-AIRE
HOME HEATING UNITS**

Here they are . . . the smallest of the new Gar Wood Tempered-Aire Units to be produced. Everything your clients can ask for . . . and even more than they will expect is embodied in these new fully automatic heating units. They are beautifully designed, more compact than before, and proved by laboratory tests to be even more efficient and economical than their famous predecessors. These latest contributions to better living are the result of many years of successful operation of thousands of Gar Wood Heating Units *PLUS* constant research and development.

You can recommend Gar Wood Tempered-Aire to your clients with perfect confidence . . . and have the solid satisfaction they will be getting the very finest in heating equipment.

Deluxe heating units, incorporating the famous Gar Wood washable cloth filters will also be available.

OTHER Gar Wood Heating Units to be announced in the near future include: Boiler Burner Units (steam or water) Conversion Burners, Indirect Cabinets and Water Heaters.

GAR WOOD INDUSTRIES, INC., HEATING DIVISION

7924 RIOPELLE STREET

DETROIT 11, MICHIGAN

Canadian Distributors: Engineering Industries, Ltd., 282 Dupont St., Toronto, Ont.

HOISTS and BODIES . . . WINCHES and CRANES . . . TANKS . . . ROAD MACHINERY . . . MOTOR BOATS

(Continued from page 264)

UPHOLSTERY FABRIC

Plastic coated fire resistant upholstery for postwar uses.

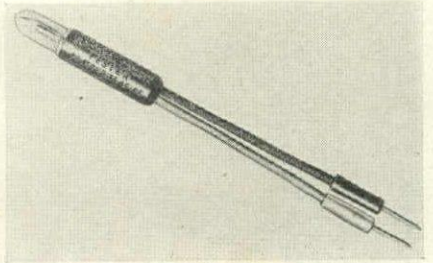
Cavalon, a fire resistant, plastic coated upholstery fabric developed for aircraft, tanks and ships is expected to find wide postwar usage in boats, restaurant seats, and office furniture. The fabric consists of a flameproofed cotton cloth base with a flexible fire-resistant coating of synthetic resin. It will char in contact with flame but will not support combustion,

and there is no afterglow when flame is withdrawn. Cavalon is very pliable. Tests show it will not crack in a flexing machine at -30°. It will be available in a range of colors, grains and finishes as soon as the war demands have been met. *Manufacturer: E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del.*

CIRCUIT TESTER

Vest pocket type has innumerable uses.

This new convenient all purpose circuit tester indicates voltages from 90 DC and 60 AC, to 500 v. AC or DC. Its operation is simple and safe. A General



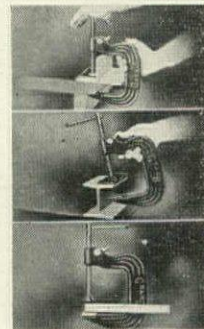
Electric neon lamp on the top glows in varying intensities indicating current conditions, no glow indicating a dead line. This reliable tester is especially valuable for higher voltages, and also for circuits of very low amperages. The lamp lights on currents as low as one microampere. Used for locating blown fuses, trouble shooting in cords and appliances such as electric irons, toasters, etc.; testing radio frequency, receivers, and screen grids; spark plugs, meters, condensers, etc.; it is equally helpful in shop, plant or field. Price \$.50 each.

Manufacturer: Amerline Co., 1753 North Honore St., Chicago 22, Ill.

CLAMP

Extra deep throat speed clamp has quick action features.

A new type of "C" clamp, the Grand ASL Extra Deep Throat Speed Clamp, can be positioned instantly by simply pushing down on the ratchet screw and

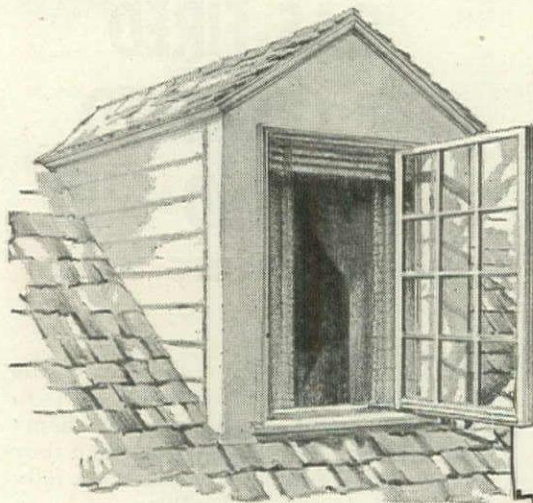


tightening with the loose-proof handle. This eliminates time and motion of running down the conventional type of clamp screw. Made of strong alloy-steel, the clamp is said to release instantly

by merely loosening the handle and pushing on the trigger release pawl which frees the ratchet screw. The new clamp holds work with a firm tension grip on any surface, even slanting or irregular, and is equipped with replaceable ball and socket swivel to prevent shifting or creeping. The trigger release pawl has hardened teeth which hold a meshed grip under spring tension on the ratchet screw while clamp is set. This new line includes 3 sizes: 4 3/4 in. opening—4 1/4 in. throat; 6 3/4 in. opening—4 3/4 in. throat; 8 3/4 in. opening—6 in. throat. Claimed capacity of each size is 3,500 lbs. and the prices respectively are \$4.50, \$5.50, \$6.50 each (slightly higher in West Coast States and Canada).

Manufacturer: Grand Specialties Co., Grand Ave. at Troy, Chicago 22, Ill.

(Technical Literature, page 272)



3 LIGHTS WIDE CASEMENT UNITS

.. thanks to special Pella hinge design and rigid steel frame

Here is a line of casement units with full 28" sash openings. Heights run from 2' - 4 1/2" up to 4' - 5 1/4". These attractive stock-size units are helpful in solving many problems of design and proportion.

Pella special design hinges provide an extra long 5 1/2" plate for screwing into the solid wood top and bottom sash rails. Butt plate is riveted to the welded steel inner frame of Pella casement units. Hinge extends to allow washing from inside. Tamper-proof when closed. A special mortise and tenon sash joint gives greater gluing surfaces. Joints are also steel-dowelled. Sash is made from genuine White Pine full 1 3/4" square and toxic-treated. Pre-war installations have demonstrated these 3-light wide Pella casements to be thoroughly practical on all counts.

PELLA 3-LIGHT WIDE SASH easily supports weight of 300 lb. man without springing sash "out-of-true."



Free FOR YOUR FILE!

22 separate pages of scaled Pella casement details for all types of installations. Send for your FREE set today. Write: ROLSCREEN COMPANY, Dept. A-95, Pella, Ia.



ROLSCREENS — the original roller-type inside screens. The ultimate in screen efficiency and convenience.



DUAL GLAZING—a single panel type that mounts on inside of sash. Inconspicuous. Easily removed for cleaning.

Pella CASEMENT WINDOWS
Made by makers of Famous Pella ROLSCREENS and Pella VENETIAN BLINDS

Think in terms of

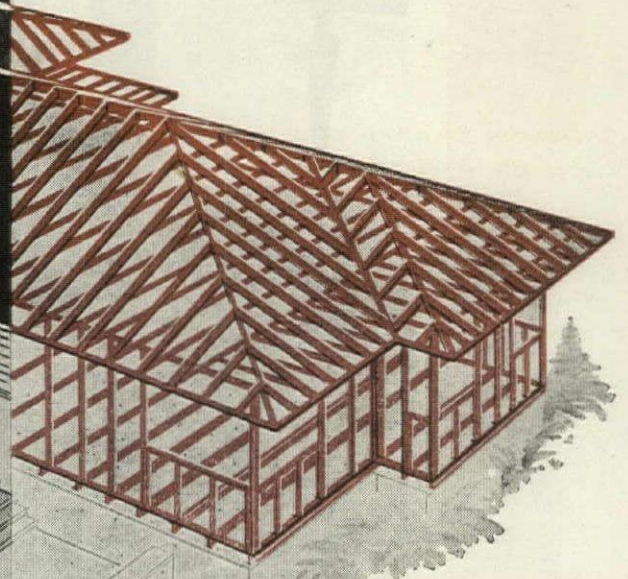
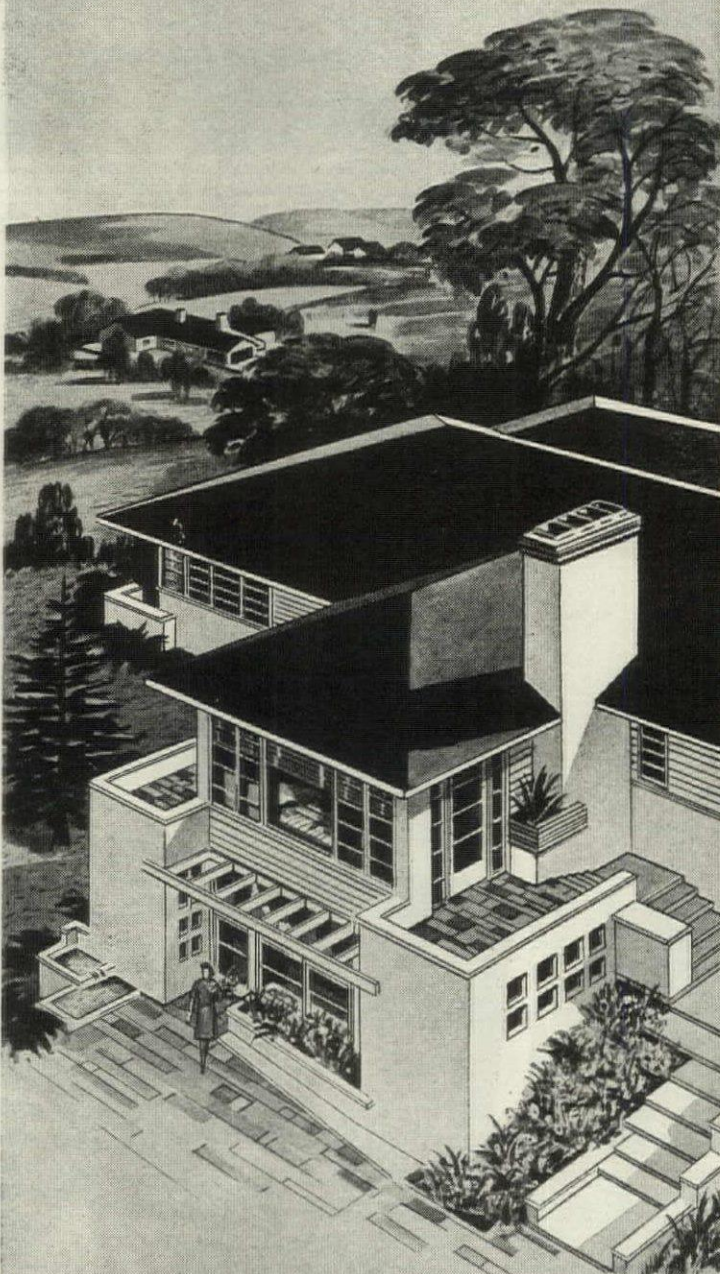
STRAN STEEL

**Designed for gracious
living . . . built around
a framework of steel**

Whether you are planning along ultra-modern or traditional lines, Stran-Steel framing will give you the permanence of steel construction, with new efficiency . . . flexibility of ideas.

Stran-Steel, with its nailable studs and joists, brings an entirely new perspective to postwar building . . . assures permanence, fire-safety, freedom from warp, sag and rot. These qualities — to the home builder, home buyer or investor — are as salable as grace and beauty of design.

Investigate the possibilities of Stran-Steel . . . shape your building plans around this uniform precision material. Build with Stran-Steel for beauty of design . . . comfort and convenience . . . lasting strength.



GREAT LAKES STEEL CORPORATION

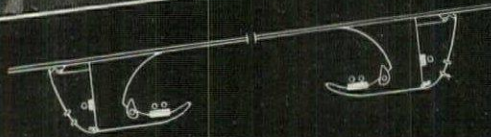
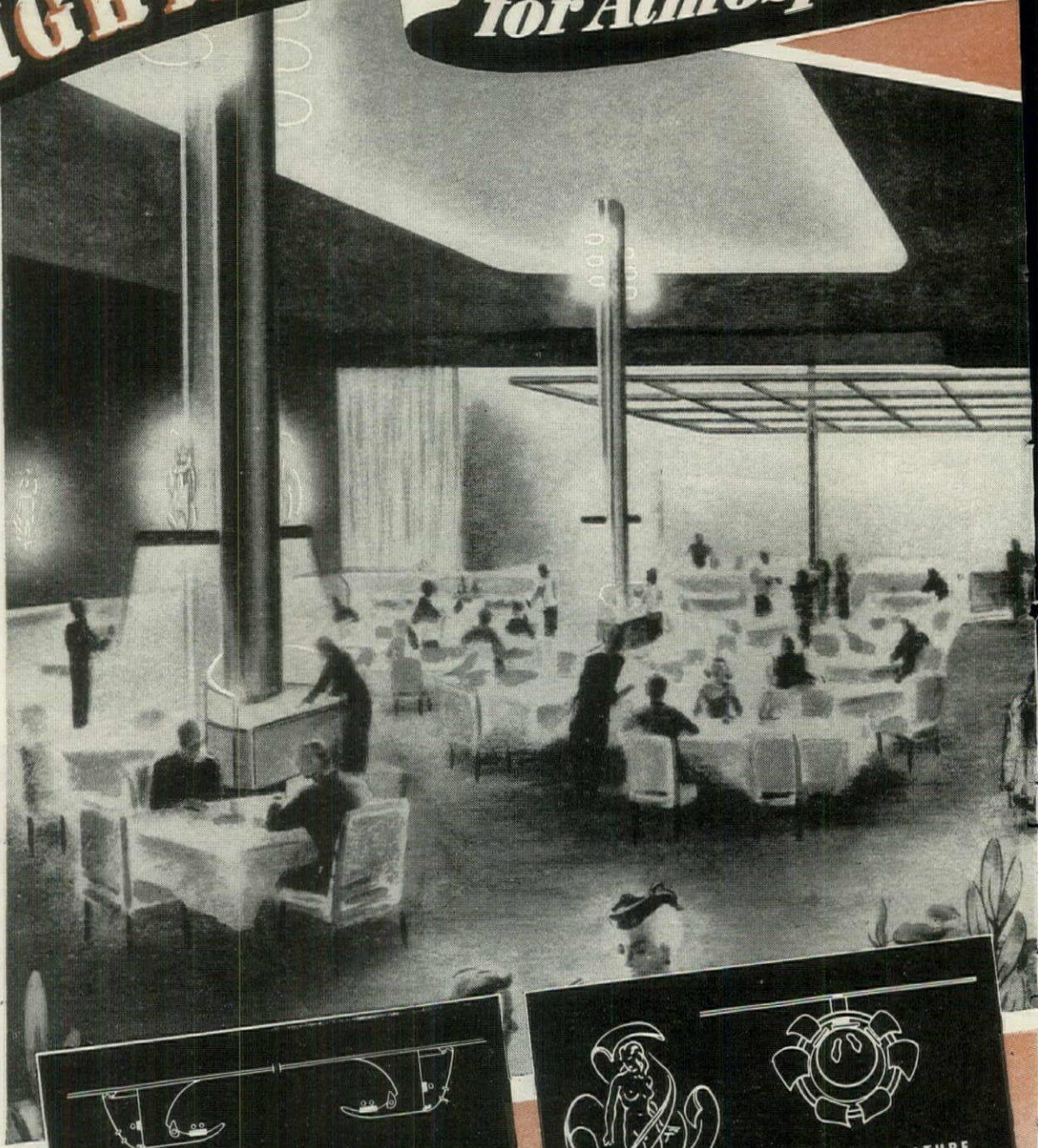
Manufacturer of the Famous Quonset Hut for the U. S. Navy

STRAN-STEEL DIVISION • 37th FLOOR PENOBSCOT BUILDING • DETROIT 26, MICHIGAN

UNIT OF NATIONAL STEEL CORPORATION

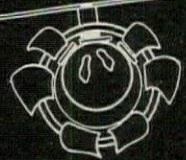
LIGHTING...

for Atmosphere



OVERHEAD COVE

See how Slimline lamps, because of their unusual lengths and slimness, reduce the size of this cove, which might be made of pre-fabricated units.



DECORATIVE FEATURE

Note the Circline lamp below this figurine of transparent plastic . . . an application which is used throughout to create unusual decorative wall brackets.

that Attracts and Pleases



GENERAL ELECTRIC presents some interesting new ideas for lighting a restaurant, by RIDEOUT & PAYER, Chagrin Falls, Ohio.

"New G-E Lamps Simplify New Treatments,"

say these designers . . . JOHN GORDON RIDEOUT, FSID
ERNST PAYER, AIA

"In tomorrow's restaurant, you want an atmosphere somewhat festive, but still a pleasing, quiet atmosphere. You want a setting that invites customers, that helps them relax, makes them want to return.

"Lighting offers flexibility to help you create this atmosphere. And the new lamps of General Electric, Slimline and Circline, suggest new ways to achieve this.

"For example, overhead, Circline lamps form "capitals of light" to provide a touch of novelty; while below they focus attention on decorative figures and light waiter-stations. In the foreground room, the Slimline cove has the effect of raising the ceiling; while the treatment in the farther room lowers it. In short, Lighting is an integral part of the design."



This new booklet "Lighting . . . that attracts and pleases" will bring you more details on modern restaurant lighting as visualized by Rideout & Payer. For a copy, write General Electric, Div. 166-AF 9, Nela Park, Cleveland 12.

THE CONSTANT AIM OF G-E LAMP RESEARCH

IS TO MAKE G-E LAMPS *Stay Brighter Longer!*

G-E LAMPS
GENERAL  ELECTRIC



(Continued from page 268)

CLEANING PLANTS. Modern Dry Cleaning Plants, Manual of Design, Layout and Operation, 20 pp., 11 in. by 8½ in. Price \$1.

This authoritative guide to dry cleaning plant design and remodeling, sponsored by SEC Cleaning System, contains interior and exterior designs for small and large dry cleaning plants, complete with scientific layouts based on the latest knowledge of straight-line production methods. Designs and layouts were prepared by Van Doren, Nowland and Schladermundt, and include three designs for drive-ins and one for a dry

cleaning-laundry combination. A section of designs and suggestions for the modernization of a small dry cleaning plant is also included. Owners, managers or operating executives may obtain a copy free by making requests on business letterhead. Star Equipment Corp., 210 Bloomfield Ave., Bloomfield, N. J.

VARI-TYPER. Vari-Typer, A New Tool for Business, 14 pp., 8½ in. by 11 in. The Vari-Typer Composing Machine (same size as conventional typewriter) which writes in over 600 different types including modern foreign languages is described in this booklet. Illustrated in color, it contains information on how

to use Vari-Typer, and reproductions of Vari-Typed work. Ralph C. Coxhead Corp., 333 6th Ave., New York 14, N. Y.

DOOR CLOSER. Norton Door Closer Co., Wartime Catalog No. 22W-2, 4 pp., 8½ in. by 11 in.

This wartime pamphlet illustrates and describes Norton Door Closers. A diagrammatic sketch illustrates the parts of one model closer, and includes a price key. Wartime maintenance information is included. Norton Door Closer Co., Div. of The Yale and Towne Mfg. Co., 2900 No. Western Ave., Chicago 18, Ill.

SAFETY TREADS. Comprehensive Coverage of Safety Tread Installations, 16 pp., 8½ in. by 11 in.

This catalog describes the two principal types of Wooster Safety Treads, the Safe Groove and the Abrasive Cast, and the large variety of types available. It covers in detail with illustrations and sections the installation of safety treads on stairs, ramps, platforms and ladders in all types of commercial, industrial and public buildings. Tables of standard maximum sizes and complete specifications facilitate the selection of the proper tread. Proper repair procedure is given for the renovation of floor areas, stairs and ramps. Included is complete information on door thresholds for exterior and interior doors; safe edge nosings for stairs, counters, and tables; cast iron window sills, elevator sills, trench and floor plates. Wooster Products Inc., Wooster, Ohio.

PRECAST ROOF SLABS. Safe, Under a Federal Roof of Featherweight Precast Concrete, 4 pp., 8½ in. by 11½ in.

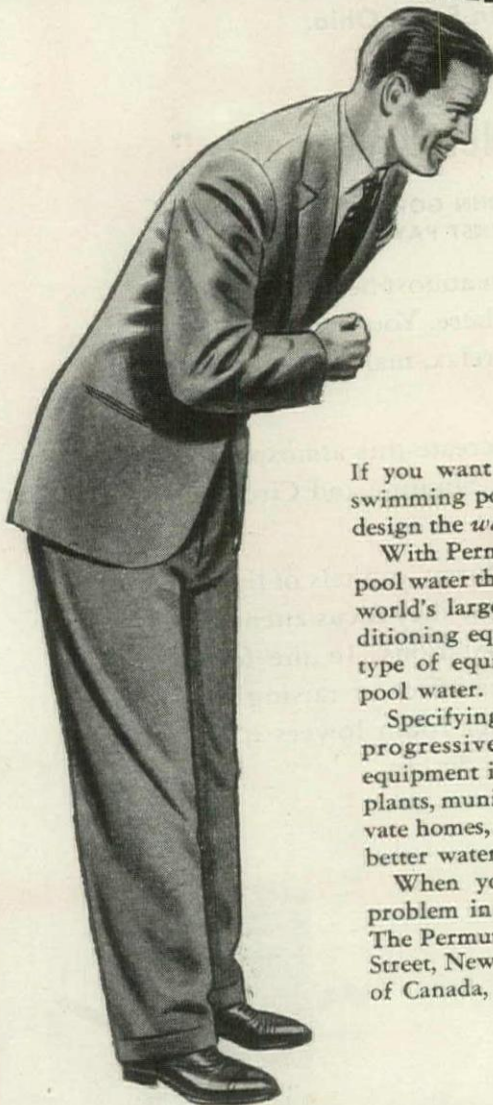
This folder gives the advantages of Featherweight Nailing roof slabs and shows a few outstanding Federal installations in the institutional field. Federal Cement Tile Co., 608 South Dearborn St., Chicago 5, Ill.

KITCHEN EQUIPMENT. Unit Combines Four Separate Appliances, 4 pp., 8½ in. by 11 in.

The Robot Duo-Sink, a unique combination of sink and tub which can be combined with a counter height range and refrigerator to form a complete kitchen unit is illustrated and described. The Duo-Sink can be converted into a fully automatic dishwasher. Optional equipment such as the portable electric agitator converting the sink into an auxiliary clothes washer and its operation are fully covered. Gas or electric ranges combined with the Duo-Sink are featured and the Counter-Hi electric refrigerator which is an integral part of the assembly, is fully described. Various combinations and arrangements of Robot appliances are illustrated and a section is devoted to Robot expandable cabinets. Robot Appliances, Inc., Industrial Bank Bldg., Detroit, Mich.

(Continued on page 276)

THEN YOU CAN TAKE A BOW!



If you want to attract attention with the swimming pools you design after the war—design the *water* too.

With Permutit* to help, you can provide pool water that's *pure as drinking water*. The world's largest manufacturer of water conditioning equipment, Permutit makes every type of equipment for treating swimming pool water.

Specifying "Permutit" is nothing new to progressive architects. This economical equipment is on the job today in industrial plants, municipal water works, and even private homes, providing better living through better water.

When you're confronted with a water problem in postwar planning, put it up to The Permutit Co., Dept. AF, 330 West 42nd Street, New York 18, N. Y., or Permutit Co. of Canada, Ltd., Montreal.

*Trademark Reg. U.S. Pat. Off.

PERMUTIT

WATER CONDITIONING HEADQUARTERS

SAVE 10% TO 15% ON COAL

Many office buildings, hotels, hospitals, schools and other large buildings, in New England, the Middle Atlantic States and Canada, have cut their coal bills 10% to 15% by using Reading "Barley Size" Anthracite. It is not a "substitute" fuel, but a small size of pure, clean Famous Reading Anthracite. And it is *absolutely unrationed*. It is available in any amount — and costs up to 15 percent less than the larger sizes. Why not investigate Reading "Barley Size" Anthracite as a means of reducing the cost of heating and power — and assuring a steady, dependable coal supply? Mail the coupon and get the facts.



THE PHILADELPHIA AND READING COAL AND IRON COMPANY
READING TERMINAL, PHILADELPHIA, PENNA.

BOSTON, MASS. BUFFALO, N. Y. CHICAGO, ILL. DETROIT, MICH. MILWAUKEE, WISC.
MINNEAPOLIS, MINN. NEW YORK CITY, N. Y.
ROCHESTER, N. Y. ST. PAUL, MINN. SUPERIOR, WISC., DOCKS WASHINGTON, D. C.

READING ANTHRACITE CANADIAN COMPANY, Limited, Toronto, Ontario; Montreal, Quebec

The Philadelphia and Reading Coal and Iron Company, Reading Terminal Bldg., Philadelphia 5, Penna.

Send me the facts on Reading "Barley Size" Anthracite.

Heating Equipment (type and make)-----

NAME-----

STREET NO.-----

CITY-----STATE-----



CONCRETE JOIST CONSTRUCTION

Preferred 2 to 1

Ceco never guesses. We have always known concrete joist construction had definite advantages, but we wanted to find out what builders everywhere thought. So we employed independent investigators on a nationwide cen-

sus to get the whole story. The result was surprising even to us. Architects — contractors — engineers — all across America—those who know building best prefer concrete joist construction two to one. Here are their reasons:

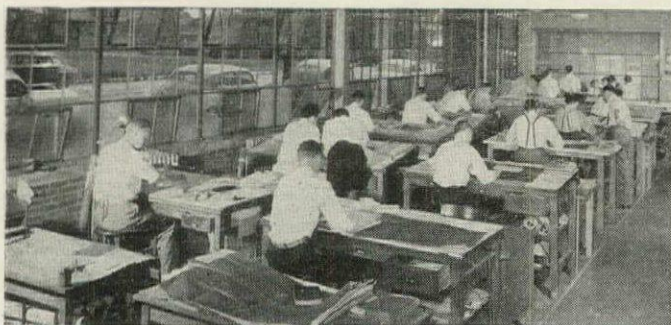
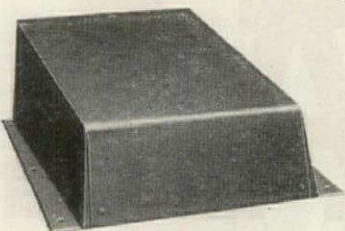
1. Lower cost construction
2. Speeds up building
3. Provides rigid, strong, permanent, soundproof buildings
4. Assures fire-resistive construction

22 OFFICES TO SERVE YOU

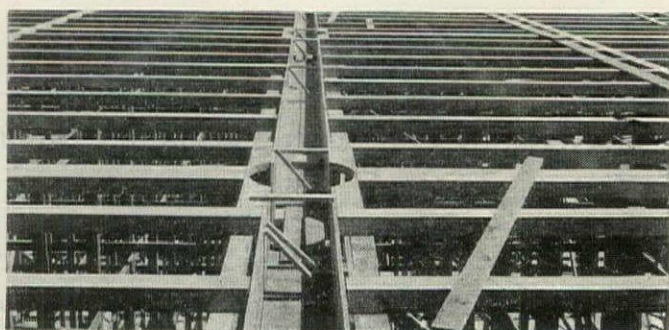
Wherever you are in the United States, there's a Ceco office strategically located to serve you. That means Ceco Meyer Steelforms for concrete joist construction

are quickly available with fast delivery from the closest warehouse. Just write Ceco at the address below—we will put you in touch with your regional Ceco service headquarters.

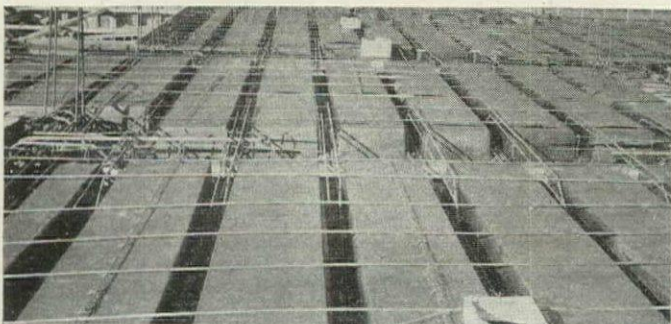
← Typical Meyer Steelform shown at left.



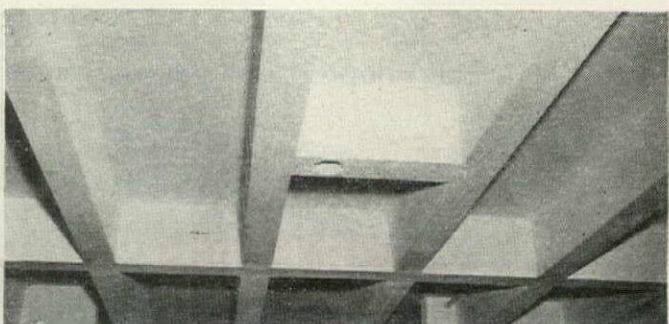
Ceco engineers in 22 offices are always ready to help you in the preparation of designs and estimates—to help you cut costs and save time. Feel free to call on the Ceco organization for service on your jobs.



Simple open wood centering is all that is required in Meyer Steelform construction. The centering may be re-used from one floor to another, as can Meyer Steelforms. This eliminates extra lumber costs, saves time.



Above is a Ceco supervised job showing how Meyer Steelforms are correctly placed to eliminate leakage of concrete and insure accurate execution of structural design. Ceco experts supervise placing of Steelforms.



Fire-resistive construction shown in a close-up view. Notice the finished character of ceiling joists built with Meyer Steelforms. Concrete joists can be left exposed or a flat ceiling can be attached.

30 YEARS OF EXPERIENCE IN REINFORCED CONCRETE!

CECO STEEL PRODUCTS CORPORATION

Concrete Engineering Division—5701 W. 26th St., Chicago, Ill.

MANUFACTURING DIVISION, SHEET STEEL AND WIRE DIVISION, HIGHWAY PRODUCTS DIVISION

ENGINEERING

MAKES THE BIG DIFFERENCE IN

CECO

CONSTRUCTION-PRODUCTS

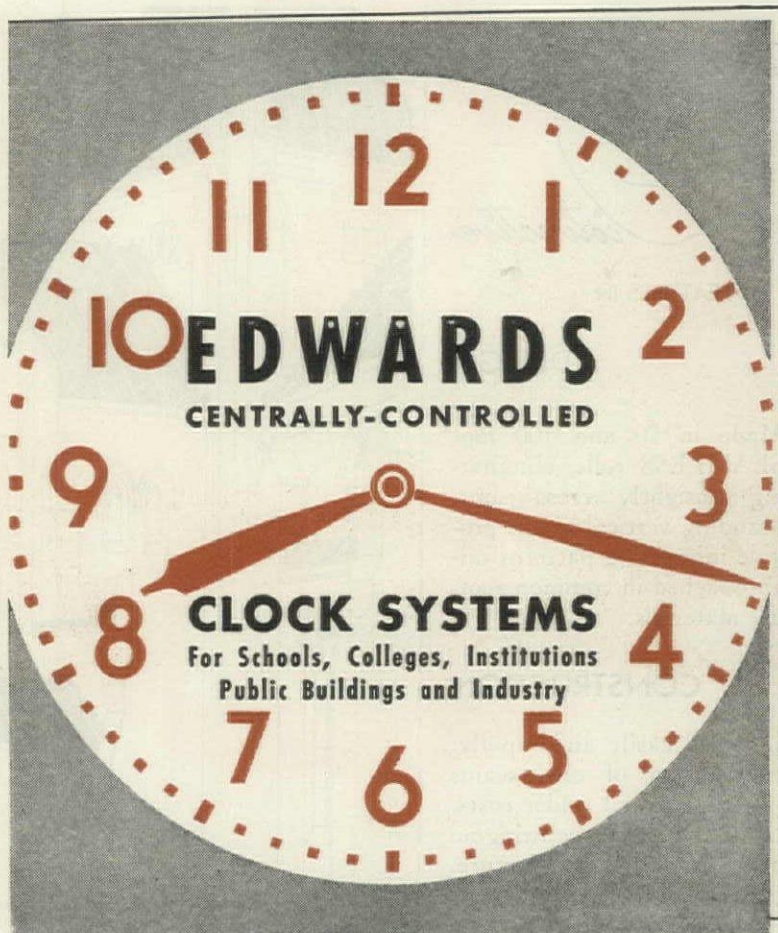
Now ready for you!

Edwards announces a new and complete line of Clock Systems for schools, colleges, institutions, public buildings, and industry. This addition to Edwards other well-established lines of telephones, alarm and protection systems, now enables architects to specify complete "all-over" signaling systems from one source:

- Clock and Program Systems (school signaling)
- Telephone Systems (communication)
- Fire Alarm Systems (protection)

Edwards Clock Systems feature the famous dual motor, Telechron self-starting synchronous movements which operate without contacts, rectifiers, master clocks, relays, pendulums, keys or switches. Unlike ordinary electrical clock systems, which operate by impulse from a master clock, Edwards Systems pulsate with the alternate current—there is no central control clock to be looked after, regulated and serviced.

Investigate Edwards facilities for furnishing you with accurate, complete signaling systems for your postwar building projects.



This new catalog will be ready shortly. Write today for your copy.

EDWARDS *and Company*

NORWALK, CONNECTICUT

IN CANADA—EDWARDS & CO. OF CANADA, LTD.

Electrical Signaling Communication and Protection for Homes, Schools, Hospitals, Offices, and Industry

(Continued from page 272)

CONVERSION FACTORS. Industrial Research Service's Conversion Factors and Tables, 262 pp., 4 1/2 in. by 6 1/4 in. Price \$2.75.

This book is prepared as a time saver for the scientific or technical worker in converting measurements from one unit or set of units to another, and from one system of measurement to another. It provides in one handy volume an accurate source of fundamental physical relationships as well as several thousand useful constants for the conversion of units. Industrial Research Service, Masonic Bldg., Dover, N. H.

CLEANING, MAINTENANCE. Klem Cleaners, 8 pp., 8 1/2 in. by 11 in.

Of interest to maintenance personnel, this folder cover cleaning, derusting, phosphotizing, soldering and maintenance processes. A step by step procedure is outlined to acquaint the purchasing personnel with the diversified uses of the products. Full descriptions explain the use of phosphoric acid cleaners, alkali power wash and still tank cleaners, compounds and enamel or paint removers. Also included is a layout chart of the concentrations of the cleaners used for respective work, and under specific conditions. Klem Chemical Works, 1500 E. Woodbridge St., Detroit 7, Mich.

HEATING & PLUMBING. Taco Specialties, Catalog D-99, 20 pp., 8 1/2 in. by 11 in.

Specialties for warm water radiator heating systems and modern water heaters of both tankless and storage tank types are illustrated and described. Detailed information on the Taco-One Venturi system of radiator heating includes layout diagrams, design tables and installation data on this one pipe system. Also described are Taco two pipe systems and various accessories. Storage type water heaters in a range of sizes and capacities are grouped to show comparison of capacities. Tankless heaters are shown in an equally wide range of capacities. Many diagrams show appropriate installations of the various heaters described, and helpful installation details and tables useful in selecting heaters best suited for given requirements are included. Taco Heaters, Inc., 342 Madison Ave., New York 17, N. Y.

STOKER. Majestic Heavy - Duty Steel Stoker Furnace, 4 pp., 8 1/2 in. by 11 1/2 in.

This folder describes the heavy duty Majestic stoker unit for gravity or forced air heating systems, and which contains a built-in clinker can eliminating fly ash and basement dirt. Other features and advantages of the unit are illustrated and described. The Majestic Co., Huntington, Ind.

REQUESTS FOR CATALOGS

- HARRY E. HARRIS, consulting engineer, 229 Thorne St., Bridgeport 6, Conn.
- GERALD H. BENSE, architect, Univ. of So. Calif., Los Angeles, Calif.
- THEODORE L. PERRIER, architect, Carondelet Bldg. New Orleans, La.
- HAROLD H. EATON, architect, Bewley Bldg., Lockport, N. Y.
- CPL. CHARLES HURRAY, Squadron BG, 4117th AAF Base Unit, Robins Field 2, Ga.
- GEORGE H. SPOHN, architect, Box 436, Rollings College, Winter Park, Fla.
- F. E. E. YATES, contractor, 56 Dunrobin St., Sydenham, Johannesburg, S. Africa.
- ALTON S. HEYSER, consulting engineer, 308 South Broadway, Santa Maria, Calif.
- HUGH A. KELLY and B. SUMNER CRUZEN, architects, 220 Broadway, N. Y. C.
- HENRY JOHN JEFFERSON, architect, 362 Entrada Drive, Santa Monica, Calif.
- HUGH W. BROWN JR., architect, 212 Petroleum Bldg., Shawnee, Okla.
- KATZ-WAISMAN, architects, 327 Lexington Ave., N. Y. C.
- M. A. SIMPSON, c/o J. A. Simpson, contractor, 713 South Second Ave., Washington, Iowa.

REQUESTS FOR INFORMATION

- LT. F. A. BENEDICT, 126 Mountain Engr. Branch, A.P.O. 345, c/o Postmaster, New York, N. Y. would like to receive information from prefabrication manufacturers.
- BRIAN PEAKE, A.R.I.B.A., 35 Bruton St., London, W.1., England, would like to receive information on prefabricated partitioning, internal wall framing and ceiling framing in steel.
- JOHN P. GILBOY, JR., Director, School of Plumbing, Heating and Air Conditioning of the International Correspondence Schools, Scranton, Pa., requests manufacturers catalogs on heating, air conditioning, plumbing, insulation and allied equipment.

Distinctive

FEATURES IN

DESIGN

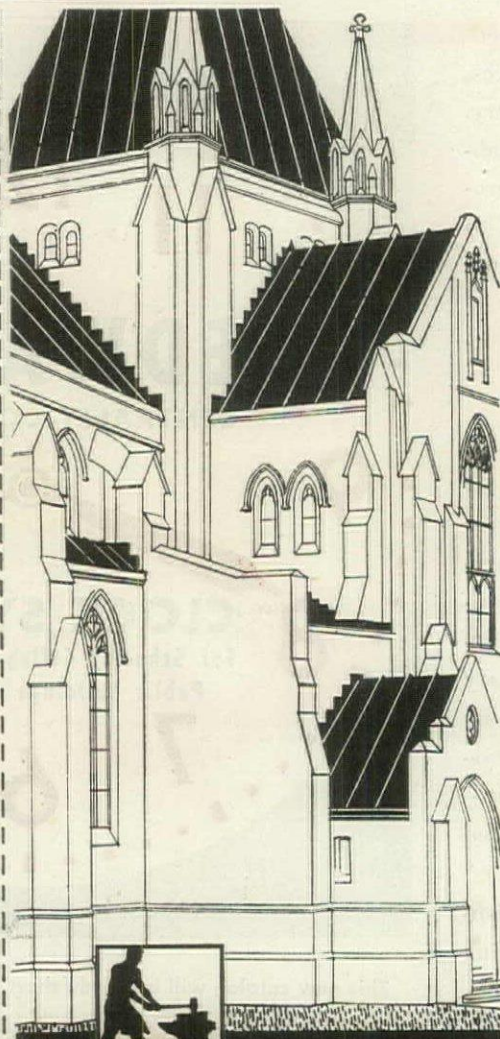
Made in 50 and 100 foot SEAMLESS rolls, eliminating unsightly cross-seams. Standing vertical seams provide interesting patterns unapproached in common roofing materials.

CONSTRUCTION

Installed easily and rapidly. Elimination of cross-seams saves labor and solder costs. Light in weight, requiring no heavy supporting structure.

SERVICE

Highly resistant to severe weather conditions—excellent fire-retarding properties. Hundreds of thousands of rolls in service, with a remarkable record of low maintenance cost.



FOLLANSBEE
SEAMLESS
TERNE ROLL ROOFING

Data and Specification File A.I.A. 12-C-1 on request

FOLLANSBEE STEEL CORPORATION

GENERAL OFFICES • PITTSBURGH 30, PA.

Sales Offices—New York, Philadelphia, Rochester, Cleveland, Detroit, Milwaukee.
Sales Agents—Chicago, Indianapolis, St. Louis, Kansas City, Nashville, Houston,
Los Angeles, San Francisco, Seattle; Toronto and Montreal, Canada.
Plants—Follansbee, W. Va., and Toronto, Ohio

ALLOY BLOOMS & BILLETS, SHEETS & STRIP • CLAD METALS
COLD ROLLED CARBON SHEETS & STRIP • POLISHED BLUE SHEETS
ELECTRICAL SHEETS & STRIP • SEAMLESS TERNE ROLL ROOFING

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

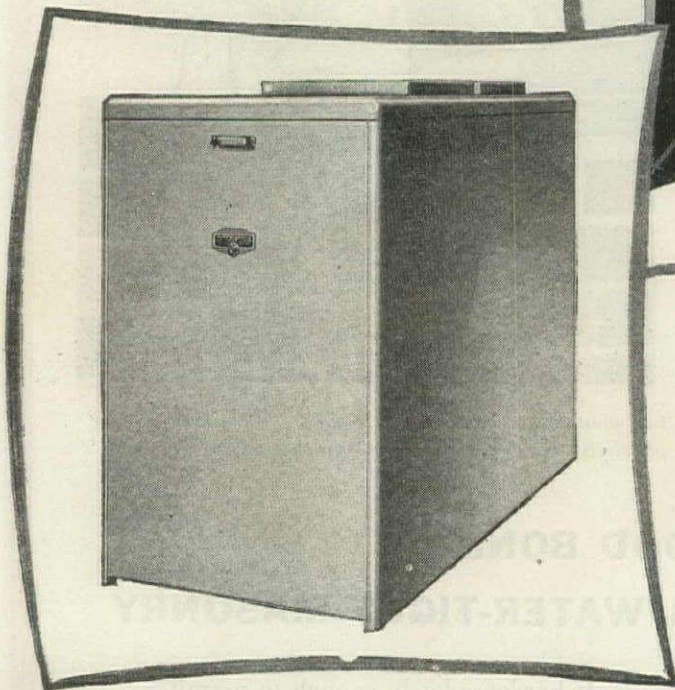
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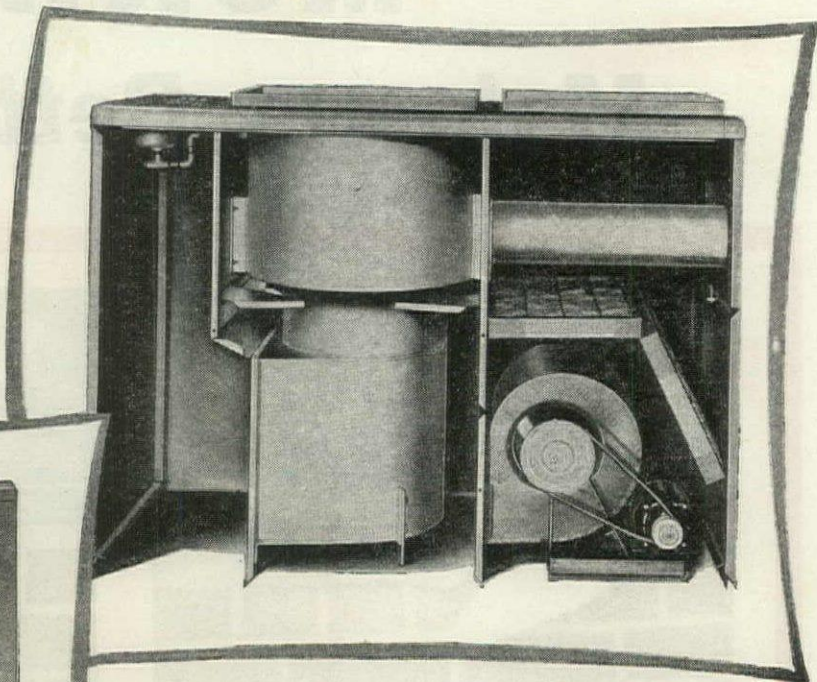
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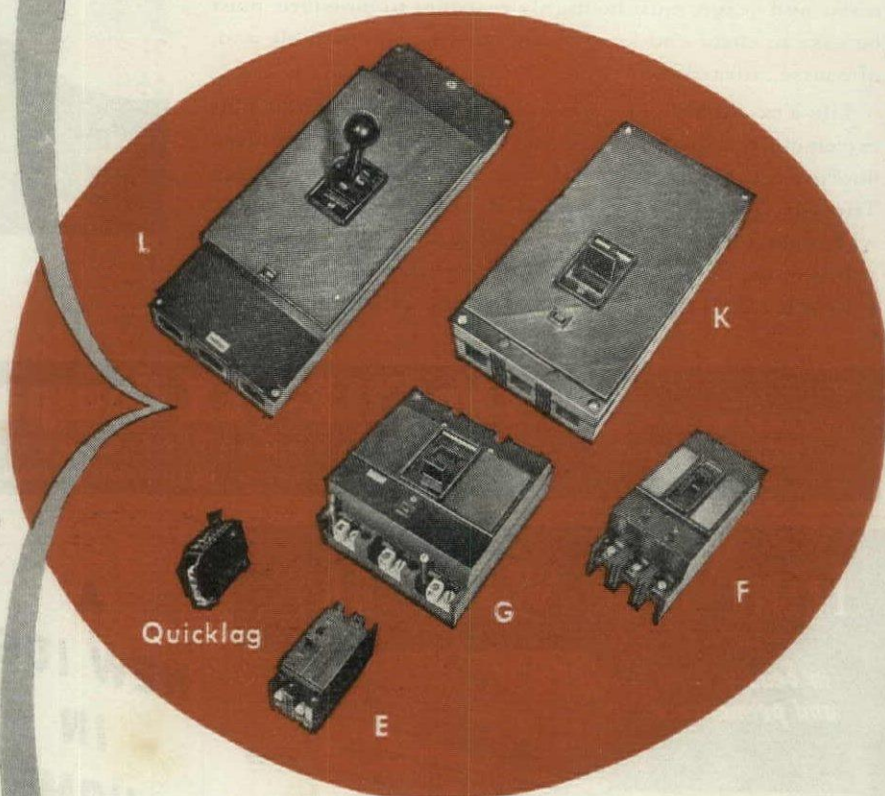
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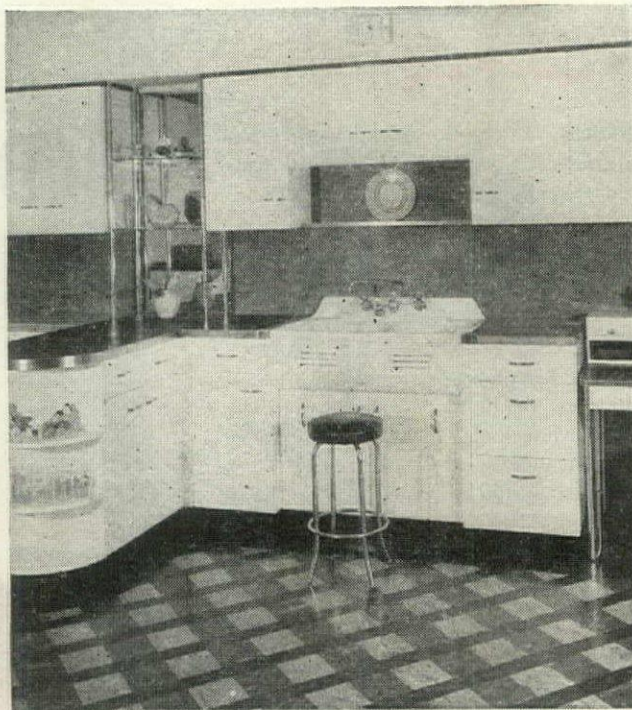


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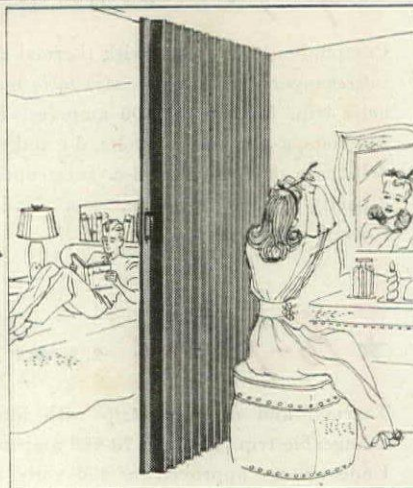
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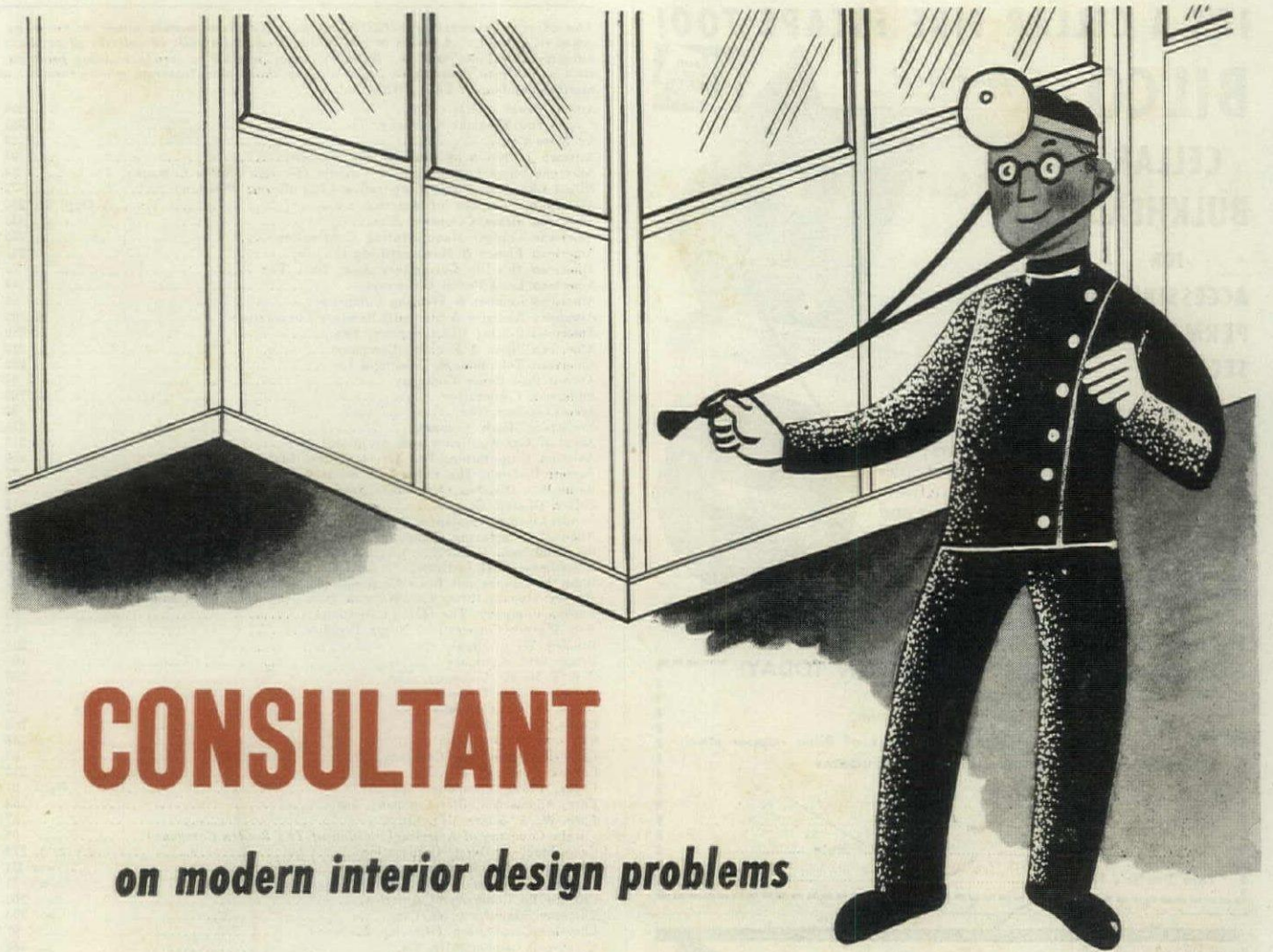
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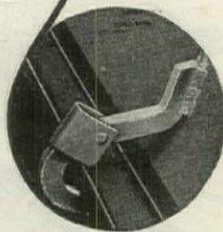
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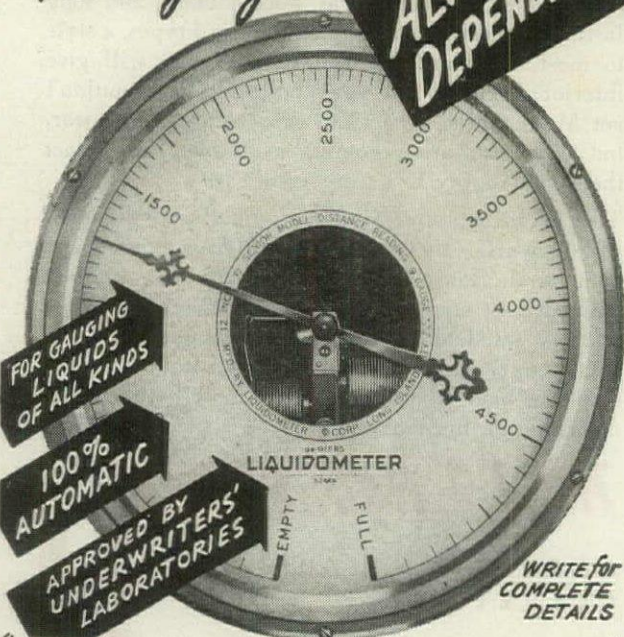
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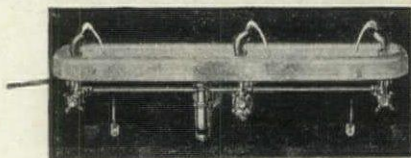
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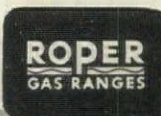
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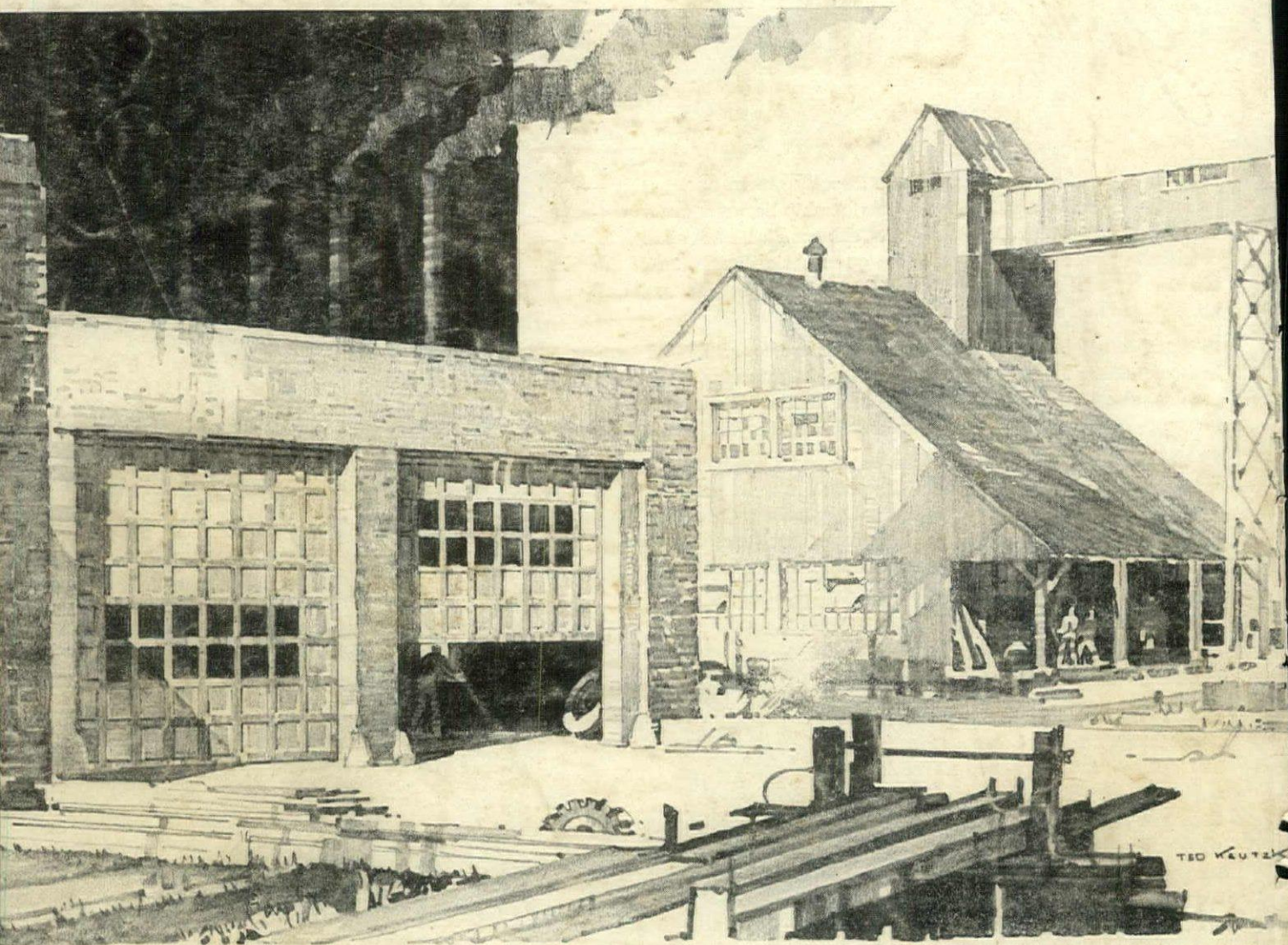
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