The Architectural

FORUM

Magazine of Building

August 1947

WHAT DOES SUNTILE OFFER A HOME OWNER ?

Ideas! Colorful, practical ideas in Color Balanced Suntile! See the Suntile Idea Book in Sweets!

No single building refinement can mean more in satisfaction and carefree use than the bath or kitchen that's given the finishing touch of Color Balanced Suntile walls and floors ● Installations are guaranteed by Authorized Suntile Dealers ● Over and above the many practical features found only in Suntile, there's that satisfying realization that one's own home is equal to any in gracious charm and modern convenience ●

Color Balanced Suntile, made only by The Cambridge Tile Mfg. Co., is the real clay tile of fine body and more accurate dimension, color-calibrated by the Munsell Color System to assure color harmony. Suntile has every desirable quality of ordinary clay tile . . . easy sanitation, integral beauty, permanence. It is, of course, fireproof, bugproof, stainproof, and just about everythingproof. In addition, today's Suntile has many exclusive features that make it more desirable than any clay tile ever produced. Suntile is manufactured from selected materials by carefully governed processes under a rigid quality-controlling inspection system. Suntile is displayed, sold, and installed by Authorized Suntile Dealers. Each Suntile Dealer has been selected for his ability to install quality work and his installations bear the Suntile guarantee of good material and good workmanship. Non-vitreous glazed Suntile in 16 colors is made in the standard 4¼" x 4¼" size. Impervious unglazed ceramic mosaic Suntile in 15 colors and vitreous unglazed "Camargos", the natural clay Suntile, in various color ranges, are made in modular sizes to simplify all design, layout, and installation work . . . . . The Cambridge Tile Manufacturing Company, Cincinnati 15, Ohio.

COLOR BALANCED

Suntile

. . . . . Bright with color

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Specify Suntile by name . . . . that's the way to get the best in real clay tile.

lighting with a new versatility of application . . . ceilings unlimited

You get "good lighting" from MILLER FLUORESCENT TROFFER LIGHTING SYSTEMS — you get, in addition, the opportunity to plan the lighting to form any ceiling pattern desired — CEILINGS UNLIMITED! Interiors of stores, schools, offices, factories, and public buildings are thereby modernized as well as lighted by the use of this one basic lighting system. Installation is simplified. Wiring costs are cut up to 50%, conduit and conduit fitting costs up to 80%. Supports from structural ceiling reduced 50 to 75%.

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MILLER field engineers and distributors are conveniently located.

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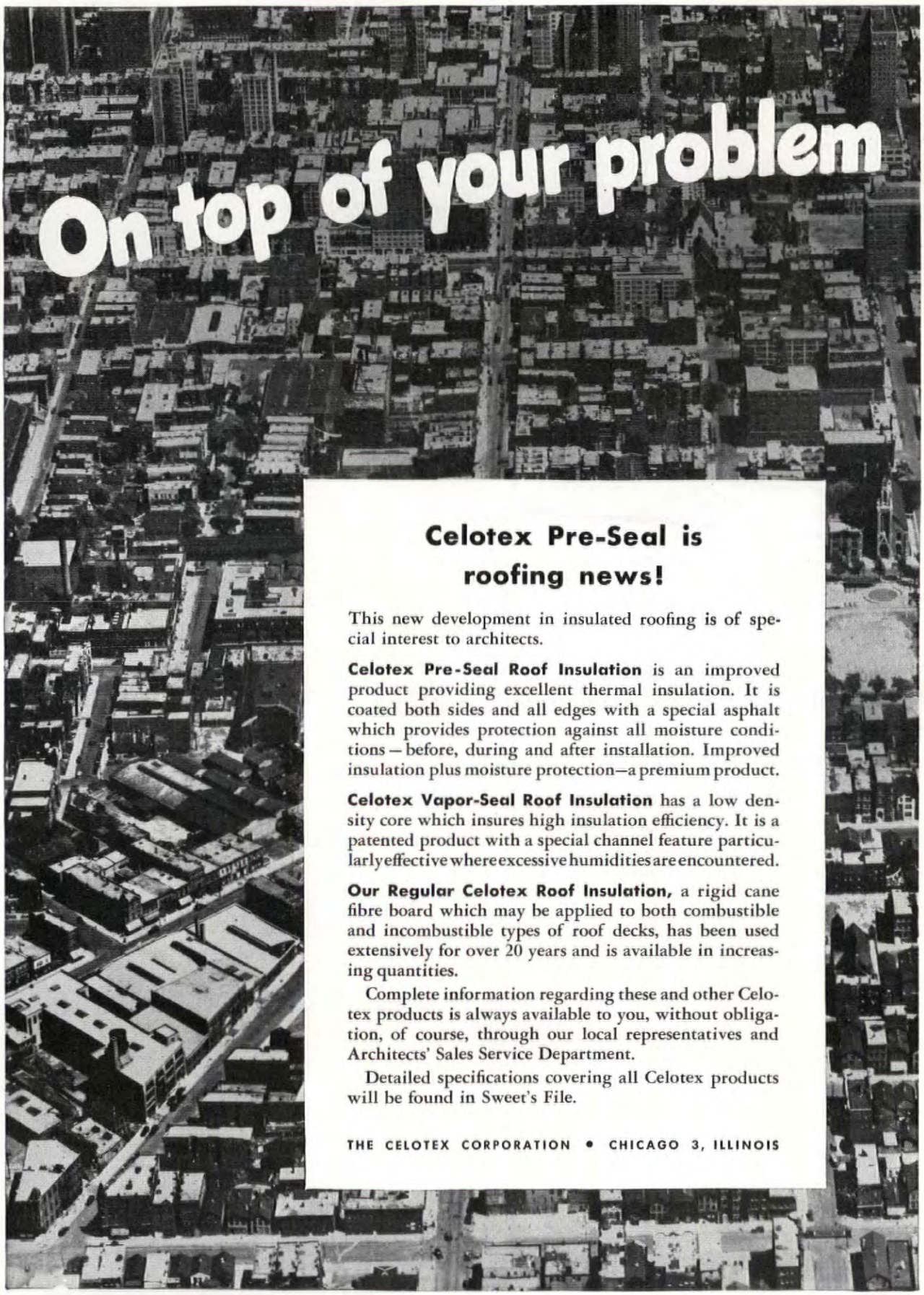

Celotex Pre-Seal is roofing news!

This new development in insulated roofing is of special interest to architects.

Celotex Pre-Seal Roof Insulation is an improved product providing excellent thermal insulation. It is coated both sides and all edges with a special asphalt which provides protection against all moisture conditions – before, during and after installation. Improved insulation plus moisture protection—a premium product.

Celotex Vapor-Seal Roof Insulation has a low density core which insures high insulation efficiency. It is a patented product with a special channel feature particularly effective where excessive humidities are encountered.

Our Regular Celotex Roof Insulation, a rigid cane fibre board which may be applied to both combustible and incombustible types of roof decks, has been used extensively for over 20 years and is available in increasing quantities.

Complete information regarding these and other Celotex products is always available to you, without obligation, of course, through our local representatives and Architects' Sales Service Department.

Detailed specifications covering all Celotex products will be found in Sweet's File.

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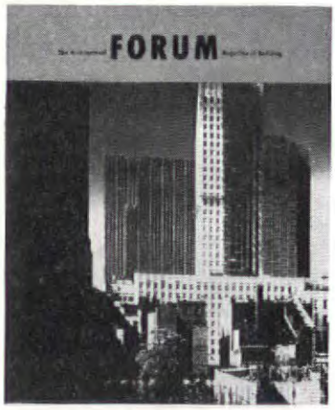

Now nearing completion in New York is the 33-story home of the Standard Oil Company. Immediately north of famed Rockefeller Center Plaza, the new Esso Building straddles a space originally earmarked for the extension of the Plaza's private mid-block street. Along this axis, the building is bisected by a huge two-story, glass-fronted lobby. Esso's new home is the second postwar Manhattan skyscraper to be designed for complete air conditioning.

Published by TIME Incorporated

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

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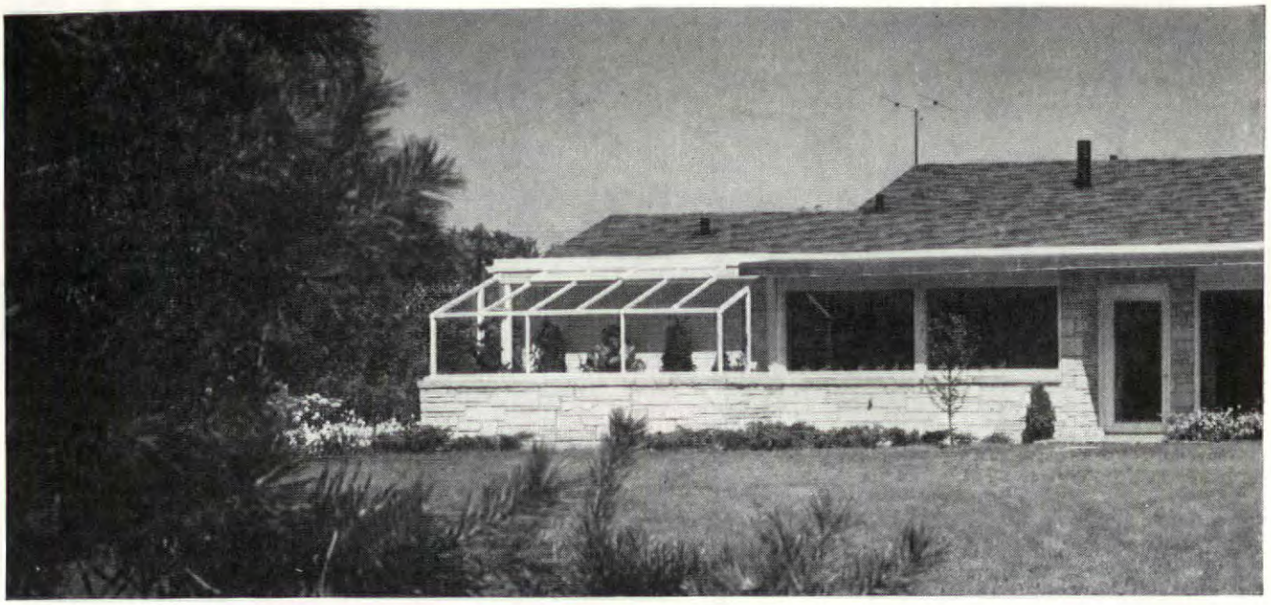
VOLUME 87, NUMBER 2

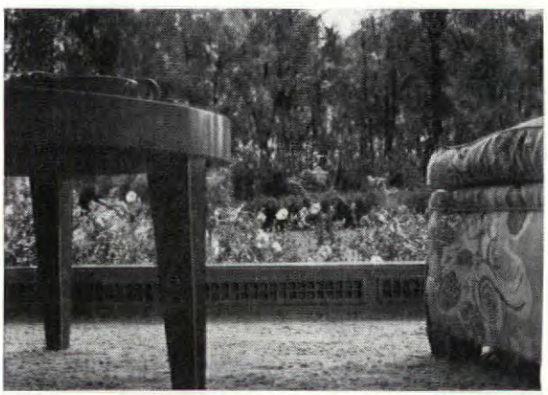
The Architectural FORUM
MAGAZINE OF BUILDING

AUGUST 1947

Cover photo: (Esso Building) Lionel Freedman: Pictorial Services



Many design innovations



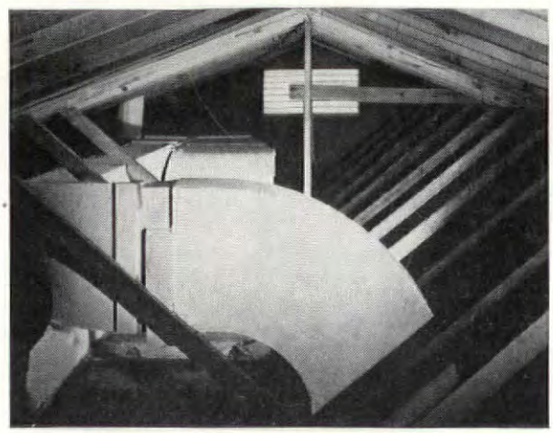
Reprinted from House & Garden

Servel-conditioned air emerges from this specially designed grille below living room windows to form a solid curtain between pane and room.

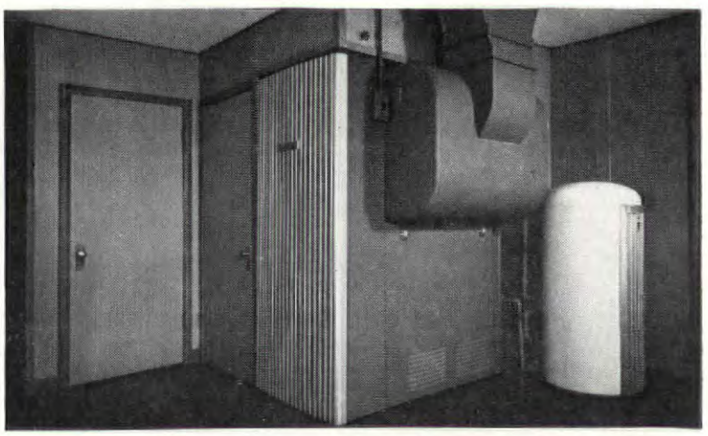
Servel All-Year Gas Air Conditioning makes possible new high in year-round comfort

TO INSURE maximum physical and psychological comfort in America's first all-sealed house, Howard M. Sloan and his architect, David S. Barrow, used solar heating and Servel *All-Year* Gas Air Conditioning. This unique combination not only provided a "new quality of living" the year round; it also made possible more efficient and economical design and construction.

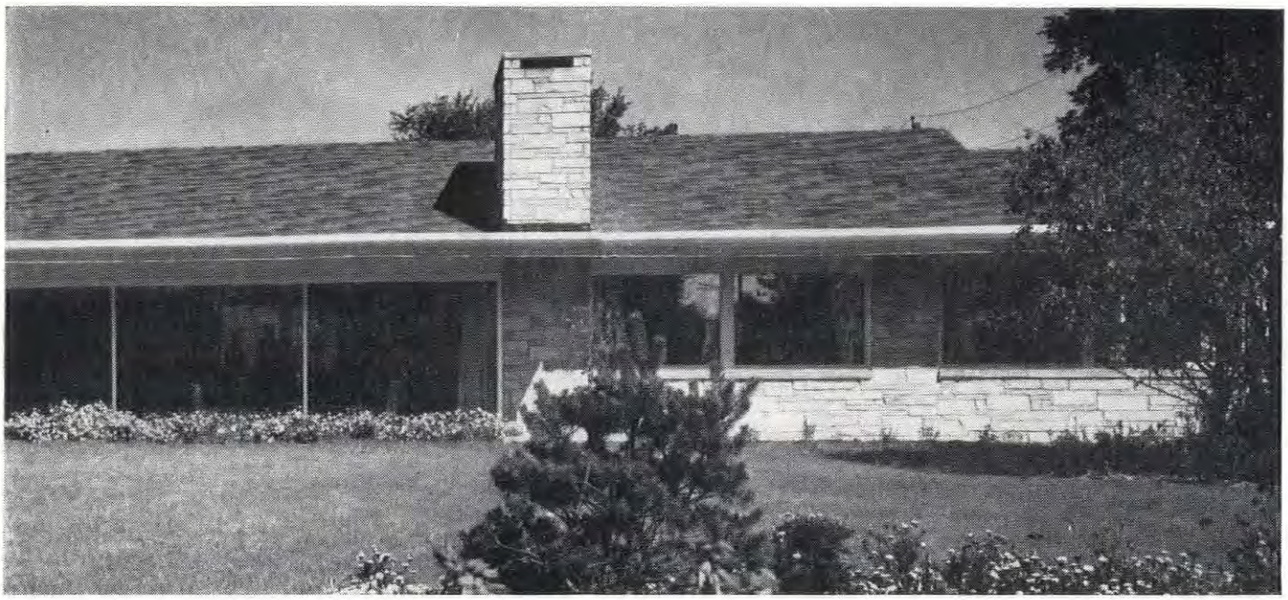
The Sloan house uses the entire floor area as a radi-



Air returns to the Servel *All-Year* Gas Air Conditioning unit are conveniently placed in the attic.



Heart of the solar-radiant heated Sloan house is the Servel Conditioner. At right is Servel *Ball-Type* Gas Water Heater.



in first all-sealed house

ant heating panel. Six separate ducts bring air from the Servel Conditioner to six plenum chambers under the various rooms. Openings under windows allow conditioned air to circulate from bottom to top of glass areas. It returns through openings in the ceilings. Outside air for ventilation is taken through unit, where it is cleaned and conditioned before being delivered to rooms.

The air supply ducts for the six zones in the house are equipped with splitter dampers where air leaves the Servel *All-Year* Gas Air Conditioner. Thus the flow of air to zones can be adjusted to provide the most desirable year-round temperatures in each room. What's more, distribution of heat generated by the sun is assured by the fan operating continuously in the Servel unit. In this way all rooms are kept at uniform ideal temperature and humidity, in winter as in summer.

Comprehensive tests on typical days show that there is almost no stratification of air in the rooms. Findings reveal a maximum variation of one degree between floor and ceiling levels. And there is no overshooting of temperatures during normal heating operations.

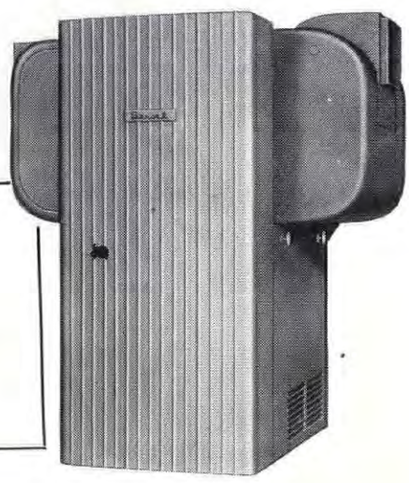
In addition, the use of fixed windows eliminates window screens, window hardware, weather stripping as well as the need for a screen porch. Mr. Sloan states that "the economies in design and construction made possible by the Servel *All-Year* Gas Air Conditioner actually made it cost little, if any, more than an ordinary heating system!"

The Sloan house is a striking example of how Servel *All-Year* Gas Air Conditioning can help you design greater comfort and livability into any home—without appreciably increasing the cost. Get all the facts from your local Gas Company. Or write today to Servel, Inc., 2708 Morton Avenue, Evansville 20, Indiana.

TRIED . . . PROVED . . . SUCCESSFUL

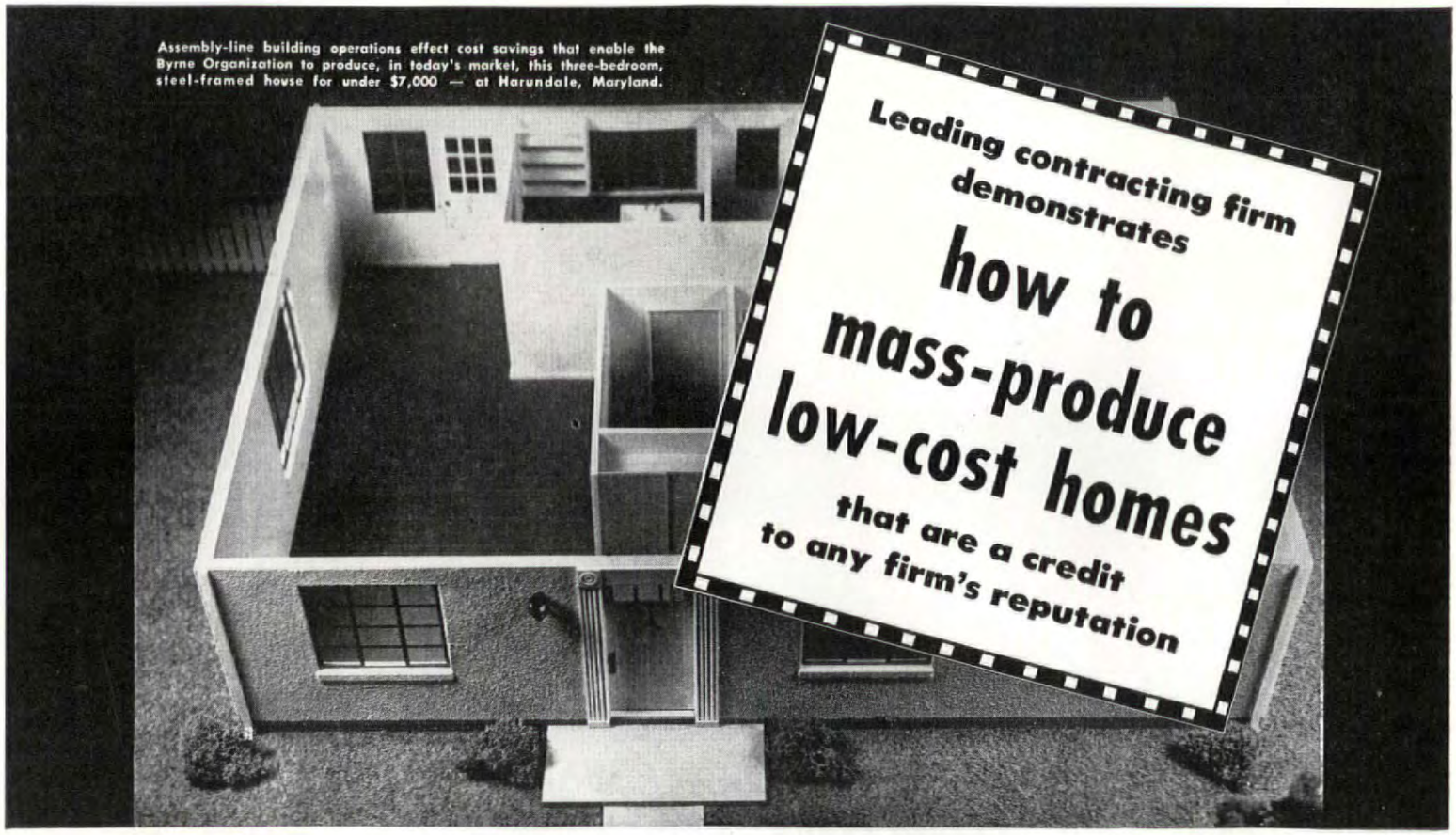
(From Boston to San Diego . . . From Bismarck to Miami)

The Servel *All-Year* Gas Air Conditioner is already operating successfully in hundreds of installations from coast to coast. Some have been running for more than seven years. The equipment is tried, tested . . . and *approved* by users everywhere.



Servel

All-Year GAS AIR CONDITIONER



Assembly-line building operations effect cost savings that enable the Byrne Organization to produce, in today's market, this three-bedroom, steel-framed house for under $7,000 — at Harundale, Maryland.

Leading contracting firm demonstrates

how to mass-produce low-cost homes

that are a credit to any firm's reputation

. . . by utilizing the versatility of

Milcor Steel Building Products

By applying repetitive operations to line-production methods in the field, The Byrne Organization, Washington, D.C., builds really substantial housing for veterans — at low cost.

At present, the Byrne method is being applied to some 4,500 steel-framed homes — all embodying details of quality, materials, and workmanship hitherto unavailable to home owners of moderate means. The speed of erection is amazing. The structures are lighter, stronger, less costly — and far safer against fire hazards.

Perhaps the use of Milcor Steel Building Products at the Harundale housing project — a Byrne-planned community five miles south of Baltimore, Maryland — may suggest ways to similarly improve the efficiency of erection for the homes you design and build:

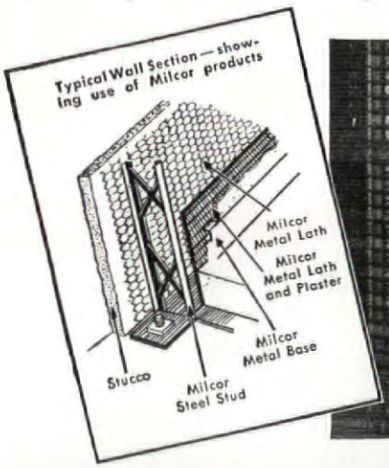
Here, *Milcor Steel Studs,* used as framing, are assembled in the shops and welded together on the site. They are used also in hollow partitions between rooms.

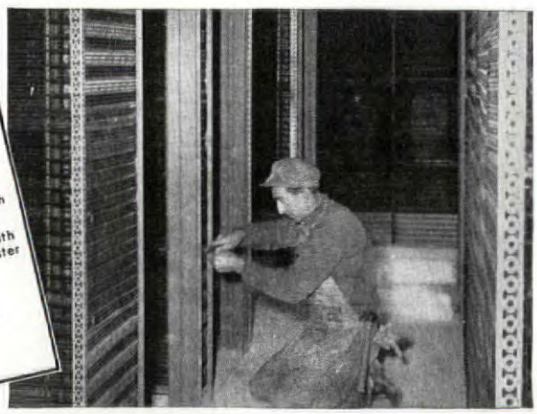
Milcor Metal Lath provides continous steel reinforcement for the three-coated plaster interior walls and the stucco exterior walls.

Milcor Metal Base, used as interior trim, simplifies finishing; is permanent, sanitary, economical to maintain.

Milcor Louver Ventilators provide air circulation that relieves summer heat and retards moisture condensation in winter.

Consult the Milcor Manual in Sweet's, for data that helps you apply these and other Milcor Steel Building Products to your particular problems.





Left: Tying Milcor Metal Lath to Milcor Steel Stud — in a Harundale home. Note the use of Milcor Corner Bead, to protect the straight-edge beauty of plaster corners.

MILCOR

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Inland Steel Products
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Baltimore 24, Md. Buffalo 11, N. Y.
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Cincinnati 25, Ohio Cleveland 14, Ohio
Detroit 2, Mich.
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Rochester 9, N. Y.

Note clean, modern design of boiler jacket. Standard jacket illustrated. Also available, extended model completely enclosing boiler and burner unit.

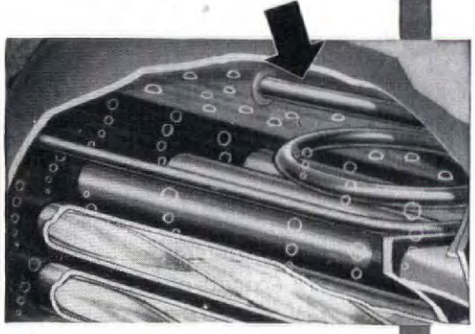
SPENCER BOILERS "HAVE MET THE TEST" WITH HEATING EXPERTS

More than a half-century's experience is built into every Spencer Boiler.

For 57 years, Spencer Boilers have met the test in actual use in homes and buildings everywhere. Heating experts know that they can depend on Spencer's modern design for efficient, economical boiler performance. They have learned to specify Spencer for all heating jobs from a small home to a large building. Architects, builders and heating engineers know, too, that a Spencer Boiler operates efficiently with any type of fuel—coal, gas or oil.

Investigate Spencer! Write or wire today for full information and join experts who have solved their heating problems.

Coils are made of copper and bronze. They deliver rustless hot water because service water passing through coils does not come in contact with boiler water at any point.



PATENTED SPENCER COILS—FOR YEAR 'ROUND HOT WATER— The modern home owner will enjoy Spencer's patented service year 'round water heating method. A special feature of the Spencer design is a cover plate at the top front of the boiler—for quick installation of the copper tube hot water coils. All piping connections are at the rear of the boiler—out of sight. The back of the boiler may be installed close to the wall—out of the way.

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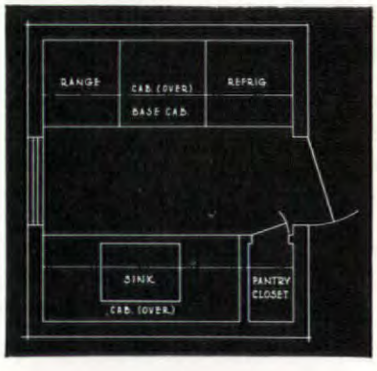

Kelvinator's NEW "SPACE-SAVER"

Holds 50% more... uses no extra floor space!

Here's the most practical refrigerator ever designed for small kitchens—Kelvinator's new "SPACE-SAVER"! Ideal for small homes and apartments, it offers 50% more storage—full 6 cu. ft. compared to the previous 4 cu. ft. model. *Yet it takes up no more floor space!*

And just look at these really modern features! 5 full-width shelves with *greater space between shelves... extra room* for tall bottles and bulky foods . . . *High Speed Freezer* for frozen foods . . . *"Seal Tight" Door Latch,* Kelvinator's latest exclusive . . . beautiful snowy-white *Permalux* finish . . . perfect trouble-free performance of *Polarsphere*—the matchless cold-maker!

To solve your small kitchen problems, or to replace inadequate units—*anywhere*—count on Kelvinator's "SPACE-SAVER"! Write today for further information . . . NASH-KELVINATOR, Detroit 32, Michigan.

Kelvinator

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NEWS

BUILDING MONTH. The first Republican-bossed Congress in 16 years was hurrying home to find out what the voters thought about what, among other things, it had done or failed to do about Building. That the Congressmen were not entirely easy in their minds about their record on housing and on rent control was apparent in their last-minute decision to set up a 14-man committee, charged to report on an old question—What's the Matter with Housebuilding?

The Republicans had interpreted the voter's mandate to mean a speedy end of all government controls and a reduction of government expenditures. Thus they had ended all building controls, relaxed rent control, repealed the veterans' housing program. In the House, Congressmen of both parties had launched a drive to kill off all federal housing activities except those which backstop private building money by (1) refusing to vote for the President's plan to set up a permanent Housing and Home Finance Agency to replace the National Housing Agency and (2) cutting housing funds to a point where local housing authorities said their credit would be impaired.

But Senator Robert Taft, most powerful member of the present Congress, said that "chaos would result" if no permanent mechanism were set up for coordinating the various federal housing activities. Over protests from the housebuilders, real estate, and savings & loan lobbies, Taft secured a Senate vote for the Housing and Home Finance Agency. Late in July, the President appointed Housing Expediter Raymond Foley as acting head of the Agency.

The Senate also partly restored the budget cuts which the new Agency's three constituents (the Federal Housing Administration, the Public Housing Administration, the Home Loan Bank Board) had suffered in the House.

Congress went home without anything much to show veterans in direct housing action. It had unfrozen a small group of prewar public housing projects by permitting cities to pay the difference between present costs and legislative limits on room cost. It had voted to let the government pay half the cost of building specially designed houses for 2,400 wheel-chair veterans. But it had failed to pass the comprehensive housing program sponsored by Senator Taft and urged by President Truman.

Private housebuilding seemed to be justifying Congress' confidence that, with controls off, it would rise quickly to meet its enormous market. June starts reached 75,000; housing chief Foley said they would reach 85,000 in August. Everywhere rental housing was booming (see page 67)

Although housebuilding was doing better than it had at any time in the last 22 years, there were reminders that this was still not enough. Giving Congress his mid-year economic report, President Truman said: "Although housing construction has been higher in 1947 than in 1946, it lags far behind the real needs of our people for homes. A much higher volume of housing output will be needed to help sustain maximum employment when temporarily sustaining forces—such as the huge net export balance, high investments in reconversion, and an abnormal rate of inventory accumulation—begin to deline or decline further.

"The needed stimulus to more housing construction, and also to industrial and commercial construction, depends largely upon lower prices."

PRICES

DECONTROL EFFECT LIMITED

Increase in building is bringing price pressure in only a few cities.

Except for Miami, which has always been exceptionable, final building decontrol seemed to be bringing no sudden upsurge of nonresidential building over the U. S. The Associate General Contractors said that "the return to a free market . . . is being accomplished in an orderly manner." Most of its member chapters last month noted no big increase in building.

Leading real estate editors, queried by the FORUM, backed this up. Everywhere store building and store modernization showed up as benefiting most from decontrol. In only a few cities do the editors think that decontrol has pushed up building costs. All found housebuilding increasing rapidly. This is what they said:

Ferman Wilson, Miami Herald:

Metropolitan Miami building permits are spurting to the highest level since the big bad boom of 1925 as a result of decontrol. Luxury hotels on the ocean front and swank apartments head the list in cost. Work has started on a badly needed million dollar hospital. A downtown block-size department store is under construction as are a number of long-delayed industrial plants. Groups of stores are being built in a trend toward decentralization. Thousands of small homes are under construction, and a wave of rental duplexes and apartments under FHA's Section 608 has developed. A $5 million housing program at the University of Florida in Coral Gables is being rushed. Plans for 11 theaters await Washington OK.

While this feverish activity which includes almost every kind of building is causing contractors some concern, building materials for the most part remain available and building costs so far are fairly stable. The union scale of $2.25 an hour for most skilled workers remains in effect, but keen competition is prompting some contractors to raise the ante. Because labor supply is limited, this threatens price increases.

James K. Chandler, Cleveland Press:

The impact of decontrol has not been felt here yet. As one builder puts it, "There is a lot on the springboard, but we don't know just how much will actually jump off."

Factory expansion is running ahead of

all other kinds of nonresidential building. Housebuilders have not protested this, since they figure more jobs mean more prospective home builders. One huge General Motors parts plant, for example, will bring 5,000 workmen to the city.

Housebuilders are more afraid of losing labor than materials, if any rush of nonresidential construction starts. Nonresidential builders are already chipping into the short labor supply by offering such inducements as "travel pay" to jobs, running in one case to $3 daily for an eight-mile round trip.

The housebuilders association says queries from prospective home buyers have tripled since decontrol. Builders are also planning to go ahead on many deferred rental projects. One 580-unit job will start immediately. Builders estimate that 20-25 per cent of all new housing will be for rent.

Robert Stapp, Denver Post:

Contractors think decontrol will more than double nonresidential building, which has been almost at a standstill for the past six months. It has already increased about 20 per cent since July 1. Permits show that schools, warehouses, and retail business buildings are showing the greatest response.

Housebuilding, which had been slowing down during the past few months, also picked up in July. Construction of rental units, held up this spring by work stoppage in construction trades and wrangling over FHA terms, is now beginning to roll. Some 1,200 rental units are in the planning stage. But there is still considerable resistance to high costs in both residential and nonresidential building.

Virgil G. Baker, St. Louis Post-Dispatch:

The decontrol bill was signed too late to have much effect on the current building season. Higher steel prices seem to be effective in deterring new starts on commercial and industrial work. The major project started since decontrol is a $9 million hospital.

Residential starts since decontrol include some long-planned pretentious dwellings. One big operational builder, Ralph Duke, complains that the 30-day waiting period for veteran buyers curtails the number of properties he can start at one time. "Most veterans haven't the money and don't want to buy," Duke says, "but the 30-day waiting period adds to the price when the property is finally purchased. I would triple my starts if I did not have to tie up my money that extra 30 days."

Col. Henry H. Burdick, Detroit Free Press:

Gauged by the volume of building permits issued since July 1, nonresidential building has shown a marked increase. Corresponding demand for building materials has created some shortages, particularly in finish lumber items, flooring, doors, etc. Lumber prices are up about 15 per cent. Sheet steel items are also in short supply, but as yet there has been no announced increase in prices.

Commercial construction currently leads in the nonresidential category. Many stores, display rooms, funeral homes, etc., plans for which had been put on ice, are now coming out for bids.

Good weather, settlement of the strike of building mechanics and final decontrol have given housebuilding a tremendous shot in the arm. Reversing the trend of a year ago, the weekly dollar volume of permits for residential construction has been steadily increasing since July 1. A few homes in the price bracket over $15,000 are appearing on the list. In the week ending July 18, 314 permits were issued for one- and two-family houses to cost $2,725,050—an increase of 35 per cent over the preceding week and of 144 per cent over the same week last year. So far this year, 39 new developments providing 611 rental units have been approved.

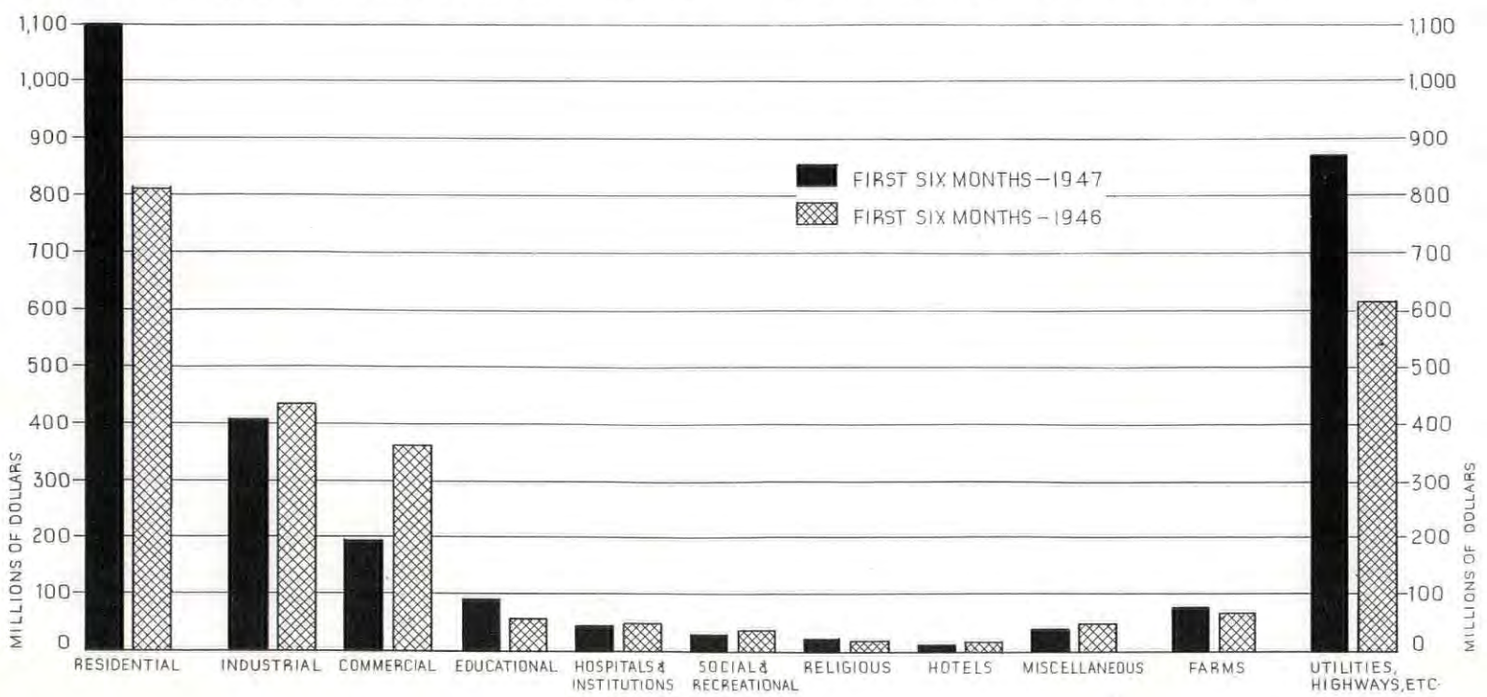
George M. Fuermann, Houston Press:

Nonresidential building is up about 15 per cent since decontrol. Materials are no scarcer than before, but prices are up 10-15 per cent. Most new nonresidential building here is business property and office buildings. Industrial building (about $300 million worth) is snafued by a sub rosa dispute between industrial contractors and AFL building trades. AFL had negotiated a 12½ cent hourly increase for five trades with the contractors' association. But owners of the big industrial jobs (Shell, Sinclair, Humble, Dow, Union Carbon, and others) balked and passed the buck to contractors with a $2 ceiling. About $150 million worth of work is temporarily shut down as a result.

Although much has been promised, very little rental housing is actually being built.

WHAT'S HAPPENING TO BUILDING THIS YEAR? Department of Labor clocks building pace in 1939 dollars.

The shrinking dollar has made it pretty hard to tell exactly what's happening to Building volume. Dollar totals in almost all classes of construction have been running ahead of last year, but everybody knows the figures have to be discounted by the rising cost of building. This chart, prepared from Department of Labor figures, translates building expenditures for the first half of this year and for the same period last year into 1939 prices and makes it possible to compare them. Thus it is apparent that housebuilding production is considerably ahead of last year's pace, that commercial building has fallen by about 45 per cent, that industrial building has come close to maintaining its record peacetime pace of 1946.



Housebuilding is up about 5 per cent, largely through big deals like Frank Sharp's (FORUM, July '47). Builders and contractors expect a big last-of-the-year spurt here.

Jim Furniss, Atlanta Constitution:

High building costs have replaced government controls in keeping down non-residential building in Atlanta. Predictions that this area was in for the greatest business building boom in history as soon as the government got its oar out still have not materialized.

New non-residential building generally has been confined to smaller projects such as stores. Plans to construct a paint manufacturing plant and a department store have been announced recently, but many large firms are holding off for price drops. One firm is said to have $25 million worth of commercial construction ready to go as soon as materials and labor costs come down.

Building materials are going into construction the moment they arrive outside the city limits. Supply is such that construction time on homes has been cut down to one-half the 1946 rate, but customers are still waiting in line with ready cash.

Residential building is holding up well. Home builders expect to finish 7,000 units this year, well above last year's total. Some 700 of these are Section 608 rental units inspired by FHA's favorable financing terms. Twice as many more rental units are now awaiting FHA approval and should go a long way toward eliminating Atlanta's still very acute need.

William K. Trosene, Pittsburgh Press:

The increase in nonresidential construction in Pittsburgh since lifting of controls is not up to expectations. Contractors think that commercial building is going along at about the same rate or just slightly better than before decontrol. Prices are the big drawback. A local teamsters' 52-day truck strike has also hampered new starts.

Industrial building is going along best. Scores of factories and plants are going up. This accounts for the small gain in nonresidential building, since nearly all industrial building was being approved by CPA as essential.

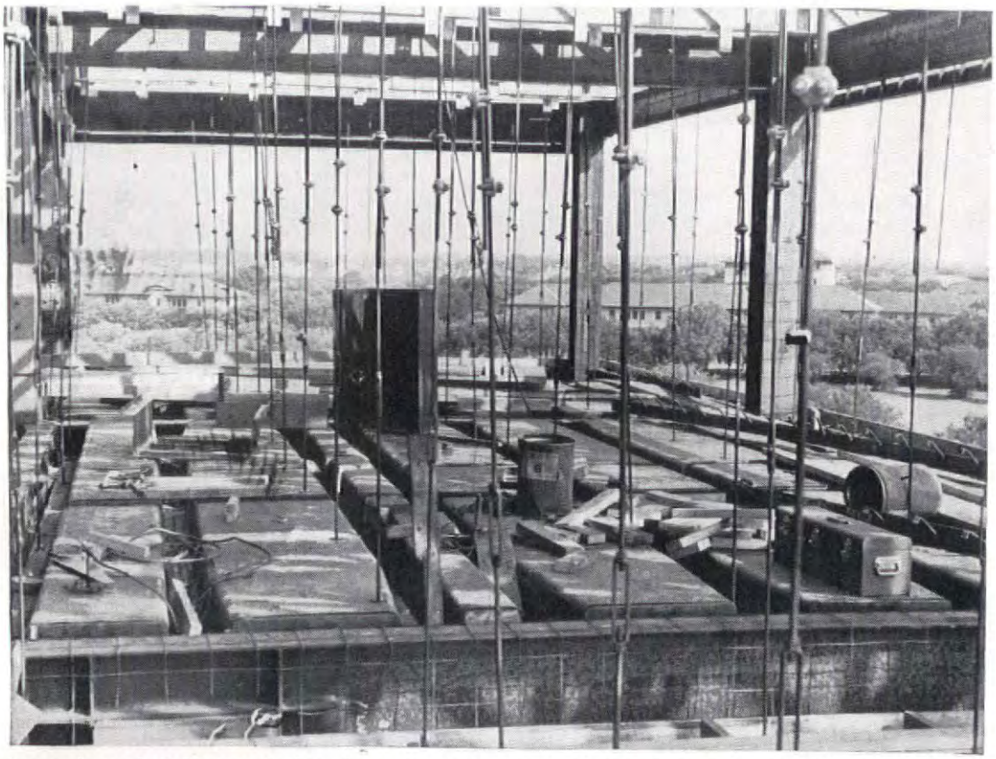
There is some store construction and great activity in store face-lifting jobs. House building is showing an increase. Materials supply is steadily improving, but a few items—nails, gypsum lath—are still scarce.

PREFABRICATION

DEALER CREDIT

Prefab firm forms Acceptance Corp. to finance both dealers and customers.

When Henry Ford broke through traditional credit facilities to set up his own system to finance Ford car buyers, the automobile business found millions of new customers. Many who bewail the housebuilding industry's failure to get on a mass pro-

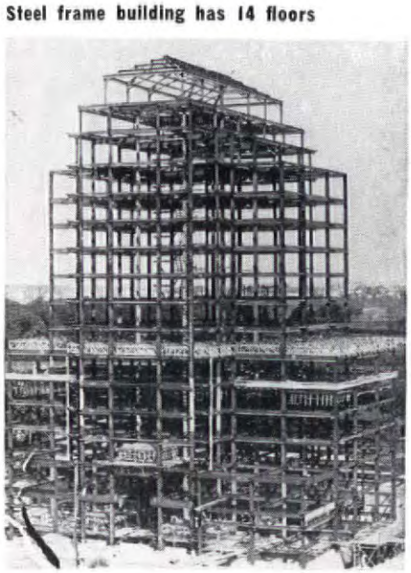


Suspension rods hold concrete floor forms as pouring starts at sixth floor of Houston building

Industro Photos

Forms are lowered to next floor

Steel frame building has 14 floors



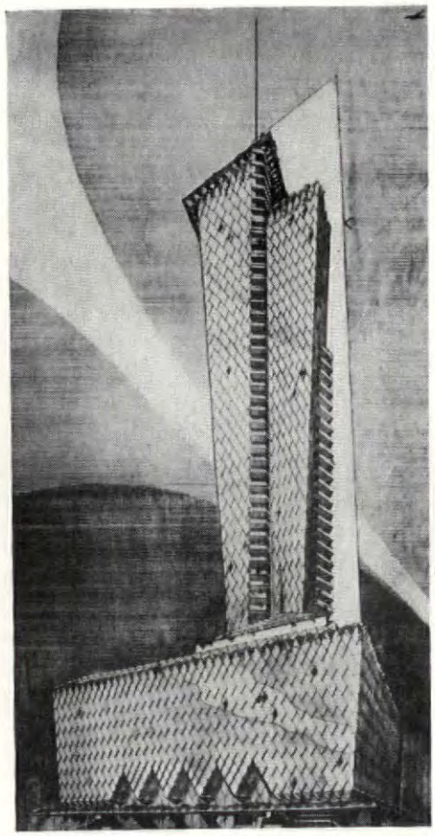
"D. C." System has just Crossed Mexican Border

During the war Young Mexican architect-engineer Manuel Gonzalez Flores worried about how to save lumber, which looked more like gold to Mexico City's fabulously busy builders. He decided it would save a lot of lumber to hang forms for concrete floors from the top of a building and lower them for each floor—instead of starting, as builders always had, at the bottom. His method turned out to save on almost everything. It saved the lumber used for shoring and supports. It saved the labor time needed to re-erect forms at every floor level. Only a few men were needed to operate the chain hoists which lowered the ready-to-use forms from floor to floor.

Last month Flores' D. C. system (Descimbrar Cimbrando means descend and re-erect) was being used in the 14-story Hermann Professional Building, part of the $100 million Texas Medical Center now being built in Houston as one of the oily blessings of gusher-rich Roy Cullen. Alert Texas contractor Gray I. Thomas had sewed up the right to Flores' system in five states and hoped to be licensed for exclusive U. S. use. Thomas' Southwest D. C. System, Inc. is working on the Hermann Building as subcontractor for the Linbeck & Dederick Construction Co. Kenneth Franzheim is the architect.

Inventor Flores says that a form panel may be lowered and re-used for as many as 30 floors. It takes about 30 minutes to lower each floor slab form, about two days to lower the forms for an entire floor. Flores says that an entire floor can be completed and stripped in a week. After the first floor has been poured, workers have protection and can work in bad weather.

AP



FRANK LLOYD WRIGHT designed this 47-story glass hotel which Texas oil tycoon Rogers Lacy plans to build in Dallas "as soon as costs of labor and material become fair." Wright said the construction of glass, magnesium and stainless steel will be stronger than reinforced concrete. Outer walls will be diamond-shaped glass panes with an axis measuring 5 ft. 6 in. Each row will project slightly. "The overlapping stories may startle," Wright said, "but they make the walls self-cleaning and quite impervious to hail. All rooms are outside rooms, reached by interior sun galleries. I have tried to avoid the tomb-like aspect of most hotels, which weigh 10 times as much as the Lacy will."

duction basis have wished somebody would do the same thing for houses. Last month somebody did.

The National Homes Corp. of Lafayette, Ind. became the first U. S. prefaber to set up its own financing system for both dealers and customers—a system frankly patterned after the credit methods of the automobile industry.

President James M. Price had set up a financing subsidiary—the National Homes Acceptance Corp. The Acceptance Corp. is providing FHA mortgage loans for home buyers, thus making National Homes dealers completely independent of local lenders. Even more important, it is offering dealers not only credit to cover the houses they order but also construction advances with which to pay subcontractors while the houses are being built.

National Homes is a prefab firm which has been making money since 1940 by concentrating on the spots where conventional housebuilding is most vulnerable to competition. It climbed quickly into a market by producing a really low-cost house at a time when many prefabers were aiming at the medium-price market. It got a firm foothold by merchandising initially in small towns and rural areas, where there is no big merchant builder competition. It gradually expanded its coverage of the Middlewestern market and now can count 110 dealers in ten states (and in every city in the area except Chicago). President Price, who once was one of Foster Gunnison's dealers, could reflect with satisfaction that he was gaining briskly on his old boss, classed by many as No. 1 in the industry.

Price's sure eye for a weak spot led him straight to the prefab industry's biggest present weakness—lack of dealer credit. He thinks his new plan is the most liberal ever offered dealers. It works like this: When a house is delivered to a dealer, National Homes Acceptance pays National Homes Corp. for the house. At the same time, the Acceptance Corp. gives the dealer the first of three construction advances. The second advance is made after the second FHA inspection. The third is made upon completion of the house. By this time, the dealer will have received credit and advances totaling 90 per cent of the price of the house. The Acceptance Corp. worked out its plan for dealer advances with the help of the American Bank and Trust Co. of Chicago.

The ready secondary market for FHA-insured mortgages now offered by insurance companies makes possible National's one-stop mortgage service for buyers. National is the first prefaber to capitalize on this sure secondary market by making its dealers mortgage correspondents as well as builders. VA-guaranteed home loans are also offered by the Acceptance Corp.

How well National's new credit plan is working can be gauged from an impressive statistic: during the first month of operations, dealers turned in $1,250,000 worth of applications for FHA mortgage insurance.

CITIES

NOT BY BATHTUBS ALONE

Planners can't seem to find out just what it is people want.

"The great problem," said Lewis Mumford, "is: What kind of human being are we trying to create?" Jay Rumney, a Rutgers professor, asked who was going to plan the planners. Dr. Edwin S. Burdell of Cooper Union said flatly that people don't know what other people want to do. Architect Albert Mayer, just back from India, announced his conclusion that we do not live by bathtubs alone.

But it was an unidentified young woman who summed up the sense of the meeting best. "I doubt," she said, briskly snapping shut her briefcase, "if city planners can ever satisfy that deep inner longing of the human race for happiness."

The Russell Sage Foundation, which sponsored this conference on community planning at Columbia University last month, may possibly have felt rewarded by the novel presence of several geographers and a half-dozen social scientists of assorted brands. The appearance of these specialists did not, however, lighten noticeably the customary fog, in which the planners groped their way from platitude to platitude.

A great deal of attention was, for example, given to the puzzling and refractory nature of the human species. Nobody could even say for sure whether people do or do not want to live near their work. Dr. Burdell told about the girl who lives on New York's lower East Side and works in a biscuit factory ten miles away in Queens. Asked by planning surveyors why she didn't get a job in the biscuit factory in the next block, she said she wouldn't think of it, she liked "to get on the bus every morning and see all the people."

Hugh Pomeroy, head of the Westchester Planning Commission who chairmanned the conference, backed this up. United Nations personnel, he said, all plumped for UN headquarters in Manhattan because they "didn't want to be colonized in the shadow of the buildings in which they were expected to work."

Some thought the dilemma of planning for unpredictable people could be solved by bigger and better surveys. Mumford, although a little depressed by the meagerness of people's wants as revealed in British planning surveys, seemed to favor this solution. Among other things, Mumford wants to know "why a country like Holland should have a high net reproductive rate as opposed to England or the U. S." and thought he could find out why Holland has more babies if he could locate "units small enough to be surveyed and compared."

Others thought surveys had already been overdone and agreed with historian Talbot Hamlin that "at the end of 50 pages of statistics, you come to the conclusion that this is a pretty rotten section of town—which you can find out by walking through it."

About this as about many another planning conference, perhaps one optimistic conclusion could be drawn: for men in the tedious position of being highly trained to do almost nothing, the planners have retained a rather surprising ability to talk about it.

BUILDING MONEY

DISCRIMINATION DYNAMITE

UN employes turn down insurance company housing, ask new building.

It looked as if the Metropolitan and New York Life Insurance Companies were about to lose 912 well-bankrolled tenants. United Nations employes, by an overwhelming majority, asked the Secretary General to cancel agreements under which 912 apartments are being reserved for UN staff in Met's Peter Cooper Village and in N. Y. Life's Fresh Meadows housing project.

Unlike the insurance companies, UN employes seem to think the United Nations charter means exactly what it says about "respect for human rights and for the fundamental freedoms for all without distinction as to race, sex, language or religion."

The insurance companies, in agreeing to set aside a block of apartments for UN tenants, had insisted on the right to pass on the "suitability" of each applicant. If anybody doubted this spelled race discrimination, he had only to refer to the New York State Supreme Court, where the world's biggest insurance company last month won a veterans' suit seeking to enjoin it from discriminating in tax-exempt Stuyvesant Town. This is why UN employes have decided to boycott the insurance company housing.

Metropolitan, which sells insurance policies without asking questions about "suitability", has been uneasily tiptoeing around discrimination dynamite ever since it acquired the land for Stuyvesant Town. It now saw its embarassed stand on racial segregation in its giant housing projects becoming an international issue: the UN staff also asked the Secretary General to refer the matter to the member nations.

The employes said they were "confident that the General Assembly will take steps to insure that the Secretariat of the United Nations can live in the headquarters area without being subjected to the humiliation of discriminatory practices."

To any housing investor with good ears, this sounded like a gilt-edged invitation to start building—for United Nations pays 25 per cent of the rent of its employes. UN is already leasing two housing developments —Parkway Village and Great Neck Plaza— where, unhampered by any restrictions imposed by the owners, it is allocating apartments to employes on the basis of urgency of need.

One staff member, a doctor born in Africa—"where they have 300 million black people"—, spoke what the world might think about Met's attempt to hang a "Restricted" sign on United Nations. He said: "If we do accept the use of Peter Cooper Village now, in any form, it will not only hurt the American Negroes but hurt a great many more people abroad. All of us should understand the spirit of the Charter. It is a question of the rights of man."

LENDERS' BETS

Owners are taking money out of real estate, and lenders are putting it in.

Non-farm real estate debt piled up faster last year than in any year on record. But only about 650,000 new houses were finished, and a lot of these were temporary, publicly-owned units.

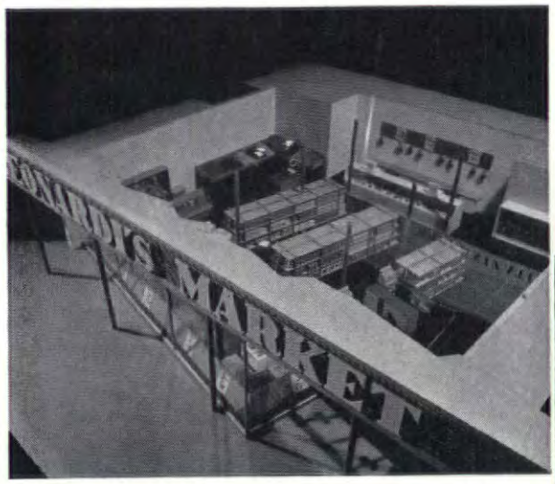
To Donald S. Thompson, vice president of the Federal Reserve Bank of Cleveland,

(Continued on page 14)

STORE MODERNIZATION SHOW

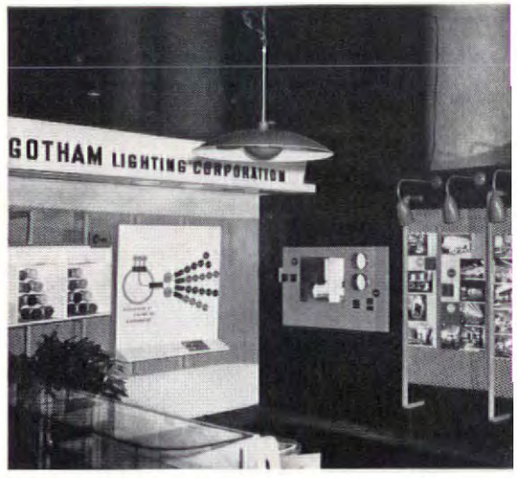
Business is Booming

FIRST SHOW of its kind, the store modernization show held in New York's Grand Central Palace drew a crowd of more than 20,000. This was not only enough to satisfy the 75 exhibitors (whose wares ranged from plastic dummies to the latest thing in store lighting) but also to supply impressive evidence that, of all sectors of the Building front, store modernization is probably the busiest. Director John W. Evans boldly organized show without usual trade association backing (there is none blanketing store modernization field), plans to repeat his success next year.



KAWNEER CO. DISPLAY included large super-market model (above) and an impressive series of before-and-after photographs. Many of these photographs showed slick dress-up jobs by Ketchum, Gina and Sharp, who seem to be out to turn every Main Street in the U. S. into a Fifth Avenue. Kawneer and General Electric had largest exhibits.

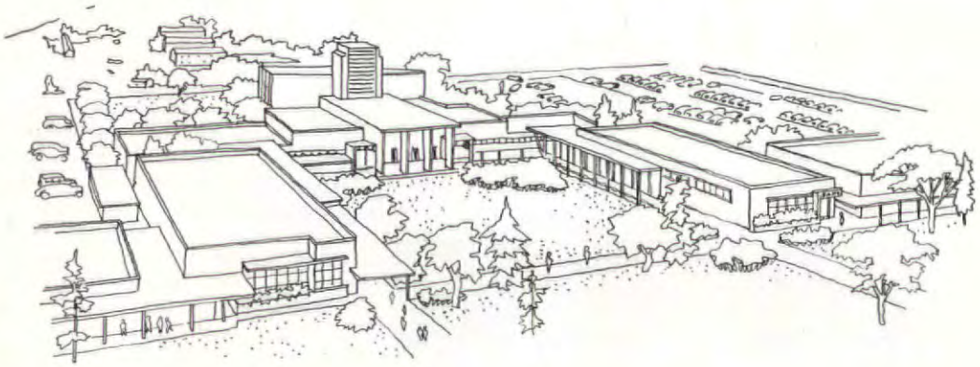
COMPETITION for architectural students helped publicize show. Competition judges: A. Gordon Lorrimer, Henry Wright, Morris Lapidus, Morris Ketchum, John Ragsdale, Thomas Creighton.



GOTHAM LIGHTING EXHIBIT was one of most attractive at show. Manufacturers expect to sell $90 million worth of fluorescent lighting alone this year. Sylvania representative estimated that 18 per cent of all stores, hotels and restaurants will have converted to fluorescent by the end of this year.

A.I.A. came through with five good-looking panels emphasizing the key place of the architect in a store modernization program. Show director Evans said that store modernization expenditure would total $3 billion by 1950. This kind of building got a big boost from decontrol.

Pictorial Services



WAR-BUILT LOS ALAMOS, the town in New Mexico that put together the first atom bomb, will be made permanent by a big building program, the U. S. Atomic Energy Commission announced last month. W. C. Kruger Co., architects & engineers, Santa Fe, are handling the job, which includes 1,000 new houses (half of them prefab), new schools, streets, commercial, service and recreational facilities. Drawing above shows new community center. Intention is to make Los Alamos, a guarded community which no one can enter without government permission, as much like a normal city as possible.

this rapid expansion of mortgage debt without a corresponding increase in new houses means only one thing: "People are taking their money out of real estate and the lenders are putting it in."

Because investors are taking money out of real estate faster than buyers are putting it in, lenders are assuming greater and greater proportions of the risks. Lenders are, therefore, extremely vulnerable to any fluctuations in consumer expenditure for housing. Writing in the *Journal of Finance*, Thompson describes two possible fluctuations that might be ahead:

- A sharp decline in income would make more families double up, reduce demand for housing and precipitate a drop in real estate prices.
- Higher rents might also result in more intensive use of space, thus reducing pressure on housing. But higher rents might decrease consumer expenditure for other goods, and this would have a depressing effect on business and consequently on income levels.

Mortgage lenders don't seem to be worried by either of these possibilities. Thompson says the kind of mortgages they are now making mean that lenders are betting (for the next three to five years at least) that:

1. Volume of funds available to consumers for shelter expenditure will not decrease.
2. The tendency to spread out will not be reversed.
3. Building will continue to accelerate slowly.
4. The housing shortage will be eliminated slowly.
5. Building costs will not decline rapidly or to any important extent.
6. Present trends of neighborhood change will not be seriously altered.
7. Real estate values generally will not decline enough to reduce owners' equities dangerously.

Some $40 billion worth of mortgages—or one-fourth of all the private debt in the country—is the pot on which the lenders are making bets. Just what the odds are, nobody knows.

MINING AHEAD

FHA reserves "fissionable" rights.

The Federal Housing Administration is taking no chances on giving away any of the stuff from which atom bombs are made. Every now and then FHA sells a house taken over on a foreclosed mortgage it had insured. But if you want to buy one of these houses, you will have to take a deed which reserves for the U. S. government the right to mine any fissionable material that might be underneath.

The clause now inserted in FHA deeds reads: "Reserving unto the grantor all fissionable materials, if any, in the lands hereby conveyed, together with the right at any and all times to enter upon the land and prospect for, mine and remove such materials."

Last month George H. Woods, president of the Bridgeport (Conn.) Peoples Savings Bank, started raising a row about the "fissionable" clause. Banker Woods seemed to think that the U. S. government might show up at any minute to start digging on the lawns of the encumbered houses.

Connecticut's assistant attorney general agreed. He told the State Banking Commission that, in his opinion, the "reservation . . . would constitute an encumbrance." This means that state savings banks, permitted to make loans only on unencumbered real estate, cannot take mortgages on the FHA houses.

Harrumphed banker Woods: "The implications of the restriction are so broad and overwhelming that this bank is convinced that their true import is not fully understood." If FHA had plans for going prospecting for fissionable deposits, it was keeping quiet about them.

FARM DEBT RISING

Farm land prices are also climbing.

Diagnosticians alert for any tremor in the real estate pulse picked up an off-beat that made them frown. Farm mortgage debt, which had been steadily shrinking since 1929, last year started to climb up again. The $170 million climb showed up in figures just compiled by the Department of Agriculture.

Compared to what it was in the farm land inflation after World War I, the present size of farm mortgage debt is not alarming. By the end of last year, it amounted to $5¼ billion—less than half its $10.8 billion peak of 1923.

But the reversal of farm debt's downward trend may signal danger ahead because of three other symptoms:

- Average size of new farm mortgage loans is increasing. In 1940 the average loan was $2,290; last year it was $4,000—a rise of 75 per cent.
- Farm real estate prices are only six per cent under their all-time peak of 1920. Last March the average price per acre was 92 per cent above the 1935-39 average.
- Farm land sales are increasing steadily.

All the diagnosticians could easily see that if anything happens to present high prices for farm products the patient might get very sick indeed.

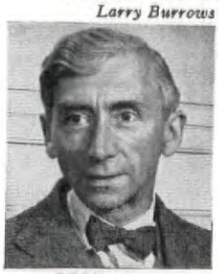
OVERSEAS

MODERN MUSEUM FOR LONDON

Critic Read will get a new job.

In London, modernists who have looked admiringly for years at New York's well-heeled Museum of Modern Art could last month finally look forward to a start of their own. In a letter to the *London Times*, Britain's most discerning critic of the graphic arts, Herbert Read, asked those who wish to be founding members of an Institute of Contemporary Arts to come forward with 100 guineas ($422). Of the $200,000 required to launch the Institute, Read said, some $60,000 is already in hand.

Larry Burrows



READ

Read and other art-conscious Britishers have hoped for a long time to start a contemporary art center, but plans were delayed by the war. Among the most enthusiastic backers was the late great economist Lord Keynes, who used to drop in at the New York Museum to chat about plans on his way home from weighty fiscal conferences in Washington.

For sensitive, socially-orientated critic Read, once assistant keeper of the gloomy Victoria and Albert Museum, a more congenial job now seems imminent. The new Institute, he explains, will not merely collect and exhibit, but also "attempt to establish a common ground for a progressive movement in art, and enable artists of all kinds to join together in the search for new forms of social expression."

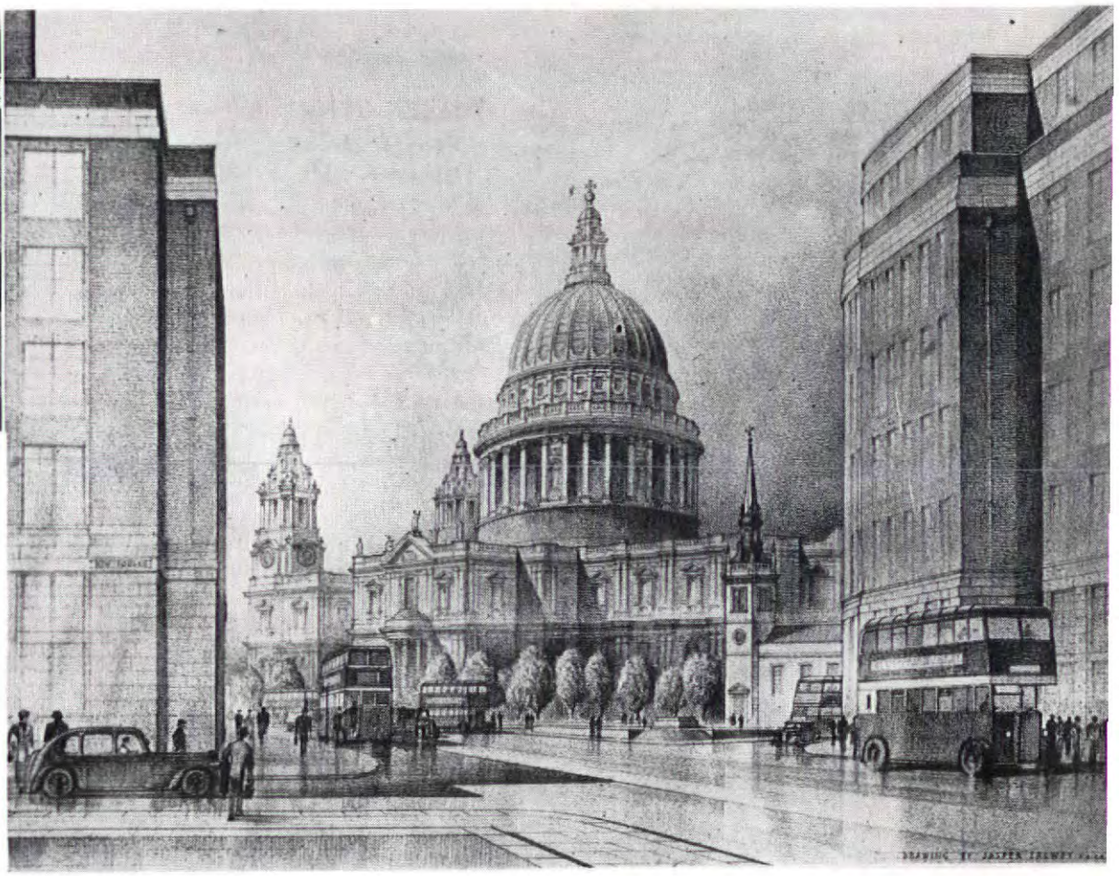
The British *Architect's Journal* hoped that London's new museum might soon grow into a building of its own which, like its New York counterpart, would give contemporary art a proper setting in contemporary architecture.

PLANNERS' PROGRESS

Financial district of London may rebuild to sensationally low density standards and to new daylighting code.

Grumbling, like the U. S., at the slow pace of housebuilding, Britishers might take some comfort from the fact that their great plans for city rebuilding are now moving briskly toward a building start. Last month the Ministry of Town and Country Planning approved, in general, the County Council plan for Greater London prepared by Sir Patrick Abercrombie (FORUM, Aug. '43). Some changes in detail will be made, but the main proposals for moving 1¼ million persons out of London with supporting industries, for a system of ring roads and arterial roads to handle through traffic, for a five-mile-wide green belt around the London suburbs will all be carried out.

NEW CITY OF LONDON plan proposes height and set-back control for new buildings around historic monuments. Drawing (right) shows how traffic underpass would be routed around St. Mary-le-Bow.



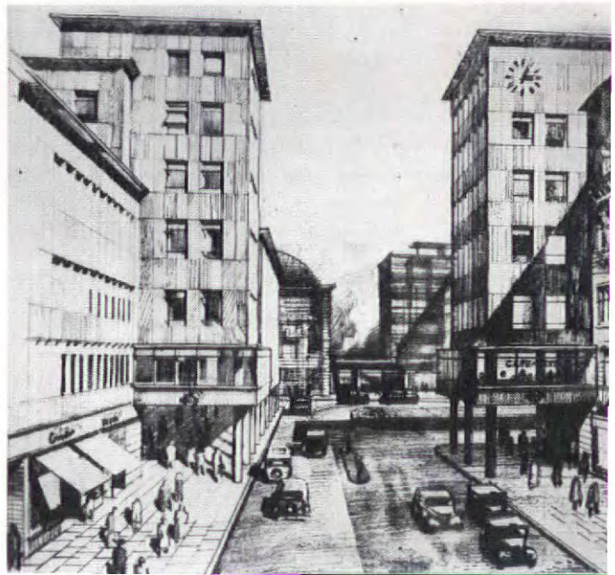
British Combine Photos

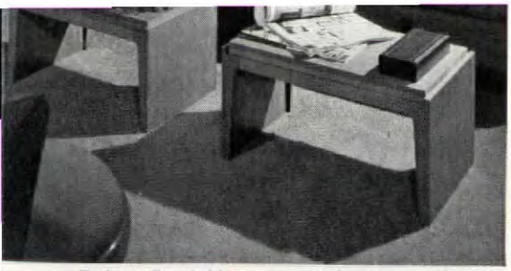
Londoners might also be cheered by the very real progress apparent in the report on rebuilding the "City"—the central square-mile of Greater London—recently presented by Dr. C. H. Holden and Professor W. G. Holford to the Court of Common Council. The City is the financial heart of the British Empire; its $24 billion worth of real estate includes the massive Bank of England, the Royal Mint, the gilt-domed Stock Exchange, the Tower of London.

For an area so crowded with history and pounds sterling, the planners' standards for low-density rebuilding are sensational. They propose that the working floor space in any building should not exceed four times the ground area covered by the building. This represents an enormous whittling-down compared with the business-even-more-than-usual plan sponsored a few years ago by the Court of Common Council.

The report also outlines a daylight code which would have a considerable effect on building mass and layout. This code is based on a "Daylight Factor of 1 per cent." which means that illumination at the point of measure is 1 per cent of that available if from that point the whole hemisphere of the sky could be seen. The code is intended to achieve a standard Daylight Factor of

ST. PAUL'S CATHEDRAL precinct (above) is to be widened to dimensions proposed by Sir Christopher Wren, given ceremonial approaches. Drawing (right) shows two new stations for Old Broad Street.





Twin coffee tables are easy to move and stack

Hedrich-Blessing Photos

One large table is made by flipping open tops

Same tables are stacked for game or snack use

Basic end table may have drop-leaf or drawers

Roll-out drawer section gives typing surface

1 per cent at a distance of 12 ft. from the outer face of window wall and at a height of 2 ft. 9 in. above the floor. This very high standard is probably not excessive for murky London.

The sagacious *Economist* called the report "sensible and a very fine adjustment between all the conflicting claims that, in the case of the City of London, inevitably cry for precedence."

The planners naturally put a great deal of emphasis on unwrapping St. Paul's from its surrounding husk of commercial buildings and giving it impressive approaches from which main traffic is to be diverted. One of these, leading from the Thames, will unfortunately open up a vista straight to a power station which the government has decided to build on the other side of the river. Although the power station is intended to be smokeless, gritless, with gardens in front and fuel tanks underground, a good many Londoners are horrified at the prospect.

DESIGN

BETTER HOMES' MODERN

Designer Wormley turns out some multi-use, medium-priced furniture.

A bright spot in the generally uninspired summer show at the American Furniture and Merchandise Marts in Chicago, Edward J. Wormley's multi-purpose furniture was designed for *Better Homes & Gardens*. It will be presented in that lively magazine's September issue. Produced by the Drexel Furniture Co., the medium-priced pieces are going on sale through Drexel's regular merchandising set-up, which includes 41 stores.

Better Homes' leading editorial idea, which it tactfully says it picked up from letters from readers, is that people like to have furniture they can move around easily and use in a number of different ways. In addition to the tables shown here, Wormley's response to this notion includes a bed whose headboard swings out to become a backrest and whose footboard swings out to become a bench, and a chest with a big pop-out drawer to serve as night stand. Desk chair (lower left) has hidden swivel action.

MARKET

MOST BOUGHT USED HOUSES

Average family expects to pay $6,300 for a house this year.

First close look at what the Great Housing Shortage has done to the Great Housing Market came from the Federal Reserve Board. Of the 2,700,000 families who bought homes last year, 2,350,000 bought used houses.

While last year 6 per cent of all families surveyed had definite plans to build or buy a house, this year only 4 per cent—or about 1,000,000 families—had definite plans to do so.

AUTOMOBILE AND HOME PURCHASES BY INCOME GROUPS—1946

(As percentages of all auto and home purchases)

	Under $1,000	$1,000-$1,199	$2,000-$2,999	$3,000-$4,999	$5,000 & over
Autos	3	20	31	27	19
Homes	6	19	26	29	20

The Board's pry into how people spent their money in 1946 and how they hoped to spend it in 1947 also showed that house customers have made a considerable adjustment to price realities. Customers were planning to pay about $6,300 on the average for houses they intended to buy in 1947—one-quarter more than the average payment they had contemplated for 1946 purchases. (Average price of houses actually bought in 1946 was $5,390.) Almost one-third of this year's customers were planning to pay $8,000 or more, as against only 16 per cent in 1946. Only an optimistic 23 per cent were expecting to pay less than $4,000 this year, compared with 34 per cent in 1946.

Contrary to an American legend, more low-income families buy homes than buy automobiles—if last year's figures are a fair index. The Board's survey produced the interesting table above.

PEOPLE

GRIPES

Sock for realty lobby, parks for Georgia, hospital cocktails.

Last month, as in every month, a number of Americans spoke their minds on things that were making them mad. This, as it does in every month, outraged a certain number of other Americans.

▸ A homespun Georgia Democrat claimed the Veterans Administration "wants hospitals built like the Waldorf." Sourly scanning the appropriation bill, Representative E. E. Cox grunted: "They want cocktail lounges in them."

▸ A Republican governor, noting "the bitterness abroad in this country over housing," backed President Truman's demand for an investigation of the real estate lobby. Vermont's Governor Ernest W. Gibson told the 39th annual Governors' Conference that he thought the real estate lobby "has had an extremely detrimental effect" on the construction of new housing.

▸ In Miami, Mayor Perrine Palmer appalled hotel owners by suggesting that a tax be levied on every hotel room to pad out the city budget.

▸ In Georgia, Governor M. E. Thompson prepared to condemn a 3,500-acre island, for 61 years the private playground of the Morgans, Rockefellers, Goulds, Bakers, Baruchs and other Eastern millionaires. He said he wanted to make it a state park for "the plain people" of Georgia. "Only three miles of the 140 miles of beaches along the Georgia coast are open to the people of Georgia," he explained.

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Chairs in dining room are Naugahyde-upholstered.

Banquettes and chairs in lovely Crystal Dining Room.

Signature of the finest in new upholstery

DECORATOR COLORS execute schemes—modern or traditional—with brilliance and distinction.

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WON'T MAR, CHIP, CRACK, PEEL, SCUFF. There's iron wear in Naugahyde. Sponge off spills, perspiration, dirt, even ink. Impervious to oil, gasoline, acids, salt, water.

NAUGAHYDE IS FLAME RESISTANT, TOO. Can be made in special flameproof construction approved for use in New York, Boston and other major cities.

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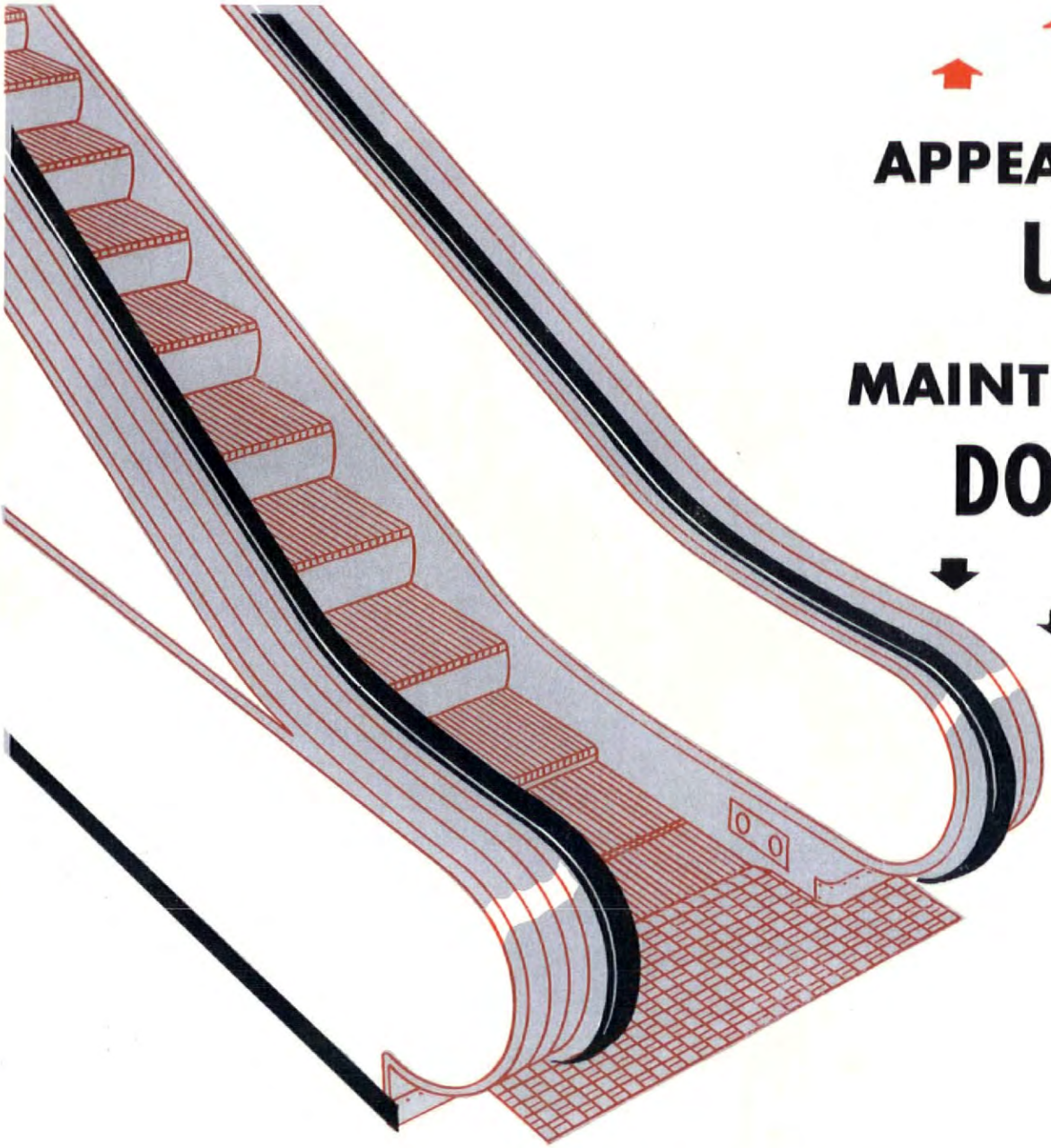

APPEARANCE UP

MAINTENANCE DOWN

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Otis Engineers End Traffic Congestion With Automatic Dispatching, Shorter Round Trips

Lobby congestion ended—waiting time cut by more than half—trips dispatched at regular intervals — these are the results of the elevator modernization in the Medical Arts Building.

DAILY TRAFFIC 19,700 PLUS. A traffic survey by the Otis Elevator Company showed that 19,700 persons entered and left the elevators at the main floor every day. In addition, elevators were used constantly for inter-floor traffic between offices, laboratories and the hospital at the top of the building. Waiting time was excessive, both up and down trips were irregular and full cars often had to bypass waiting passengers. Two banks of elevators, each located in different sections of the building, served all 19 floors.

ENGINEERS MAKE RECOMMENDATIONS. Otis engineers recommended an immediate conversion to modern Peak-Period Control and to high-speed, power-operated doors. They also recommended that one bank of elevators be reserved for local traffic, the other for express travel.

Controls are now arranged so that the scheduling of the elevators is independent of the human element. By simply pressing a button on the lobby control panel, the starter instantly adapts the elevators to changing traffic conditions.

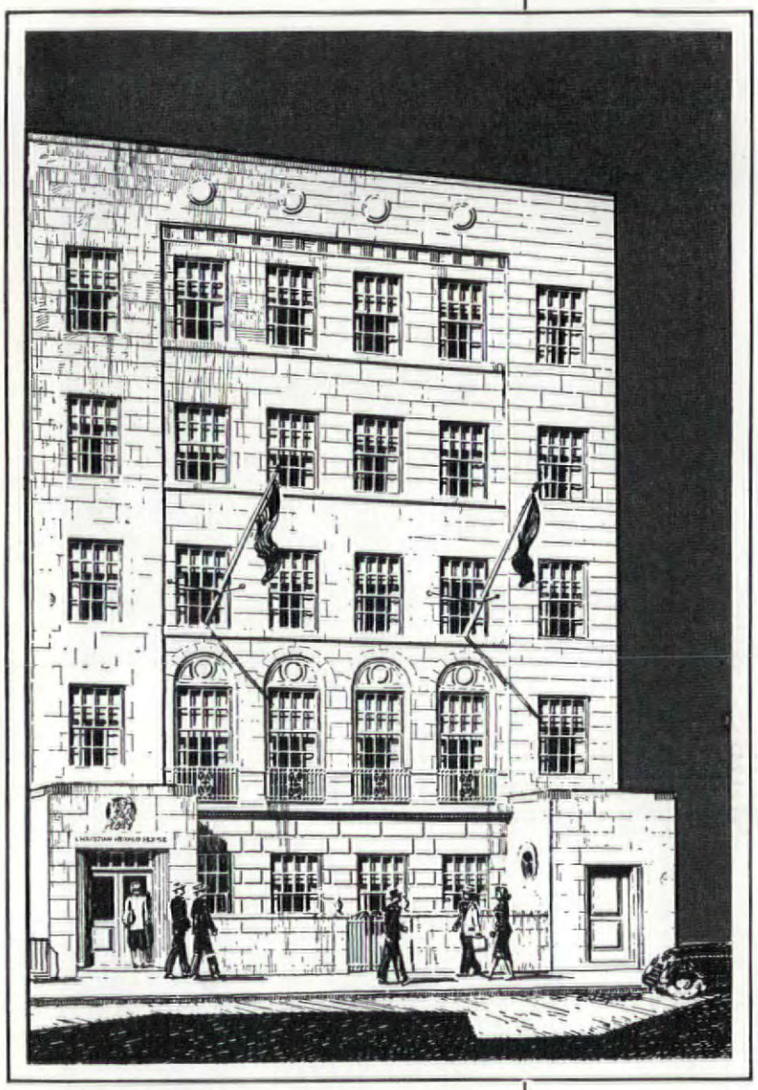
WAITING TIME CUT 42 SECONDS. As a result of proper scheduling and shorter round trips, congestion in the lobby has been eliminated and the average interval between cars reduced from 72 seconds to less than 30. Tenants, visitors and owner praise the greatly-improved service.

DALLAS 19-STORY MEDICAL ARTS BUILDING, *one of the nation's first structures to combine doctors' and dentists' offices, laboratories and complete hospital facilities under one roof.*

PORTION OF LOBBY *showing recently-modernized elevator doors. Bronze plaques on doors depict Pasteur, Hippocrates and other immortals of medicine.*

GOOD SUGGESTION FOR BUILDING OPERATORS. If the elevator efficiency of your building is hampered by inadequate dispatching methods or outdated equipment, why not let a trained Otis modernization expert help you, too? His experience and services are yours at no obligation . . . just call your nearby Otis office.

OTIS ELEVATOR COMPANY



Harry Leslie Walker,
ARCHITECT

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The Christian Herald House, new home of one of America's oldest charity organizations, is the latest testimony to the experience, character and ability of Crow Construction. To the architect these qualifications assure faithful and accurate interpretation of design . . . to the owner, they guarantee sound, economical construction. The irrefutable proof of these qualities stands today in the buildings already constructed by Crow...buildings where Character counts.

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

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That's one reason why so many architects prefer Tile-Tex Asphalt Tile * because it gives them more design freedom in creating correct floors for the interiors of buildings. This is particularly true in retail stores, where modern merchandising requires floors of appropriate design.

Variety of color and size, plus the necessary decorative and functional accessories, are all available in Tile-Tex Asphalt Tile. Here's a product that helps the architect create beautiful, striking floors that help merchants sell goods.

Tile-Tex does more than give the architect design freedom. It gives his client a long-wearing durable floor—easy to clean and keep clean—resistant to stains and scars. Its smooth, tread-easy surface is comfortable to both customers and store employees.

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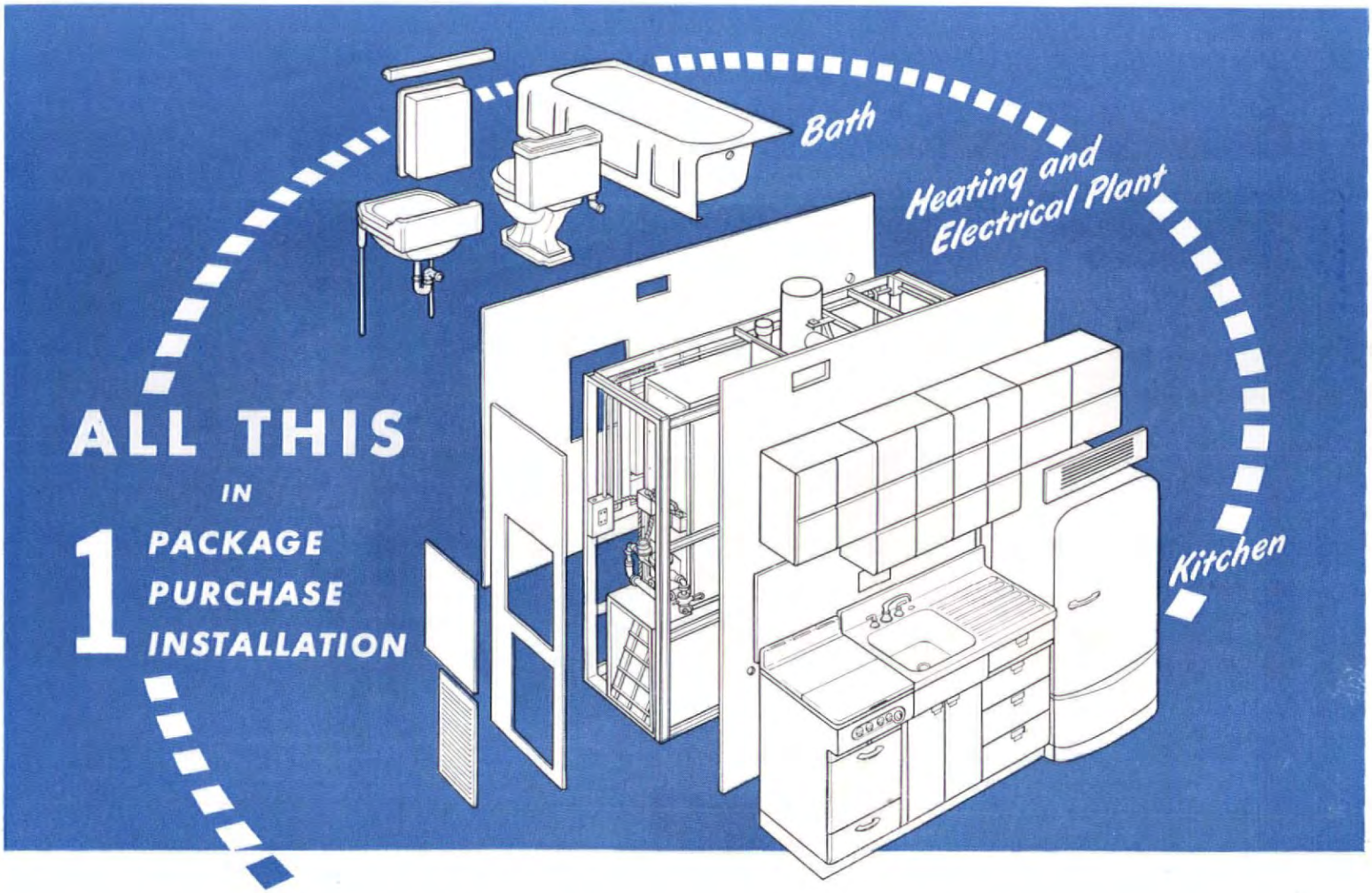

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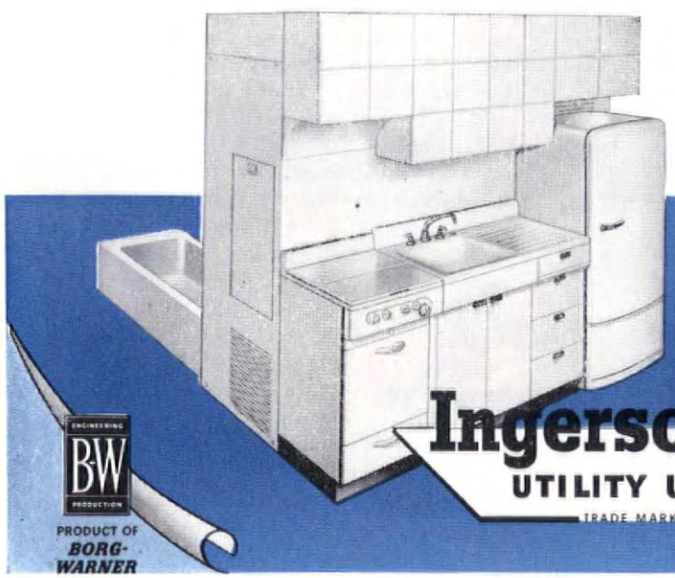

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LETTERS

Dean Meeks Commentary . . . Houses U.S.A. . . . Literary Critique . . . Roger Allen on Nomenclature . . . Continuing Battle over Modern Design . . . More on Architectural Censorship . . . Letter from Tarrytown.

ARBITER OF THE ARTS

Forum:

Congratulations to the FORUM for honoring, in its June issue, Yale's genially dynamic Sybarite, retiring Dean Everett Victor Meeks.

As one of those privileged to partake of the Dean's indulgent direction during the "golden days" of Otto Faelton, the undersigned also had the good fortune to "nigger" for FORUM-consultant George Nelson. Am I wrong in suspecting that I detect his Puckish hand throughout the article?*

Seriously, though, the article was splendid, bringing back nostalgic memories of Weir Hall, water fights, charettes and the imposing figure of the Dean slyly and with great good humor manipulating the strings that built up his beloved school.

ROBERT ALLEN WARD
Skidmore, Owings & Merrill
Oak Ridge, Tenn.

* Wrong.—ED.

Forum:

Our compliments to the magazine for an excellent article, "Arbiter of the Arts," concerning Dean Meeks and especially Otto Faelton, from two former students of theirs.

HARRY G. LINDSAY, A.I.A.
FRED C. JOHNSON, A.I.A.
Bridgeport, Conn.

Forum:

I greatly admired . . . the article on E. V. Meeks . . . because it was so lively and informative.

ROBERT DANIEL
Sewanee, Tenn.

Forum:

A plug for biographical features such as "Arbiter of the Arts" and others of recent months.

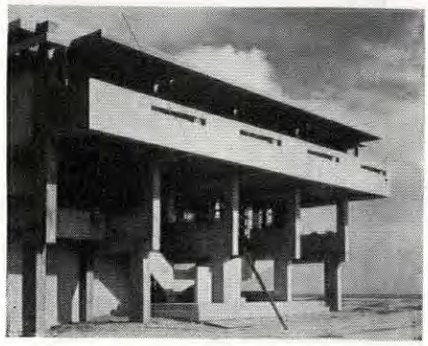
A. V. PETERSON
Seattle, Wash.

HOUSES U.S.A.

Forum:

I am much interested in your historical outline of contemporary architecture in the May issue of the FORUM, but I feel that you have slowed down the pace of our development unnecessarily.

You show under the date of 1929 a house by Corbusier and one by Neutra. I enclose pictures of a beach house I designed and built in 1926, which introduces the radical features of both buildings, except that instead of using the architecturally infantile device of pipe stilts, the house is raised on concrete posts that are an organic part of the concrete skeleton supporting the two upper stories of the building.



I should like to use this occasion to set another date. I built my own house in 1922, and it has become the prototype for most of the now fashionable California houses. It introduced the following characteristic features:

A cellarless, rambling, one-story building, low on the ground, the floor extending without steps into the garden.

A full-height glass wall with large sliding doors on the patio side, under ample overhangs.

A flat shed roof with clerestory windows.

A solid back wall for privacy, and movable partitions for flexibility.

The wall construction uses a prefabricated standard concrete wall unit, which also was a step ahead of contemporaneous experiments with precast, full length walls containing conventional window openings.

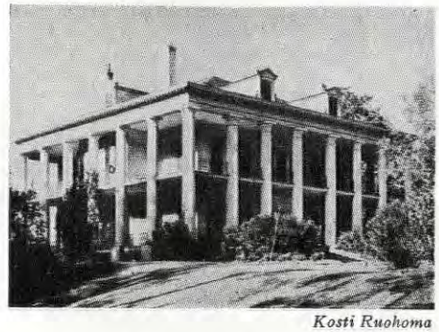
It might be interesting to publish this correction to see if the historic dates might be set back still further by others.

R. M. SCHINDLER
Los Angeles, Calif.

NATCHEZ GRECIAN

Forum:

In the March '47 issue it is written on page 98 "(6) Natchez, Mississippi, 1850, where a colonnade in the '*American Order*' is carried entirely about the house . . ." Would you kindly point out the particulars of the so-called American Order. The number 6 picture is too small to show the details of the order, however it seems to me that it is a 'variante' of the Doric Order.



Kosti Ruohoma

A. MEUTEMEDIAN
Cairo, Egypt

While the details of the capitals are basically Doric, the treatment of the entire colonnade (with its attenuated lines broken by a continuous gallery) reveals such marked regional influence that the order was termed American.—ED.

LUMBER ALIAS LITERATURE

Forum:

I am puzzled by your use of the expression "pecky cyprus" in describing the Loewy House at Palm Springs (FORUM, May, '47). Is this an arbitrary changing of the word cypress by your board—and may we expect similar changes for other words?

RALPH M. BUFFINGTON
Houston, Tex.

Our red-faced writer had been helling around with Homer.—ED.

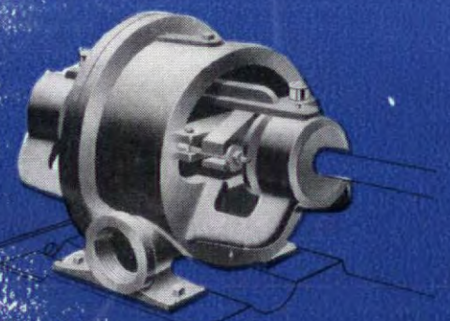
ALLEN RIDES CORBUSIER

Forum:

After reading "When the Cathedrals Were White" by Charles Edouard Jeanneret (M. Le Corbusier), I understand all about everything except why Charles Edouard Jeanneret wished to change his name to Le Corbusier as I think (I merely think, since I am not going to spend any MORE time hunting all over the place for my French dictionary) that Corbusier means Crow. This is ridiculous as M. Jeanneret does not look any more like a crow than I do. Not as much, you say? Not that there is anything wrong in changing your name, if it improves things. For instance, Fred Allen changed his name from Sullivan to Allen. My wife did the same thing, come to think of it, but Fred Allen didn't do it the hard way. He didn't have to marry me.

However, this is neither here nor anywhere else, that I can see. I must protest

(Continued on page 26)



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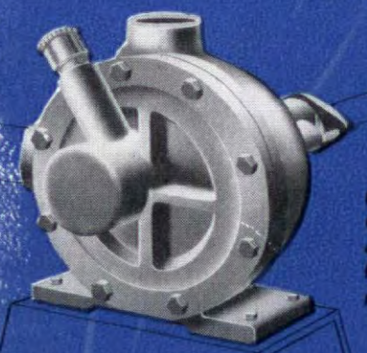

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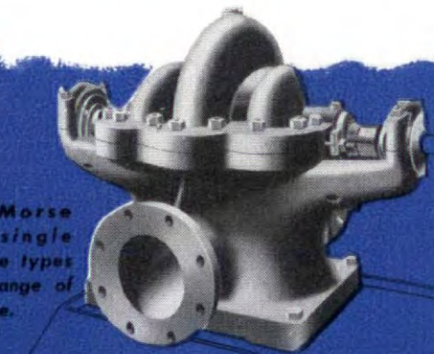

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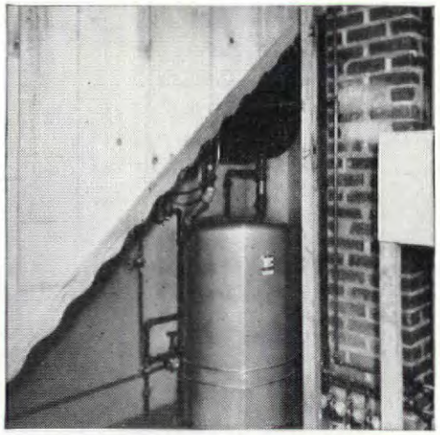

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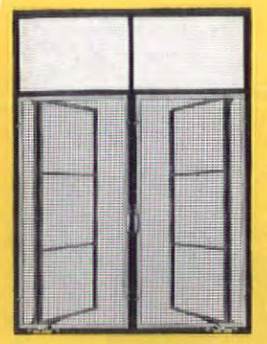

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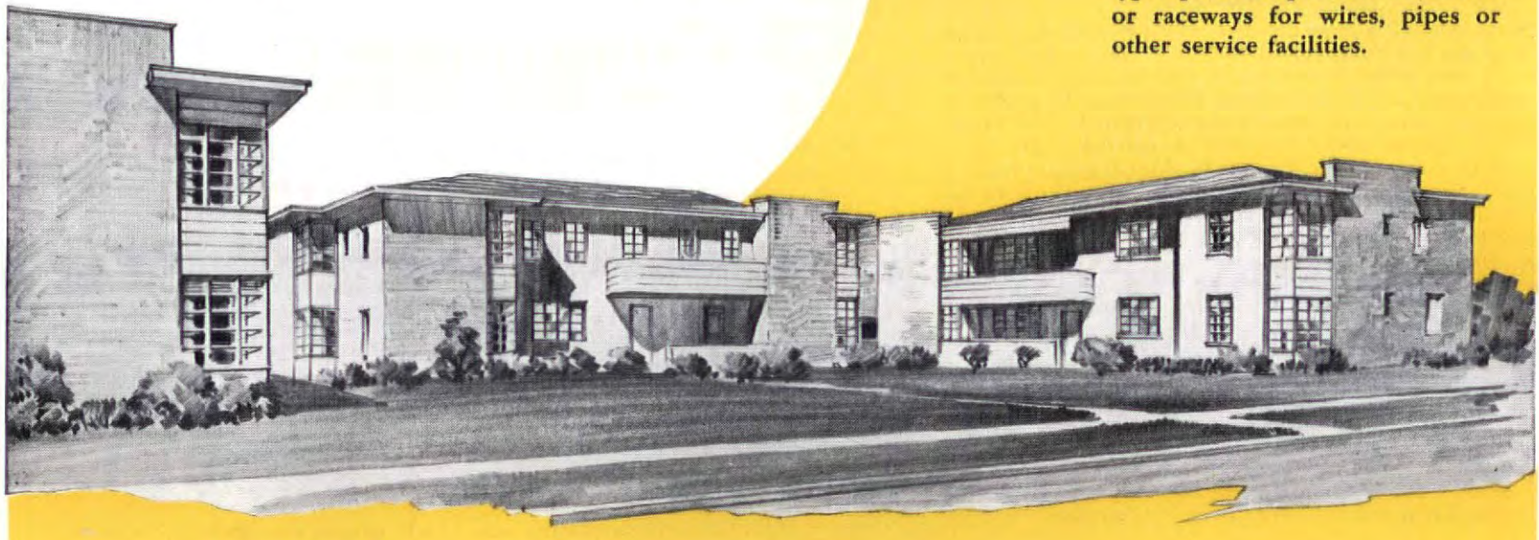

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Kno-Draft adjustability increases efficiency and economy.

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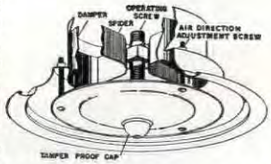
To those advantages, Kno-Draft adds adjustment features that increase both the efficiency and economy of the air diffusion principle and a simplicity of design that blends with any decor.

Kno-Draft Direction Adjustment assures positive air pattern control by affording any angle of air discharge from vertical to horizontal that is needed to accommodate ceiling heights, individual or seasonal requirements. Volume adjustment is made with a patented damper that regulates the amount of air without affecting the velocity or diffusion pattern.



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against M. Jeanneret establishing a dangerous precedent; suppose all the architects in America adopted his ideas on nomenclature and hauled off and changed their names to something descriptive? Naturally they would not ask their colleagues' advice; if they did, and accepted it, there would be a lot of plans signed by Le Stinky floating around the country. No, they would appraise their own merits and come up with the mot juste. (French; I found the damn dictionary.)

As I have enough people mad at me already, not counting what I am going to have for mentioning Le Corbusier without genuflecting, I will not select names for American architects except to point out that Doug Orr, the new president of the Institute, could call himself Le Nugget if he wanted to. And my friend Alden Dow could rearrange his name just a trifle and sign his drawings Le Wow. I have always envied Alden his forethought in having such a short name; it fits into any headline. As this has now exhausted the list of architects who will not get angry at me for mentioning them in print, I will turn to my own affairs.

The way I look at it is this: Naturally, I am not going to come right out and call myself Le Face, regardless of how pretty I am, and on the other hand, I am not going to come right out and call myself Le Thirst, as I am not allowed more than two highballs a day, and the days are getting longer too. In fact, I know the ideal architect to call himself Le Thirst; some years ago he and I invented an organization known as Waterdrinkers Anonymous; whenever any poor soul felt the urge to down five or six glasses of water, he could phone us at any hour and we would talk him out of it.

Of course I could call myself Le Loudmouth to general acclaim but suppose you keep your witty remarks to yourself.

ROGER ALLEN (Le Lowbloodpressure)
Grand Rapids, Mich.

NOTES AND COMMENTS

Forum:

Now that I have seen the April issue of the FORUM's cow shed architecture, will you be so good as to cancel my subscription . . .

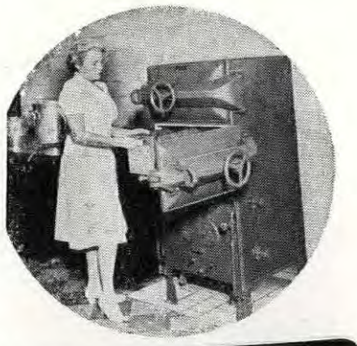
I knew that architects had reached a new low in the respect of their fellow men and now I am beginning to understand why. I have never seen so much unattractive material posing as architecture before in my life.

HARRY LEONARD MILLER
White Plains, N. Y.

Forum:

In the May 1947 Architectural FORUM: We do not see anything to get excited about

(Continued on page 30)



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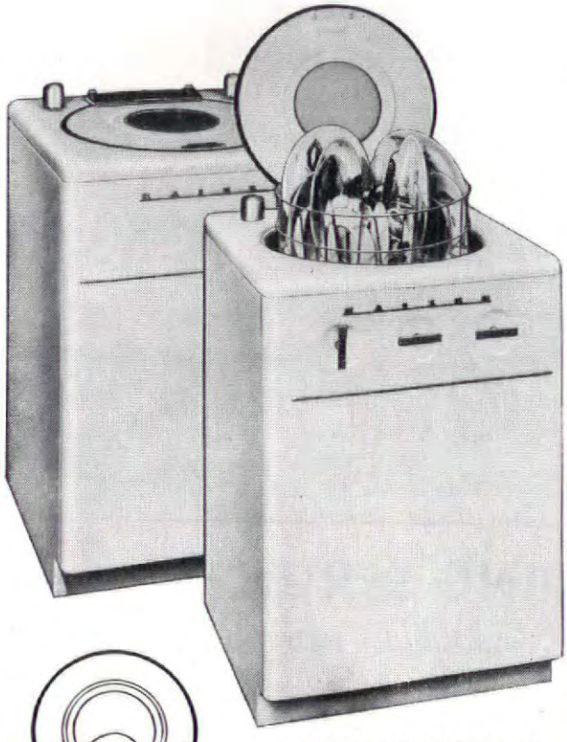

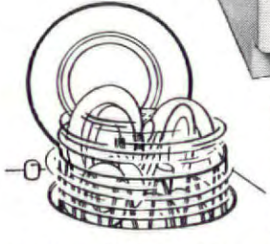

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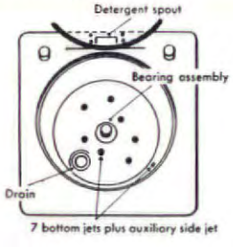

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Prices from $129.50

DE LUXE BUILT-IN: Height, top closed—30¾"; height, top open—50¼"; width—21"; depth—20". Controls mounted on panel across front of machine. Includes a water-operated lift control which raises and lowers basket in basin.

STANDARD BUILT-IN: Height, top closed—20¼"; height, top open — 39¾"; width — 21"; depth — 20". Easily adapted to various architectural treatments. Controls centered in operating knob at left rear corner of top. Either model may be installed at any height from the floor.

It's quick! It's simple! It's available NOW!

All models of the Kaiser Dishwasher are constructed of lightweight, rust-proof aluminum. Exterior panels and cabinets are finished in baked white enamel. Fittings are chrome plated.

One piece seamless washing basin retains its satin-smooth surface for life of the machine. No corners or cracks to collect food. Basin cleans itself.

Dishwasher is "plumbed in" with only two connections—one to hot water supply, one to drain outlet. Uses approximately 2 gallons of hot water per minute during rinsing and washing.

Operates from natural pressure in the kitchen hot water pipe. Minimum pressure required is 40 pounds. Venturi jets in basin increase actual water circulation four times primary volume.

Table service for average family is normal load for all models — plates, cups, glasses, silverware, etc.

Siphon-breaker (complying with A.S.A. codes) acts automatically to prevent back flow of dishwater. De Luxe models have two siphon-breakers (for wash mechanism and lift control); Standard models, one.

Average operating period includes approximately ½ minute initial rinse — 3 minutes washing — ½ minute final rinse.

A liquid detergent, CHAT, is recommended for use in the Kaiser Dishwasher

Kaiser Fleetwings Sales Corporation
General Sales Office
1924 Broadway, Oakland 12, California

Please send me A.I.A. file sheet on the new Kaiser Dishwasher. I am an architect ☐ I am a contractor ☐

Name and Title _____

Firm Name _____

Street _____

City _____ *Zone* ___ *State* _____

AF-8-47

A "Sea-Side" Beauty Celebrates Eight Years of Public Acclaim!

Crawford's Sea Grill—famous Seattle, Washington, restaurant, on the shores of Puget Sound—was built in 1940. Top photo was taken soon after completion; the picture at the right was made in May, 1947. This plywood building has given excellent service —and has many years to go.

Inside walls are of Interior-type Douglas fir plywood. Ceiling, also of plywood, is covered with sound-absorption blocks. Outside walls, including the pylon, are Exterior-type plywood, as are two walk-in refrigerator units for fish and meat storage.

"OUTSTANDING SERVICE"

. . . says Builder Bob Atwell,

"Our Experience Puts Plywood On the 'Preferred Material' List"

THIS attractive, modern restaurant is another example of plywood's extensive use for commercial buildings of almost every type. For eight years it has been attracting the public's eye—and patronage! Designed by Architect George Groves of Seattle, and built by the Atwell Construction Company, it has proved a much-copied structure. Builder Bob Atwell says: "Douglas fir plywood is definitely on our list of preferred materials for both commercial and residential work. We were, I believe, among the first to use Exterior plywood for large, non-residential jobs, and in every case it has turned in excellent performance. We take advantage of plywood's strength, durability and ease of handling whenever possible."

PLYWOOD'S MANY ADVANTAGES KEEP DEMANDS GREATER THAN PRESENT SUPPLY

Douglas fir plywood production is greater now than in prewar years. Today's demand, however, is unprecedented—and raw material availability is the controlling factor in attaining higher output. This uneven demand-supply ratio naturally means that plywood may not always be readily obtainable at any given time and place. Keep in touch with your regular source of supply as to price and delivery information. For technical data, write the Douglas Fir Plywood Association, Tacoma 2, Washington.

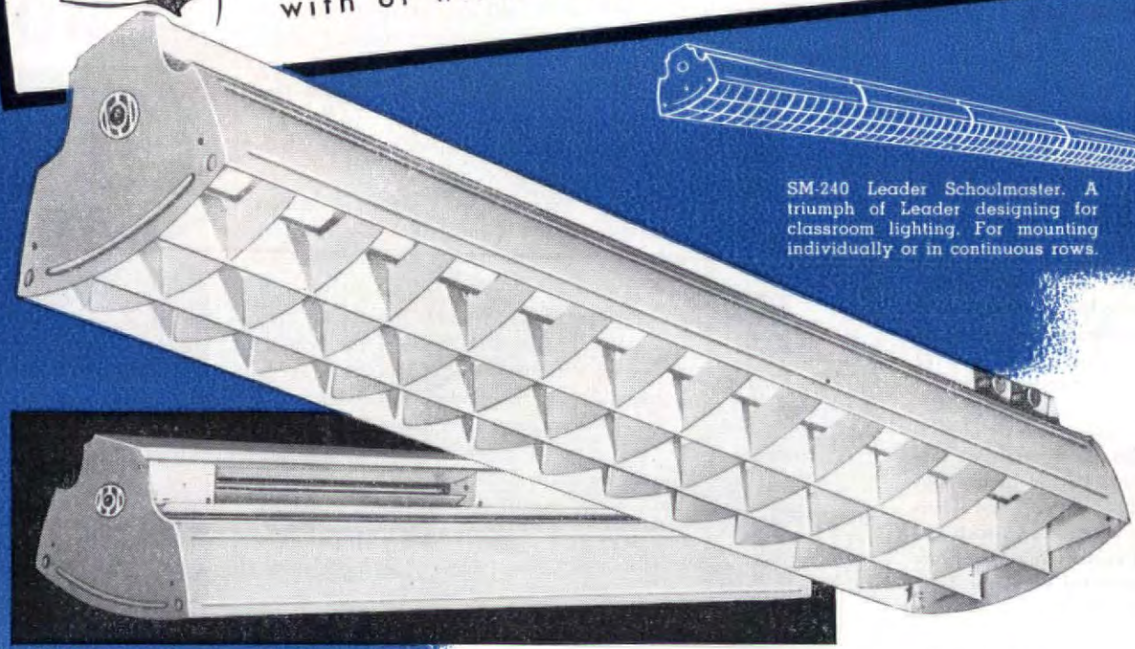
Douglas Fir
PLYWOOD
LARGE, LIGHT, STRONG
***Real Wood* Panels**

Manufactured in two types: EXTERIOR, *for permanent outdoor applications;* INTERIOR, *for inside use. Both types are available in several appearance grades.*

Leader announces the SCHOOLMASTER

with or without built-in germicidal lamp

SM-240 Leader Schoolmaster. A triumph of Leader designing for classroom lighting. For mounting individually or in continuous rows.



SMG-240 Leader Schoolmaster with optional built-in germicidal lamp — an intensified source of radiant ultraviolet energy that rapidly destroys air-borne bacteria.

It's New! It's Different! It's America's Finest Classroom Fixture!

Good schoolroom lighting is an important tool of learning. And the Leader SCHOOLMASTER has really "rung the bell." Here, at last, is a classroom fluorescent fixture with no glare, correct intensity and even distribution of light. And there's an optional feature of a built-in germicidal lamp that is not visible when the fixture is hung at ordinary lighting levels. Yes, the Leader SCHOOLMASTER has *everything* for proper schoolroom lighting.

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

LEADER ELECTRIC COMPANY

3500 NORTH KEDZIE • CHICAGO 18, ILLINOIS

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

NEW HEATING IDEAS...

COME OUT OF the WEST

Of signal interest to you who design and build: Pacific has developed—(1) really new performance standards in warm air, automatic gas heat; and (2) distinctive functional styling.

Throughout the nation, our own industry acknowledges the spectacular success of such 1947 Pacific innovations as Duo-Stage Modulation* and Thermo-flo Heating Element . . . such distinctly original engineering as appears in the new Suspended Unit, the Duct Furnace, the Winter Air Conditioner.

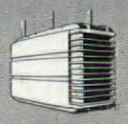
New, yes . . . yet fully proven by many months of rigid testing in the Naco Engineering Laboratories. Today, as for a third of a century, the entire lineup of Pacific Gas Heating Equipment bears the mark of superior engineering.

Learn about really new gas heating! Send for a file of catalog and specification data. Throughout the nation, our dealers are at your service.

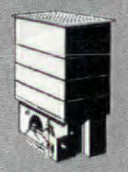
"Be Specific . . . Demand Pacific"

*Patent applied for.


DUCT FURNACE


SUSPENDED UNIT


GRAVITY FURNACE


FLOOR FURNACE


DUAL WALL FURNACE


FORCED AIR FURNACE


CONSOLE HEATER

PACIFIC HEATER DIVISION
NACO MANUFACTURING CO.
P. O. Box 310, Huntington Park, California

Levitt's $6,990 house as we have been selling 972 sq. ft., five-room brick veneer homes on good building sites for $7,725 right along, and same houses in frame for $6,825.

LYNTON L. SCHARFF, Gen. Mgr.
Little Rock Bldrs., Inc.

Little Rock, Ark.

With radiant heating, complete wall and ceiling insulation, automatic washer, range, refrigerator, wall of kitchen cabinets, built-in bookcases, metal venetian blinds and generous landscaping?—ED.

Forum:

I must congratulate you on the May issue. This time you have given us much of interest. I still do not agree with you that the so-called "modern colonial" sacrifices "convenience or economy" as compared with "Modern" as it is called (see p. 88). I have lived in Frank Lloyd Wright's houses and the criticism on page 26 is deserved.

These extremes of design are neither economical nor comfortable. Were they so, Levitt & Sons would not be building 3,000 houses of the cottage type (p. 70).

Sullivan and Wright developed their designs largely from those of the original American architects—the Mayas and Incas. Examples of their work remaining to us are temples, not residences. However, much of the new work is good and its picture windows, plain surface contrasts and color contrasts will be generally accepted.

WILLARD M. ELLWOOD

Mishawaka, Ind.

Forum:

Re the letter of Jan Sholta (FORUM, May '47) commenting on Frank Lloyd Wright: In 1887 Mr. Wright built Hillside Home at Spring Green. In 1947—60 years later, Mr. Sholta—Frank Lloyd Wright is still the foremost inventive genius of at least American architecture, if not the entire world.

But no intelligent man expects even genius to be infallible. No one person and no one thing is or ever has been perfect, Mr. Sholta. Including you and I and Frank Lloyd Wright.

T. COOPER

Seattle, Wash.

MORE ON ARCHITECTURAL CENSORSHIP

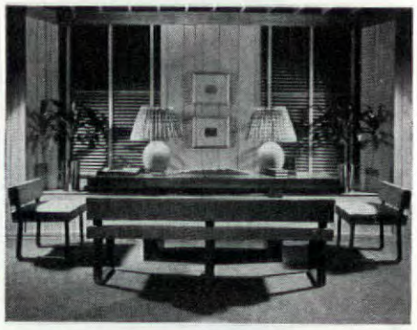
Forum:

Thanks for the invitation to grade your editorial along with the other bluebooks. It would be easy—and my first reaction was to approbate and give you an "A" for help-

(Continued on page 34)

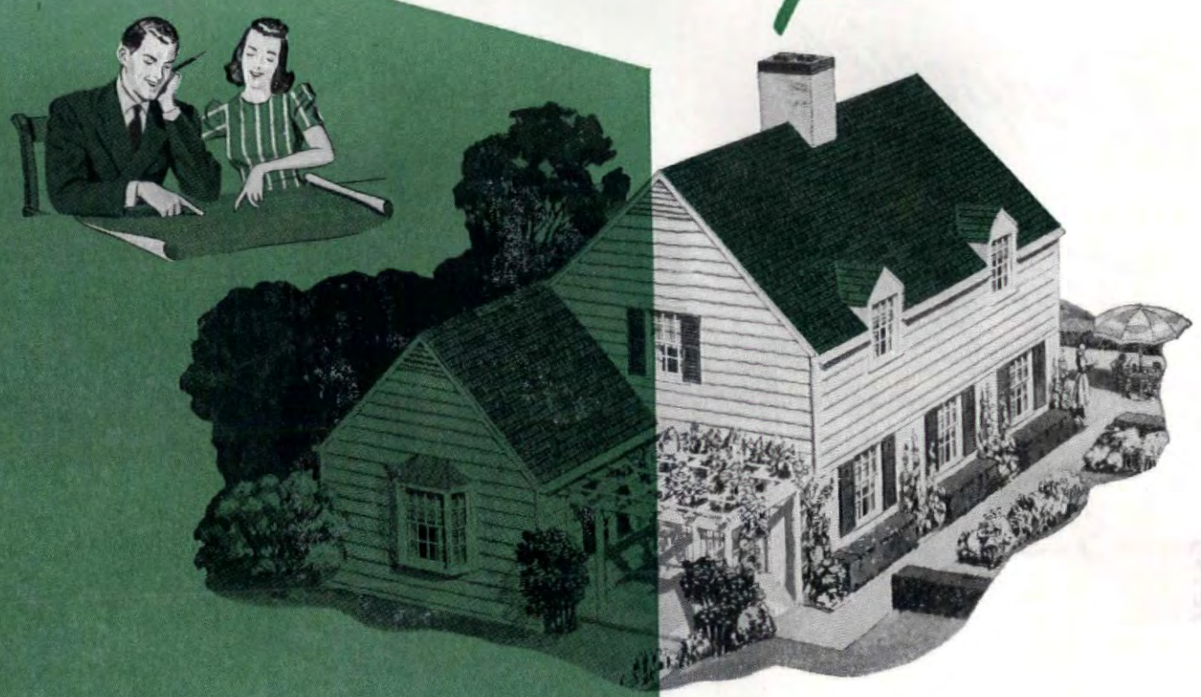
DUNBAR for MODERN

SITTING UNITS AND BANQUETTES
with continuous laminated supporting members; upholstered in sponge rubber over springs.



DUNBAR FURNITURE MANUFACTURING COMPANY
BERNE, INDIANA
1638 Merchandise Mart, CHICAGO 54, ILL.
385 Madison Ave., NEW YORK 17, N. Y.
203 Clarendon St., BOSTON 16, MASS.

THEIR HOME IS WHAT *You* MAKE IT



Think of the many houses you've helped build . . . of the many homes you've helped establish. In part, these homes are what *you* made them. On the designs you create, and on the quality of the materials you specify depends their comfort, their soundness, and their future value.

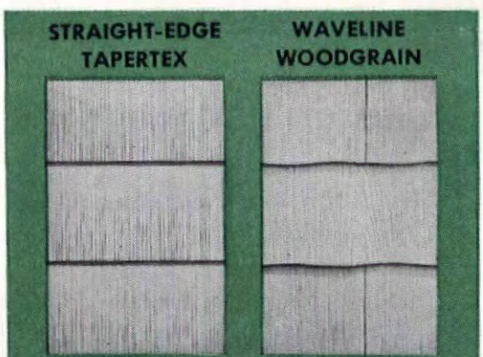
A pretty important responsibility, isn't it? And that's one reason why you should specify Flintkote Asbestos-Cement Sidings.

These attractive sidings are currently available in a variety of pleasing surface textures. They're equally adaptable to new construction or remodeling. They're durable, and as fire-resistant as stone. They never require paint to protect their long life.

In short, Flintkote Asbestos-Cement Sidings are a big value.

And, like all Flintkote Building Materials, the Asbestos-Cement Sidings have behind them the experience and care-in-manufacture that comes with Flintkote's nearly half-a-century in the business.

The home owners in your community depend on you. Their homes are what *you* make them. And you can't go wrong with Flintkote.



The two patterns above are among the most popular in the Flintkote line of Asbestos-Cement Sidings. Specifications for both: Pieces per Square, 57; Weight per Square, 185 lbs.; Exposure, 10½" x 24"; Headlap, 1½".

● If you haven't already received your copy of our new 1947 catalog, write for it today. It's yours for the asking. The Flintkote Company, Building Materials Division, 30 Rockefeller Plaza, New York 20, N. Y.

FLINTKOTE MAKES A COMPLETE LINE OF BUILDING MATERIALS . . . **Asphalt Shingles and Sidings Asbestos-Cement Shingles and Sidings • Roll Roofings and Sidings • Insulated Sidings • Decorative Insulation Board • Structural Insulation Board • Fiberglas* Insulating Wool.**

*TM Reg. U. S. Pat. Off. Mfgd. by Owens-Corning Fiberglas Corp.

FLINTKOTE

the extra years of service cost no more!

*Draperies of Fiberglas** set a fashion in SAFETY

Fires can't start or spread in noncombustible decorative hangings

Serious fires usually result from the rapid spread of flames through materials that *can* burn.

Now, replace an inflammable material with one that *can't* burn—*and you eliminate a fire hazard.*

Decorative hangings woven from Fiberglas yarns can't burn. They're *glass.* They're *originally* and *permanently noncombustible.* Furthermore, in the midst of fire or searing hot blasts, these fabrics of Fiberglas will not contribute to the further depletion of oxygen, will not give off suffocating smoke and fumes.

In hundreds of places of public assembly from coast to coast—in hotels, restaurants, clubs, schools, hospitals, auditoriums—architects, decorators and owners are designing for safety, including in their plans these decorative, noncombustible fabrics of Fiberglas.

Many attractive weaves and colorful patterns are available—and expert fabric service shops located in principal cities are ready to fashion and hang the draperies you select for your decorative scheme . . . write Owens-Corning Fiberglas Corporation, Dept. 830, Toledo 1, O.

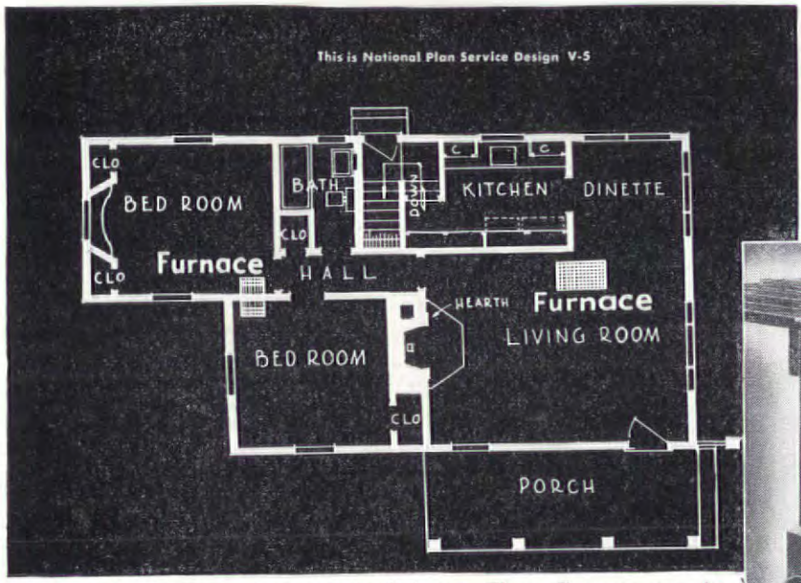
In Canada: Fiberglas Canada Ltd., Toronto, Ontario.

**Listed by Underwriters' Laboratories, Inc., as "Noncombustible Fabric".*

OWENS-CORNING
FIBERGLAS
REG. U.S. PAT. OFF.

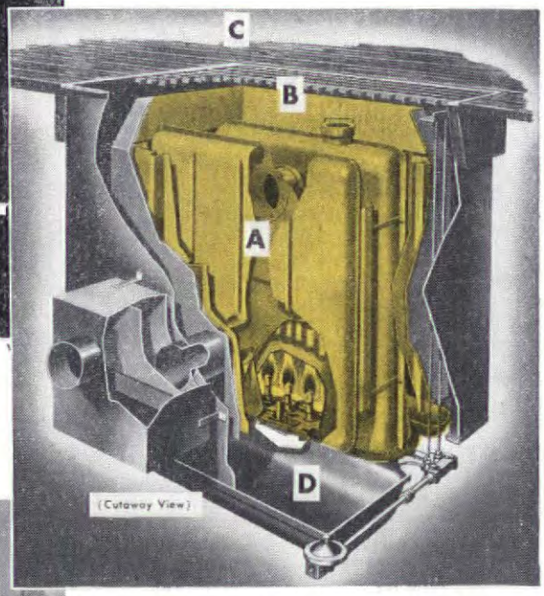
Why it pays low-cost-home builders to revise plans

To Include Coleman Floor Furnaces

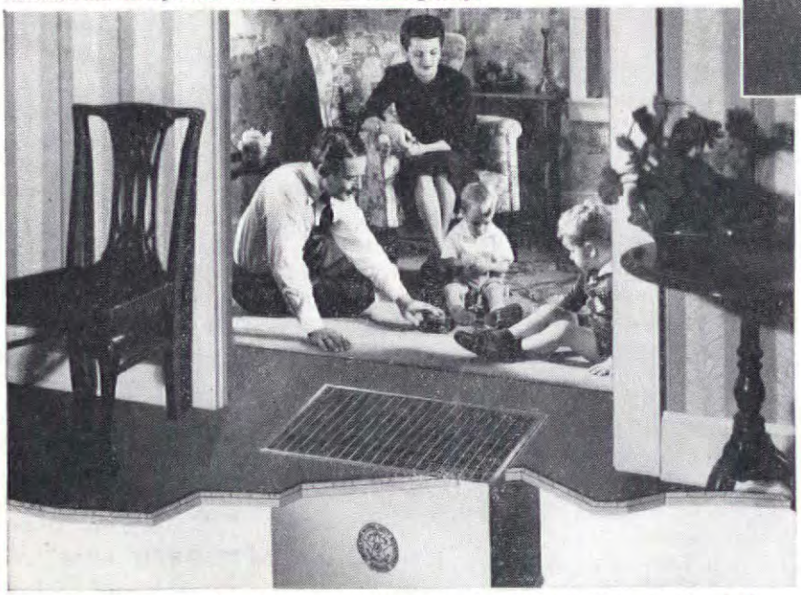


This plan offers savings that often improve value! This design, by National Plan Service (Design V-5), shows how this leader in small home design has secured maximum value and convenience in a genuinely moderate-priced home. Note how two Coleman Floor Furnaces can be used for "area" heating in this type of construction—to eliminate basement cost, and still require no first-floor space for heating equipment.

Needs no basement. Easily installed. Coleman Floor Furnace can be adapted to designs either with or without basements. This saves space in all cases, and often saves construction cost too. Coleman engineering has made it possible to give amazing "all-over-the-house" comfort, at exceptionally low fuel cost—along with the clean automatic heating today's housewives demand. And Coleman's reputation for quality and nationwide acceptance are powerful selling helps.



Cutaway model shows the advantages of Coleman's automatic, "all-over-the-house", warm-floor heat that really sells homes. Note how floor-level air is drawn through cool-air-chamber (A); how air is thoroughly heated in warm-in chamber (B); how 78% open register (C) lets warm air into house FAST. Note: Patented streamlined bottom (D) speeds up warm air flow 35% over old-fashioned designs.



See how it sits in the floor—not ON it and not in the basement. No basement is needed, so you can often save this cost—and much costly duct work. An experienced man can install in only 4 to 6 hours. Models from 25,000 to 70,000 BTU input; use one furnace, or combinations of two or three. In city, town or country, there is a Coleman Floor Furnace to fit your needs—models for oil, gas and LP-Gas.

Special cooperation for contractors! Send coupon for full facts and latest contractors specification book.

The Coleman Co., Inc., Dept. AF-658, Wichita 1, Kas.; Philadelphia 8, Pa. (Terminal Commerce Bldg.) Los Angeles 54, Calif.

AUTOMATIC HEATING **Coleman**

The Coleman Co., Inc., Builder's Contract Dept. AF-658, Wichita 1, Kansas

Send me free information about your special cooperation for builders and contractors. Also send Floor Furnace Builder's Catalog.

Name_____

Address_____

Town_____ **State**_____

Samuel Cabot Announces . . .

A NEW STAIN FOR CALIFORNIA REDWOOD

Cabot's CALIFORNIA REDWOOD STAIN

Cabot's California Redwood Stain was developed in cooperation with the California Redwood Association and carefully formulated to meet their exacting standards.

Preserve the natural beauty of redwood siding and clapboards with Cabot's new California Redwood Stain. This stain maintains the original color of new redwood and displays grain and texture to its best advantage. California Redwood Stain contains undiluted creosote oil, the best wood preservative known, and insures long-lasting protection from decay.
Write for complete information and sample of California redwood treated with Cabot's California Redwood Stain. Samuel Cabot, Inc., 1304 Oliver Bldg., Boston 9, Mass.

CALIFORNIA REDWOOD STAIN

1. Maintains the color of new redwood.
2. Restores the original color to old, darkened redwood.
3. Gives any wood a redwood appearance.

Cabot's CALIFORNIA REDWOOD STAIN

ing preserve democracy in design. On second reading I must reduce the grade to "C+." Time marches on, you know, and a design commission in 1947 need not be a slicked up version of the old Fine Arts Commission. It seems to me that today, perhaps for the first time in the U. S. A., architects have sufficient stylistic freedom and imagination to use reasonable limitations in a creative way, especially when there is an over-all social objective involved.

Perhaps I'm an optimist. I don't believe: (a) that a design commission in New York would "substitute Vignola for virility;" nor (b) that control over the whims of those who finance the Avenue buildings would "inevitably bring banality;" nor (c) that design control would be the kind of "censorship rule behind which the commonplace is never far;" nor (d) that either the architects or the public would long endure your brand of censorship even if it ever crept in.

Did you know that New Orleans passed an ordinance requiring all old buildings facing Canal Street to be painted white, and new ones to be near white in color? The result is approved by most everyone.

Why not try out the idea of design control?

BUFORD L. PICKENS
Tulane University
New Orleans, La.

Forum:

. . . The question reminds me of the aphorism. "Good taste is a quality of a small mind."

B. KENNETH JOHNSTONE
Carnegie Institute of Technology
Pittsburgh, Pa.

Forum:

I heartily agree with your sentiments regarding censorship in general. If art is to be an expression of its time and place and be appreciated by the populace, popular opinion should be the censor. Only when a number of architects and others are engaged in the design of related buildings is an art commission or similar agency justified. The government buildings in Washington serve as an example. If unity in the design of the group is desirable (and I think it is), then a coordinating agency with power is necessary.

C. H. COWGILL
Blacksburg, Va.

Forum:

I served for twenty years as a member and vice chairman of the City Plan Commission of St. Louis. On several occasions I discussed with the chairman, Mr. Ernest J. Russell, the desirability of some control

(Continued on page 38)

for every wire joint . . .

Specify IDEAL Wire-Nuts*

(THE SOLDERLESS, TAPELESS WIRE CONNECTORS)

because . . . they offer these definite advantages . . .

Better Electrically

Stronger Mechanically

A "Wire-Nut" joint will stand up to 3 times as much pull, show up to 25% less electrical resistance than a solder and tape joint. Highly resistant to heat and vibration—non-corrosive.

SAFE Molded insulation prevents sharp wire ends protruding—stops insulation failures.

COMPACT "Wire-Nuts" require very little space; fit in close quarters "like peas in a pod."

EASY TO USE Strip wires—screw on—*that's all.* No solder—no tape.

FACTORY TESTED "Wire-Nuts" must pass the most rigid tests for precision and strength before shipment.

APPROVED Ideal "Wire-Nuts" are listed by Underwriters' Laboratories, Inc.

Millions of Ideal "Wire-Nuts" are in use for roughing-in, fixture wiring, etc. Write now for complete application and cost data. Free samples on request.

*Trade Mark Reg. U.S. Pat. Off.

IDEAL INDUSTRIES, Inc.
Successor to
Ideal Commutator Dresser Co.
2075 Park Avenue, Sycamore, Ill.

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

YOU NAIL TO STRAN STEEL FRAMING

When they use Stran-Steel packaged framing for the first time, architects and builders alike are surprised that steel can be so easy to work with. Consisting of only a few basic types of framing members and fittings, the Stran-Steel system is simple and efficient. Yet it allows full flexibility of design. Practically any type of framing connection is possible, and any standard collaterals can be used.

Two unique construction features make Stran-Steel packaged framing ideally suited for light-load buildings. One is the fact that members can be quickly assembled with self-threading screws. The other is the patented *nailing groove*, an integral part of every Stran-Steel stud and joist. By means of this groove, collaterals can be nailed directly to the frame, just as easily as to wood.

By virtue of its efficiency, Stran-Steel is *economical*. To prospective owners it represents a sound investment in long building life, simplified maintenance and added fire protection.

BUILD WITH

STRAN STEEL

GREAT LAKES STEEL CORPORATION

Stran-Steel Division • Dept. 35 • Penobscot Building • Detroit 26, Michigan

UNIT OF NATIONAL STEEL CORPORATION

Kawneer presents

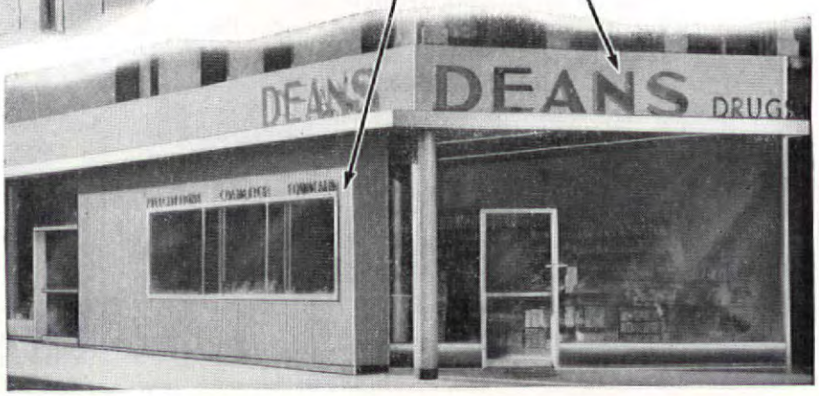
Zourite

A NEW ALUMINUM FACING MATERIAL

- Handsome appearance
- Easy to install
- Easy to maintain

This modern shopping center in Modesto, California, makes use of Zourite as a facing for the walls which separate the stores and as a decorative covering for the cornice.

On Dean's Drug Store in Niles, Michigan, Zourite has been applied vertically to the exterior wall and horizontally to the sign area above the projecting ceiling ledge.



BEFORE

These "Before" and "After" pictures of Smith's Store in Oakland, California, show how successfully Zourite can transform an out-of-date building into a striking, modern store. No major alterations were made to the face of the structure.

AFTER

ZOURITE — THE MODERN FACING MATERIAL FOR FACADES, WALLS, CEILINGS, TRIM, AND OTHER EXTERIOR AND INTERIOR SURFACES

Zourite is ideal for all facing jobs . . . for new construction or remodeling . . . for all types of commercial buildings.

Made of easy-to-work aluminum with a soft, semi-lustrous finish, Zourite is styled to the highest standards of contemporary architecture. Its decorative, cleanlined pattern and moderate price make Zourite a handsome and practical covering for the largest facade surface or the smallest area of trim.

It can be applied to exterior or interior surfaces without major structural changes. High costs for demolition work and alterations are eliminated.

Shipped complete with furring strips, fastening clips*, and trim mouldings, Zourite can be applied horizontally or vertically to masonry, wood, or metal surfaces. Adjustable tongue and groove joints* reduce job-site labor and eliminate the special manufacture of odd sizes and shapes to meet individual job requirements. They also allow for expansion and contraction.

*Patent applied for.

Easily maintained, Zourite can't chip, rust, or scale. It is washed clean with water, and it requires no painting.

Zourite comes in 8½-in. and 4¼-in. widths and 20-foot lengths which can be quickly cut to desired lengths on the job.

Write for construction details which will be sent to you at once, and for the illustrated Zourite book which will be off the press soon.

The Kawneer Company, 763 North Front St., Niles, Mich.

Kawneer
SALES-BUILDING
STORE-FRONTS

Weir-Meyer equipment offers all types for all fuels

GAS
OIL
COAL

Specify Weir-Meyer confidently for any fuel. It's dependable. It's modern. New ease of installation. Finer performance—lasting economy. For residential, commercial, industrial use.

for homes with or without basements

Weir-Meyer offers custom-fitted equipment for every need. Gives exclusive improvements you'll want to utilize.

WRITE
Send for descriptive literature and performance data on the complete Weir-Meyer line.

Weir-Meyer means modern heat

NATIONAL WARM AIR HEATING AND AIR CONDITIONING ASSOCIATION
INDOOR COMFORT

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

that would prevent architectural monstrosities which so commonly destroy the potential beauty of streets and avenues that have been opened or widened at heavy expense. I do not agree with you that such control necessarily means that "the commonplace is never far behind," and that "anonymity and mediocrity rule." It need not be the function of an examining board to suppress individual treatment, but merely to pass upon the appropriateness of a design to fit reasonably well with its surroundings. The burden of proof that his design is appropriate should be placed upon the designer.

I have traveled a great deal through the length and breadth of this country and I have been appalled at the sordid ugliness of the great majority of our cities and towns when, with little or no additional expense, the structures might at least have had some dignity and even an approach to beauty. I think that we have gone so far in the direction of uncontrolled building, with disastrous results, that at least a beginning in the opposite direction could have no worse results than we have actually experienced.

A. S. LANGSDORF, Dean
Washington University
St. Louis, Mo.

Forum:

From this distance one can only shiver and guess at what lurks in the shadows of the Fifth Avenue Association. Are we threatened with the Rue de Rivoli revisited or will the Avenue be an endless, shining canyon whose east and west walls are identified as to use only by such legends as Kress, Childs, or Bergdorf-Goodman?

I take it that you are pleading for Fifth Avenue as a super Main Street—every frontage for itself—and as an outlander my vote is in favor of your stand. Better unlimited though sometimes unpleasant variety than even one block of regimented harmony.

WELLS BENNETT
University of Michigan
Ann Arbor, Mich.

MIDDLE CLASS OPPORTUNITY

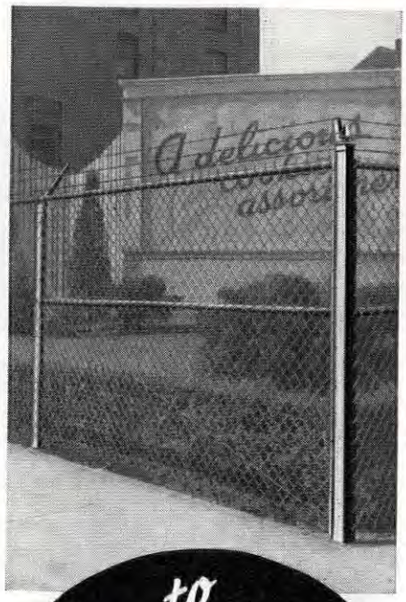
Forum:

Rich men's houses are individually designed. The poor man must live in "housing" produced by the factory principle of economy by duplication.

But what of the middle class house—is it to be individually designed by architect or owner, or is it also to become a duplicative product of the housing industry?

For the architect this is a question of a threatened shrinkage of the field of his profession. For the rest of us it is a prospect of being taxed to save individualism for

(Continued on page 42)



How to ASSURE YOUR CLIENTS LASTING FENCE PROTECTION

THE fence you specify gives maximum protection only so long as it maintains correct position. That's why Anchor Chain Link Fence is designed to stand *permanently* erect and in line. *Deep-Driven Anchors* do this job! They form a three-point, "tree root" anchorage for every post—hold the fence firm in any soil or weather—yet permit easy relocation where necessary.

What's more, when you specify Anchor Fence you get several other features which mean extra years of top-notch service. There are *Square Frame Gates*, free from warping and sagging—*U-Bar Line Posts*, rust-free, rigid and self-draining—*Square Terminal Posts*, which improve strength, durability and appearance.

Send for your free copy of our book, "Anchor Protective Fences," for your A.I.A. File 14-K. It's both a catalog and specification manual. Shows many types and uses of Anchor Chain Link Fence . . . pictures installations for many prominent companies and institutions . . . contains structural diagrams and specification tables. Just ask for Book No. 110. Address: ANCHOR POST FENCE DIV., Anchor Post Products, Inc., 6635 Eastern Ave., Baltimore 24, Maryland.

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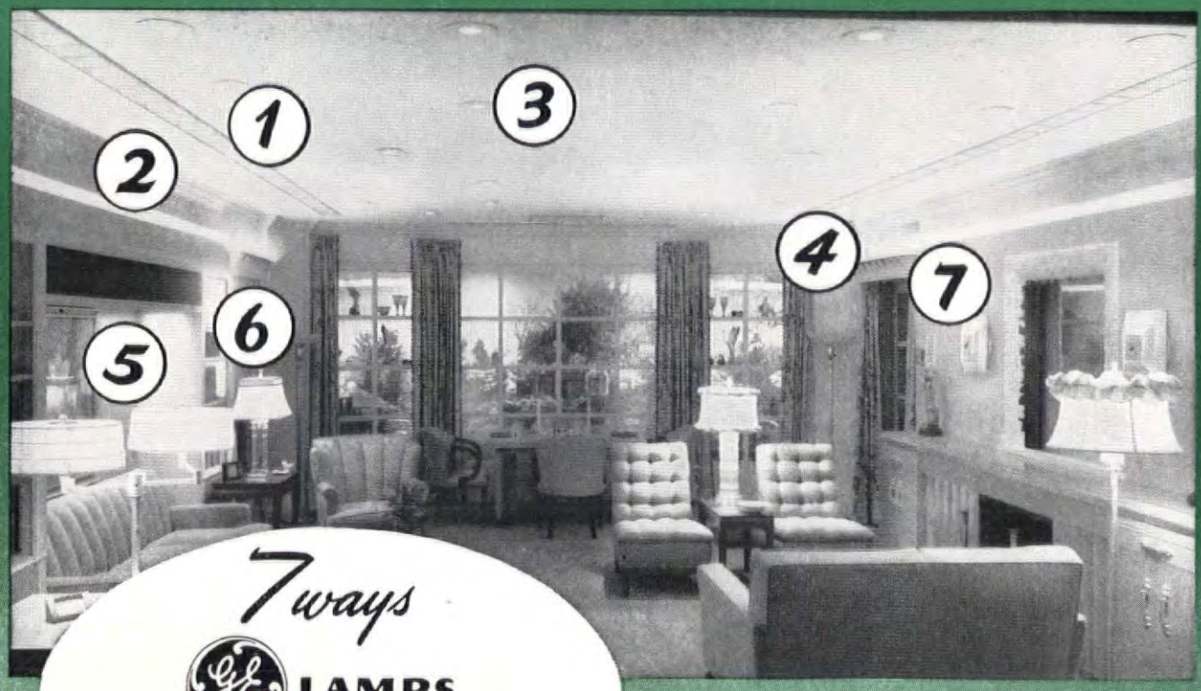
FOURTH IN A SERIES FEATURING DISPLAYS AT THE G-E LIGHTING INSTITUTE



7 ways G-E LAMPS Make a Living Room Livable

This living room is a laboratory for architects. It abounds in new, practical lighting ideas. Into this room are gathered an array of modern light sources which can be used singly or in combination to create atmospheres of comfortable living. Here, in the G-E Lighting Institute Horizon House, architects may study new uses for G-E Lamps, fluorescent and filament, for easier seeing and for decoration.

1. G-E Slimline lamps recessed in the ceiling in continuous lines are shielded by etched plastic tiles and are engineered to illuminate side walls.
2. G-E Slimline lamps in coves along side walls bathe the ceiling with cool over-all lighting.
3. G-E projector spotlamps and floodlamps are recessed in the ceiling at strategic points to provide both concentrated downlight and dramatic highlighting for furniture groups.
4. G-E Fluorescent lamps in door and window valances add light, glamour and loveliness.
5. The soffit above the sofa contains two rows of G-E Slimline lamps to provide flexible and comfortable reading light.
6. Bookcase lighting is supplied by G-E Slimline lamps placed vertically within side trim.
7. G-E Circline lamps are used in the wall brackets. They are shielded by pleasing and decorative glass.

Whatever the lighting needs of your client, specify G-E Lamps, the ones that benefit from unending research to . . .

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Write for free copy of "Horizon House", a descriptive booklet of architectural and installation details of this room. Address General Electric, Nela Park, Dept. AF1, Cleveland 12, Ohio.

How to Keep a Home Owner Free of a "Ball and Chain"

● Architects and builders are well aware that Bituminous Coal is the most economical and most dependable of all home-heating fuels.

And the advantages of coal heat become even more obvious as stoker developments make coal an "automatic" fuel as well.

So what can you do when a client *insists* on some other fuel for his new home? Simply this—keep him free of a "ball and chain" by making it possible for him to change his mind later on—and turn to coal.

Just be sure his house plans include: (1) *A chimney with sufficient flue capacity to burn coal efficiently;* (2) *Sufficient space adjacent to the heating unit for eventual coal storage and stoker installation.*

These sensible precautions involve but trifling cost—and they may add greatly to the future value of a house.

Coal supplies uniform, *steady* warmth throughout every portion of each room. For there's always a fire in the furnace—no "pop on and pop off" periods that permit accumulated heat to rise to the ceilings and leave floor areas dangerously cold. That, plus its low cost, is why more than 4 out of every 7 homes in the United States now heat with coal!

BETTER AND BETTER THINGS ARE COMING FROM COAL!

As you undoubtedly know, the modern research facilities of the Bituminous Coal industry are hard at work not only to make coal a still better fuel, but also to devise new, low-cost *automatic* equipment that will make coal-heating even cleaner, more comfortable, more convenient, and more economical. This makes it all the more important that every new home built today be planned to permit the eventual burning of coal—no matter what fuel may initially be selected.

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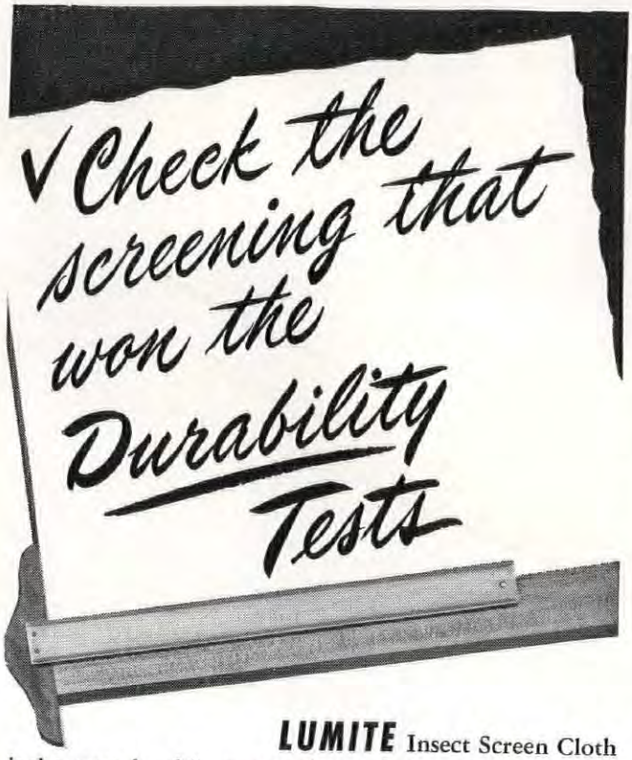

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Recently, an outside engineering organization put all standard types of commercial screen cloth through rigid tests—from immersion in salt water to accelerated weathering and exposure in a tropical chamber.

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Chicopee Manufacturing Corporation, 47 Worth St., New York 13

the Greeks while losing our own individualism in the houses we live in.

All about us today are communities of new houses demonstrating the latest tricks of camouflaging duplicative monotony.

Can we not have, for comparison, a community of houses in which every house is not only individually designed but in which every house contains some distinctive and original feature in design or in the use of materials?

. . . Such a community should be built by a cooperative group of young architects, engineers, etc., most of whom would be building houses for themselves. But this need not rule out construction undertaken for a client, or even, speculatively, for sale.

. . . My personal interest in this is that I have a site in which location, richness of landscaping effects and availability of materials combine to contribute value to the proposed demonstration of architectural originality.

To get such a development under way I can provide, for two single men, living quarters, workshop facilities and some construction equipment. The location is such that other participants, now resident in New York City, could also devote week-end time to their construction projects.

Here follows a description of the site:

The Land—As a nucleus for the community we have an eight-acre tract on the main Westchester cross-country highway, two miles east of Tarrytown, four miles west of White Plains, and less than a mile from the Sawmill River Parkway at Elmsford. Bus service passing the property connects these three points, which are stations on the three New York Central commuting lines.

Power lines, water and gas mains are along the highway frontage, and also contact the property 600 ft. back from the highway. The water main passes through the property between these points.

The tract has a highway frontage of only 300 ft. but extends back 1,500 ft. along the base of an outcrop of ledge rock. The property was detached in this form for the purpose of quarrying the face of this ledge. From this quarry most of the nineteenth century stone houses in Tarrytown were built. The quarrying was done in the central third of the strip. In both the front and back sections, where the ledge was less prominent, the natural terrain has not been disturbed.

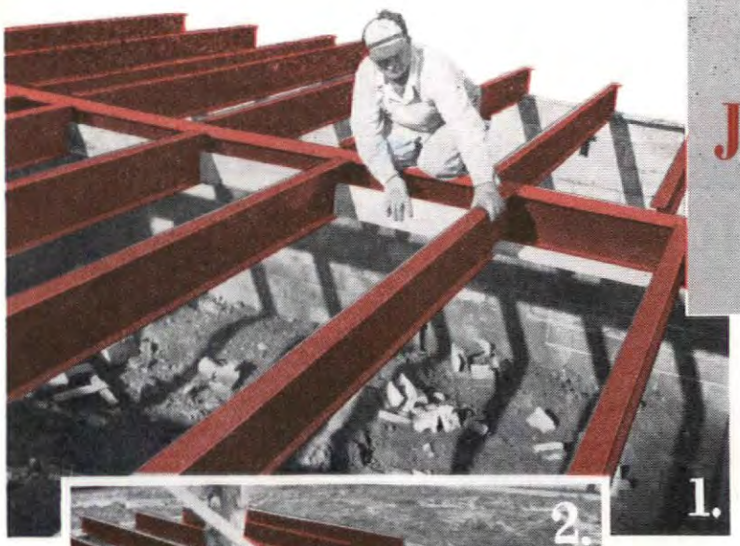
Of the 3,500 ft. boundary of this property, only about 500 ft. is along lots now containing houses. The remainder of the bordering property is still in acreage holdings, and most of this would be available for the expansion of the proposed community. The

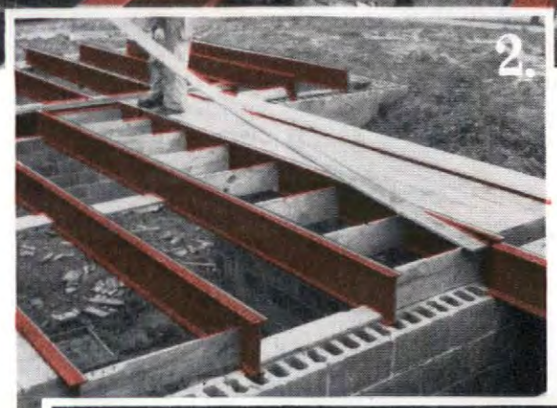
(Continued on page 46)

Easy to install—Easy to sell

J&L Steel Junior Beam Floors

Rigid, Fireproof, Vermin proof





Your plans and methods can be quickly adapted to provide your houses with J&L Steel Junior Beam floors. Installation of this rigid, fireproof, vermin and termite proof, shrink-proof floor is simple and fast. It can be accomplished with a minimum of labor. Also you will save money by eliminating return calls by your contractor to repair plaster cracks, sagging doors, stuck windows and creaking floors.

Prospects quickly see the advantages of permanence, safety from fire, cleanliness, low maintenance and resulting economy provided by J&L Steel Junior Beam floors. They make your houses easier to sell and enhance your reputation as a builder.

J&L Junior Beams are immediately available from the 7 J&L Warehouses listed below. Write for booklets "*J&L Junior Beams for Residences*," "*Engineering Data*" and "*Nine Simple Steps*" to help you in designing strong, permanent flooring that is easy to install—makes for quick sales.

1. Main wide-flange carrying beam which will support bearing partition also supports Junior Beams on bottom flange. One inch wood spreaders are being placed to space Junior Beams properly.

2. Form boards are being placed on wood spreaders which are cut to length so five form boards may be used without ripping. Duct openings are provided in form work. Depending upon the total live and dead load to be carried, Junior Beams can be spaced to accommodate 4, 5, or 6 form boards.

3. Reinforcing rods have been clipped to top of Junior Beam. Form is complete and sills for carrying studs above first floor placed. Sills are used as screeds to level the concrete slab. Various types of finished floor may be used, such as carpet on pads, wood parquet, linoleum or mastic tile.

J&L STEEL

IMPORTANT: The wood spreaders and form boards can be salvaged for sheathing or reused as forms.

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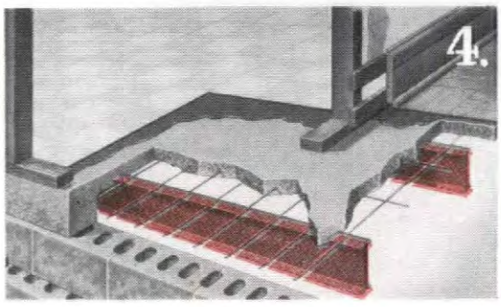
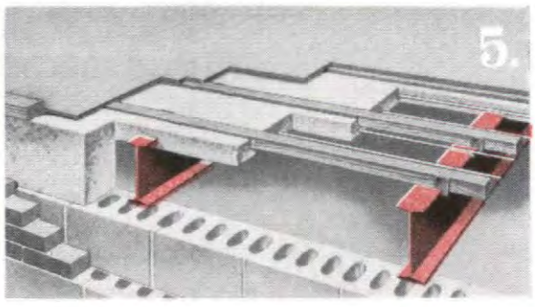
4. This "cut away view" shows Junior Beams, reinforcing rods, slab with firestop, studs for non-bearing partition and finished tile and parquet floors.

5. Shows how conventional hardwood flooring can be nailed to strips which were clipped to top of beam before concrete slab was poured.





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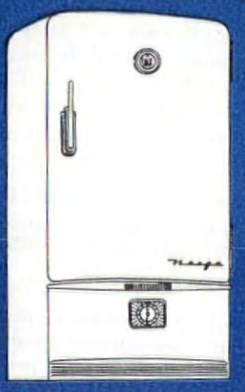
Homes are warmed by Norge. Food is refrigerated, zero-stored, gas-cooked or electric-cooked by Norge. Water is heated, clothes are laundered by Norge. And these services—seven of them—are performed in a manner that justifies your recommendation—or selection—of Norge appliances.



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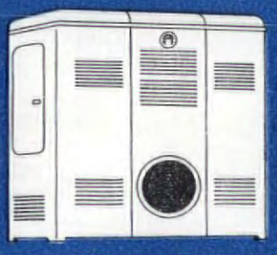
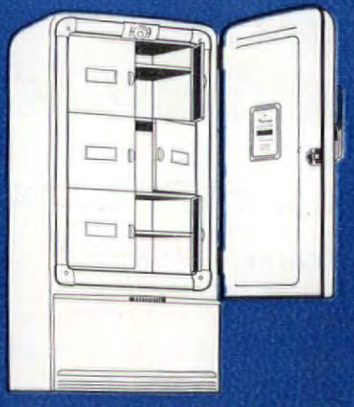


HOME HEATERS

GAS RANGES

WASHERS



HOME & FARM FREEZERS

SEE NORGE BEFORE YOU BUY

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6 PRACTICAL IDEAS for a MODERN STOREFRONT

There's more than beauty in this storefront by Architect Louis Redstone of Detroit. To mention just a few of its practical points:

1. It's a Visual Front. Note how the center section is open to full view through large windows of plate glass. This makes the store look more inviting—brings customers in. Daylight brightens the sales floor—and at night, the lighted interior makes the whole store a showcase.

2. The second floor is "opened" with a glass front. Merchandise displays can be seen from the street. This floor, too, is brightened by daylight.

3. The *Tuf-flex** tempered plate glass doors lend a modern note to the entire front and accentuate the openness.

4. Display windows in the "wings" permit excellent model room displays. Low bulkheads make the prospect feel almost as though he were in the room.

5. The roof extension keeps direct rays of the high summer sun out of the store. And at night, lights this in canopy flood the front and the sidewalk.

6. Patterned Glass in second floor windows provides privacy where it is wanted—without sacrifice of daylight. Day and night, the glass adds a decorative note.

Not every storefront offers such design opportunity. But this one shows how glass was used to make a home furnishings store more attractive and a better business-getter.

For information on Visual Fronts, write for our storefront brochures. Just tell us which types of stores interest you most. Libbey·Owens·Ford Glass Company, 6487 Nicholas Bldg., Toledo 3, Ohio.

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Because . . . Superior Windows are equipped with a special weatherstrip which insures easy, smooth sliding sash at all times.

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Easy sliding the year around. Swelling or shrinking will not affect the smooth weather-tight operation.

Sash may be removed easily and quickly without loosening or removing the weatherstrip

Light, snug contact between sash and weatherstrip at all times, no stick, no dust, no draft.

Perfect counter-balancing at all points. Windows stay in any position. Balances guaranteed for the life of the building.

THE **SUPERIOR** WINDOW IS A BILT-WELL WOOD WORK PRODUCT

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Carr-dor Overhead Garage Doors
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Bilt-Well Breakfast Nooks

eight-acre tract and most of the bordering land is zoned for the middle grade of residential construction which requires a lot size minimum of 10,000 sq. ft.

In the front section, 400 ft. from the highway, a small stream comes over the ledge. From there to the highway, the stream flows through a low, flat valley about 100 ft. wide, and, at its lower end, about 5 ft. below the highway. In this valley I am constructing a long, curved pond, using the excavated material to raise the grade of any low land that is not to be in water. The pond will be fed by the brook, coming over the ledge, with a 27 ft. drop, through a series of small falls and rocky pools. There is space for six to eight house plots bordering on or overlooking the pond, which will have a periphery of about 800 ft.

About half of the eight acres, and more than half of the bordering property, is in natural timber with a flora of 30 species of trees, not counting shrubbery. Some of the trees are 90 ft. high, and others said to be 200 years old. However, this is not an area of dense timber. There is enough open space for house sites with good sun without an undue sacrifice of good trees.

While we have enough rock outcrop and water to give pleasing scenic variety, the major area is of excellent soil to support ornamental gardening. To resurface the area where the topsoil was destroyed by the quarrying we have an abundance of humus-laden topsoil from the area being stripped to form the pond.

. . . The abundant and varied natural scenic effects call for highly individualistic plots laid out to fit the terrain. Water, rock and large tree groups facilitate a maximum degree of privacy for outdoor living space. For such inter-lot boundaries as lack other means of separation, planting material for shrubbery borders is now being grown in nursery plots.

The variety and individuality of the landscaping effects demands a corresponding individuality of house design, but not without some over-all harmony of style in structure and materials.

As native material to work with, there is some heavy timber that must or should be removed. But far more abundant is the stone available—gray and reddish granite, white quartz and some black mica schist. Formal cut stone is too expensive of labor for the middle class house, but there is opportunity here for ingenuity in the use of ledge outcrop, boulders and field stone for foundations and terracing, and the use of textural and color effects in combinations of stone, concrete and stuccos.

Such is what we have to work with. What is needed is work.

Tarrytown, N. Y. MILO HASTINGS

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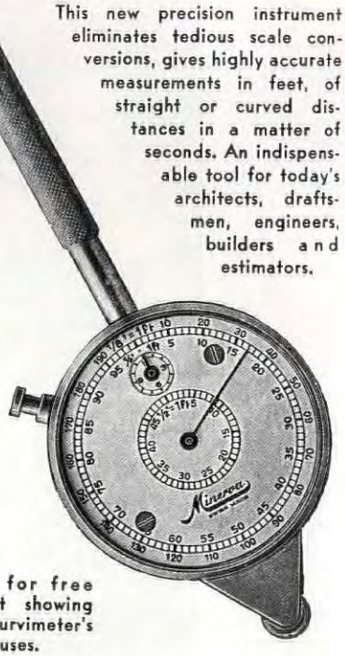
This new precision instrument eliminates tedious scale conversions, gives highly accurate measurements in feet, of straight or curved distances in a matter of seconds. An indispensable tool for today's architects, draftsmen, engineers, builders and estimators.



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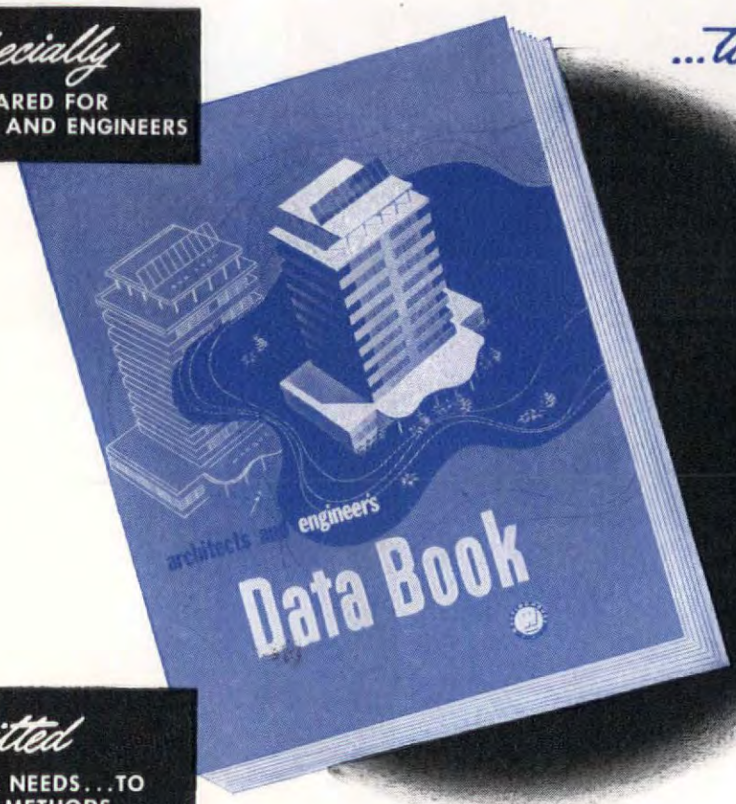

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One of its important features is that this book has been prepared in accordance with the preferences of both Architects and Engineers. Before its compilation and design, a check was made as to what was wanted in a book of this character—both in regard to content and manner of presentation. In other words, it's fitted to your needs, to your methods.

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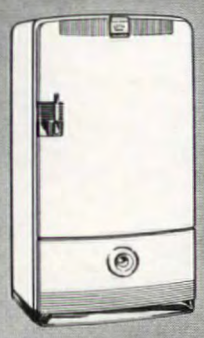

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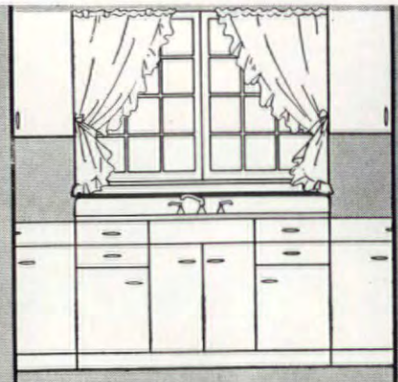

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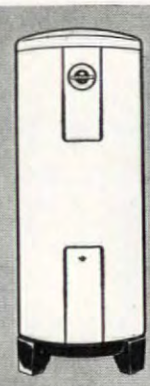

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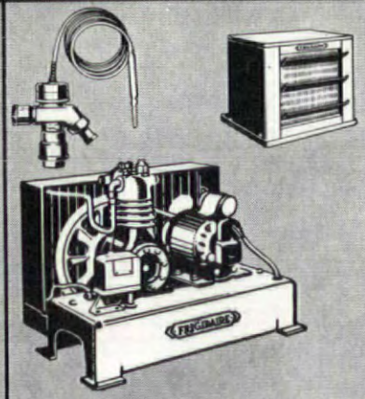

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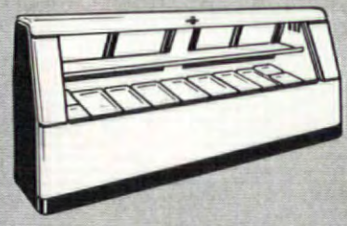

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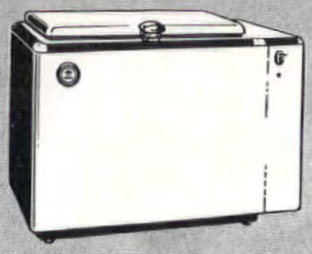

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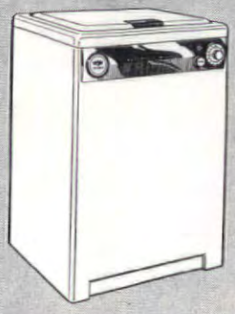

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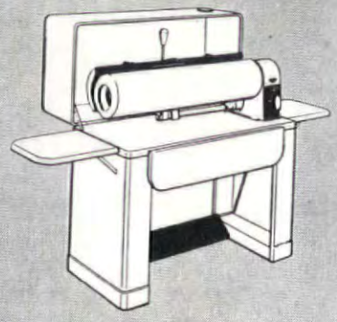
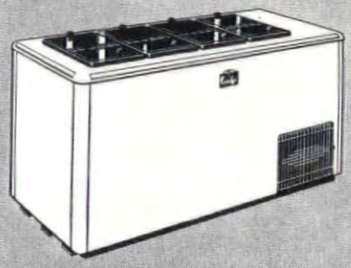
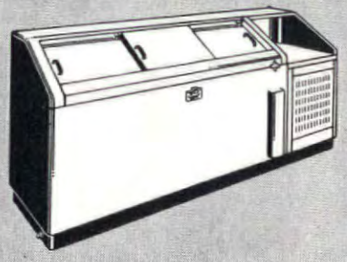


Electric Ironer
2-speed. Prestoe-Matic foot control. 2 thermostats control iron heat.



Ice Cream Cabinets
All-steel. Sealed tight against heat, moisture, and vermin.



Beverage Coolers
Dry storage, wet storage types. Capacities to 910 12-ounce bottles.

Water Coolers
Bottle and pressure self-contained coolers. Tank types also available.

Air Conditioners
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FORUM

Behind the scenes with FORUM contributors


CARSON & LUNDIN, designers of the RCA Center (p. 57), have been managing architects for Rockefeller Center since 1939. **TOM LEE** (left), vice president in charge of design at W. L. Stensgaard & Associates, did the Center displays. A specialist in commercial design, he has done work for Macy's and Bonwit Teller and until recently acted as design coordinator for *House & Garden.*

WALTER F. BOGNER, who designed the factory at Somerville, Mass. (p. 61), is a native of Rhode Island, educated in Austria and first registered in Wisconsin. In 1928 he started an independent practice, his interest centering around the development of modern architecture in America. Since then he has combined designing with teaching at Harvard and has been a member of the International Congresses on Housing, Town Planning and Architecture.


The association of **WILLIAM HAMBY** and **GEORGE NELSON,** who designed the Svirsky house (p. 75), was a five-year affair, ending in 1942 when Hamby left to become plant operations manager at Fairchild Aircraft (for whose president Nelson and Hamby had designed a lush and much-publicized town house). Nelson continued editorial work for FORUM and FORTUNE, recently designed a line of furniture for Herman Miller. Hamby is now with Raymond Loewy.

VAN EVERA BAILEY, architect of the Clefton house (p. 78), has practised in Oregon since 1932, concentrating mainly on residential design. Work on Navy housing aroused his interest in the scientific enclosure of space to cut costs and he is now experimenting with pre-cast concrete homes. Of traditional building he remarks: "Designing a house with conventional construction is as inadequate as powering a bomber with a steam engine fired by sawdust."

GARDNER A. DAILEY, who remodeled the Claire Brown apartment (p. 80) from an old-fashioned San Francisco house, vintage 1900, was born in St. Paul, Minnesota but came to California before he started kindergarten. A short but spectacular career as an Army aviator in World War I was followed by the pursuit of botany and engineering at Stanford and the University of California. Not until he was 30 did he switch from landscape architecture to houses.

VINCENT FURNO, who designed the Whitehouse & Hardy shoe shop (p. 88) during his 1946 partnership with Richard Boring Snow, has recently become associated with Bernard J. Harrison. Furno studied at Columbia and the University of Pennsylvania, has executed an unusual variety of work including the Queensbridge Housing Project, Army and Navy bases, transportation jobs for Raymond Loewy and, with Ketchum, Gina & Sharp, the Rye Replanning Project.


GEORGE NEMENY and **A. W. GELLER,** architects of the Andrew Geller shoe store (p. 90), have been collaborating since November 1946 when Geller returned from the Army Air Forces. Previously he had worked for a number of firms including Shreve, Lamb & Harmon, Gropius & Breuer, William Lescaze and the T.V.A. Nemeny, well-known for housing work, recently won the New York A.I.A.'s second prize for the best small house built from 1936-46.

BOLTON WHITE, designer of the Rucker-Fuller furniture showroom (p. 92), is a west coast architect who took his training at Columbia University and the American School of Fine Arts in Fontainebleau. After graduation he returned to the academic atmosphere, teaching for five years at Stanford University before he became chief designer in Gardner Dailey's office. War work for the Navy was exchanged in January, 1946 for his own full-time San Francisco practice.

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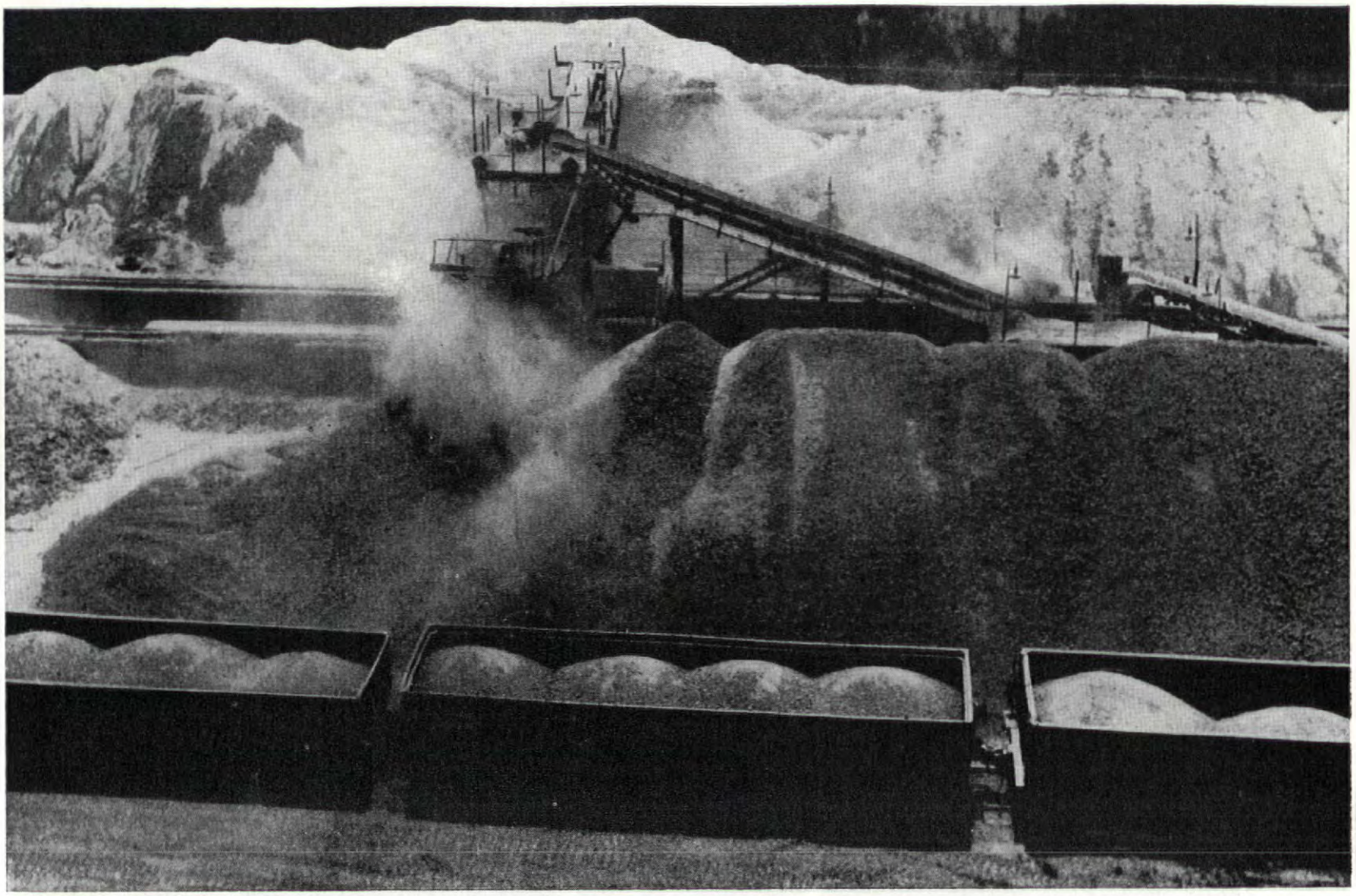

1. Bauxite from South American deposits is unloaded and stockpiled at the Baton Rouge plant of The Permanente Metals Corporation, where it is converted to *alumina*. The plant, located on the Mississippi River, comprises 34 buildings on a 318-acre river site, is capable of turning out one billion pounds of alumina per year.

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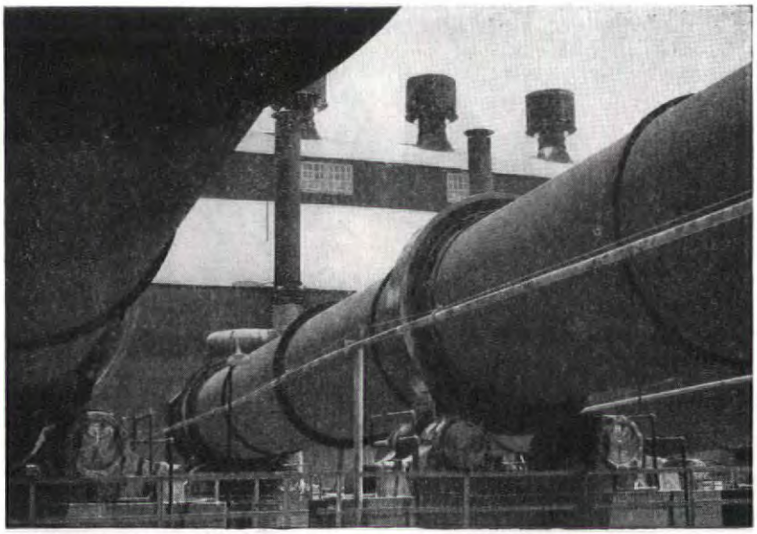
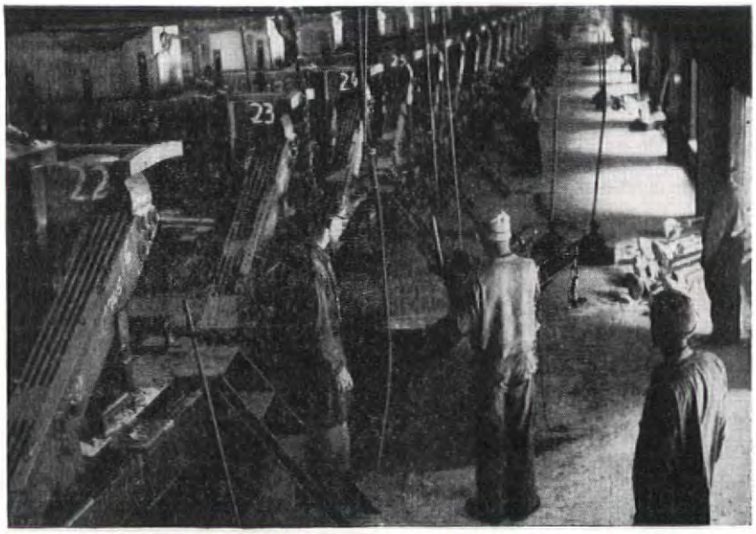
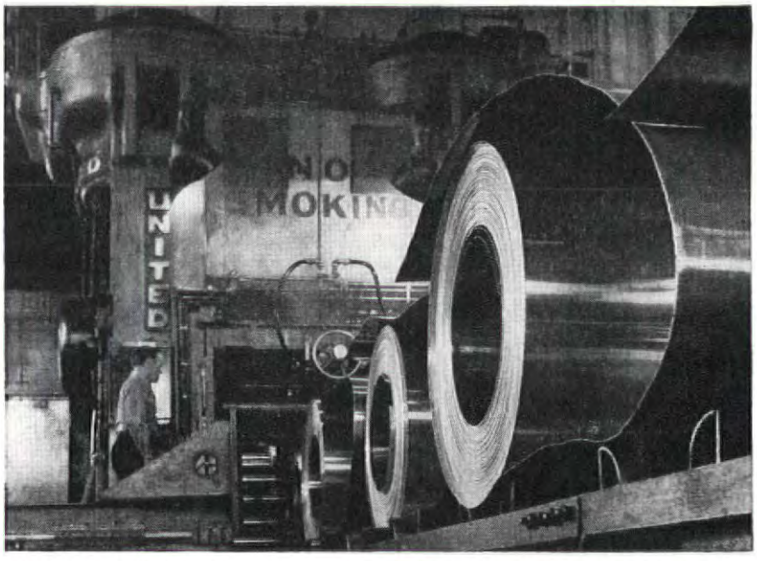


2. It isn't alumina yet—but this view in the Baton Rouge plant shows the final step in processing. These giant rotary kilns operate at 1800 degrees F., and cook the alumina hydrate into snow-white alumina powder. This alumina is then loaded into box cars and goes by rail to Permanente Metals' reduction plants at Spokane and Tacoma, Washington, where it is converted into basic aluminum.



3. Spokane, Washington, is the home of the Mead reduction plant of The Permanente Metals Corporation, where alumina is made into basic aluminum. Another reduction plant, at Tacoma, increases the supply, all needed to keep the Spokane rolling mill operating at capacity. Reduction process requires tremendous power. Metal is cast into pure aluminum pigs, then sent to rolling mill for remelting and alloying.



4. The rolling mill at Spokane can produce more than 288 million pounds of aluminum yearly. Two-ton ingots of alloyed aluminum are hot-rolled into long strips. Cut into sheets, the metal is cold-rolled to proper specifications (above). Careful handling and constant testing assure outstanding quality. This plant comprises 53 acres under one roof. Plate, sheet and strip are loaded directly into cars for shipping.

5. Here's why Kaiser Aluminum is in demand: Permanente Metals' representatives really give service. Delivery promises are kept. Quality exceeds specifications. Top technical brains are always at your service, may cut your costs through sound advice. Though Permanente Metals itself is but one year old, its administrators, engineers and operators have had years of experience in the aluminum industry.

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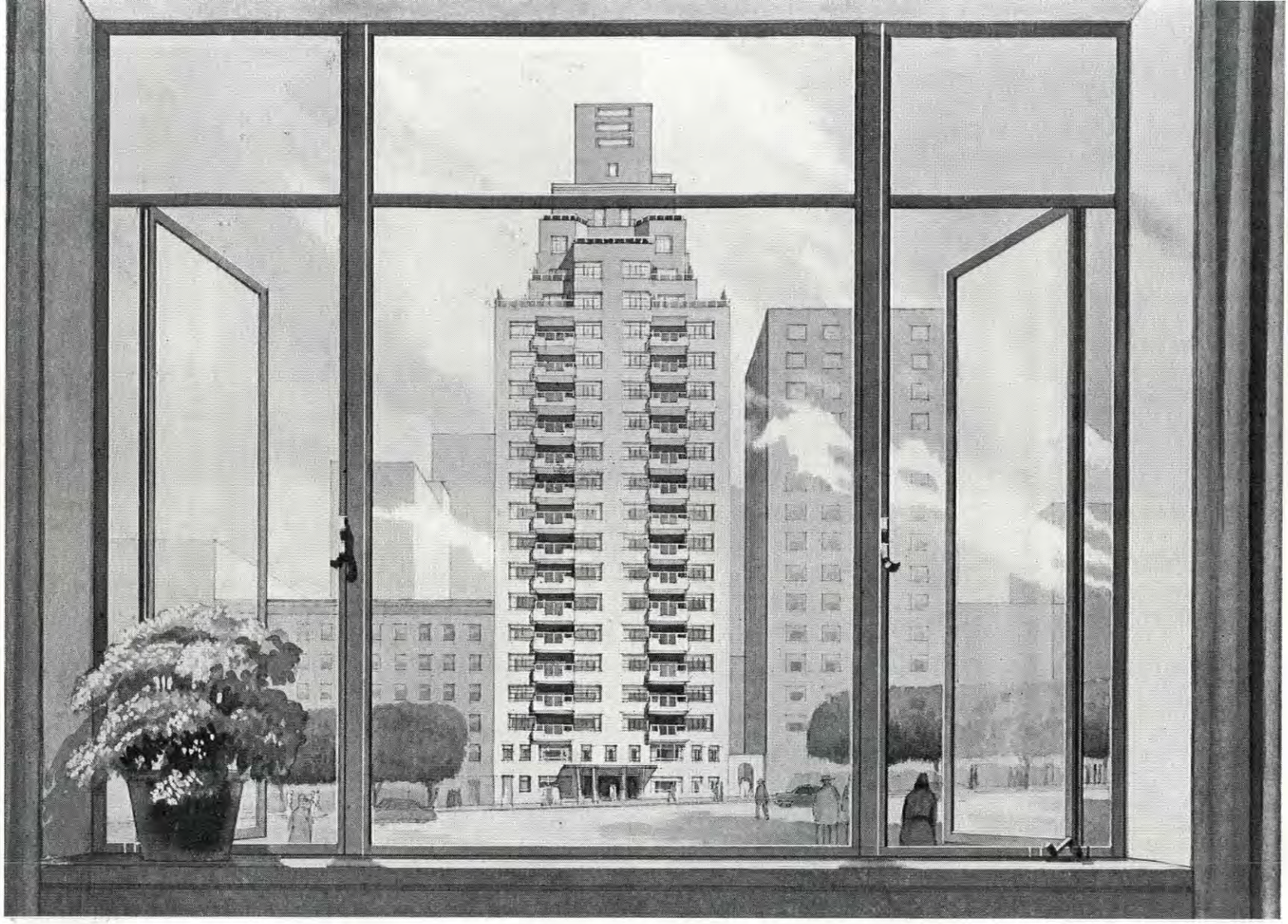

Apartment House, 120 E. 79th St., New York. Architect: Sylvan Bien, New York. Contractors: S. Minskoff & Sons, NewYork. Adapted from the original rendering by J. Floyd Yewell.

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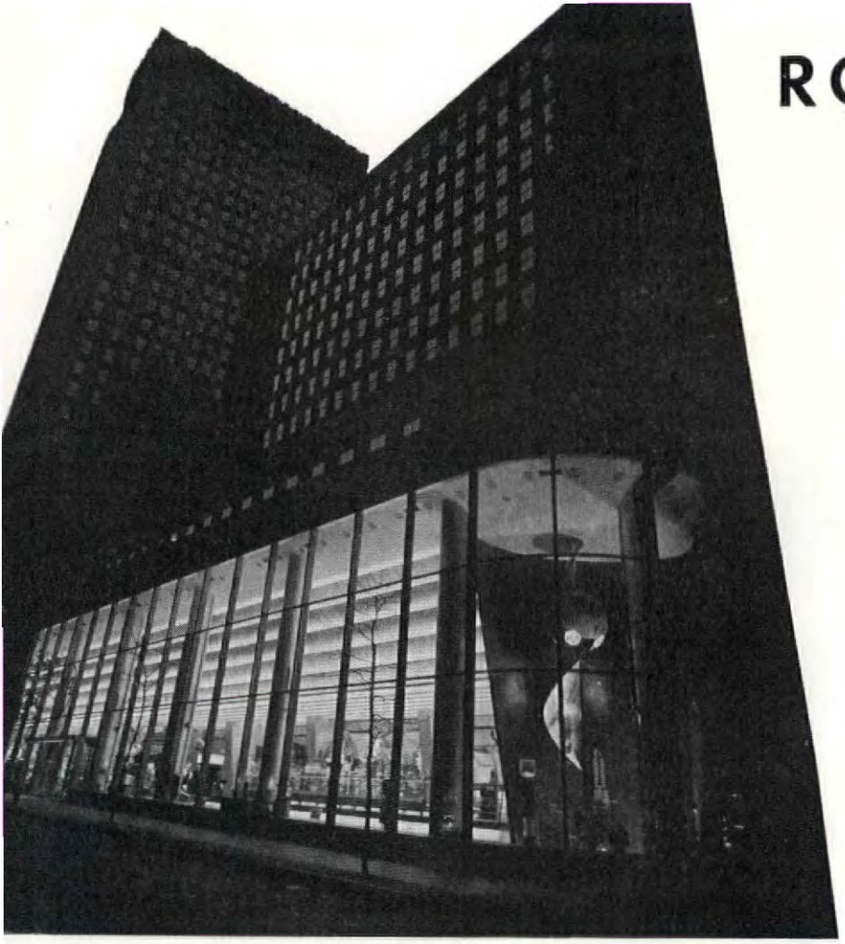
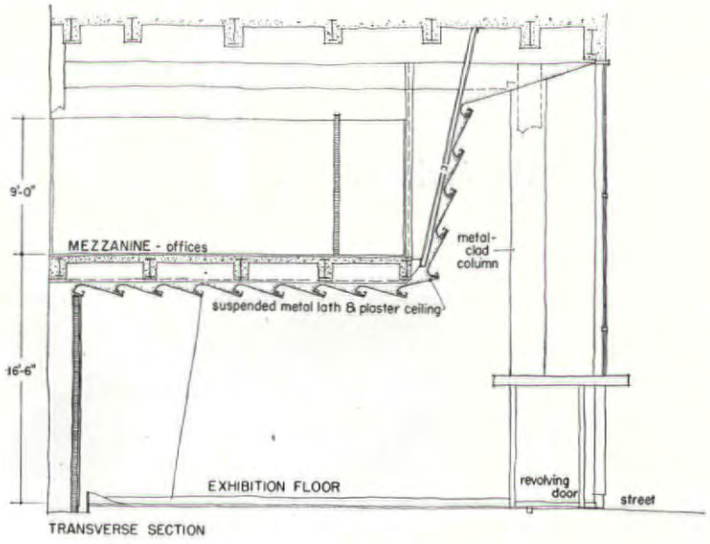
The Architectural **FORUM** Magazine of Building

RCA POPULARIZES APPLIED ELECTRONICS IN A SPECTACULAR EXHIBIT

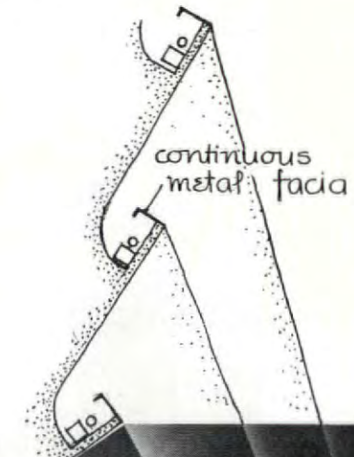
Ezra Stoller

RCA EXHIBITION HALL dramatizes and

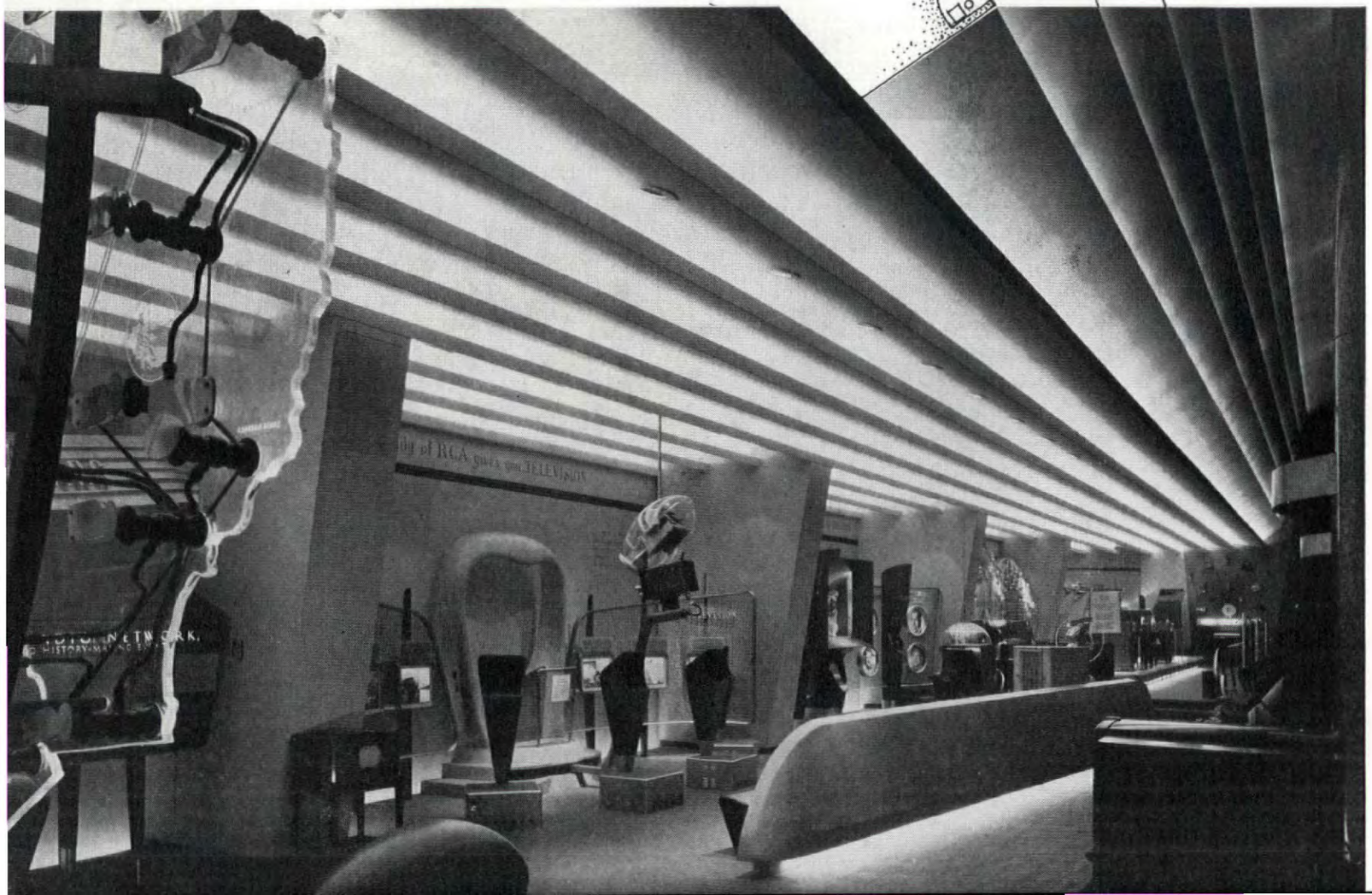




TRANSVERSE SECTION



TWO-STORY GLASS FACADE GIVES THE EFFECT OF AN IMMENSE, ILLUMINATED SHOWCASE, WAS MADE POSSIBLE BY CONCEALING MEZZANINE BEHIND A LOUVERED, INDIRECTLY LIT CEILING



simplifies the technical complexities of modern science.

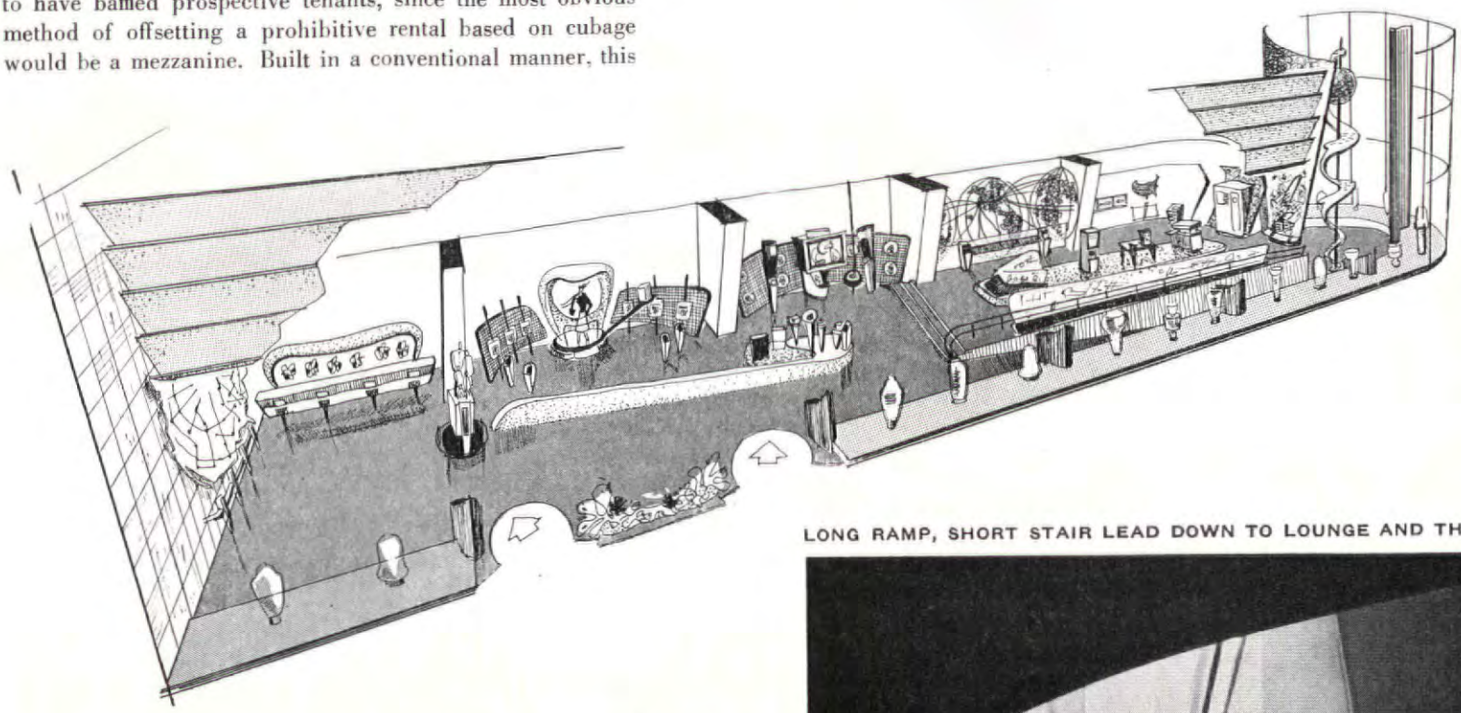
In the design of this exhibition hall, the chief objective was to present a dynamic picture of the heterogeneous products and operations of RCA in terms easily comprehensible to the man in the street. Architecturally speaking, to simplify so complex a presentation, integration and unity in the display were necessary. This is expressed generally in the vast expanse of glazing, continuous trough lighting and the unusual length of the ramp.

To New Yorkers the structure housing the show was known as a wartime white elephant which has been vacant since the construction of the Rockefeller Center garage (except for temporary exhibits). Its two-story glass facade appears to have baffled prospective tenants, since the most obvious method of offsetting a prohibitive rental based on cubage would be a mezzanine. Built in a conventional manner, this would have been unsightly from the street. Architects Carson & Lundin showed true ingenuity in their treatment of the space. By holding the mezzanine away from the glass façade and masking it with an illuminated louvered ceiling, they dramatized the ground floor space, improved its proportion for exhibition purposes and provided accommodations for regional offices on the mezzanine.

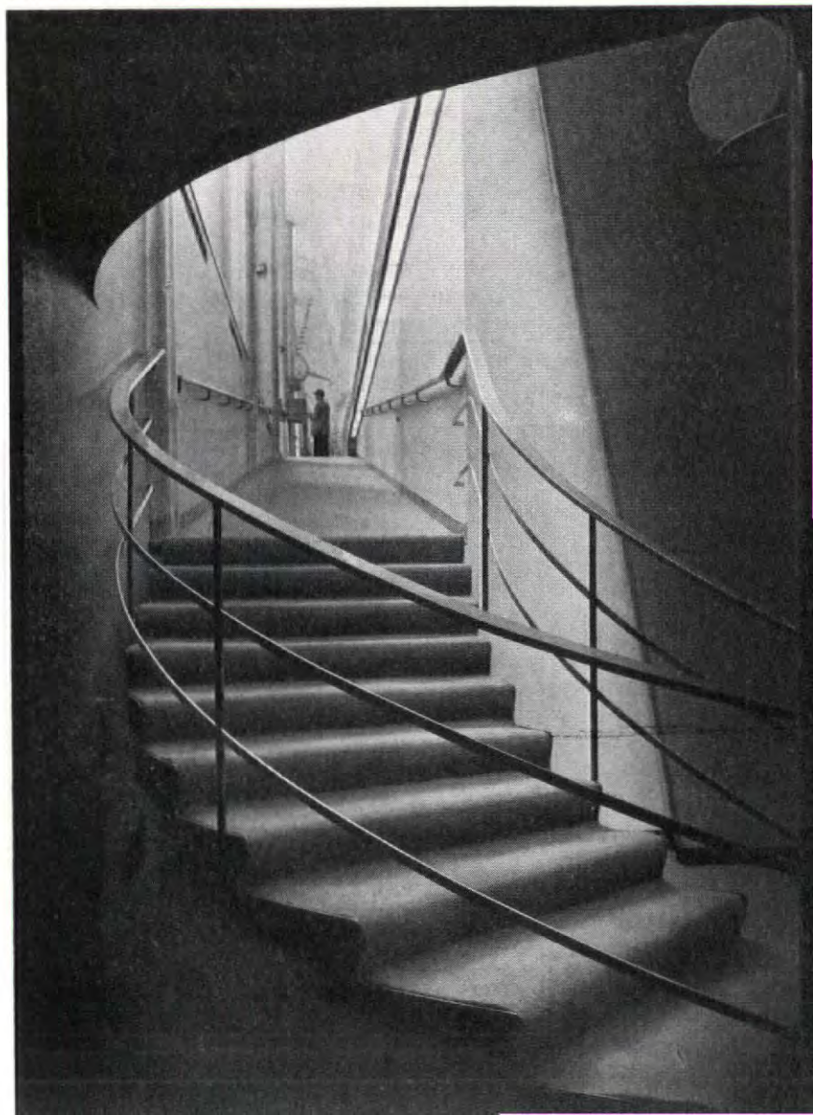
From the exterior, particularly at night, the exhibit appears as a brilliantly lit showcase, nostalgically reminiscent of the World's Fair. Its rounded glass corner facing the theater district has been intentionally played up. The interior was laid out to accommodate a heavy flow of traffic and, to date, the sponsors have not been disappointed. The longitudinal division of the main floor was planned to keep the flow of traffic clearly directed, also to permit a central display aisle.

Since this is a semi-permanent exhibit in a high rent location, it was essential to provide complete flexibility for new, complicated exhibits to be installed later on. As a result, the whole floor is a grid of duct work so that high and low tension wires, and even water, can be conducted to any point. Lighting is concealed in display coves around the perimeter of the floor, creating the effect of a sort of "floating carpet." Colors throughout are rich but muted, complementing the glittering richness of the metals and plastics on display.

CARSON & LUNDIN, Architects
POLLAK & GRIEVE, Mechanical Engineers
TOM LEE, designer of exhibits for W. L. STENSGAARD & ASSOC.

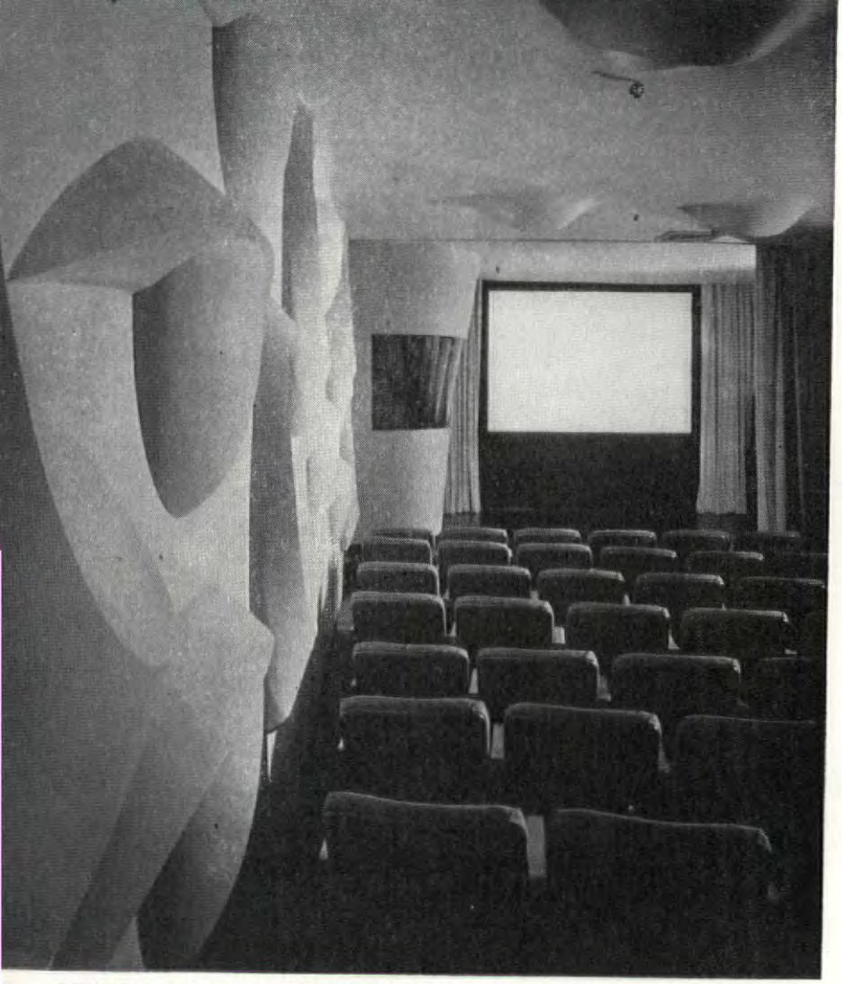


LONG RAMP, SHORT STAIR LEAD DOWN TO LOUNGE AND THEATER

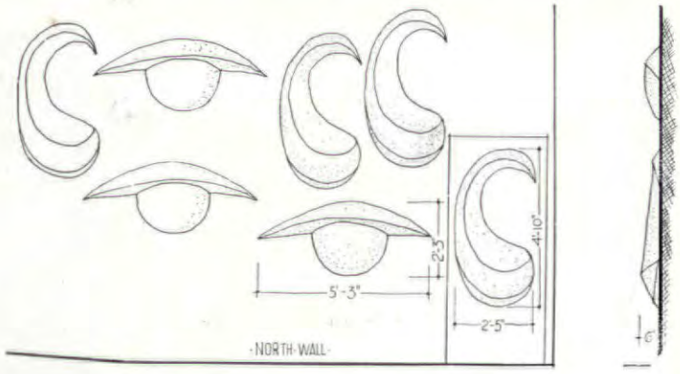


Ezra Stoller Photos

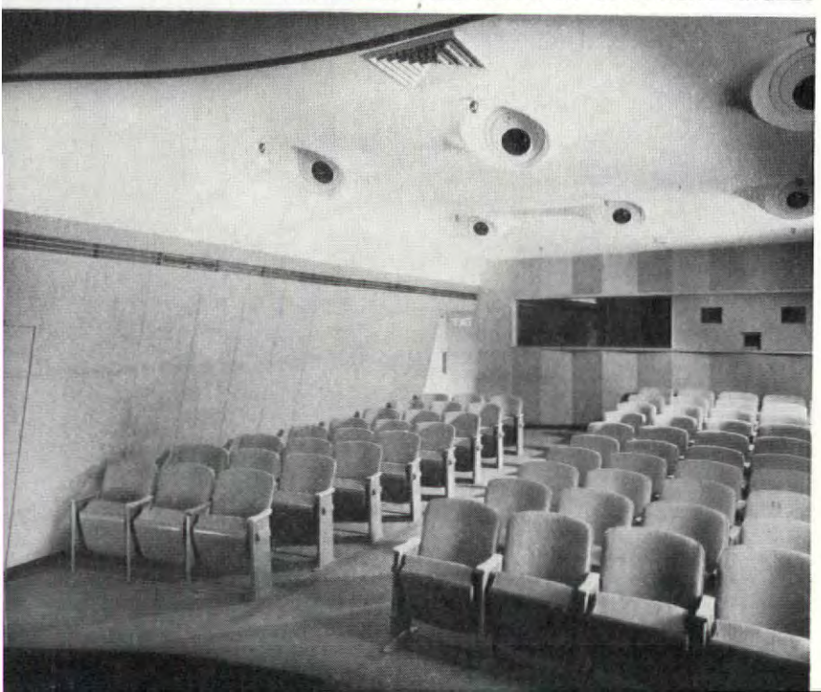
Theater presents broadcasts, movies and television.



ACOUSTICAL TREATMENT SIMULATES HUGE PLASTER EYES AND EARS



NO TWO WALLS ARE PARALLEL. ALL SLOPE AT DIFFERENT ANGLES

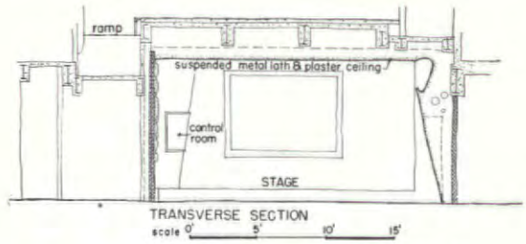


A small auditorium on the lower level, known as the *Johnny Victor Theater*, typifies RCA in its capacity for entertainment. In midget scale it boasts a control room for regular radio broadcasts, projectors for 16mm. and 35 mm. film plus equipment for the projection of television. The same screen may be used for all three types. Despite the playful note of enormous plaster eyes and ears adorning one wall, the auditorium is treated like a regular broadcasting studio. Acoustically, these shapes are as efficient as the raised spheres of the NBC studio (FORUM, Feb. '46). On another wall perforated cement asbestos, backed by mineral wool, is used as a sound conditioner.

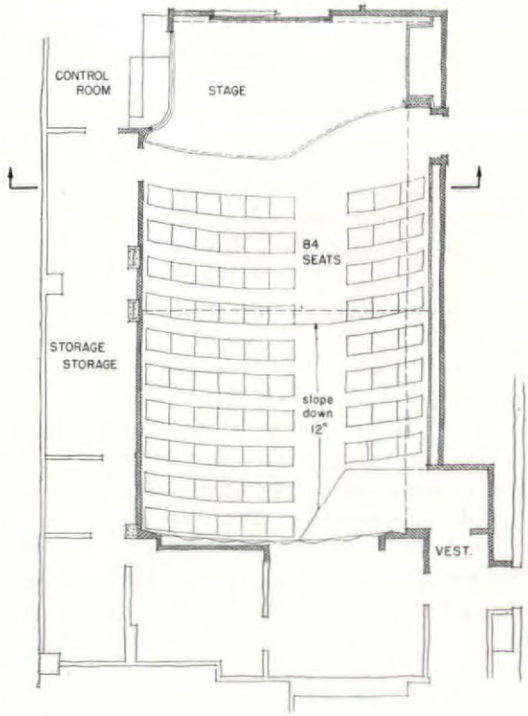
The public lounge outside the theater entrance features an electron microscope where the spectator can see such things as penicillin working on bacteria, thousands of times enlarged. These magnified images have been reproduced in models which make striking abstract wall decorations.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—glass and bronze. Interior partitions—cinder blocks. Columns—steel. Floor—stone concrete with cement. SOUND INSULATION—perforated Transite over rockwool, Johns-Manville. FLOOR COVERINGS: Office—asphalt tile, David E. Kennedy, Inc. Exhibit spaces and studio—carpet, Bigelow-Sanford Carpet Co., Inc. WALL COVERINGS: Office—oak panel. Lounge—striated fir. Remainder—plaster. FURNISHINGS—Dan Cooper. TRIM AND INTERIOR DOORS—steel, Dahlstrom Metallic Door Co. EXTERIOR DOORS—bronze, C. E. Halback & Co. HARDWARE—P. & F. Corbin Co. PAINTS—Pratt & Lambert, Inc. ELECTRICAL INSTALLATION: Belmont Electric Co. Wiring—Crescent Wire & Cabel Co. Conduit—Walker Bros. Switches—Royal Switchboard Co. and Bryant Electric Co. Fixtures—Gotham Lighting Co. and Kliegel Bros. Special equipment—Radio Corp. of American and Ward-Leamard Electric Co. PLUMBING FIXTURES—American Radiator-Standard Sanitary Corp. Pipes: Soil—cast iron. Wastes and vents—galvanized iron. Water pipes—red brass. HEATING AND AIR CONDITIONING—hot blast system with complete air conditioning. Grilles—Uniflo, Barber-Coleman Co. Regulators—Powers Regulator Co. Valves—Crane Co.



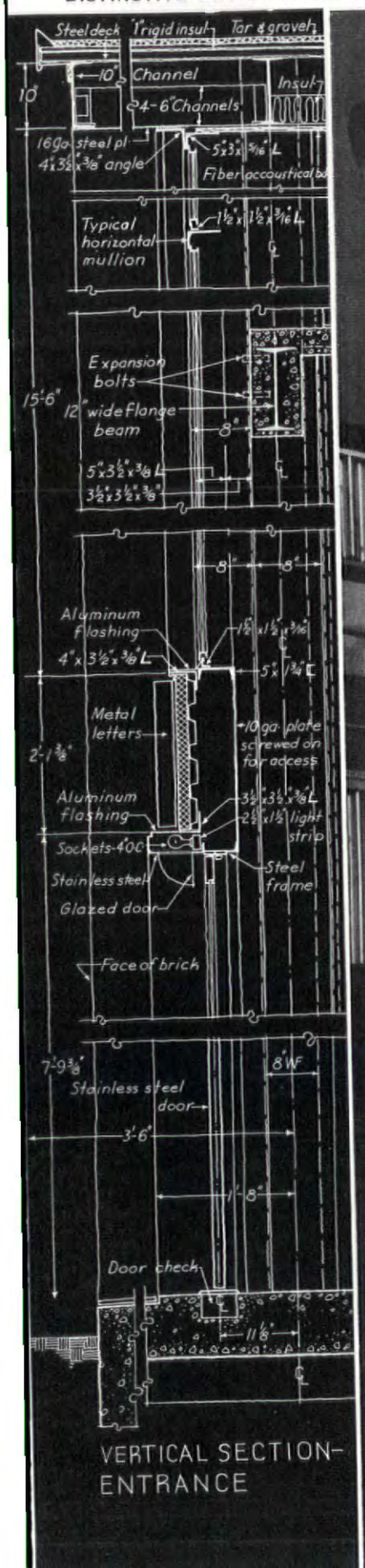
TRANSVERSE SECTION
scale 0' 5' 10' 15'

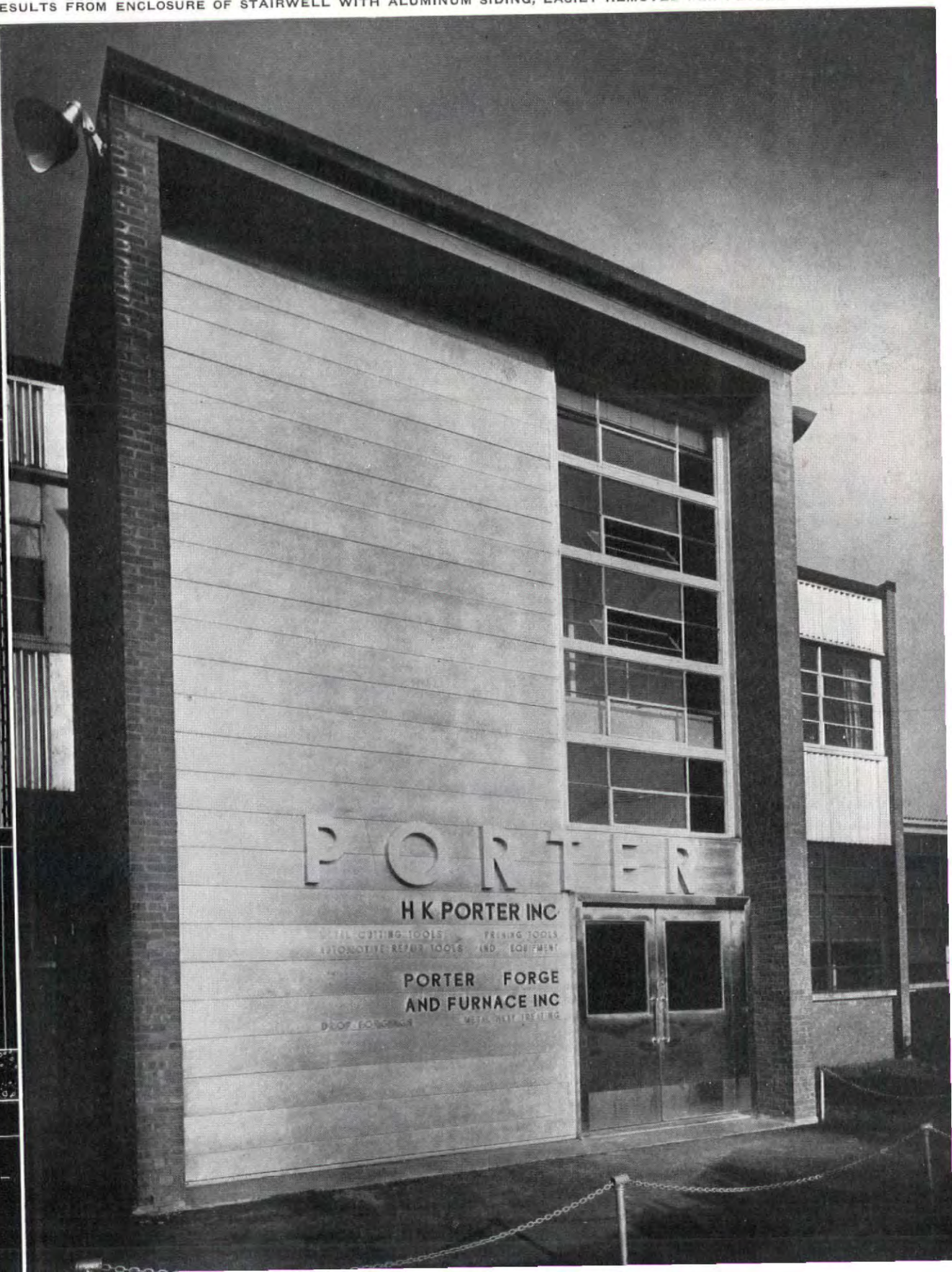


FORGE AND TOOL FACTORY

H. K. PORTER, INC. and PORTER FORGE AND FURNACE INC., Owners
WALTER F. BOGNER, Architect
BOND BROS., General Contractors

DISTINCTIVE ENTRANCE RESULTS FROM ENCLOSURE OF STAIRWELL WITH ALUMINUM SIDING, EASILY REMOVED FOR FUTURE EXTENSION



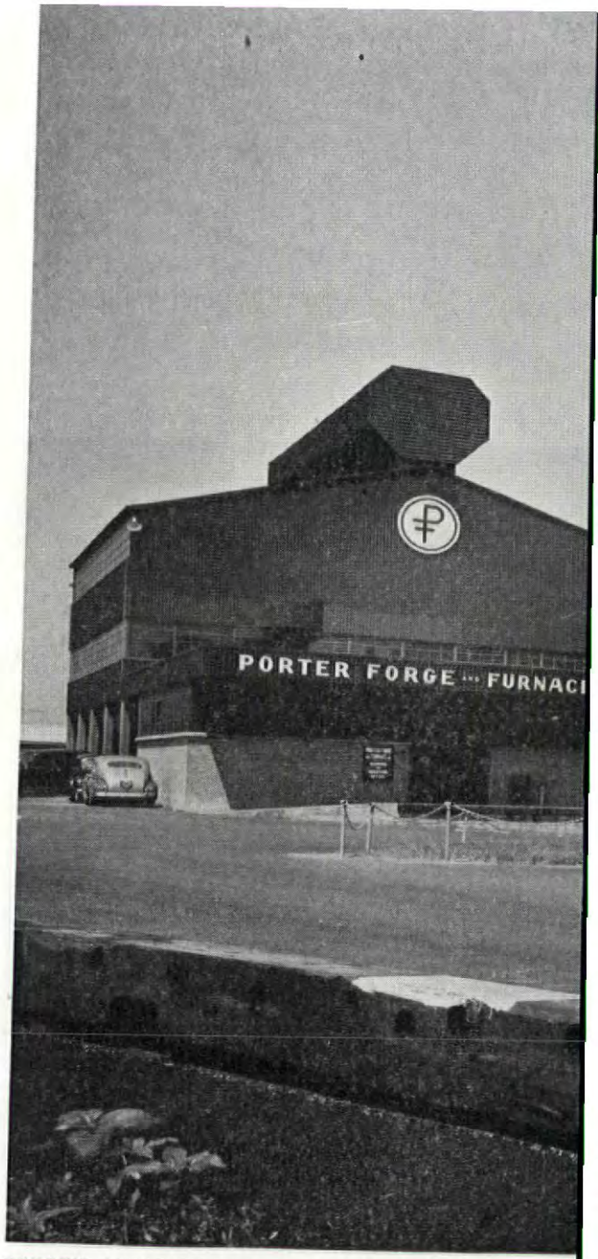


ARCHITECT'S ROLE in planning this modern factory included determination of whether and where to build it.

Seldom is site selection and design for an industrial project based on such intelligent and lengthy deliberation as that which preceded the completion this year of the Porter forge and tool plant in Somerville, Mass. Booming with war orders, the company put Architect Bogner to work in 1941 studying the cost and feasibility of remodeling and extending its Everett, Mass. plant. As a yardstick with which to measure this proposal, an ideal new plant was designed for a hypothetical site. This completely modern plant was estimated at about twice the $243,000 cost of reconstruction but was judged to be well worth the premium.

A location was the next problem entrusted to the architect. A site in Everett could be had for 6 cents per sq. ft., but a better one in Somerville was selected because of its complete utility services, an adjacent railroad line, lower electric rates and comparable taxes. (Savings in electricity and transportation costs alone would cut annual operating costs by about $3,000—almost 10 per cent—and excessive industrial water costs could be shaved by drilling shallow wells on the site). Moreover, the 252,400 sq. ft. site was offered at 4.8 cents per sq. ft.

Meanwhile, since Porter could not obtain a high enough priority to build the plant of steel, the proposal was postponed in favor of renting space in four widely separated buildings. Twice, however, the need for consolidation prompted the company to consider modified versions of its dream plant: 1) In 1943 a new forge was planned by Architect Bogner and proposed as part of the Boston Ordnance District—but the proposal was not accepted; 2) In 1944 the possibility of buying and converting an excess army aircraft hangar was studied, but architect and client agreed that the $112,000 cost was uneconomical and its erection on the Somerville site would later be regretted. However, these efforts were not fruitless. Each study by the architect and consulting engineers helped define the extent and relationship of the company's various space requirements. They all contributed to the efficient planning and design of Porter's postwar Somerville project which may be easily extended to accommodate the consolidation of all Porter enterprises and their foreseeable expansion.

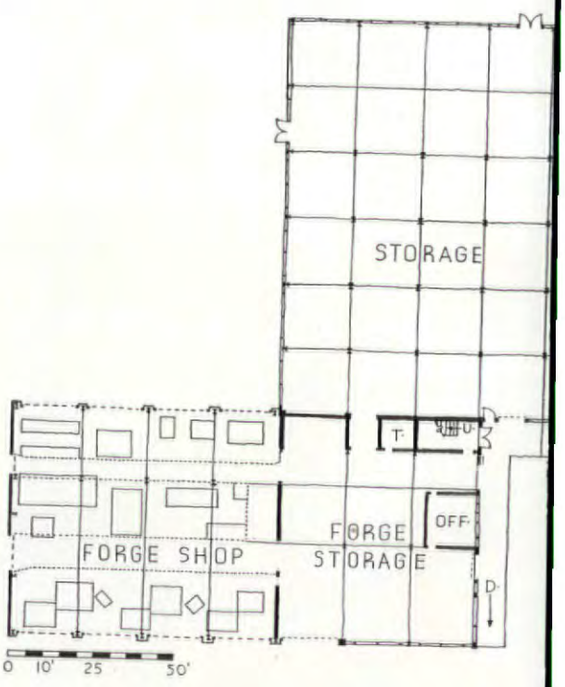


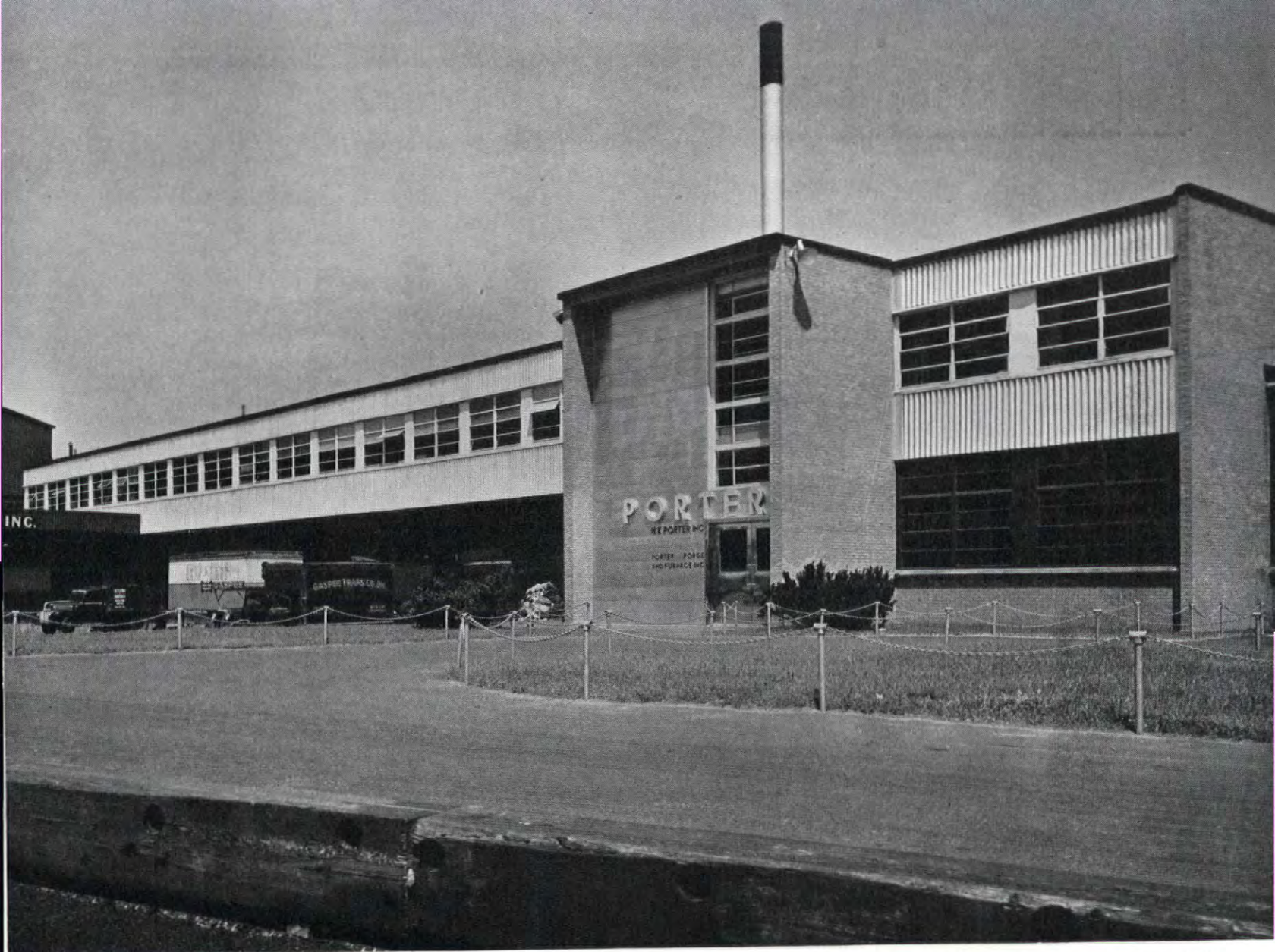
FORGE'S ANGULAR MASS AND DARK FINISH OFFER

INTEGRATED DESIGN of the two buildings saves space and money, provides for balanced expansion.

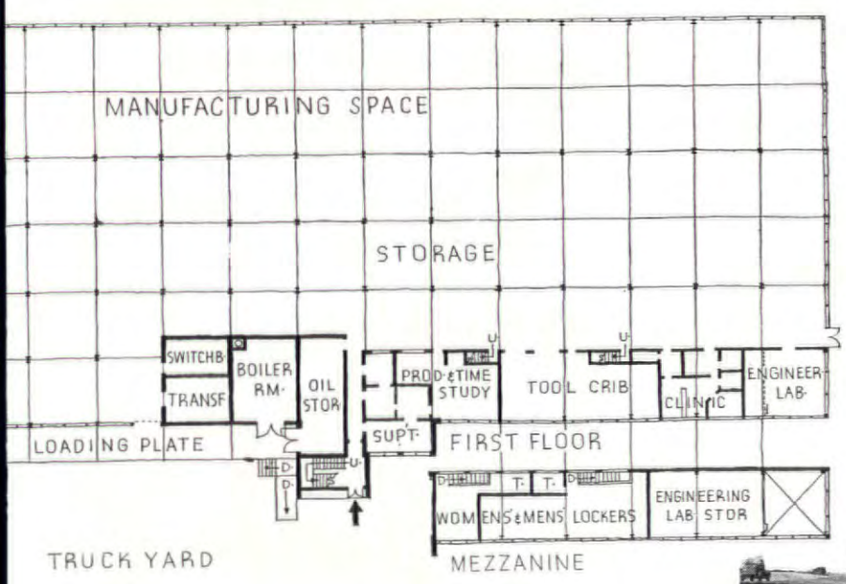
The forge and tool companies are separate entities (related only by corporate marriage) with quite different space requirements, and accommodating them in one integrated plant presented no mean design problem. The dual character of the project is clearly evident in its plan and appearance (right) but, wherever possible, common facilities have been economically provided: parking space, railroad siding, truckyard, tool room, heating plant, offices and employes' locker rooms, washrooms, canteen and recreation area.

In addition to economy of space and administration, design requirements called for minimum intra-plant handling and trucking, maximum flexibility and balanced expansion of all departments without extensive remodeling costs. To meet these requirements the architect first recommended a "looped flow" of production predicated on a central loading and storage area, then designed the ultimate plant around this core (see p. 64) and finally cut it down to a half-size plant which met the companies' initial space requirements and budgets. In their present stage the buildings contain 54,000 sq. ft. of plant area plus 10,000 sq. ft. finished space (offices, etc.). They cost $421,000 excluding land, equipment and furnishings, or about $6.60 per sq. ft.



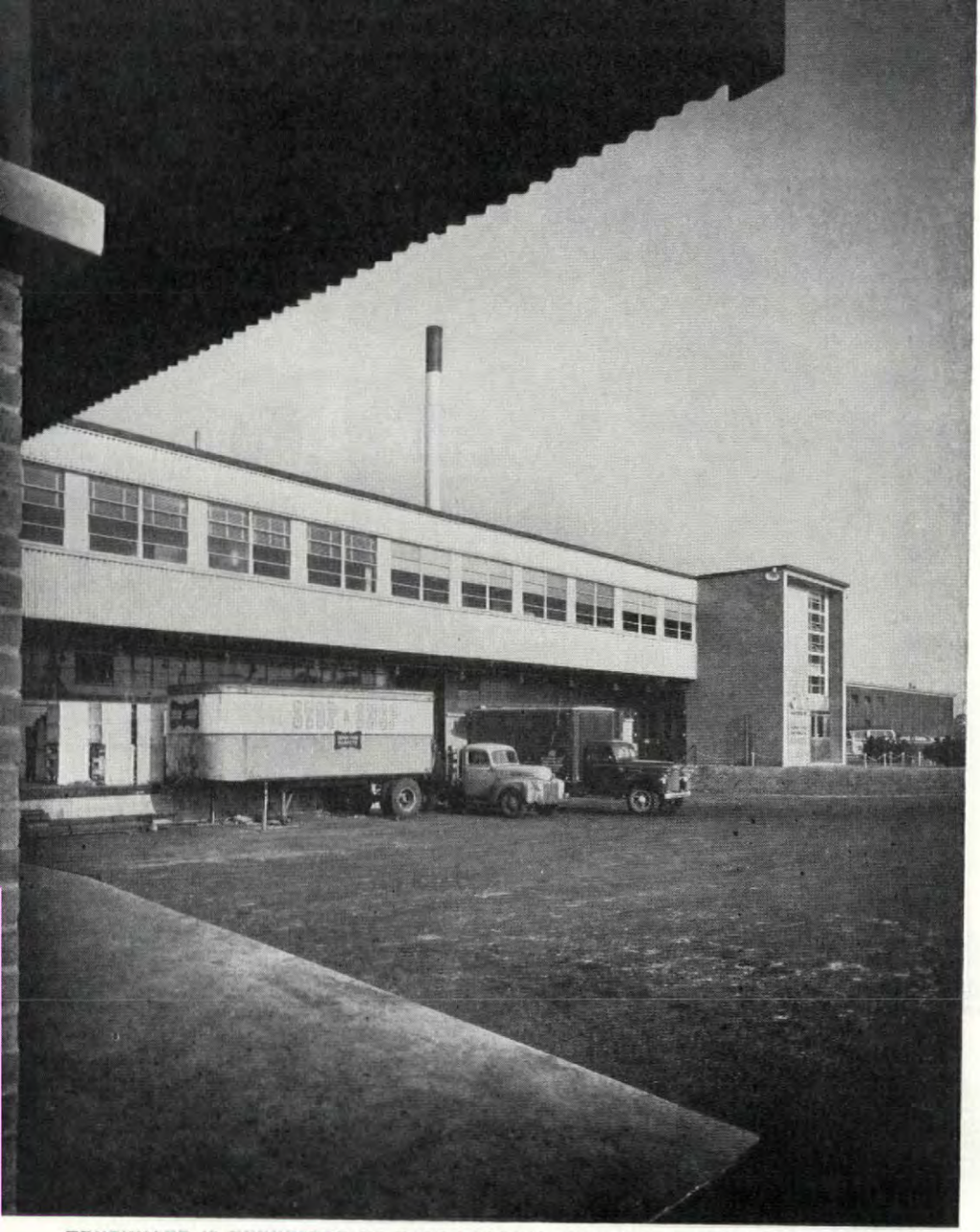


INTERESTING CONTRAST WITH THE LONG LOW LINES OF THE ASSEMBLY AND OFFICE BUILDING. TRUCK LOADING AREA SERVES BOTH WINGS



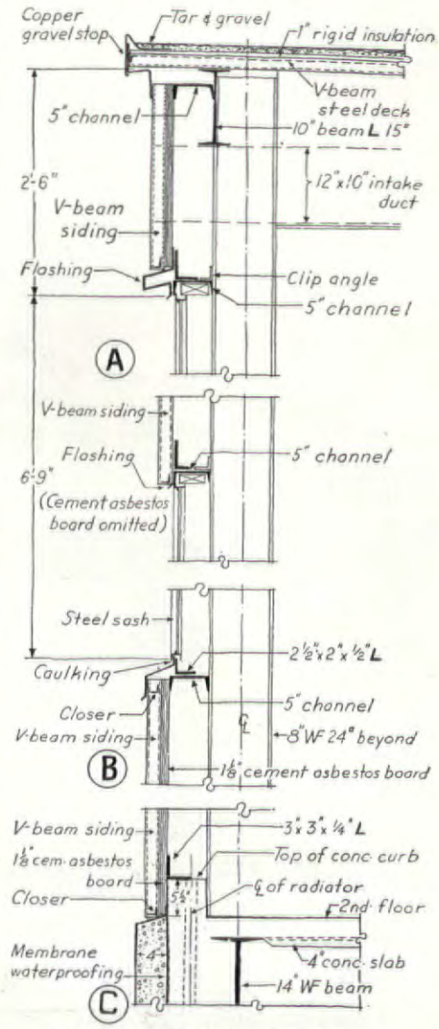
PLAN of the project focuses on the central truckyard where most deliveries and shipments are made. Both plan and design reflect the entirely different space requirements of the forging and tool assembly operations. While the latter involves the usual manufacturing process, forging and heat treating are extremely hot, noisy operations. Therefore, the forge is designed as a high one-room structure with its gabled roof opening into a huge full-length ventilator. During the summer the large window areas and roll-up doors are opened to accelerate the natural circulation of air generated by the furnaces. Concrete walls and a buffer of storage space separate the noisy forge from the rest of the plant.

Ezra Stoller Photos



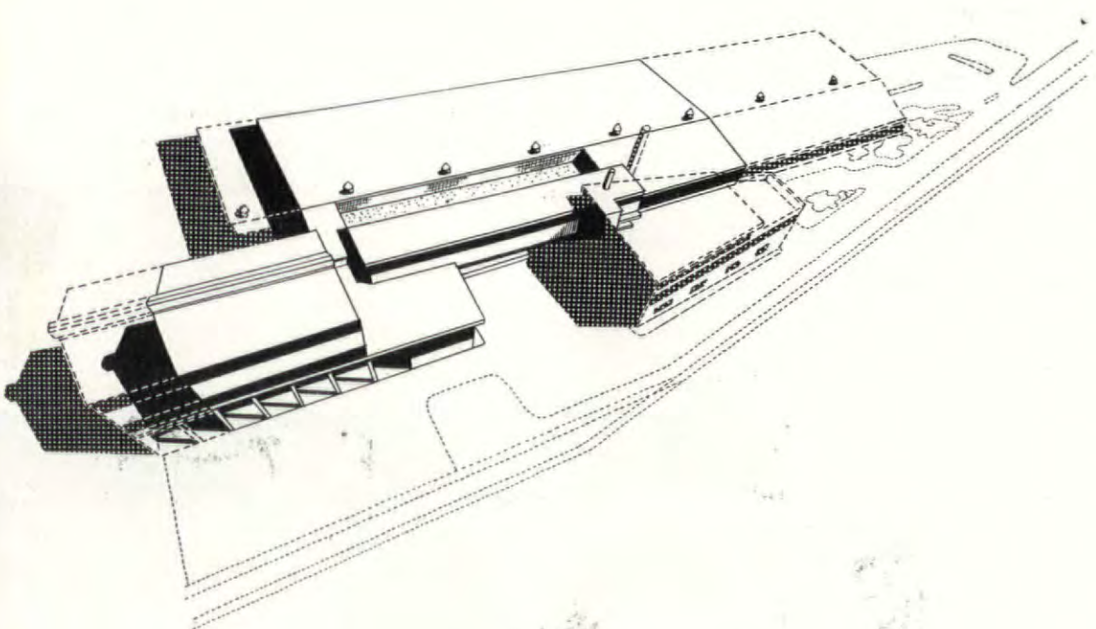
TRUCKYARD IS DEPRESSED TO EASE LOADING; DOCKS HAVE OVERHEAD PROTECTION

CURTAIN WALL EXTENSION



TYPICAL WALL SECTION
SECOND FLOOR

THREE-WAY EXPANSION



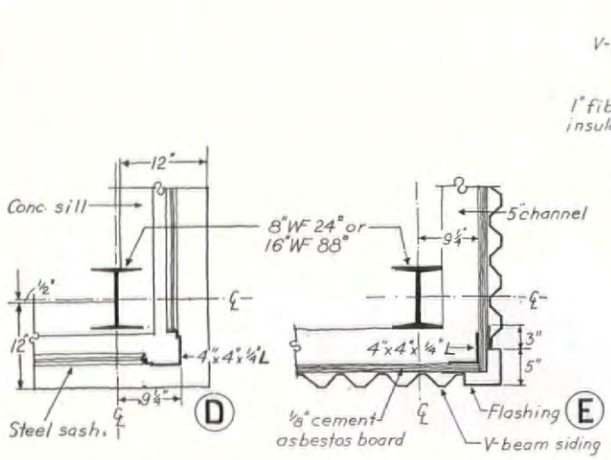
Looped flow and future expansion, as well as the pie-shaped site, influenced the project's layout. Unlike the straight-line technique, looped flow involves a single central receiving and shipping area, largely surrounded by storage areas in and out of which raw materials, parts, subassemblies and finished products flow during the course of their fabrication. This flexible type of flow was suggested by the fact that the company is constantly developing new products and must frequently rearrange its production lines. Moreover, the availability of transportation facilities on only one side of the site suggested the centralization of shipping and storage facilities.

Thanks to the careful location and relationship of the plant's various departments, all may be expanded without major readjustment of the original flow pattern. When the wedge-shaped storage and office building is added, the plant entrance will be shifted to the narrow end of this addition.

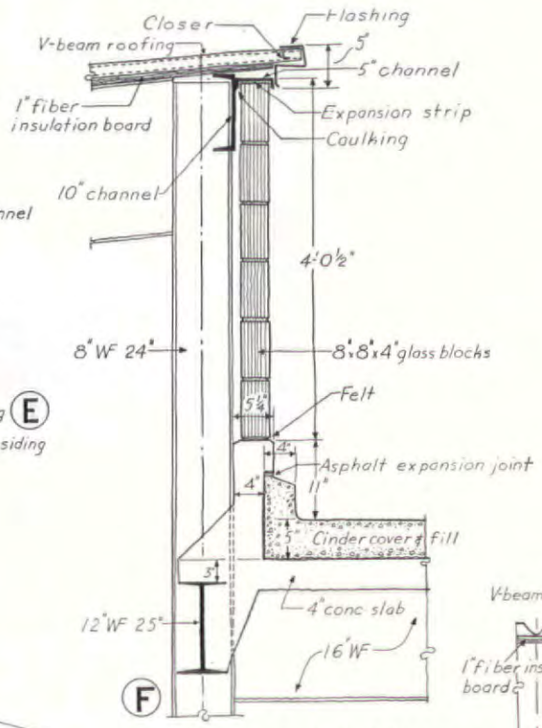
eatures corrugated steel panels, readily demounted to facilitate plant expansion.

With ground water within 6 ft. of grade and bearing soil available only at a depth of 18 ft., it was necessary that the project's foundations be concrete piles. Atop these are cavity brick exterior walls, extending up to the concrete window sills, and a steel framework producing 20 ft. bays. Above the steel casement windows this framework is enclosed by demountable panels of felt-backed corrugated steel, insulated where necessary with 1⅛ in. laminated fiber board. Three types of roofing are used: 1) insulation and corrugated metal over the forge, storage and manufacturing areas; 2) metal decking with rigid insulation, tar and gravel over the offices; and 3) a waterproofed concrete slab for the roof terrace.

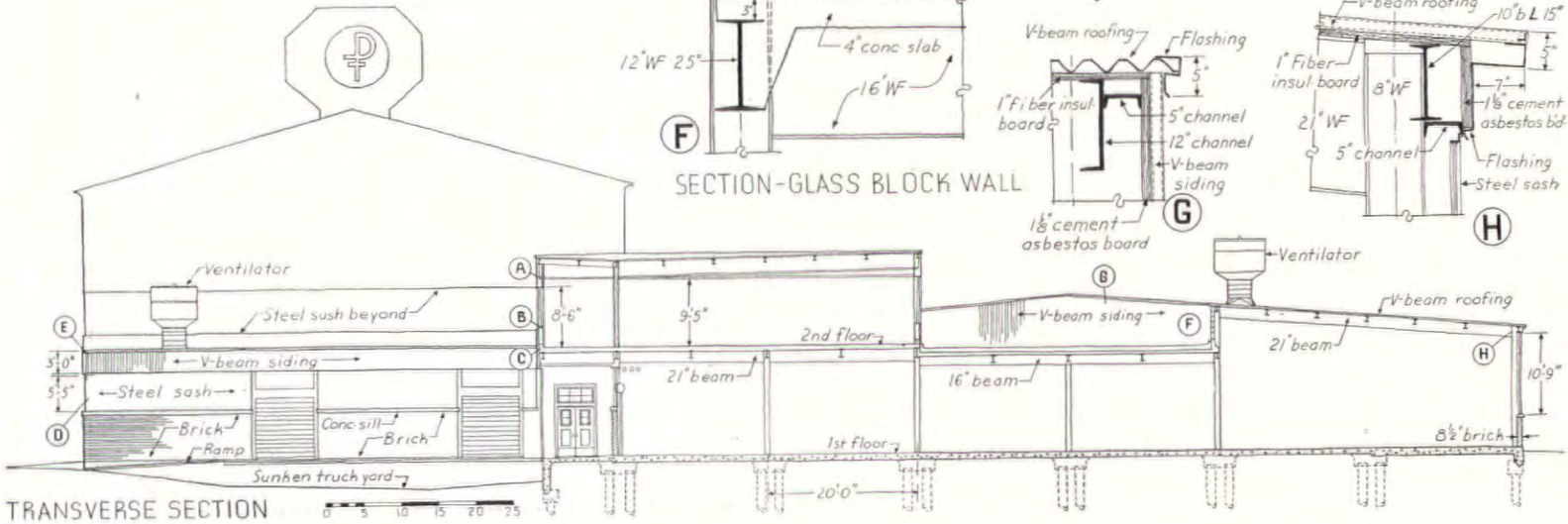
Used by employes for recreational purposes, the terrace is dropped below the adjoining roof lines (see section below) to admit light to the second story offices and, through a glass block clerestory, to the main manufacturing bay (see photograph below).



TYPICAL EXTERIOR CORNER DETAILS

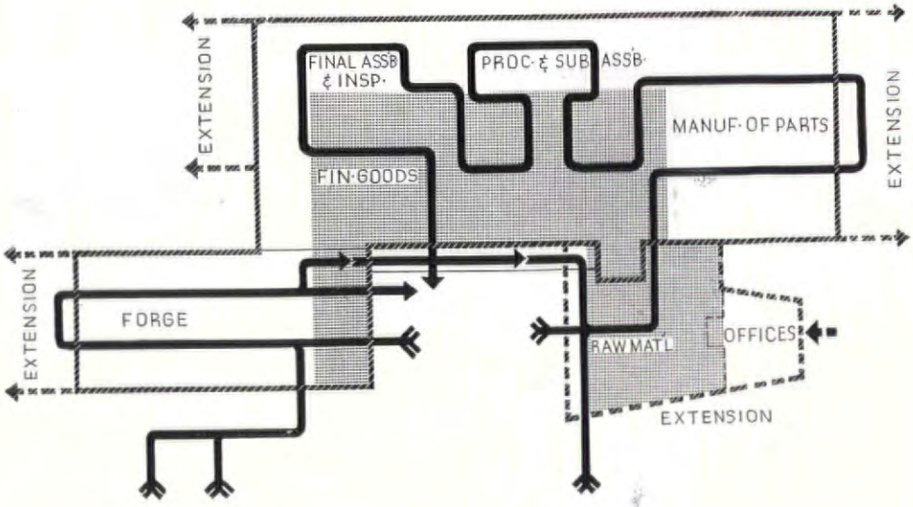


SECTION-GLASS BLOCK WALL



TRANSVERSE SECTION

is geared to efficient production flow.

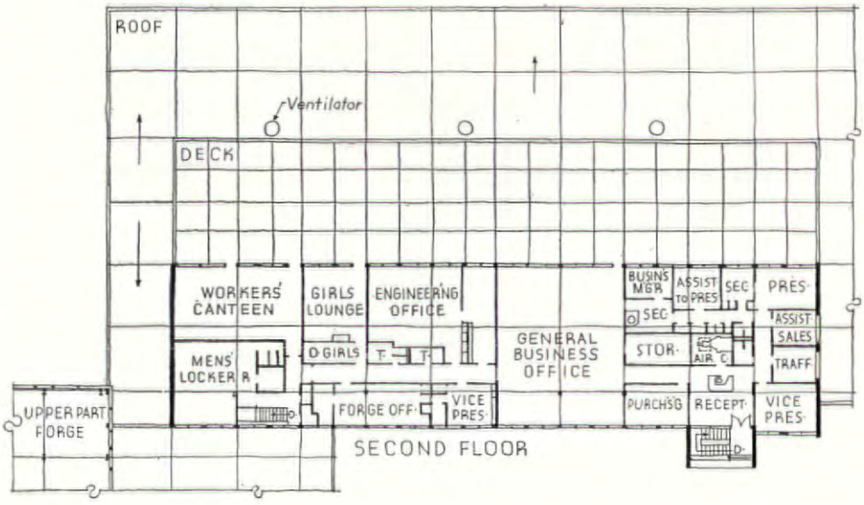


ASSEMBLY BAY LIGHTING IS AIDED BY CLERESTORY

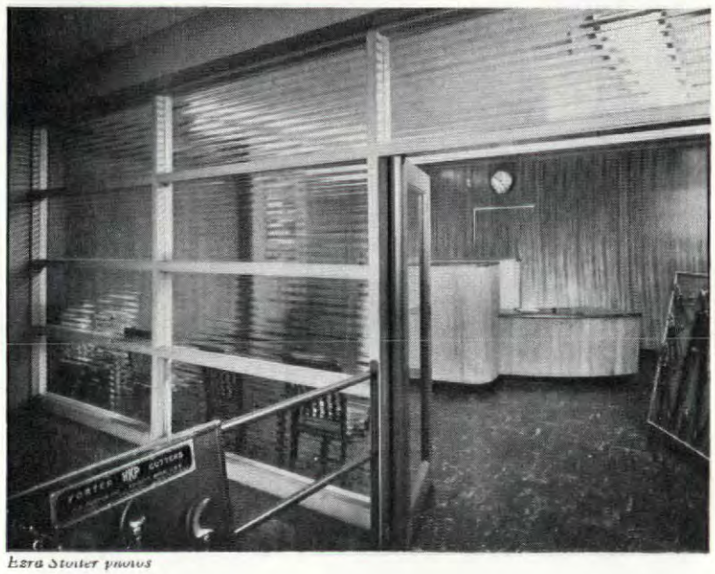
SECOND FLOOR accommodates employe facilities and office space.

To attract better workers and encourage them to do better work, the Porter companies have elevated their employes' locker rooms, restrooms and canteen to the well-lighted second floor and opened the latter to an expansive roof terrace used for rest-hour recreation. Accessible via stairs at the juncture of forge and factory buildings, these employe facilities serve both units. Similarly, offices of both jointly occupy the remaining second floor space. Demountable steel and glass partitions divide the office space and contribute to the flexibility and expansibility which keynote the entire project's design.

SECOND FLOOR OFFICES ENJOY BIG WINDOWS, OVERHEAD STRIP LIGHTING

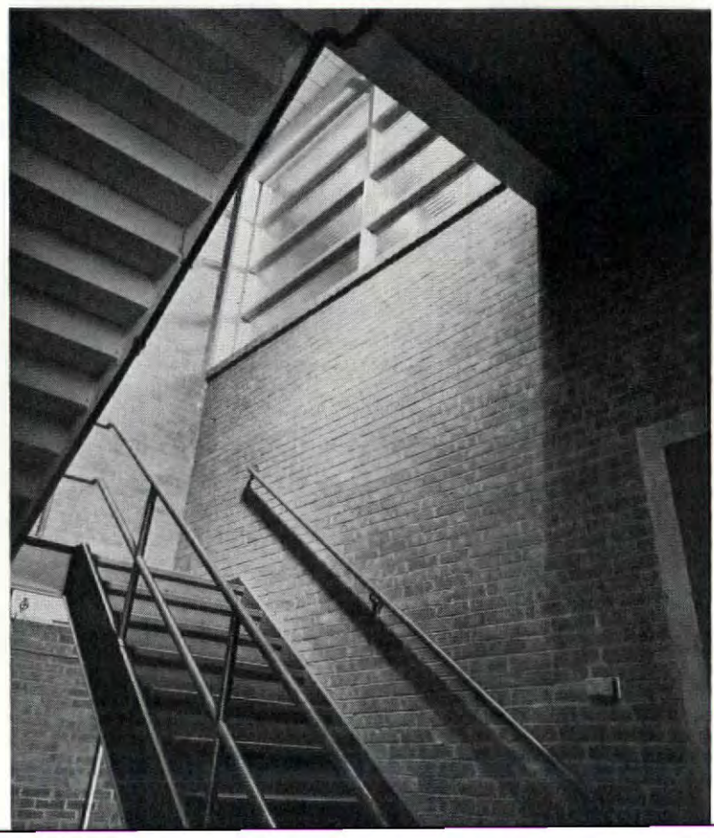


RECEPTION ROOM IS SEPARATED FROM STAIRS BY GLASS WALL



Ezra Stoller photos

STAIR WELL AT MAIN ENTRY IS UNGARNISHED BUT ATTRACTIVE



CONSTRUCTION OUTLINE

FOUNDATIONS—concrete piles. STRUCTURE: Exterior walls—brick cavity; Galbestos walls on forge shop, H. H. Robertson Co. Interior partitions—fireproof enclosures of brick; office partitions prefabricated, E. F. Hauserman Co. Columns—steel H-columns. Structural steel—The Bethlehem Steel Co. Floors (main)—reinforced concrete slab, Masterplate finish, Master Builders Co.; (offices)—asphalt tile, Johns-Manville. ROOF: (Offices)—tar and gravel on 1 in. Celotex, Celotex Corp. Plant—Galbestos V-beam sheeting, H. H. Robertson Co., on 1 in. rigid insulating cork. SHEET METAL WORK: Flashing—copper. INSULATION—Celotex Corp., The Insulite Co. and Johns-Manville. WINDOWS: Sash—steel and commercial type projected. Glass—Pittsburgh Plate Glass Co. and Mississippi Glass Co. Stairs—steel, concrete filled metal pans, Masterplate finish, Master Builders Co. DOORS: Entrance—stainless steel. Others—metal covered and wood slab or rolling doors by Kinnear Mfg. Co. HARDWARE: Floor checks—Oscar C. Rixson Co. PAINTS—Briggs-Maroney Co. and Carpenter-Morton Co. ELECTRICAL INSTALLATION: Wiring—550 v. power wiring; 110 v. lighting panels, rigid conduits. Fixtures—Holophane Co. A unit sub-station, 500 kva, 2400/4160 v., 3 phase, 60 cycle. Switchboard—Westinghouse Electric & Mfg. Co. PLUMBING FIXTURES—American Radiator-Standard Sanitary Corp., Fiat Metal Mfg. Co., Inc. and Bradley Washfountain Co. Refrigerated drinking fountains—General Electric Co. Pipes: Soil—cast iron. Water pipes—brass. HEATING AND AIR CONDITIONING: Low pressure steam system, Trane Co. Air conditioning in executive offices. Boiler—Kewanee Boiler Co. Oil burner—Todd Combustion Equipment, Inc. Radiators—Vulcan, A. F. Hinrichsen, Inc. Grilles—Tuttle & Bailey Mfg. Co. Regulators—Minneapolis-Honeywell Regulator Co. Valves—Crane Co., Jenkins Bros., Inc. Water heater—Taco Heaters, Inc.

PRIVATE RENTAL HOUSING gets a lift from Government's recent rulings and Building's belated recognition of a whopping market. But project designs and costs are less attractive than FHA's 608 financing scheme.

When President Truman reluctantly modified rent controls last month, he gave the champions of private rental housing one of the trophies for which they have long been fighting: The liberation of rents on new construction. Combined with FHA's streamlining of its rental housing requirements, the Bureau of Internal Revenue's easing of its real estate depreciation policy and the Housing Expediter's general relaxation of all building restrictions, the new rent decontrol law will give a big boost to apartment construction.

A big boost is sorely needed. Since the beginning of the war, when about 56 per cent of the nation's 35 million dwelling units were rented, the unbalanced relationship between tightly controlled rents and Scot-free sales prices has prompted landlords to sell some 4 million rental units. Moreover, while about 20 per cent of all dwelling units privately built in the uncontrolled prewar market were offered for rent, the ratio last year had dropped to less than 10 per cent. This, despite the fact that the great housing shortage has long been recognized as primarily a shortage of rental housing. Veterans newly returned to business and war workers displaced by the retrenchment of war production neither want nor can they afford to buy a house. Unfortunately, many of these low incomers, most of whom do not yet know where they want to live permanently, have been saddled with an unwanted high-cost house.

Jointly bearing the blame, both government and the building industry muffed the rental housing ball. The error became apparent last winter when housing for sale began to go begging. Since then, however, the much ballyhooed, much delayed rental housing program sponsored by FHA has finally got moving. The first big shove came in May when Long Island's big housebuilders, Gross-Morton, launched a $30 million, 3,800-family rental project for New York City's Borough of Queens. The $4.4 million mortgage on the first section of this project was among the largest ever insured by FHA and the first such mortgage ever to go through the agency's New York office. But, these records did not stand for long. Within two weeks the New York office committed FHA to insure two mortgages totaling $6.6 million for the Roth-Schenker Corp.'s 1,338-family project in Astoria and three more aggregating $9 million for Fred C. Trump's 1,344-family job in Brooklyn. Then, the Chicago FHA office beat them all by approving $27.5 million of financing for American Community Builders' 3,010-unit development 30 miles south of the Loop.

All these projects are to be built under FHA's Title VI, Section 608. Throughout the country, similar but smaller projects were announced almost daily. During the first half of this year, FHA insured $171 million of such mortgages, covering 9,500 rental dwelling units in 168 projects (seven times the dollar volume for the full year 1946). And, the building industry's switch to rental housing is just getting under way.

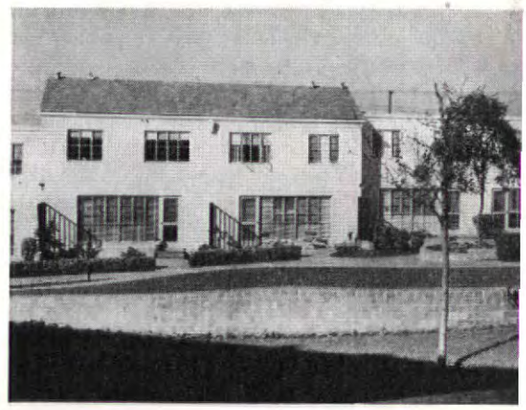
To speed this healthy trend, The FORUM gives the industry a quick look at the kind and cost of the apartments being built under FHA's 608 program (below), a close look at the financing scheme which has proved so attractive to builders and investors alike (p. 68), and a preview of one of the first big postwar apartments to get under way—Gross-Morton's Glen Oak Village (p. 70).

PLAN AND DESIGN show little improvement over prewar practice.

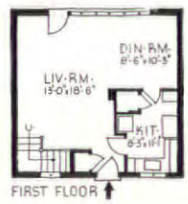
Although FHA's 608 program authorizes almost any kind of rental construction (detached houses, low walk-up buildings or multi-story elevator structures), the bulk of them will continue to be the so-called "garden apartments" which made their debut when FHA entered the rental housing field in 1935. It is logical that this type of project should lead the field, for it is a logical building form. Its narrow two- and three-story buildings are easily adapted to sites of irregular shape and topography and, due to the frequent repetition of a few identical elements, they are easy and economical to design and build. Their elimination of public space and equipment and the resultant ease of operation and maintenance are additional attractions from the owner's point of view. Tenants like them for their convenience and privacy—two important assets which most designers have failed to exploit to the maximum. For the investor, the garden apartment provides an outlet for a large amount of investment funds in a single transaction, with attendant economies in initiating and servicing the loan.

Although this building type is more than ten years old, its design is still in its infancy. Floor planning follows closely the numerous patterns originally developed and frequently published (see FORUM, May '40, p. 309 and FHA's "Planning Rental Housing Projects"). Designers and builders are still arguing the case of the one-story "flat" versus the two-story "duplex." Since both types continue to appear with about equal frequency, the advantages of one seem to balance those of the other, particularly when each flat, like the duplex, has its own entrance and tenant-maintained stairs, as do the Gross-Morton apartments (p. 71).

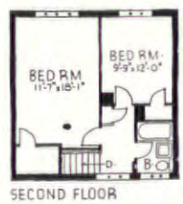
To be sure, a few imaginative designers have improved upon the garden apartment's original layout. The most noteworthy advance is demonstrated in Metropolitan Life Insurance Co.'s Parkmerced in Los Angeles. In this project, Architects Leonard Schultze & Associates concentrated the service elements of each two-story apartment to the front and opened the living room and bedrooms to the rear by means of large windows (see plans and picture, right). A glazed door beside the living room window leads to a private terrace, giving the tenant a garden apartment in fact as well as name. Such a room arrangement permits placing the buildings close to the street, thus creating larger landscaped courts to the rear. And these courts are unobstructed by the usual garages which have been integrated into the surrounding buildings. A similar floor plan developed by Architect Louis



METROPOLITAN'S PARKMERCED

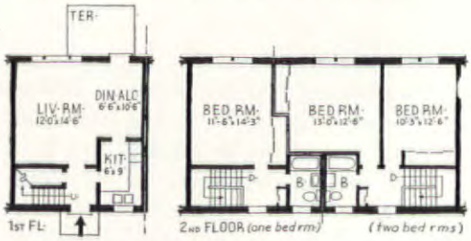


FIRST FLOOR

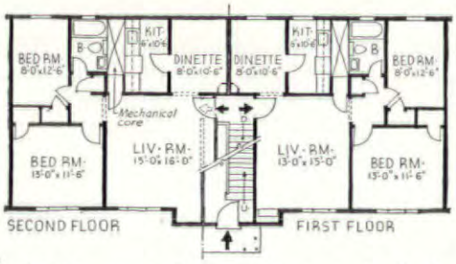


SECOND FLOOR

justement and Builder Gustave Ring for the John Hancock Mutual Insurance Co.'s new Boston project achieves the same results in a longer, narrower dwelling unit:



The provision of a separate heating plant in each apartment is another new design wrinkle. Its increasing favor over central heating, although as yet a mere drop in the bucket, may presage a trend. Primary advantage is the reduction of the project service crew and operating expenses. For the tenant, it means individually controlled heat and separate rent and fuel bills. Builders Nettleton & Baldwin, Inc. of Seattle have spotlighted this budding trend by equipping each of the 544 units in their Lake Burien Heights project with Ingersoll's Utility Unit—a packaged bath, kitchen and heating plant:



Outside, most of the projects to be built this year will look like their prewar prototypes, which, in turn, were patterned after such antiques as Mount Vernon. Unfortunately, the designers who specialize in this work and the neophytes who ape them seem more concerned with useless shutters, pilasters, cornices and cupolas than with such important details as adequate light, ventilation and orientation and minimum cost. Basically a Colonial imitation, Gross-Morton's huge Glen Oaks Village presents the garden apartment's typical front. If, as the rendering on p. 70 indicates, each apartment has two of its little windows flanked with shutters, the total of these useless accessories will number 15,200 and cost no less than $50,000.

Although FHA does not and should not dictate design, it is clearly on record as opposing such costly artificialities. In its new booklet, "Planning Rental Housing Projects," FHA states its belief that " simple direct designs which rely for their effect upon mass, scale and proportion are more attractive to tenants, and the resultant structures are sounder investments, than those which strive for picturesque or unusual effects."

With most projects designed and built in the same manner, unit construction costs stick close to the average. In high-cost areas such as suburban New York, the average runs about $2,000 per room for two- and three-story buildings, excluding land. In low-cost areas, the figure would be nearer $1,700.

PROJECT FINANCING under FHA's 608 program involves little cash of the

Section 608 of FHA's Title VI is such a boon to the financing of rental housing projects that it is surprising that the building industry has not taken fuller advantage of it. One reason is that its many advantages are hidden in the wearisome phraseology of high finance and have not been adequately publicized.

Mortgaging Out. The most significant fact is that FHA will insure a mortgage covering as much as 90 per cent of the current cost of a rental project, including land, improvements, on-site utilities, architectural fees, taxes and interest during construction, and miscellaneous expenses incidental to construction, but excluding organizational and legal expenses. (Two provisos: The mortgage may not exceed the estimated cost of the physical improvements, nor may it amount to more than $1,800 per room.) This generous mortgage-to-cost ratio means that the sponsor-builder of a project may recover through the mortgage all or substantially all of his cash expenditures. Normally, his net investment will consist only of his organizational expenses, legal fees and his profit on his construction work. If his land was acquired at a bargain price, he may mark it up to a current reasonable value and thus recoup all cash expenses—and perhaps make a little cash to boot. A project may be sponsored by a group comprised of land owner, builder and architect who contribute respectively their land value appreciation, profit and fee in return for stock, and thus need permanently invest no cash in the venture.

Recovering all cash expenses is known as "mortgaging out," and is the unannounced goal of every project sponsor, whether he intends to operate the project as an investment or sell it to a professional landlord. Mortgaging out is relatively easy in the development of small projects, and, in the long run, is possible for the largest of projects. However, the larger the project, the larger the amount of cash which the sponsor must temporarily invest and the longer he must wait for its return. One big builder found that sponsors will spend more than $50,000 of cash per $1 million of mortgage before they recover their first penny through construction loan advances. How they will spend it is shown at the right. It proves that, while "mortgaging out" may be possible, the development of large-scale rental projects —the kind which permit maximum design, construction and operation economies—can by no means be considered a shoestring operation.

Mortgage terms, set by FHA, limit the interest rate to 4 per cent, exclusive of the annual mortgage insurance premium of ½ of 1 per cent on the declining balance. Amortization by either level or declining annuity payments may be extended over 27 to 33 years, depending on the interest rate. On a level annuity basis, 1½ per cent amortization and 4 per cent interest come to $4.59 per $1,000 per month over a period of 32 years and seven months. On a declining annuity basis (less popular because it requires higher fixed charges and higher rents during a project's early life), 2½ per cent amortization and 4 per cent interest taper off from $5.42 to $2.09 per $1,000 per month during the 40-year life of the loan.

Project size and corporate organization. FHA treats projects requiring mortgages of more than $200,000 quite differently from smaller jobs. (The minimum project must have at least eight dwelling units.) A small project may be sponsored by an individual, partnership or a corporation and may be operated without FHA supervision. Large developments, however, must be sponsored by corporations whose charter provides for the maintenance of adequate reserves and for the creation of a special class of preferred stock for issuance to FHA.

Rents and profits. While rents on new uninsured apartment construction were recently freed from emergency controls, FHA will still try to limit them to a project average of $80 per dwelling unit per month, exclusive of allowances for services which may add as much as $3 per room to the monthly rental. Similarly, all contemplated rent boosts in these projects are subject to FHA's approval. In establishing maximum rents for a project, FHA allows a net return of 6½ per cent on total investment, based on current construction, land, operating, maintenance and insurance costs, taxes and a 7 per cent vacancy.

Depreciation. Cooperating with FHA's program to get rental housing built, the Bureau of Internal Revenue has liberalized its depreciation policy with respect to income tax calculation. In place of the longstanding level installment or straight-line method of charging off

CASH REQUIRED PER $1 MILLION OF MORTGAGE

Architect's fee (advance on $50,000) (about 1%)	$10,000
Engineers' fees and blueprints (about 0.1%)	1,000
Organizational and incidental expenses (about 0.3%)	3,000
FHA examination fee (0.3%)	3,000*
FHA inspection fee (0.5%)	5,000*
First year's mortgage insurance premium (0.5%)	5,000*
Title insurance, title search or attorney's opinion, mortgage tax stamps, recording fees and closing expenses, etc. (about 1%)	10,000*
Working capital deposit with mortgagee to insure equipping and renting of project (1½%)	15,000**
Indemnity agreement (0.5%)	5,000***
TOTAL CASH DISBURSED	$57,000
Additional working capital or credit (about 5%)	50,000
Land (about 10% of total project value)	80,000
TOTAL INITIAL INVESTMENT (CASH & CREDIT)	$187,000

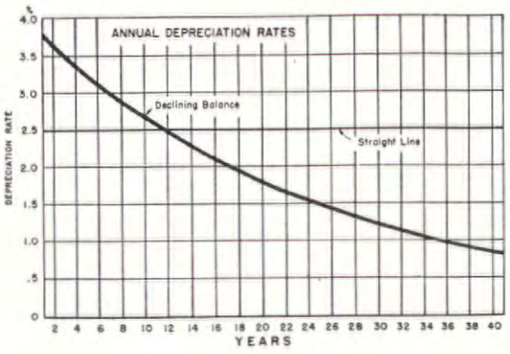
* These amounts plus $4,000 of the architect's fee (totaling $27,000) will be recovered in the first installment of the construction loan, payable shortly after the mortgage closing.

** Required only if FHA insurance is to cover advances of mortgage proceeds during construction.

*** Not required by FHA when mortgage is less than $200,000.

ponsor, little risk for the lender, but a lot of close figuring by both.

depreciation, owners of rental projects may now use the declining balance method. The former method involves writing off a fixed portion of the property's original value every year—normally 2½ per cent, assuming a building's useful life to be 40 years—while the latter permits the owner to write off up to 1½ times as much (3¾ per cent in this instance) of the declining balance each year. The two methods are compared graphically in the chart below, which shows both rates plotted in relation to the original value.



As is apparent from the chart, the new method's principal advantage is the relatively great depreciation allowed during the project's first 12 years—an important consideration for projects built during a period of high costs. The higher rate reduces the owner's taxable income during these early years, permits him to take a larger net return from earnings (supposedly to accumulate a surplus for later contingencies), and postpones the time when his steadily increasing amortization payments will exceed his depreciation allowances. Heretofore, amortization payments on a 90 per cent mortgage have begun to exceed depreciation allowances in a project's seventh year, and the owner thereafter has had to pay income tax on the ever-increasing differential.

Organizational procedure. Although FHA has recently simplified the routine and paper work leading up to the issuance of a mortgage insurance commitment, it still is a lengthy, difficult process. Between a project's inception and construction are a dozen major steps which every project sponsor must follow:

- Study carefully the rental housing needs of the community or area; determine the types and sizes of apartments for which there is a market, the number of apartments that can be absorbed, and the areas most suitable for rental housing. FHA's local offices can offer valuable data to assist in these early studies.
- Obtain and become familiar with FHA's recommendations and requirements regarding 608 rental housing—they are contained in the booklets already referred to. Also become familiar with the FHA forms which must eventually be completed, particularly Form 2013w, Application for Mortgage Insurance.
- Select a suitable site.
- Discuss the proposal with local FHA officials, obtain their informal opinion on the acceptability of the site and the proposed

Estimate of Annual Operating Expense

Administrative expense:		Gas	$ ---	Furniture and furnishings	$ ---
Advertising	$	Garbage and ash removal	---	Other operating expense	
Management	4,460.	Pay roll for 2 (Number) employees	3,600	Total	20,765.
Operating expense:		Maintenance expense:		Replacement reserve	3,154
Elevator power (if any)	---	Decorating	3,708.	Total operating expense	23,919.
Elevator maintenance	---	Repairs	940.	Total operating expense per room per annum	65.88
Fuel (heating and domestic hot water)	4,138.	Exterminating	182.		
Janitor's supplies	182.	Insurance	2,045		
Lighting and miscellaneous power	564.	Grounds expense (materials only)	182.		
Water	764.				

RESOURCES

Land	$ 13,668	
Cash (exclusive of working capital)		
Other equity	57,061	
Total equity		$ 70,729
Mortgage-loan proceeds		635,700
TOTAL RESOURCES (exclusive of working capital)		$706,429.
Cash working capital	$ 9,535	

ESTIMATED REQUIREMENTS

LAND IMPROVEMENT: (within property lines only)		
New utilities	$ 31,276	
Landscape work	17,107	
TOTAL FOR LAND IMPROVEMENTS		$ 48,383
CONSTRUCTION:		
Dwellings	$ 526,740	
Garages	18,196	
Stores		
*Salvage** (as below)		
Taxes (Social Security, sales, etc.)		
Utility Bldgs.	1,050	
FEES:		
Bld'r, $ 594,360 @ 5 %	29,718	
Arch't, $ 624,080 @ 5 %	31,204	
TOTAL		$606,908
TOTAL FOR ALL IMPROVEMENTS		$655,291
CARRYING CHARGES AND FINANCING:		
Interest 18 mos. @ 4 % on $ 317,850	$ 19,071	
Taxes (on real estate during construction)	135	
Insurance	2,000	
FHA mtg. ins. premium (0.5%)	3,178.50	
FHA examination fee (0.3%)	1,907	
Inspection fee (0.5%)	3,178.50	
Financing expense %		
Title and recording expense	3,000	
TOTAL FOR CARRYING CHARGES AND FINANCING		$ 32,470
TOTAL FOR ALL IMPROVEMENTS, CARRYING CHARGES, AND FINANCING		$687,761
LEGAL AND ORGANIZATION EXPENSE:		
Legal expense	3,000	
Organization expense	2,000	
TOTAL LEGAL AND ORGANIZATION EXPENSE		$ 5,000
TOTAL ESTIMATED REQUIREMENTS, EXCLUSIVE OF LAND		$692,761
LAND:		
261,360 sq. ft. @ .05 per sq. ft.	$ 13,668	
TOTAL ESTIMATED REQUIREMENTS		$706,429
Cash working capital	$ 9,535	

ESTIMATED ANNUAL OPERATING STATEMENT

INCOME: (See note No. 5, explanatory notes)			
Dwelling rent (from schedule E)	$ 80,880		per annum.
Garage rent (from schedule E)	2,340		per annum.
Store rent (from schedule E)	---		per annum.
Other income (from schedule E)	---		per annum.
TOTAL ESTIMATED GROSS INCOME PER ANNUM		$ 83,220	
Less vacancies assumed:			
(7 % on dwellings)	$ 5,662		
(7 % on garages)	163		
(% on other income)			
TOTAL VACANCY DEDUCTION		$ 5,825	
GROSS INCOME EXPECTANCY (Effective gross income)		$ 77,395	
TOTAL OPERATING EXPENSE: (Schedule D)			
Number of rooms 363 @ $ 65.88 per annum	$ 23,919		
REAL-ESTATE TAXES:			
Estimated assessed value: $ 242,000 @ $ 35.10 PER $1,000	8,494		
SOCIAL SECURITY AND OTHER SPECIAL TAXES	36.		
TOTAL		$ 32,449	
CASH AVAILABLE FOR DEBT SERVICE		$ 44,946	
ANNUAL FIXED CHARGES:			
Interest (1st year) 4 %	$ 25,428		
Amortization @ 1½ % during first year	9,535.50		
Mortgage insurance (0.5%)	3,178.50		
Other fixed charges (Special assessments, etc.)	---		
TOTAL ANNUAL FIXED CHARGES		$ 38,142	
CASH AVAILABLE FOR INCOME TAXES, CORPORATE TAXES, DIVIDENDS, AND SURPLUS		$ 6,804	

LIST OF EXHIBITS

- Site Plan
- Typical Floor Plan
- Typical Unit Plan
- Specifications
- City Map
- Legal Description of Site
- Zoning Map
- Request for Wage Determination
- Statement of Site Ownership
- Personal Financial Statements

FINANCIAL SET-UP for a typical 608 project of average size shows data required by FHA. Covering a 94-family development with an estimated total cost of $706,429, the tables above have been lifted from an approved "Application for Mortgage Insurance." (FHA Form No. 2013W).

Offering about six acres of land valued at $13,668 and fees totaling $57,061 as equity, the sponsors of this project must have $9,535 of working capital and a $635,700 mortgage, representing the maximum 90 per cent of total costs (excluding $5,000 of organization and legal expenses). Choosing to amortize the mortgage with 1½ per cent level annuity payments, they will be required to make 391 monthly installments of $2,913.62 covering principal and interest. When they submitted the application, they paid an FHA examination fee of $953.

The financial requirements and operating statistics shown above are based on the construction of 94 dwelling units in two-story walk-up buildings and 39 garage stalls. Containing 3½ rooms, 60 of the units will rent for $67 per month; the balance are 4½-room units at $80. Thus, the average rental is $71.70 per family unit, or $18.57 per room. Including garages at $5 per month and assuming 100 per cent occupancy, the project will gross $6,935 per month, or $83,220 per year. However, as shown above, FHA makes a 7 per cent vacancy allowance in calculating gross income, reducing this figure to $77,395 per year. On this basis and after all expenses, cash available to the sponsors for income and corporate taxes, dividends and surplus is $6,804, or about 9 per cent on their equity investment. Assuming no vacancies, this net return would almost double.

development, seek their advice as to the project's physical character, general layout, size and composition and determine exactly what will be expected of the sponsor, builder, architect and mortgagee. The presentation of rough sketches showing preliminary site plans and typical dwelling unit floor plans will prove helpful. This preliminary discussion with FHA is undoubtedly the most important step in the whole routine, for on it are based all succeeding steps. If necessary, this step should consist of two or three such visits to FHA.

▶ Purchase or obtain an option on the site and have a topographical survey prepared.

▶ Employ an architect to design the project, prepare preliminary drawings (not working drawings) and complete FHA's 2451w, Outline Specification.

▶ Make tentative financing arrangements with an FHA-approved lender.

▶ Obtain a cost estimate from a builder.

▶ With the aid of the prospective mortgagee, prepare the application for mortgage insurance. (The tables on page 69 are excerpted from FHA's standard form and indicate the scope of the information required.) If possible, the data on this application should be checked by someone experienced in dealing with FHA, for the estimates presented therein frequently make or break a project. For instance, over-valuation of the site merely cuts down the over-all mortgage-to-value ratio (no credit is given for land value in excess of 10 per cent of total project value). Padding of the construction cost estimate is frequently a fatal error, for while FHA examiners may accept this cost estimate, they may, at the same time, shave the project's indicated earning power as estimated by the sponsor. This would result in a smaller mortgage than anticipated and require a correspondingly greater cash investment by the sponsor. Still another pitfall can be avoided if the sponsor knows in advance of application that FHA will not normally authorize a financial set-up involving interest and amortization charges in excess of 91 per cent of net income, before income taxes, corporate taxes, dividends and surplus.

▶ Submit the application in triplicate to FHA along with a check covering the examination fee ($3 per $1,000 of mortgage) and the required exhibits: preliminary plans, outline specification, topographical survey, legal description of site, statement of site ownership or option, photographs of the site and neighborhood, city and zoning maps with the site indicated, request for wage determination and personal financial statements covering each sponsor.

▶ After four to six weeks, FHA will have examined the application, analyzed the project and will agree (or refuse) to issue a commitment to insure a mortgage for a certain sum.

▶ The sponsor, his architect, engineers and lender, complete all material required for the issuance of a commitment, including such revisions in plans as may be suggested by FHA.

▶ If, upon examination of this material, FHA is satisfied that all requirements have been met, it will call together all parties for the signing of the necessary contracts, including the mortgage. And, construction may begin.

8,300 GARDEN APARTMENTS by House-builder Gross-Morton of New York

Typical of the larger garden apartment projects being financed under the easy terms of FHA's 608 program is the 175-acre, 3,800-family Glen Oaks Village now being built in New York City's Borough of Queens. The sponsor is Gross-Morton, for 25 years one of Long Island's most prolific house builders,* now its biggest producer of rental housing. Its architect is Benjamin Braunstein, a specialist in garden apartment design.

Ultimately to be a $30 million development, Glen Oaks' construction will be divided into six staggered but overlapping stages. Reasons: 1) FHA will not insure a mortgage of more than $5 million. 2) The sponsors will minimize the amount of their cash investment—much of the cash paid out prior to closing the mortgage on one section will be recovered in construction loan proceeds before additional cash is required for the next stage. 3) The site payroll will be relatively small. 4) Architects and engineers will have more time to prepare the hundreds of blueprints required. 5) By feeding the proposals to FHA piecemeal well in advance of their scheduled construction dates, the periods of FHA processing will not represent lost time.

Glen Oaks' first section covering a 27-acre tract four blocks away from the project proper will accommodate 576 families and is already under construction. (Meanwhile, the street pattern for the balance of the site is being studied; the tentative layout requires only 17 acres of streets compared with the 46 acres in the city's original gridiron plan—see site plan opposite.) Setting the pattern for the entire development, site planning of the initial section was guided by standards mutually agreed upon by sponsor, architect, mortgagee and FHA: a density of 22 families per acre, a 20 per cent land coverage, garages for 50 per cent of the tenants, off-street parking for another 25 per cent, 25 sq. ft. of paved play area per small child (big children will play in nearby public parks) and one linear foot of store front for each four families with 2 sq. ft. of off-street shopper parking per 1 sq. ft. of store area. Actually, the first section's apartments are supplemented by 277 garages (including 87 in basements), 156 off-street parking space. In addition, these apartments will be served by basement perambulator "garages" (with easy access ramps—see detail, opposite), basement laundries (with automatic electric washers and gas dryers), outdoor drying yards, basement recreation rooms (with kitchens and lavatories), photographic darkrooms and workshops which tenants may reserve for nominal fees, and outdoor sitting areas. The 25,000 sq. ft. of stores in the initial section will supplement the 15-acre regional shopping center on the bigger tract.

Comprising 24 two-story buildings, the 576 apartments are divided as follows according to size and monthly rent:

72 3-room units at $66-$72
152 3½-room units at $78-$82
184 4-room units at $88-$92
168 5-room units at $96-$100

Excluding gas, electricity and garage, rents range from $19 to $24 per room.

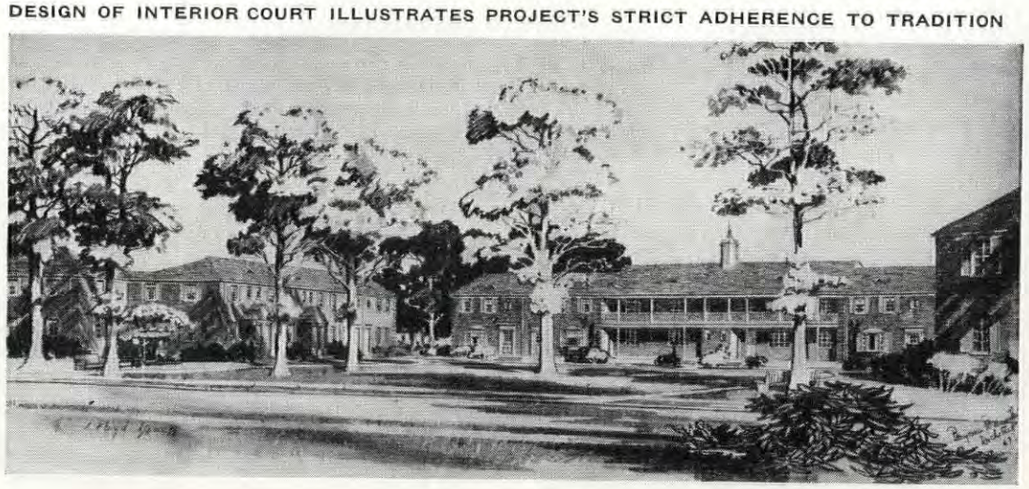
All apartments are flats, but even those on the second floor have private entrances and stairs. This arrangement permits separation of each two-family section by a masonry fire wall, thus reduces insurance costs. It also reduces maintenance costs by eliminating public stairs and halls.

Construction features poured concrete foundations, brick veneered frame walls, gypsum lath and plaster interiors, steel casement windows, roofs of heavy individual asphalt shingles with 3 in. of cotton insulation. One-third of the buildings contain basements.

Excluding land valued at about $380,000, construction of the initial section has been estimated at $4,850,000 or about $8,400 per apartment, $2,090 per room. The $4,350,000, 4 per cent FHA-insured mortgage will run for 32 years and seven months. It is held by the Bank of the Manhattan Co., who will make the construction advances and will eventually assign it to The Prudential Insurance Co.

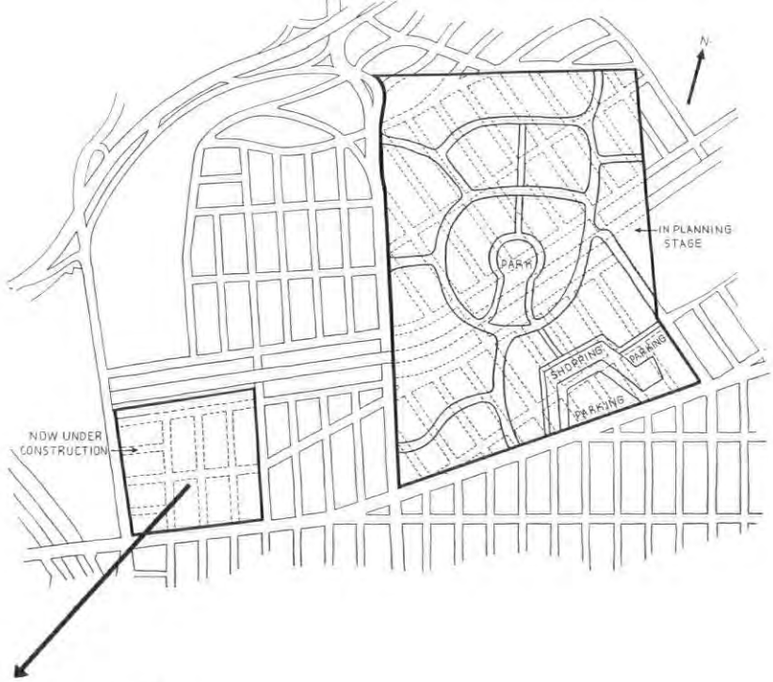
* Although most of the 7,500 dwellings produced by this company are detached houses, the total includes 1,090 war housing units and last year's 500 units in two-family houses, sold to veterans who rent out the upstairs apartments to offset part of their monthly purchase costs. The Company is headed by Brothers George (president) and Alfred Gross and Brother-in-law Lawrence Morton (vice presidents).

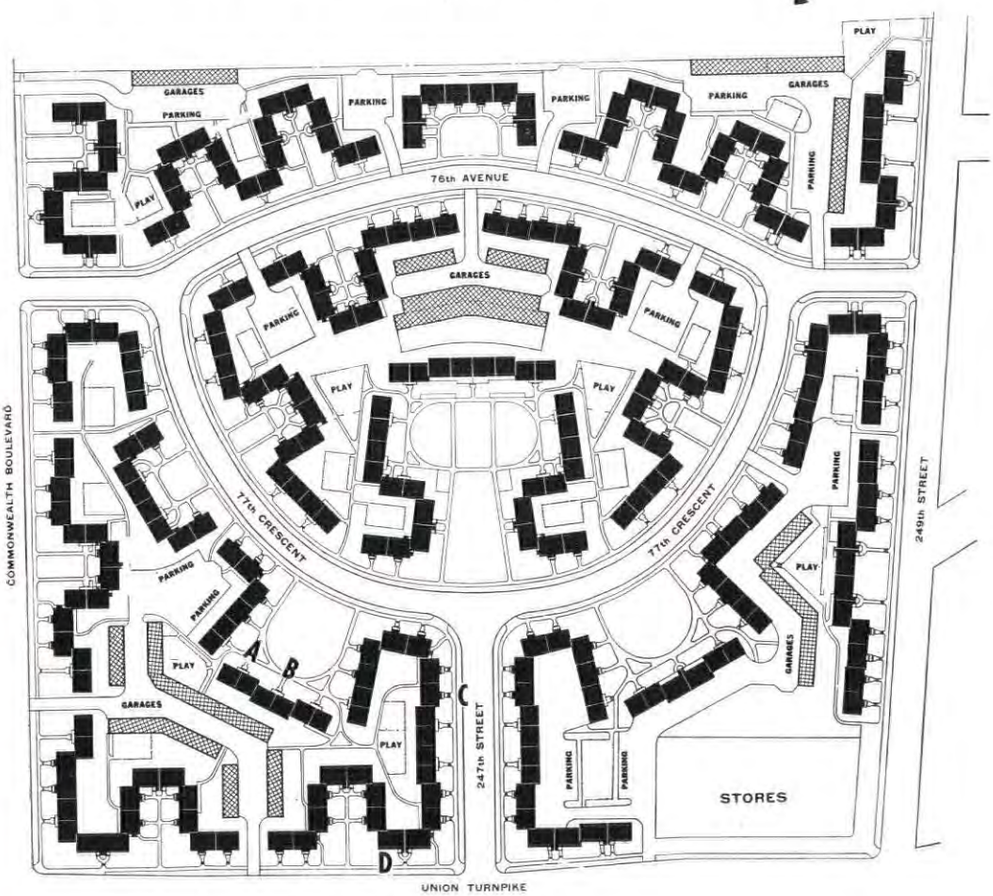
DESIGN OF INTERIOR COURT ILLUSTRATES PROJECT'S STRICT ADHERENCE TO TRADITION

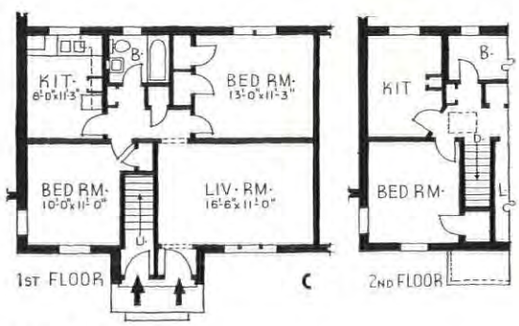


spotlight the industry's shift from sale to rent.

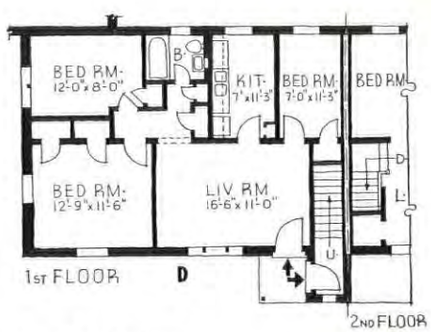
SITE IS NEAR HIGHWAYS, PARKS AND GOLF COURSES



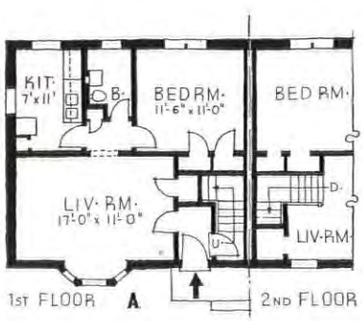




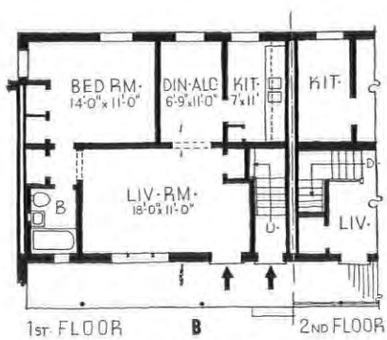
FOUR-ROOM UNIT



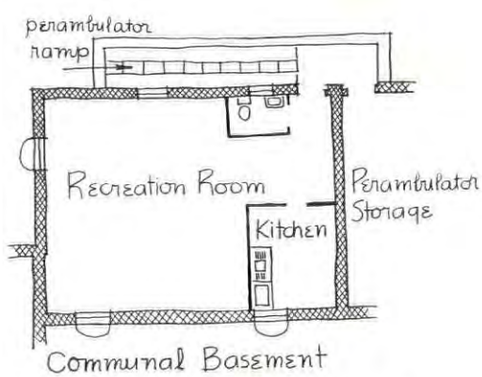
FIVE-ROOM UNIT



THREE-ROOM UNIT



THREE-AND-A-HALF ROOM UNIT



PERAMBULATOR RAMPS give access to basement storage. Recreation rooms will be available for tenants' use on fee basis.

MANY-WINDOWED HILLSIDE HOUSE IS ORIENTED TO EXPLOIT VIEW. LIVING ROOM ON LOWER LEVEL ADJOINS SCREENED PORCH

A solid, sturdy design is typical of the Middlewest

NEWTON S. NOBLE JR., Owner
WILLIAM F. DEKNATEL, Architect

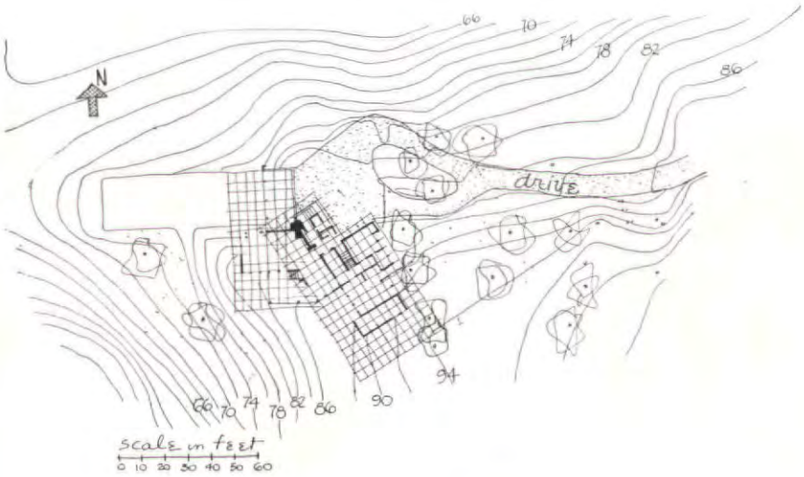
HOUSES

A good example of regional architecture is this house in the middlewest which displays a solidity of character typical of most homes, whether modern or traditional, in that section of the country. Although fenestration is ample, there are no complete window walls and the over-all effect is sturdier than the light airy construction found in California homes. Particularly middlewestern are the wide eaves, frame exterior and use of heavy masonry in the interior.

Located on a heavily wooded small hill, the house was of necessity designed in several levels, a factor which led to a number of interesting features. The childrens' rooms, for example, have direct access to the grounds through a play porch on the same level; the servants' quarters on a separate floor are effectively isolated from the rest of the house; the basement recreation room is a ground floor area opening into the garden through French doors. To take advantage of an impressive view to the north, the living room wing is turned 60 degrees from the line of the rest of the house and given corner windows.

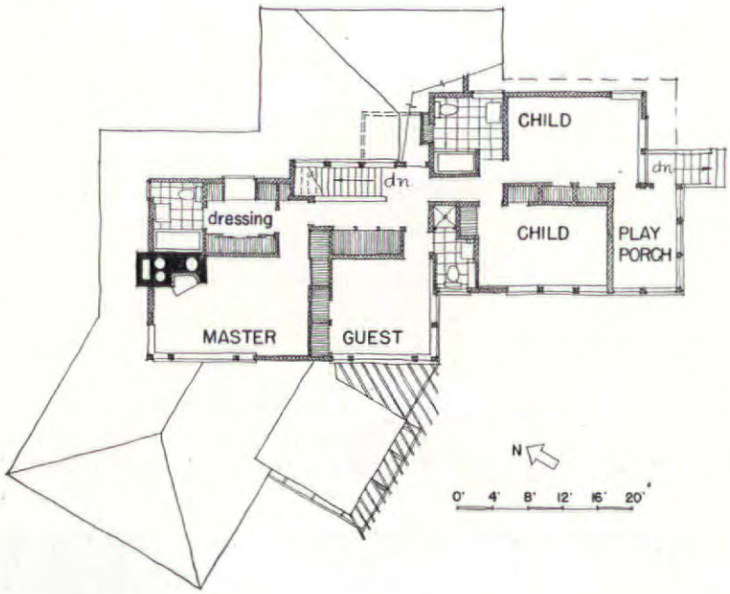
The original property was scarred by an old gravel pit located on the only part of the site commanding an extensive view. The house was therefore placed over the pit and this existing excavation utilized in part for the basement and in part for the garden at basement level under the west end of the living room. A library study located north of the living room over the pergola, is planned as a future addition.

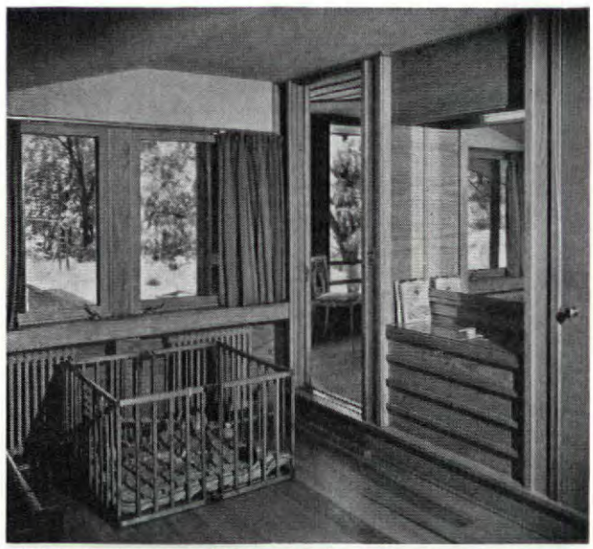
The owners are particularly enthusiastic about the porch off the second floor bedroom which, in addition to its use for outdoor living, serves as a fire escape from the childrens' rooms. They also comment on the small amount of upkeep necessary with a cypress exterior and interior woodwork of waxed oak. If the house were to be redesigned, however, they would lower the kitchen windows to obtain a better view and put double doors on the basement storage area to allow easy access for power tools.



VIEW FROM UPPER ENTRANCE LEVEL INTO DINING ROOM (LEFT) AND LIVING ROOM, WHICH IS ANGLED FROM REST OF HOUSE TO CATCH VIEW

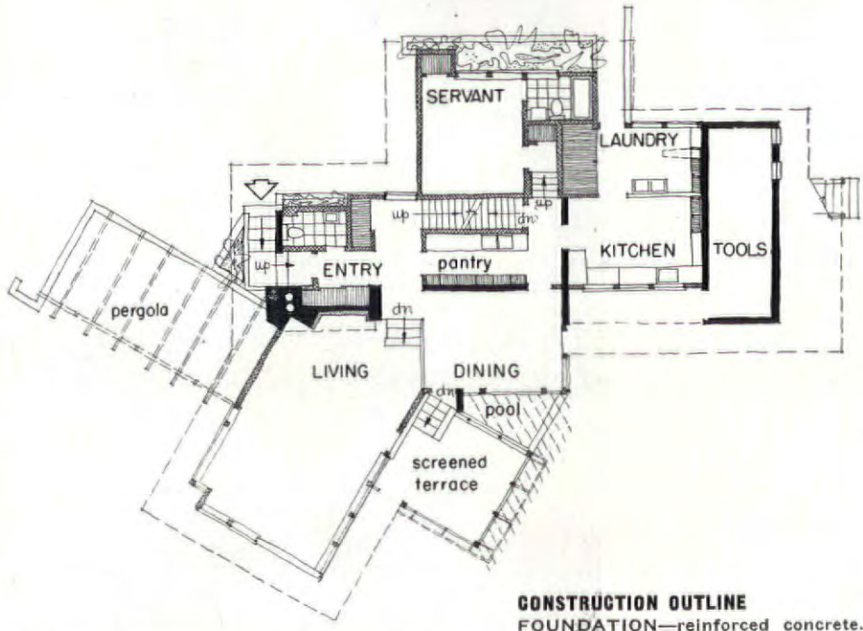
Hedrich-Blessing Photos



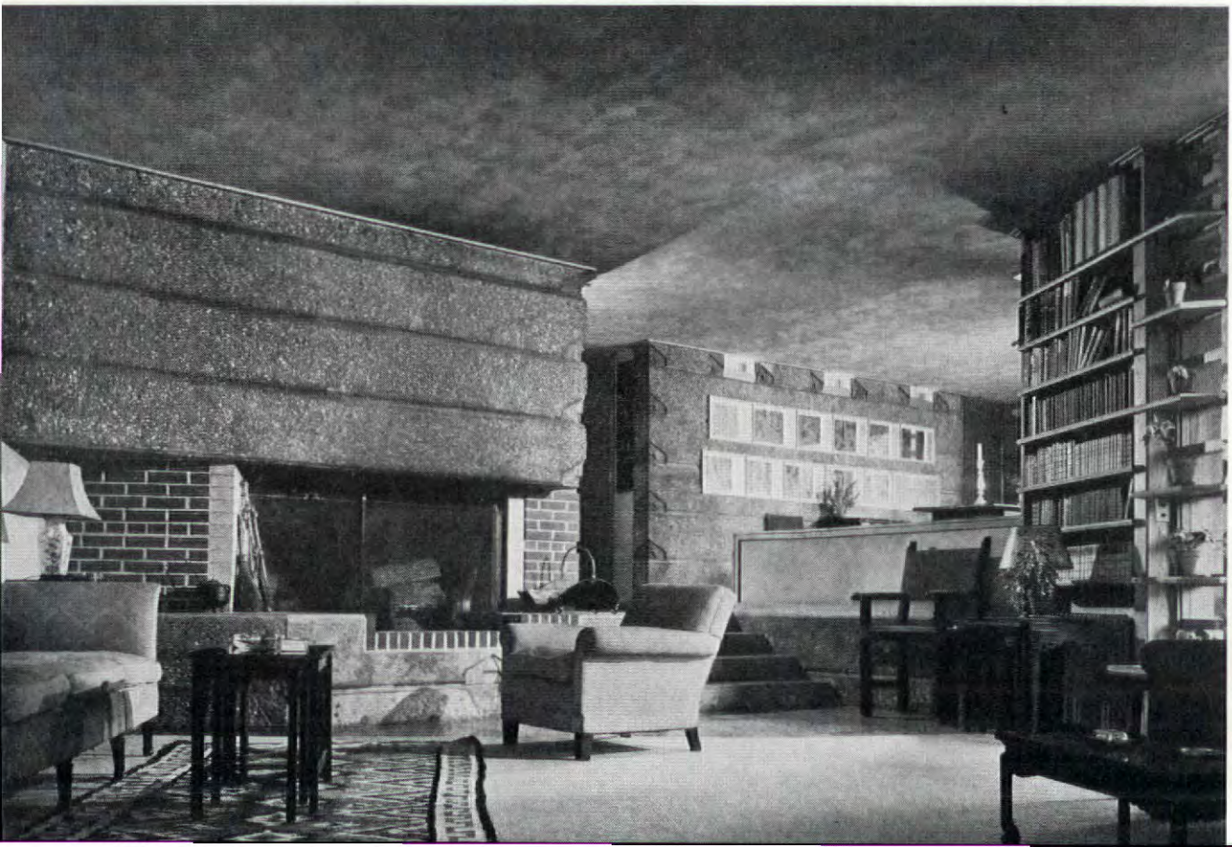


VIEW OF CHILD'S ROOM AND ADJOINING PLAY PORCH

LIVING ROOM HAS LARGE VIEW WINDOWS ON TWO SIDES



HEAVY MASONRY OF WALL AND FIREPLACE DEADENS NOISE FROM ENTRANCEWAY, PANTRY, KITCHEN

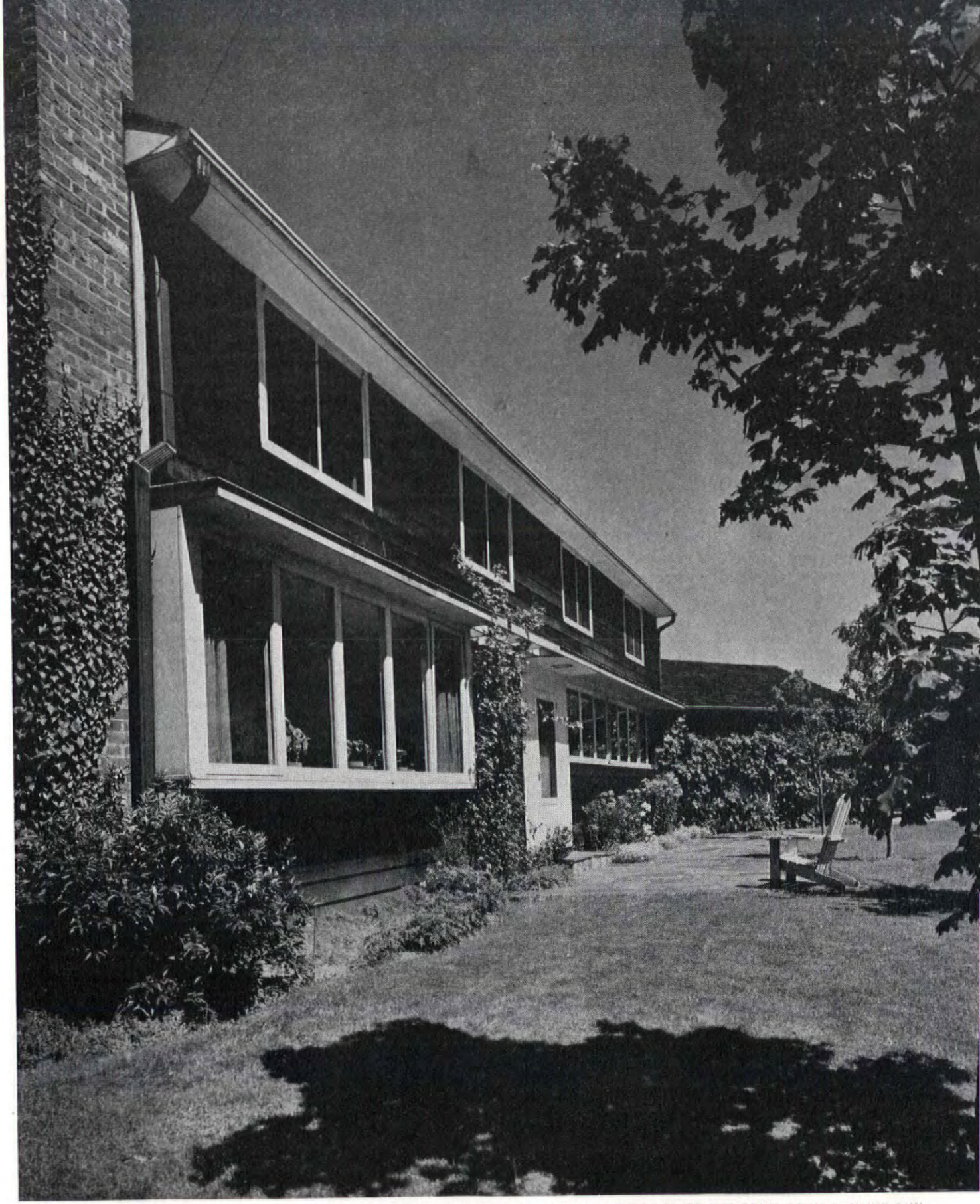


CONSTRUCTION OUTLINE

FOUNDATION—reinforced concrete. Dampproofing—Minwax spray coat asphalt, Minwax Co. STRUCTURE: Exterior walls—cypress siding, Celotex Corp. Vaporseal sheathing, studs, gypsum lath and plaster. Floors—concrete slab or oak. Ceiling—plaster. ROOF—red cedar shingles. Deck—5 ply tar and gravel. INSULATLION—rockwool. SHEET METAL WORK: Flashing—copper. WINDOWS: Sash—outswinging casement, double glazed. Glass—Lustraglass. American Window Glass Co. STAIRS—oak. FLOOR COVERINGS: Kitchen-rubber tile, Wright Rubber Products Co., Div. Taylor Mfg. Co. Bathrooms—linoleum, Congoleum-Nairn, Inc. WALL COVERINGS: Main rooms—plaster, integral coloring. Kitchen and bathrooms—plaster and linoleum. PAINTS—Minwax Co. and Berry Paint Co. DOORS and GARAGE DOORS — Hardwood Products Co. ELECTRICAL WIRING—rigid conduit. KITCHEN CABINETS—Elgin Stove & Oven Co. BATHROOM FIXTURES—Kohler Co. PLUMBING: Soil and branch pipes—cast iron and galvanized iron. Vent pipes—galvanized steel. HEATING—one pipe circualting hot water system. Boiler and radiators—Kohler Co. Valves and water heater—Bell & Gossett Co. Regulator — Minneapolis-Honeywell Regulator Co.

Hedrich-Blessing Photos

Ezra Stoller



BROWN STAINED EXTERIOR IS ACCENTED BY WHITE TRIM. PROJECTING HOOD SHIELDS LOWER WINDOWS FROM SUMMER SUN

House near Ossining, N. Y.

LEON SVIRSKY, Owner

WILLIAM HAMBY & GEORGE NELSON, Architects

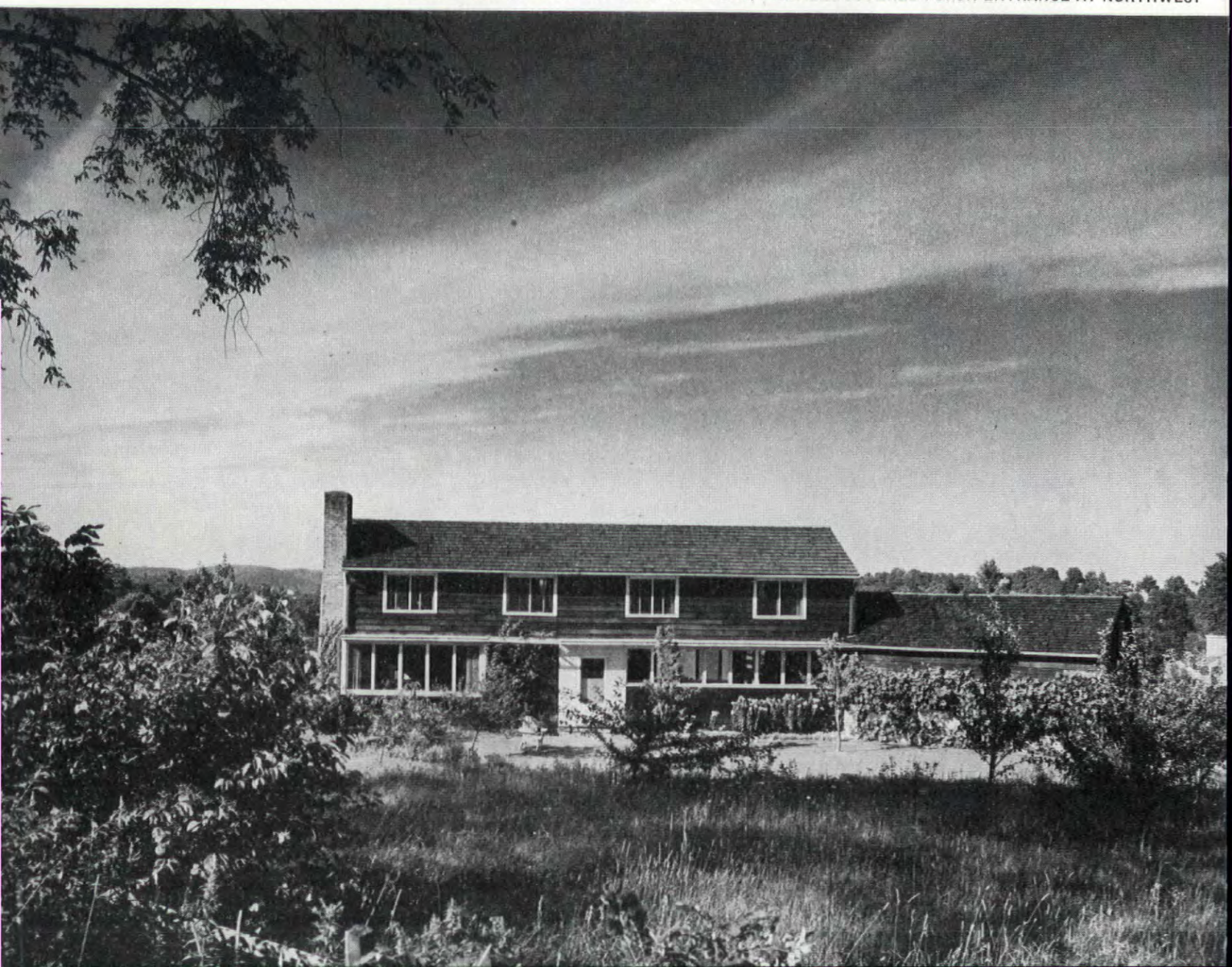
Conservative modern fits neatly into rural New York landscape

The main problem in designing this country house was to get both southern orientation for solar heat and northern outlook to catch the view of a nearby lake. This was accomplished with a two-story, in-line plan of unusual narrowness, the entire width of the house being only 18 ft. Thus, all rooms have both lake view and winter sunlight. The owner reports: "We like the openness of the house, its light, airy quality. Large windows on both sides contribute to this feeling. Also the house is economical to heat, despite its expanse of glass. Heating costs run less than $100 a year, for on cold days if it is sunny, the temperature goes up to 80° without the furnace. On most winter days the furnace stops at 10 a.m."

The owner is also enthusiastic about the trick of supplementing the upstairs bathroom with wash basins in two bedrooms and a lavatory downstairs, an arrangement the architects pushed as more convenient than the two conventional bathrooms requested by the clients.

One of the few criticisms the owner makes of the house is of the combined kitchen-playroom—a two-purpose area separated by sink and shelf units, but open enough to allow supervision of children. An excellent design idea, it has nevertheless developed a few bugs with everyday use. Because the playroom must be traversed to reach the kitchen, it turned out to be largely a passageway and toys and furniture, if left about, create a traffic obstruction. In addition, the area is used for dining and the owners object to its lack of separation from the kitchen when entertaining guests. The traffic problem might have been solved by placing the shelf partition at the east rather than the south side, but privacy for dining would have involved sacrificing the open plan necessary for child supervision.

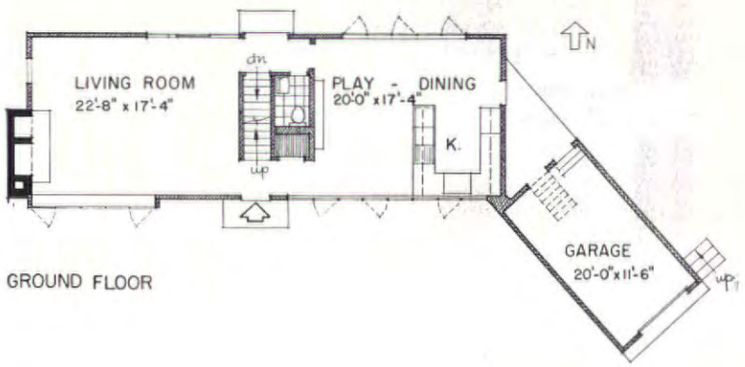
GARAGE, (RIGHT) IS ANGLED FROM HOUSE TO CONNECT WITH SIDE ROAD, PROVIDES COVERED PORCH ENTRANCE AT NORTHWEST



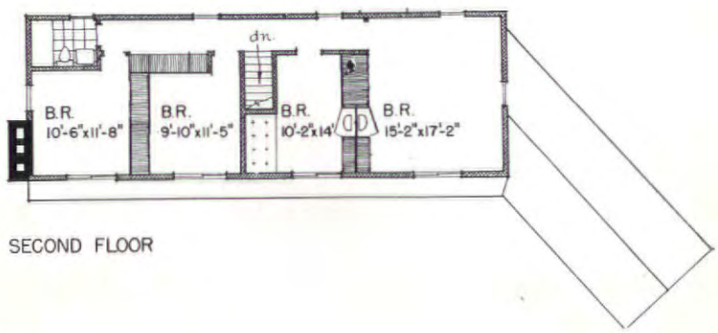
Ezra Stoller Photos

KITCHEN-PLAYROOM FEATURES TYPICAL WALL STORAGE

ACIOUS LIVING ROOM OCCUPIES A MAJOR PART OF GROUND FLOOR AREA



GROUND FLOOR



SECOND FLOOR

CONSTRUCTION OUTLINE

FOUNDATION — concrete block. STRUCTURE: Exterior walls—frame, cedar sidings. Floors—oak. Ceilings—Transite, Johns-Manville, or Sheetrock, U. S. Gypsum Co. ROOF—red cedar shingle. INSULATION—rockwool. FIREPLACE: Damper—H. W. Covert Co. SHEET METAL WORK: Gutters—wood. Remainder—copper, Revere Copper & Brass Co. WINDOWS: Sash—wood. Glass—Pittsburgh Plate Glass Co. FLOOR COVERINGS: Kitchen and bathroom—linoleum, Armstrong Cork Co. WALL COVERINGS: Living room and kitchen—pine paneling. Bedrooms—fabric or wallpaper. PAINTS—Pratt & Lambert, Inc. GARAGE DOORS—Frantz Mfg. Co. ELECTRICAL INSTALLATION—Graybar Electric Co. KITCHEN EQUIPMENT: Range—Crosley Corp. Refrigerator—General Electric Co. Washing machine—Bendix Home Appliances, Inc. BATHROOM EQUIPMENT—American Radiator-Standard Sanitary Corp. HEATING—forced warm air system. Regulator—Minneapolis-Honeywell Regulator Co. Water heater—Pittsburgh Water Heater Co.

Split-level design takes full advantage of view and sloping site

MR. & MRS. GEORGE S. CLEFTON, Owners
VAN EVERA BAILEY, Architect

The handling of different levels in this Oregon house reveals a mastery of spatial planning seldom equaled in residential design. Built on four planes, it nevertheless achieves full use of the surrounding property by means of outside entrances to every room on the three lower floors. The garage and street entrance at the third level open into a stair-landing foyer which leads either up to the top floor bedrooms or down to living quarters. Below this floor is a partial basement for tool storage (not shown), which connects with a greenhouse lean-to on the south side and has its own terrace entrance—a convenient arrangement for gardening.

Interior circulation is worth special comment, particularly the placement of the lower bath which makes it directly accessible from every room, without passing through another. A garage entrance to the kitchen is an additional convenience.

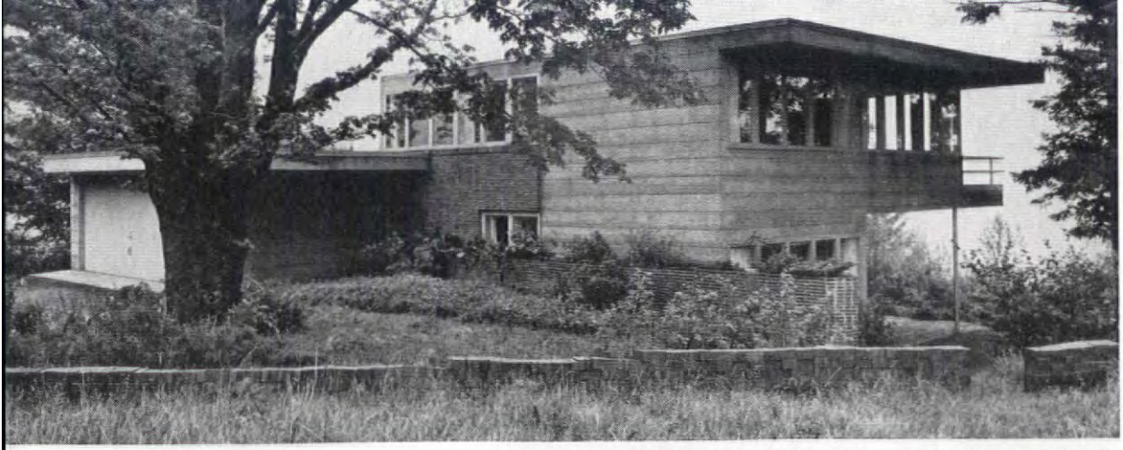
Two deck extensions, one at the top level sleeping floor, the other at the dining area (above the ground dip which makes room for the basement at that side) provide space for outdoor dining or entertaining. Another terrace on the opposite side of the house at ground level connects both living room and son's room with a large yard.

The owners particularly appreciate the solar heating, ease of circulation, flexibility of dining space, built-in furniture, open-air terraces, privacy of son's room and separation of sleeping and dressing rooms which allows a cool bedroom next to a warm dressing area. Their conclusion: "We could never again be satisfied with a period home."

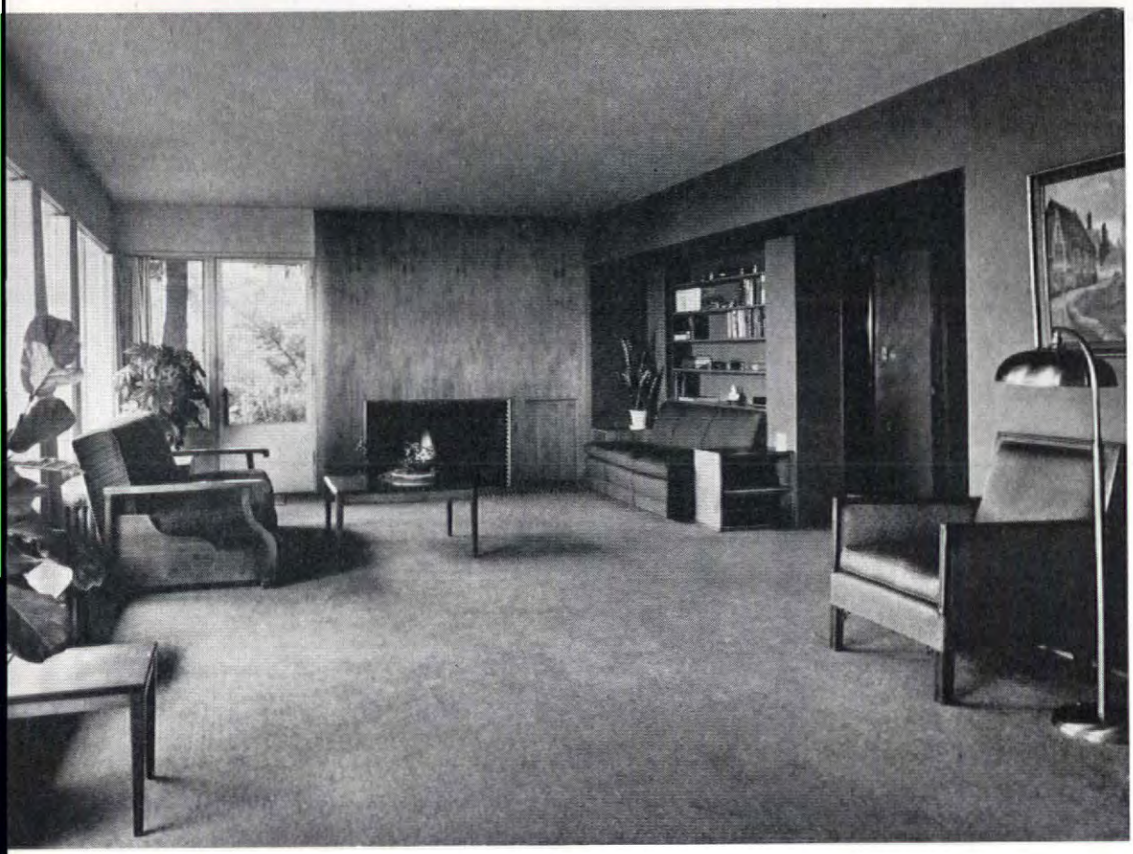
CONSTRUCTION OUTLINE

FOUNDATION—concrete. STRUCTURE: Exterior walls—cedar sidings, building paper, shiplap sheathing, plaster on wood alth. ROOF—asphalt built-up, gravel. INSULATION: Outside walls and roof—cedar shavings. SHEET-METAL WORK: Flashing—2 lbs. lead. Leaders—cast-iron. WINDOWS: Sash — casement. Glass — double strength, quality B or crystal sheet. Screens—Rolscreen Co. FLOOR COVERINGS: Main rooms—Amhaco Lair felt carpet, American Hair Co. Kitchen and bathrooms—linoleum, Armstrong Cork Co. PAINTS—Sherwin-Williams Co. HARDWARE—Schlage Lock Co., Vincent Whitney Co. KITCHEN EQUIPMENT: Range and refrigerator—Norge Div., Borg-Warner Corp. BATHROOM EQUIPMENT—Crane Co. HEATING—hot water radiation. Boiler and water heater—Crane Co. Regulator—Minneapolis-Honeywell Regulator Co.

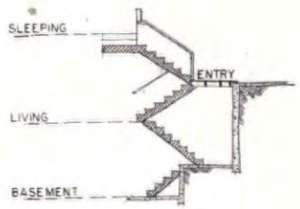
SIDE VIEW SHOWS SPACIOUS YARD AND TERRACE ACCESSIBLE FROM SON'S ROOM (LEFT) AND LIVING ROOM (RIGHT). BEDROOMS ARE ABOVE



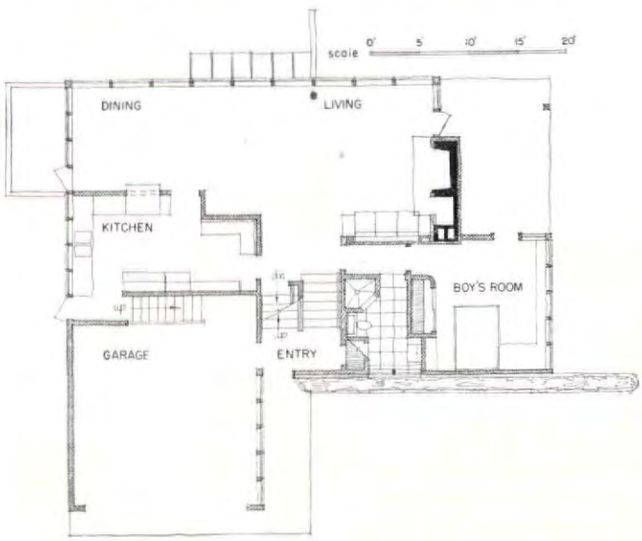
CEDAR SIDING AND BRICK WORK EMPHASIZE INFORMAL YET TAILORED QUALITY OF DESIGN

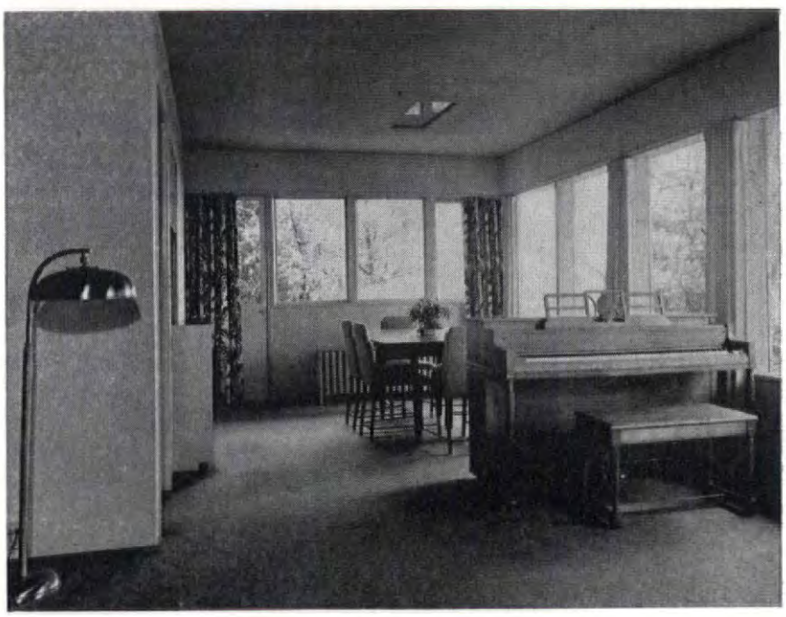


SECOND FLOOR



LIVING-DINING AREAS HAVE CONTINUOUS VIEW WINDOWS, ARE SEPARATED BY SPINET PIANO EASILY MOVED TO ENLARGE EITHER SPACE





Leonard Delano Photos

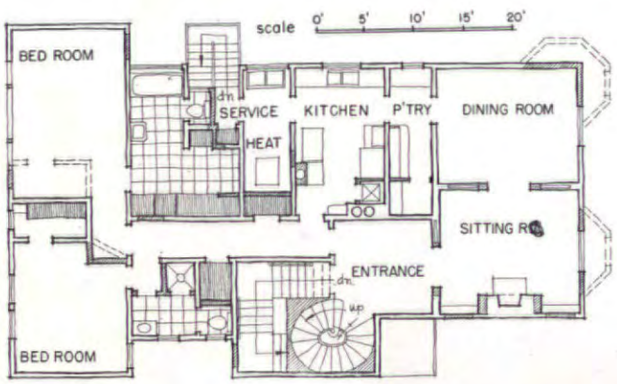
DECK COMMANDS MAGNIFICENT VIEW, IS SHIELDED FROM WIND BY INGENIOUS BOXED AREAS AT EITHER END AND CONNECTING OVERHANG

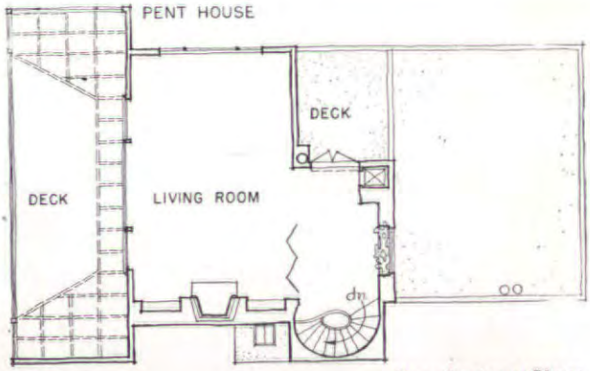
Remodeled flat in San Francisco provides outdoor living in city

CLAIRE BROWN, Owner
GARDNER A. DAILEY, Architect

DECK TREATMENT ADDS UNUSUAL DESIGN TWIST TO REAR ELEVATION

Because of high land cost in San Francisco, the "flat," a local term for two-family dwellings, has been traditionally the most popular type of residential construction. Among San Franciscans it is common practice to own flats as income property or to live in one apartment and rent the other. The one shown here, owned by a successful milliner, was a particularly unattractive example of 1900-style building, but because of its excellent location the owner decided to remodel and add a penthouse to the upper flat, thus obtaining a spacious duplex. Bulbous bays and angular projections typical of the building's era were removed, fenestration was modernized and a spacious living room with connecting sundeck constructed on the upper level. A graceful spiral staircase connects this area with the floor below, which contains bedrooms, baths, a small sitting room, dining room and kitchen. Large plate glass doors between deck and living room can be pushed back on pleasant days, making the two areas into one for entertaining. Furnishings throughout are a blend of modern and traditional, illustrating once more the effectiveness of rich period pieces against severely plain wall surfaces.





Roger Sturtevant Photos

CONSTRUCTION OUTLINE

ROOF—4-ply composition. Deck—slate set in mastic. SHEET METAL WORK—copper. WINDOWS—Sash—sugar pine. Glass—Pittsburgh Plate Glass Co. Weatherstripping—Chamberlin Metal Weather Strip Co. STAIRS: Treads—oak. Risers—Douglas fir. FLOORS: Oak. Kitchen and bathrooms—linoleum. PAINTS—W. P. Fuller Co. and Samuel Cabot, Inc. HARDWARE—Sargent & Co. ELECTRICAL INSTALLATION—knot and tube. BATHROOM EQUIPMENT—Kohler Co. Seat—O. F. Church Mfg. Co. PLUMBING: Soil pipes—cast iron. Vent pipes—wrought iron. Branch lines—galvanized iron.

UPPER LIVING AREA VIEWED FROM DECK SIDE OF ROOM IS COOL, DIGNIFIED

LIVING ROOM IS CONSIDERED ONE OF THE MOST DISTINGUISHED IN SAN FRANCISCO. OWNER-DESIGNED DECOR LENDS PERSONAL FLAVOR


LUNA
LUNA
LUNA
LUNA

CONEY ISLAND

its Architecture is the stuff that PEOPLE'S DREAMS are made of

"What does it mean to get outside oneself? Is it not the same thing as to get deep, deep down inside oneself?"
—George Santayana

THE men who built Coney Island's framework of escape—which takes thousands of people outside themselves at a velocity that is almost frightening—probably never tried, like Santayana, to define the meaning of escape. If they had, they might easily have gone bankrupt instead of building most of the merry-go-rounds in the U. S., inventing the roller coaster and the hot-dog. The flamboyant illusions that made Luna Park famous around the world, the nice blend of perfectly safe perils and sex safely reduced to its most humorous denominator that makes Steeplechase Park mecca for millions—these are not devices based on any conscious or labored attempt to figure out what holiday-seekers are trying to escape from or to. If they were, they would probably fail to meet the needs of Coney's millions of visitors as badly as a church social would fail—or a Salvador Dali show.

Many of the swaggering, beer-drinking little men who added some part to the shiny and impermanent fabric of the Coney Island dream are nameless. But some of them, whose instinctive grasp of the common dream added up to enormous profits, are immortals in the amusement business. These men came from Germany, England, France, Italy—and Indiana. Some of them were careful craftsmen like W. C. Illions, trained at Savage's wood-carving shop in London, who signed his first carousel by carving his own face on the saddle of the king horse. Some of them were slap-dash showmen like Skip Dundy, a spendthrift gambler, and Fred Thompson, a sentimental alcoholic, a team whose fantastically successful "Trip to the Moon" constituted a new amusement form—the illusion—and was finally expanded into the three-dimensional illusions of Luna Park. Some of them were methodical business men, who gave value for value received, like Charles Feltman who invented Coney's most famous offspring, the hot-dog. Some of them were self-taught, inventive mechanics — a characteristic American type — like Lamarcus A. Thompson who built the world's first amusement railway and Tom Alcock who tied the ends of the track together to invent the first circular roller coaster. But, various as they all were, they had at least one common denominator, common also to the millions whose nickels flowed into their spangled and garlanded tills: their principal purpose was making money.

If the Coney Island builders had not been preoccupied like the rest of the U. S. by the central dream of making money with all its correlatives of power and prestige, they would not have been able to use, so surely and unselfconsciously, the common vocabulary that spelled illusion, amusement and escape. Tilyou and Illions and Thompson and Dundy were not artists in a real or universal sense: their work was certainly not intended to add anything to man's sense of himself or of life. Nor were they, fortunately, even men who tried to be artists by aping all the recognized canons of good taste and disciplined style. Their gilt and papier maché background for carnival was rowdy and unrestrained, its grandiloquent style was limited only by the necessity to squeeze the maximum of flourish out of every invested dollar. The paint thinned out on the offside of the carousel horses and the delicate carving of the prototypes soon gave way to the blurred outlines of compo ornament, but there were thousands of electric bulbs, glittering mirrors, dancing colors, and the total effect was splendidly successful. Against this measure, the men who built Coney's amusements were, in their own way and in a limited sense of the word, artists —that is, what they built accomplished the job it was intended to do with a high degree of perfection.

What this job was can be explained in part by the subway. It is no accident that the amusement parks whose spectacular character and size make Coney different from any other resort in the world did not bloom until the extension of the subway. It was the subway which changed Coney overnight from the seaside playground of the more privileged groups to a makeshift paradise within the reach of anybody who had a nickel. If, like Coney's builders, its million visitors subscribed to the overriding purpose of making money, they were also, typically, the people who had come off rather badly. They were not people who had much money—or much power—or much sense of importance. What they wanted, most of all, was to lay aside their work-a-day self for a few hours—the one that worries about the rent, defers to the boss, politely averts the eyes from an accidentally exposed thigh, cautiously skurries out of the way of the taxi.

Coney's decorative flourishes stretch out a hundred glittering hands to make it easy to put aside the timid, drab, disciplined self. But the people who came found an extra way of their own. And the concessionaires, watching the people, grouped their hot-dog stands, their

←——*International News, Black Star*

custard dispensers, their pink cotton candy machines at Coney's entrance. Not everybody was ready to climb immediately on a merry-go-round—a hundred self-conscious grins testified to that. It was, however, easy to eat, and the first instinctive gesture was to reach out for a hot-dog or a swatch of cotton candy. The familiar pleasure of easting was an easy threshold to the less familiar pleasures of Coney's noisy dream world. A hot-dog in hand was reassuring, and soon even the least adventurous were ready to try something else.

Unlike most of Europe's famous parks, where ferris wheels and carousels are like tiny glittering islands in a sea of greenery, Coney has no leisurely walks, inviting pavilions for picnickers, benches that invite lingering. "In the famous park of Coney Island there is not a single blade of grass, not a single flower!" the director of Moscow's Park of Culture and Rest told the workers, reminding them that the formal gardens of their own park are fair rivals of the classical vistas of Versailles. It is impossible to tell how the workers of Moscow feel about the careful landscaping of their park's broad avenues, where they are undoubtedly required to stick to the concrete. But to bewail the lack of restful green space and spots for quiet repose at Coney is to miss the point on the real needs that its midway was built to serve. Those who flocked to the ferris wheels and the roller coasters were not looking for rest and repose. Cramped in the narrow confines of New York's crowded housing, immobilized for long hours in factories and offices, they were looking instead for unrestrained motion. And if Coney's midway, whose themes are as various as the customers they were devised to serve, has a single inclusive theme—it is motion, up-down-and-around, sometimes gently pleasurable like the slow quadrille of the carousel, oftener savagely violent like the roller coaster.

Because their customers found violent motion a good way to shake off their everyday self with its many kinds of tensions, it was natural that Coney's designers should, without thinking much about it, turn to decorative forms that reflected all the restlessness of its mechanical enterprises. From the revolving pinwheels and swirling crescents of light that embellish Luna's entrance to the Chair-o-Plane spangled against the night sky, Coney is full of motion. But, even before mechanical mobility came along to supplement the basic design intention, Coney's builders were adept at the kind of decoration that would never let the eye come to rest. When Coney's first homebuilt carousel was pulled by a real white horse in the center of the ride and none of the wooden horses bobbed up and down, the carving of the horses was in itself enough to catch and reflect a hundred times the happy sense of motion.

Illions and other Coney woodcarvers drew their inspiration from forms that had already been tagged in Europe as "music-hall Baroque." It is worth noting that the Baroque style as it spread out from Germany and Italy expressed not only opulence, power, and the exotic symbols of far-away countries. It also reflected in a blurred fashion the old Gothic delight in violent linear motion. Because the

Amusement Park Baroque

This festive ticket window in Steeplechase Park was imported from Leipzig, like much of the decoration that inspired Coney craftsmen. Its garlanded crown, whose motifs are as familiar as a Valentine, is close relative to Baroque. But the craftsman's hand is missing in the thickened rose petals which dress its lower half. Here the unified design gives way to hasty spacefilling reflecting the repressed Victorian style.

Baroque was a style conceived when a restless Europe was expanding its horizons as far as it could trade, the Gothic pattern of restless motion was never completely lost in the rounded cherubs, breasts and grapes with which later Baroque bloomed so abundantly. Just as the later Baroque artists easily appropriated and embellished their design motifs, so the amusement-park craftsmen found the forms they needed readily at hand in their inaccurate memories of what they had seen in Europe and, even closer, in Coney's first carousel which, with a good-sized batch of Steeplechase's embellishments, had been shipped from Leipzig. Thus, it is not surprising that the carved mane of one of Illions' king horses should, however blurred and simplified, show traces of the energetic Gothic line that a 16th-century craftsman used in carving an altarpiece for a German church.

It would be a good deal more remarkable and a good deal less pleasing if Illions' king horse reminded us in any great detail of a real horse. Any precise form would have shattered the essential convention of Amusement Park Baroque. There was an unspoken agreement between the craftsman and his public that it was all just in fun. And if half the fun was the unacknowledged fancy that the carousel's bobbing horse was a richly caparisoned steed a potent nobleman might ride, it would have spoiled the fun entirely to be reminded by a realistic horse-hair tail of an everyday horse. Fortunately, a horse-hair tail was more expensive and more perishable that its wooden symbol, and illusion flourished. A happy lack of what often passes for good taste helped to steer these designers away from painstaking realism—which would have been about as much fun for most visitors as a trip to the museum.

In all of Coney's exotic ragbag of the far-away and long-ago, there is no form which can be readily placed in either time or space. The scant draperies of the bosomy, grape-garlanded ladies on the carousel's rounding board speak of no definable period and only of a luxuriously warm climate. The columnar figures that overlook a Steeplechase hall probably remind as many visitors of the Statue of Liberty as they do of Aphrodite. But, although it would be hard to say exactly where or when, there is no one of these forms we have not seen before. This is the greatest charm of the Coney brand of the far-away and long-ago: its gilded symbols are enough to transport us to a land where anything is pleasantly possible, but, because they are all old friends, we do not feel like strangers there.

If Coney's architects had been men of unusual creative imagination, they might have come up with a version of escape so novel and so startling that it would be hard for us to feel at home in it. Surrealist art is one sample of such a dream world. The surrealist's escape into a world of unrestrained instincts and emotions is for most of us a frightening and shocking experience. It strips away our common symbols of escape, the familiar tag-ends of half-remembered fairy tales, the easily recognized trappings of pomp and circumstance, the blurred reminder of historical reality. These are the comfortable familiars that securely hold our hand while we step into the Coney dream world.

In all of Coney's glittering avenues of escape, there is nothing frightening or formidable. Even its breath-taking roller coasters feel many times as dangerous as they really are. Its palaces of amusement are on a homey rather than a monumental scale. The Steeplechase throne, with its immense vases and Ethiopians, suggests the grandeur of an Oriental potentate, but the white frame balustrades look quite a lot like the front porch at home. Wherever we look, there is no construction on a scale big enough to overawe the visitor or to remind him abruptly that he is, after all, small and powerless.

The ramshackle, patchwork quality of Coney's construction and the random look of its planless sprawl help to keep us safely in our unacknowledged dream world. No real estate specialist located its emporiums of fun according to the calculated flow of pedestrian traffic: down every noisy alley something yet to be seen beckons the crowd. No architect's hand detailed facades to catch a pedestrian's eye: each entrepreneur of escape painted his own come-on with a spontaneous hand. The plaster is cracking and the paint is peeling, the flashy decor of each concession has no relation to any unified design pattern, nowhere is there harmony or perfection. This in itself makes us feel comfortable. We are certainly not perfect and the imperfection of Coney's setting eliminates any demand upon us to be so. Amusement Park Baroque, as it came to its fullest and most flamboyant development at Coney, became a caricature—always a friendly and hilarious one—not only of reality but of the dream world itself.

There is plenty of magic at Coney—it is in the eyes of the man who guesses our weight or our age, in the gypsy's tea-leaves, in the fortune that turns on a roll of dice at the bingo stall. The dominating ferris wheel is like the Wheel of Fortune itself, but its sudden reverses—unlike those we know in real life—send us to the top just as often as to the bottom. From the businessman's dream of risking little and gaining much to the schoolboy's dream of exploring a Paris brothel, there are few needs that lack attention in Coney's alleys of escape. The penny arcade's hygienic glimpse of vice has none of the disenchantment of a close-up view. In the Dodgem we can bump our neighbors without restraint, and there are no traffic lights. The side-show freaks and the distorting mirrors convince us that we are, after all, not bad to look at. The high-striker testifies to our muscles, the roller coaster makes us a hero, a dozen side-shows open a cheap door to travel and adventure.

By now our shoulders have straightened and our muscles relaxed.

Ezra Stoller Photos

Coney Island Blend

Just as artists of the Baroque period appropriated design motifs from Oriental countries newly opened to European trade and easily merged them with their own stock of Classical symbols, so Coney's builders jumbled richly carved wood figures imported from Europe with white frame balustrades like those on U. S. front porches. The little Nubians at this throne have appeared in the fairy-tales of many countries.

We are laughing a lot and talking loud. What we say doesn't make much sense, and nobody expects it to. Anybody who might tell us to be quiet and behave properly has been left outside of Coney's magic gates. So far we have relied on a lot of machines to pull us up-down-around and out of ourselves. Now we are ready for a more active part in the dream world. We find it in Steeplechase Park, the oldest amusement concession at Coney, whose roof covers 15 acres. George Tilyou's great amusement park combines every element of the Coney dream in an enormously successful formula that makes us, not just riders or spectators, but an important part of the show.

It is this formula even more than Tilyou's careful management that makes Steeplechase's baroque roses bloom each season, while many another promising enterprise succumbs to fire or bankruptcy. Steeplechase gets its name from the iron horses who run in mechanical race around its boundaries. These horses have their special punch, because the rider with know-how can come out ahead of his fellows. But the heart of the enterprise is the huge hall of fun where sudden blasts raise many a skirt, where many a boy meets many a girl in the revolving Barrel of Love, where clowns initiate the comedy and customers bounce to the cue of an electric stinger. And it is within Steeplechase that Amusement Park Baroque bursts into its fullest and most eclectic bloom.

Admission to fairy-land is only 10 cents, and we can step into the Renaissance among other places. Within the park's great glittering maw is a fair version of the Hall of the Medicis done in domestic scale. The fluid columnar figures lift a festive hand to invoke merriment, a frieze of clown faces laughs with the hired clowns below. Here skirts whirl and customers bump and jostle their way to hilarity. Immobilized in the woodwork, between symbolic poppies, is the last reminder of what we have left outside of Coney's gates—the ugly disapproving face of censorious authority that might tell us to be good.

What does Coney's architecture of escape mean to the men who make America's buildings? Without thinking much about how to do it, Coney's builders drew millions of people miles away from the normal centers of urban traffic and turned a stretch of beach front into ground rents that the most enterprising developer might envy. These builders sensed and served a mass need. So long as that need exists, the men who shape buildings will, in dozens of ways, be confronted with it.

The amusement devices at Coney provide the kind of escape which millions of people, alienated from spontaneous self-expression in an increasingly rigid society, seem to require. And the cheap and guileless decorative forms express the purpose of the amusement devices with a spontaneous skill for which architects still seem to grope.

These decorative forms, shabby, flamboyant, artless as they are, point to an area in which progressive architects find themselves at a loss. While modern architects, for example, have designed movie theaters that represent great technical advances in acoustics, air conditioning, circulation, etc., they have so far produced no decorative forms (nor have they in most cases attempted to do so) that in any way assist the audience in its search for amusement, stimulation, escape. If this is a real mass need, manifested in its most exaggerated form at Coney, can architects afford to ignore it? But if escape and illusion is a social need, likely to continue in our society, does it not imply the continued use of ornament? And how does all this affect the contemporary architect's search for the kind of organic beauty achieved by an honest structural expression of function?

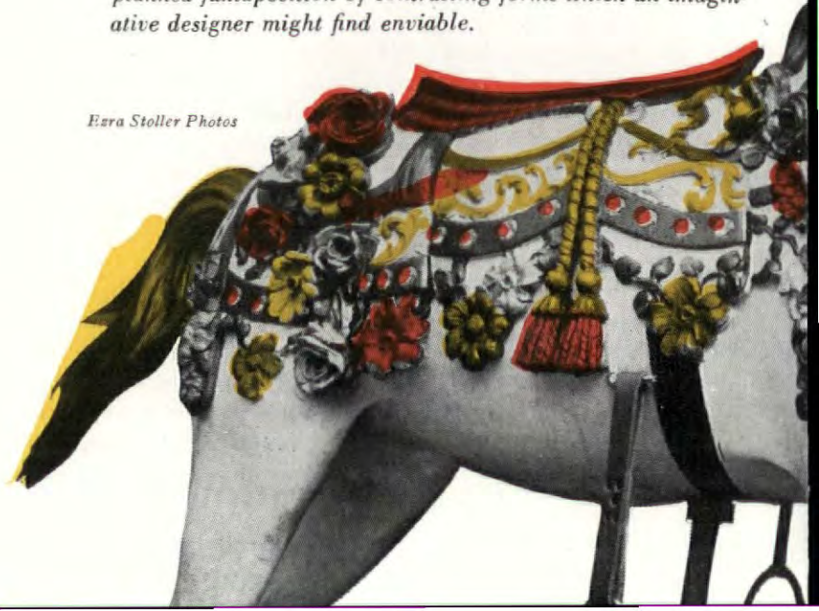
These questions affect all kinds of building. Although among architects themselves there is no longer any real controversy over traditional vs. contemporary styles, Cape Cod and Colonial still bloom in the operative development and in the customer's heart. Now the Colonial cottage is not as remote as it seems from a Coney hall of fun. Both building forms, in varying degrees, cater to the user's need to escape. To understand the user's need to escape it is important to recognize that what he wants to escape is, most of all, himself. The fake Colonial facade has as little relation to his real life as a carousel horse. But it, and a multitude of escape styles like it, will linger in building until people generally no longer need to escape themselves and the insecure pattern of their lives by unconscious flight to another time or another place. Great art and great architecture seem to occur when men are at home with themselves—and so are absorbed in increasing their awareness of themselves and of their own life and times.

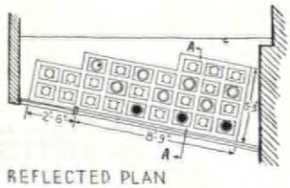
Long before Coney Island's spectacular amusement parks were built, Walt Whitman walked alone on Coney's "long bare unfrequented shore." Whitman felt at home there, as he would have felt fulfilled and satisfied in a Frank Lloyd Wright house. Perhaps it is not optimistic to conclude that the need which Coney meets with great efficiency may someday disappear—not only for the Whitmans of society but for most of us. When men generally come to feel at ease with their emotions and instincts—at home with themselves—they will once again, as they have before in civilization's great creative periods, be able to direct their energies not to escape, but to the enrichment of their lives in the forms of their buildings and the forms of their daily living.

Palace on a Homey Scale

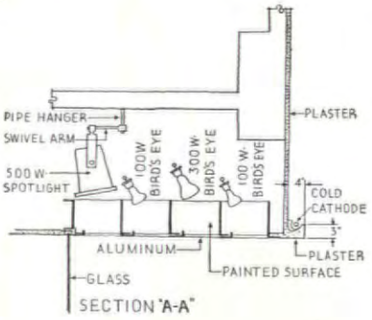
The delicate trussed bays spanning this Coney hall of fun are like the structural ironwork introduced in 19th century American train sheds. Here the lower chords of the purlins have been arched for decorative effect. This has been heightened by picking out the arch with electric lights—a device used by Louis Sullivan in the functional arches of the Auditorium theater. The fragile steel skeleton accents the opulent curves of the carved carousel figures below—an unplanned juxtaposition of contrasting forms which an imaginative designer might find enviable.

Ezra Stoller Photos





REFLECTED PLAN



SECTION "A-A"

HABERDASHERY'S

splayed glass front adds footage to a distinguished design.

VINCENT FURNO & RICHARD BORING SNOW, Architects

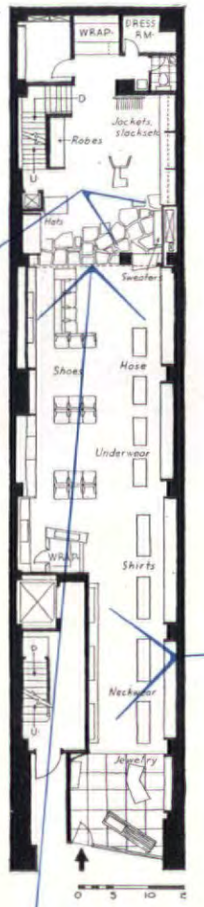
B & S STORE FIXTURE CO., General Contractor

Confronted with the tiresome, inevitable limitations of a typical interior location, the architects of this job were notably successful in opening up and making workable the deep, dark pocket that constitutes the average city shop. The particular space with which they had to work, located on New York's swank Fifth Ave., boasted one unusual asset: a few feet of additional width at the rear. In plan, this jog was perfectly adaptable as a small shoe salon without infringement on the main aisle. The problem of width, acute at the front of the store, was alleviated in three ways: 1) a splayed glass front that increases the feeling of space from within and without; 2) contrasting walls, one upholstered in pigskin, the other painted light grey; 3) specially designed fixtures shallower on the left than on the right but adequate for the display and storage of ties and accessories. To conceal existing pilasters, wall cases on the right were recessed, the surface furred out and upholstered. The merchandising plan places men's jewelry and "impulse" items at the front of the store, shoes, hats and other more stable items further back. The space below the mezzanine at the extreme rear is used as a sports shop, decorated in a casual manner with a few rustic touches such as the rough stone floor and wall. Its separate treatment also tends to reduce the elongated plan.

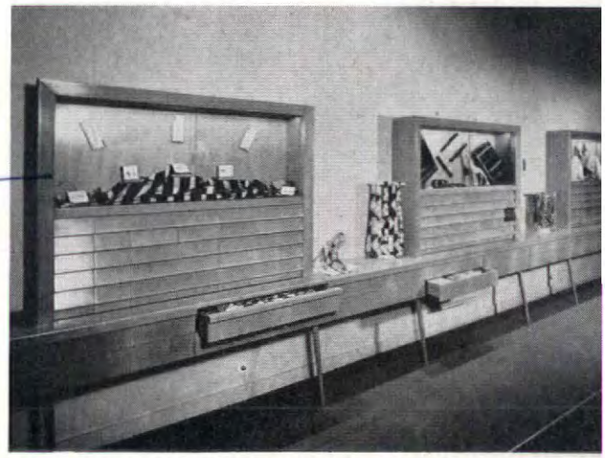
FINISHES AND EQUIPMENT

STRUCTURE: Exterior walls—gypsum block, plaster, or wood oak and sliding glass panels. Office—glass block, Insulux, Owens-Illinois Glass Co. DOORS—flush glazing and Herculite, Pittsburgh Plate Glass Co. FLOOR COVERINGS—carpet or terrazzo. WALL COVERINGS—pigskin, Lackawanna Leather Co.; pickled oak; granite, John Swenson Granite Co., and stone. PAINTS—Pittsburgh Plate Glass Co. ELECTRICAL FIXTURES—Century Lighting, Inc. FURNITURE: Chairs—H. G. Knoll Assoc.

FLOOR AND ONE WALL OF SPORTS SECTION ARE ROUGH STONE



MEZZANINE



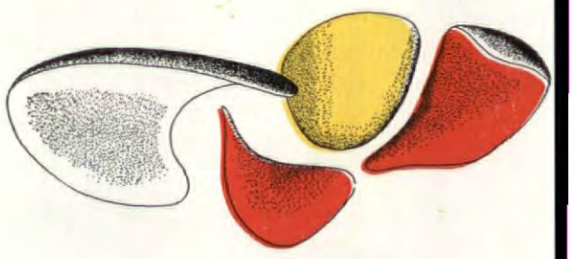
SHALLOW STOCK-DISPLAY UNITS FLANK DOOR

SEEN FROM REAR OF STORE CONTRASTING WALL FINISHES INCREASE ILLUSION OF WIDTH

AISLE CASES WERE DESIGNED FOR MAXIMUM VISIBILITY, ARE EQUIPPED WITH COLD CATHODE INTERIOR LIGHTING

Ben Schnall Photos

LIGHTING FIXTURES BY SCULPTOR JOSE DE RIVERA ARE ONLY ACCENTS OF STRONG COLOR



SHOE SALON

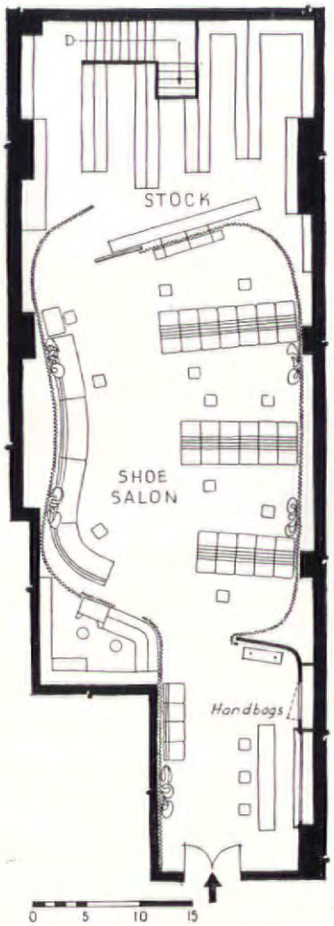
Quick change remodeling furbishes store for the duration of its lease.

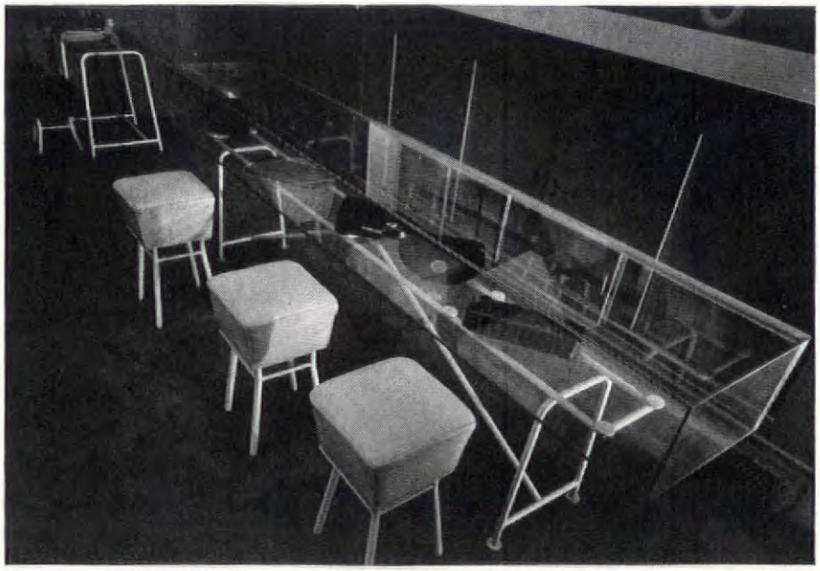
GEORGE NEMENY & A. W. GELLER, Architects
OTT CONSTRUCTION CO., Contractors

Desiring a richer background for display of their higher priced merchandise, the owners of this store nevertheless demanded that costs be held down since they intend to move at the expiration of their present three-year lease. Economy suggested the use of fabric as a wall covering. It is hung from a metal ceiling track which outlines the perimeter of the new salon, requiring minimum structural changes. This also permits a seasonal change of decor—beige and gray velvet in winter, gray and yellow spun rayon in summer. In plan, the most important alteration was the conversion of a long, narrow "open stock" store to a proportionately wider, better integrated showroom. All shoe cases are hidden from sight at the rear of the store and employes have found it far easier to locate merchandise with this arrangement. A slightly sloping, furred ceiling conceals ducts. Except for one long bench, all seats are individual so that they can be added to or removed according to the season's activity. Only two weeks were required for remodeling, twelve days of which were used in removal of existing shelving and installation of air conditioning and new ceiling.

CEILING SLOPES ALMOST IMPERCEPTIBLY TOWARD LEFT WALL

Ezra Stoller Photos





METAL AND GLASS SHOWCASES CONTRIBUTE LIGHTNESS AND ELEGANCE

FINISHES AND EQUIPMENT

INTERIOR PARTITIONS—painted canvas on plywood, wood and studs. Ceiling—suspended, Kilnoise acoustical plaster, The Kelley Island Lime & Transport Co. FLOOR COVERINGS—carpet, Mohawk Carpet Mills, Inc. WALL COVERINGS—fabric. H. M. S. Fabrics, Inc. FURNISHINGS—Modern Line. ENTRANCE DOOR—Herculite, Pittsburgh Plate Glass Co. ELECTRICAL FIXTURES—Century Lighting Co. AIR CONDITIONING—existing system, new aerofuse outlets, Tuttle & Bailey Co.

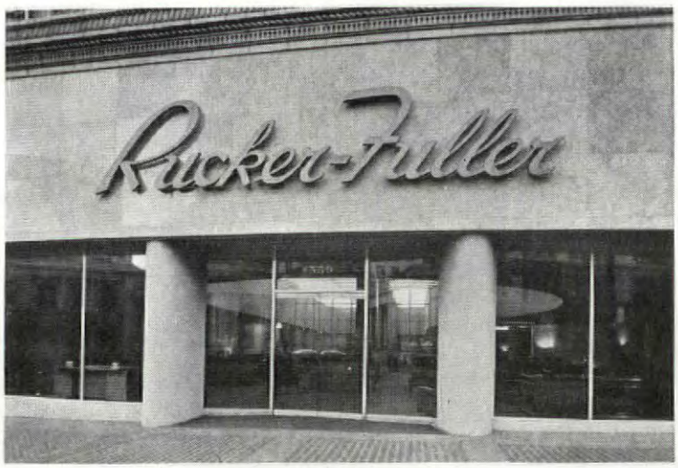
DRAPED CURVING WALL SEPARATES SHOE SALON FROM HANDBAGS AND ACCESSORIES DISPLAYED IMMEDIATELY INSIDE THE ENTRANCE

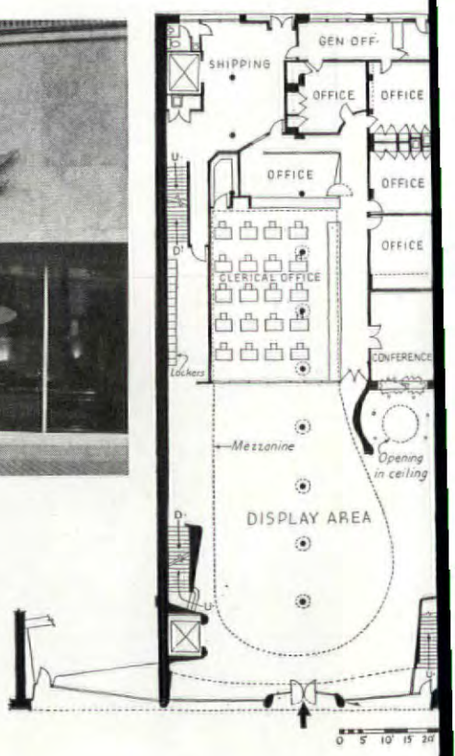
MAIN DISPLAY AREA AT FRONT OF STORE DISPLAYS MERCHANDISE PLEASANTLY IN LOGICAL GROUPINGS USED BY THE SALES STAFF

FURNITURE SHOWROOM **presents a commercial line handsomely and intelligently exhibited.**

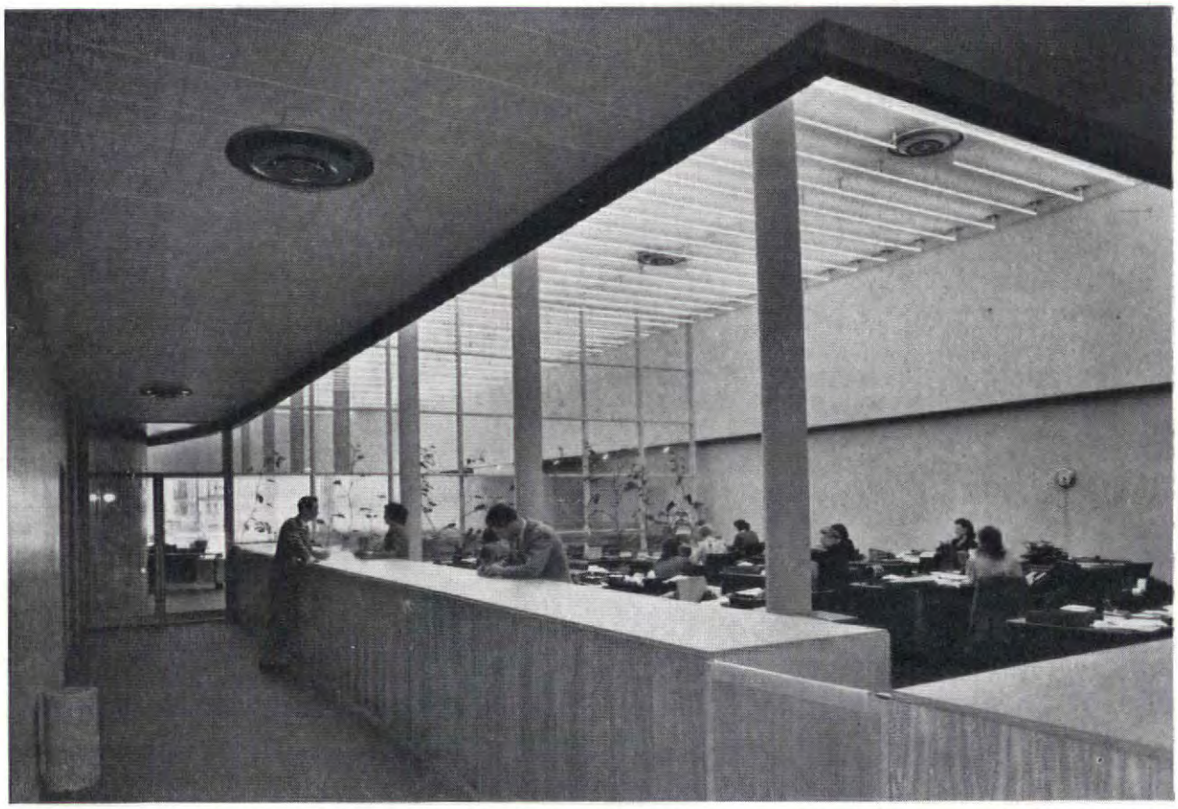
BOLTON WHITE, Architect
STOLTE INC., Contractors

The owners of this store wanted a departure from the dreary atmosphere of the usual office furniture showroom. They wanted to use their two full floors for display, yet have these displays actually function as a sales office. Certain elements of the design were determined by the existing structure: the floor space was bisected by a line of unsightly columns; a large girder ran the full length of the building; a hung mezzanine encircled the ground floor space. The latter has been enclosed by a curved valance wall which also has the advantage of taking the line of columns off dead center. By furring the ceiling, simpler lines and better proportions were achieved in addition to concealing the girder. Because the column caps came down too far to be covered by the furring, the architect resorted to the simple expedient of holding the ceiling away from them, painting everything black above the ceiling plane. The openings around the column tops also house the return air exhausts from the combined heating and ventilating system. The full height glass screen separating the display room and clerical office adds considerably to the feeling of spaciousness, permits executive offices (also a part of the display) to be seen from the showroom.



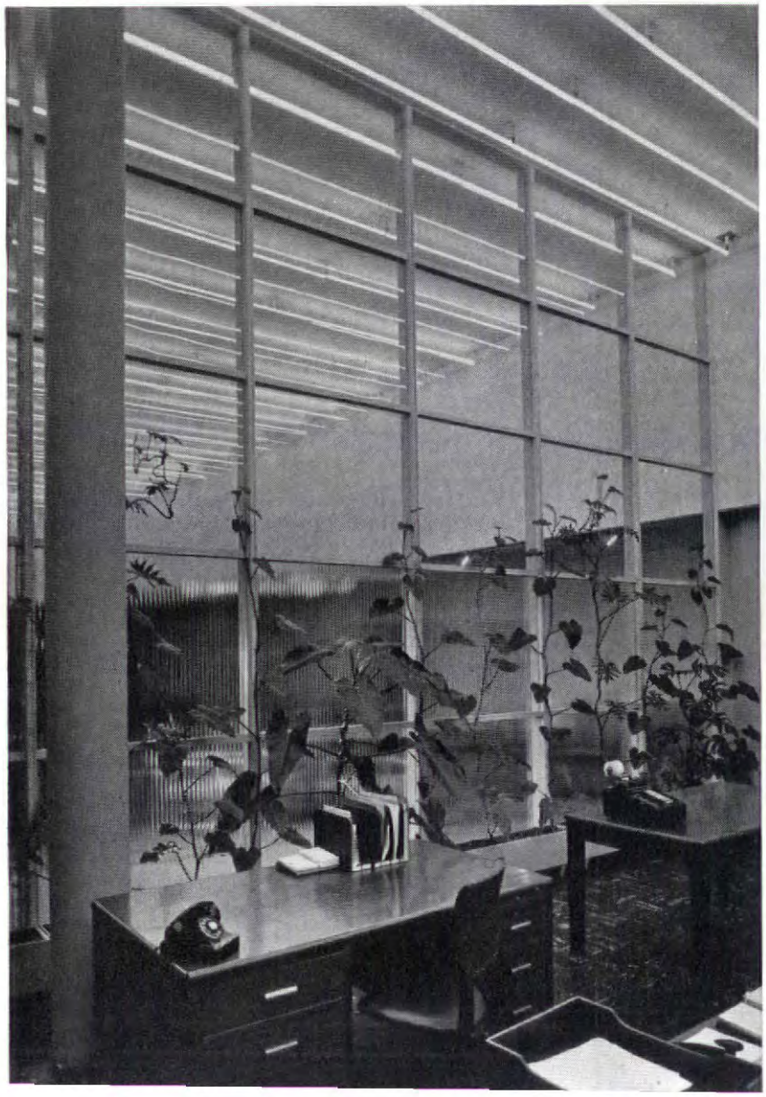


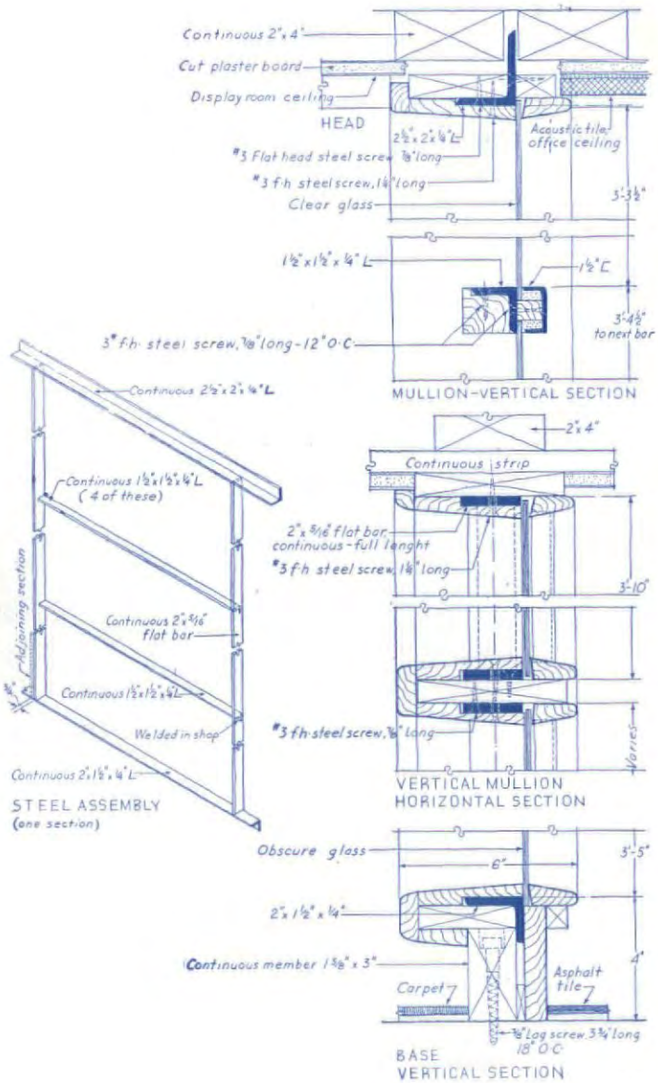
Roger Sturtevant Photos



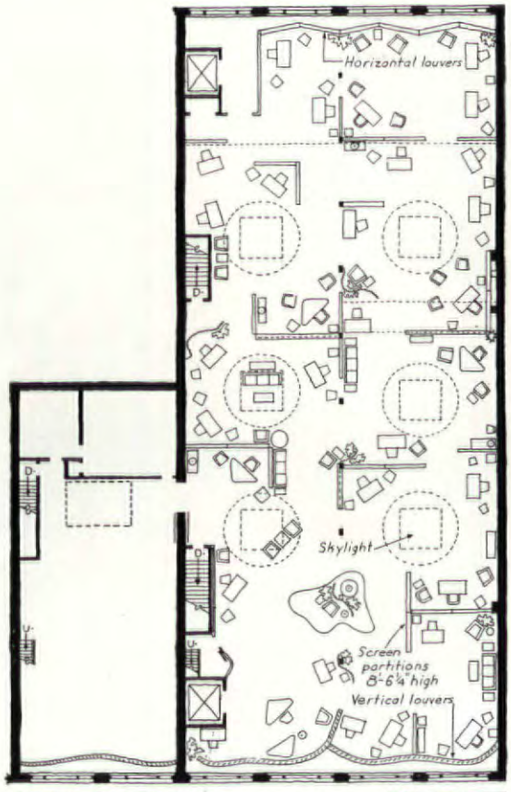
CLERICAL OFFICE IS SEPARATED FROM DISPLAY AREA BY GLASS WALL. FILES ARE KEPT UNDER COUNTER

FLUTED PORTION OF GLASS WALL SCREENS CLERICAL SECTION

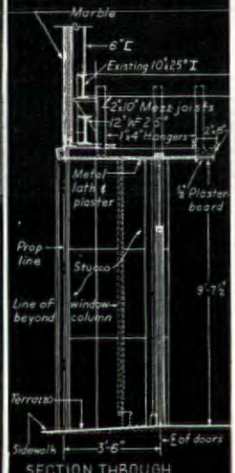




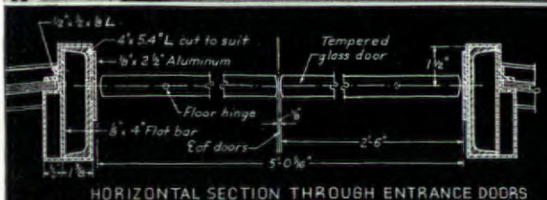
AVERAGE SALE MERCHANDISE FURNISHES THIRD FLOOR RECEPTION ROOM



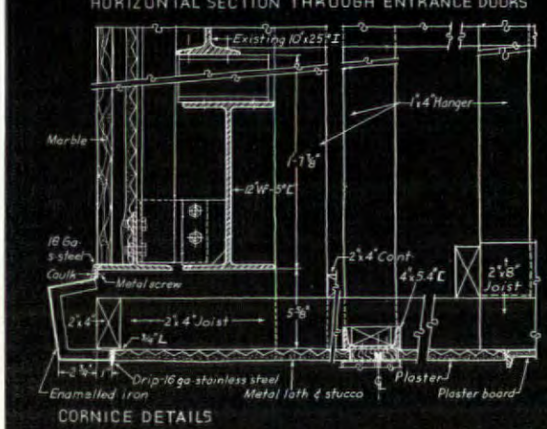
THIRD FLOOR (furniture display)



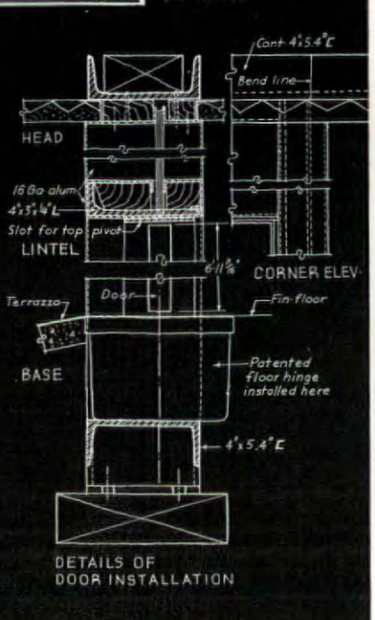
SECTION THROUGH ENTRANCE



HORIZONTAL SECTION THROUGH ENTRANCE DOORS



CORNICE DETAILS



DETAILS OF DOOR INSTALLATION

Throughout the design a concerted effort was made to provide a lively, interesting background which would complement, rather than compete with, the client's merchandise. The function of the third floor (the main sales area) necessitated subdividing a large space into small areas of special interest for furniture grouping. Since, in type and size, the displays vary almost daily, flexibility was essential. As a solution, a series of small portable screens were designed. In conjunction with louvered walls lit from behind, these constitute a pleasant and thoroughly practical background for the merchandise displayed.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—brick or Gunite, Cement Gun Co.; inside—plaster or Sheetrock, U. S. Gypsum Co., over wood furring. Steel lintel across front to carry marble facing. Steel studs—Penn Metal Co. Ceiling—Sheetrock, U. S. Gypsum Co. **ROOF**—built-up, composition. **SHEET METAL WORK:** Ducts—galvanized sheet steel, Columbia Steel Co. **SOUND INSULATION**—Cushiontone, Armstrong Cork Co. **WINDOWS:** Glazing bars—Kawneer Co. Glass—plate. **ELEVATORS**—Pacific Elevator & Equipment Co. and Westinghouse Electric Corp. **FLOOR COVERINGS**—asphalt tile, Armstrong Cork Co. **WALL COVERINGS**—Sheetrock, U. S. Gypsum Co. or plywood, U. S. Plywood Co. Exterior doors—Kawneer Co. and Tuf-flex, Libbey-Owens-Ford Glass Co. **HARDWARE**—Sargent & Co., Yale & Towne Mfg. Co. and Oscar C. Rixson Co. **PAINTS**—National Lead Co. **ELECTRICAL FIXTURES**—Kurt Versen and Holophane Co., Inc. Transformers—General Electric Co. **HEATING**—forced air, indirect system with filters. Steam coils and temperature controls. Boiler—Kewanee Boiler Corp. Radiators—American Radiator-Standard Sanitary Corp. Grilles—Tuttle & Bailey, Inc. Diffusers—Air Devices, Inc. Regulators—Minneapolis-Honeywell Regulator Co. Valves—Crane Co. Filters—Dustop, Owens-Illinois Glass Co.

THE WORK CENTER, new feature of the one-story, basementless house, poses some neat problems for everyone in house-building. With old equipment redesigned and many unfamiliar pieces appearing, successful planning is a task for experts.

Time was when a kitchen was considered complete when it had a three-piece set—sink, range and refrigerator. If there was a laundry, it was inevitably in the basement, as was the heating plant. The bathrooms, on the other hand, were apt to be on the second floor. To make matters worse for the housewife, all her tasks were manual—clothes were rubbed, boilers hand fed, floors broomed, ovens watched and dishes scrubbed by hand. The housewife thus was caught in a three-dimensional hand-powered trap which stretched her energies and good humor to the breaking point.

All this has been changed by the development of mechanized equipment and the steady advance of the single-story, basementless house. The laundry and heating plant have come upstairs, the bathroom has come down; and all clamor for first-floor space precisely when that space is at a premium. Today, whether she likes it or not, the housewife lucky enough to have a house finds her work organized in a single, horizontal plane. All sorts of structural and mechanical considerations dictate that these areas be grouped together into a *work center*. If intelligently planned, this will not only reduce building costs but—more important to the housewife—also reduce the drain on her energies.

At the same time, for anyone engaged in house building, this trend raises a series of planning problems. In a small house, for example, economy dictates that kitchen and bath fixtures be placed back-to-back. Where should laundry equipment be placed in such a situation? Mechanized equipment for washing, rinsing, drying and ironing is now a commonplace. What space do they require? How should they be organized? Many families are now doing home freezing, and many more hope to. What space does this operation imply?

While the solution of such problems is largely a task for canny planners, there is such a bewildering array of new kitchen and laundry equipment that the mere task of selection is itself formidable. A tidy tabulation of comparative dimensions, capacities and prices would be a handy tool for everyone in house building—designer, builder and housewife alike. Unfortunately, this is all but impossible. Dozens of companies produce hundreds of items which are comparable only in the most general terms. Thus, when it comes to the actual selection of equipment and layout of the work center, the interested parties may as well reconcile themselves to poring over a big stack of catalogs.

Certain broad tendencies in work center planning and equipment, however, may be plotted. In the kitchen, for example, the biggest changes are implied more by recent space and motion studies (FORUM, Feb., Mar., '46) than by any spectacular changes in basic equipment. The big three of stove, sink and refrigerator still dominate the layout. But their relationship to each other—and to the newer pieces of equipment—is coming in for closer scrutiny (see following pages); and many detailed refinements in the old timers can be seen.

RANGES. There is a steady improvement in both gas and electric units. The trend continues toward specialized burners for broiling, frying, baking, etc. In all ranges, both electric and gas, there is a great emphasis on precise heat and time control. Many new models (Western-Holly, Roper) have surface griddle plates (1) and separate broilers. "Deep well" cookers are common. Gibson and Hotpoint have an electric heating element which can be raised for surface cooking, lowered for deep well (2). Monarch boasts a counter-sunk surface "steam table" (3). Oven lights and/or oven windows are found in Florence, Magic Chef, Tappan (4), while a growing list of automatic controls makes the splash boards of many ranges look like airplane instrument.

Heavily insulated ovens are fairly common (Crosley, Detroit Jewel, Maytag, etc.). As a safety and comfort measure, the level of oven and broiler has been generally raised. Several ranges (Magic Chef, Glenwood) boast "swing-out" broiler racks: pulling out as oven door is opened, they minimize danger of burns (5). Presteline, like several others, offers a choice of surface burner arrangements.

The models available run a wide gamut of sizes, from Universal's Bantam (22½ in. wide, 14 in. deep) to Roper's huge Town and Country model with 8 burners, top griddle, 2 ovens and 3 broilers. Slated for early appearance are two newcomers: a range by Noma Electric Corp. with a special compartment for thawing frozen foods, and a new line of surface cooking and oven components by Thermador, which can be built into cabinet work at any desired point.

DISHWASHERS are back on the market in force. Some are electrically operated, while others are operated by water pressure. Some models are available only in cabinet form (with or without a sink), while the Kaiser unit also comes in chassis form to be installed under a counter (6). At least two ingenious models (Thor, Robot) wash both clothes and dishes, using special interchangeable units for each operation: (18, 19) Thor may be had with or without attached sink.

GARBAGE DISPOSERS are actually powerful electrically-operated grinders which depend upon the faucet for flushing their pulverized food wastes down the drain (Disposall, Eureka, In-sink-erator). They can handle bones and paper, but not cans or glass. The mechanical grinders some in three forms—ready for installation under any standard sink (Sani-Way, Waste-Away); or in combination with a dishwasher (7) to form the "all-electric" sink (G-E, Hotpoint).

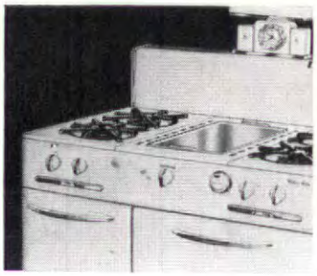
STANDARD INCINERATORS require a basement location and a chimney connection (neither of which the small house is likely to have); but there is one new cabinet model (Calcinator), fired by either gas or electricity, which can be installed right in the kitchen. Although it requires a vent, it is claimed that the unit is odorless and cool because it uses low heat to dehydrate wastes before calcination (8). Most incinerator manufacturers now produce small, portable, gas-fired incinerators which may be built into the chimney if desired.

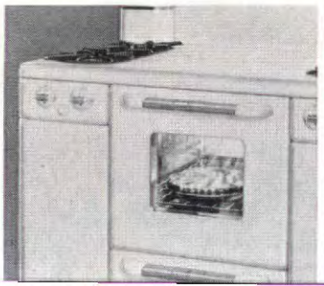
REFRIGERATORS, like ranges, show continued refinements along established lines. More efficient compressors (only Servel makes a gas-powered unit) and more efficient insulation permit an increase in usable space without any comparable increase in over-all dimensions. Most of the new models make special efforts to control odor and to maintain high humidities. Reversing an earlier trend toward circulating air around one set of coils, the new refrigerators employ all sorts of devices to prevent air movement. Many makes use glass shelves to prevent air circulation, while Frigidaire has wrapped coils on three sides, top and bottom for even cooling (9).

As in ranges, there is a tendency toward specialized storage facilities for various types of food. Philco has an exclusive "cold shelf" for quick, uniform cooling of cooked foods by conduction (10). In most of the new models, the ice cube compartment has been greatly increased to handle frozen foods. In deluxe models, this has been expanded into a separate compartment (11-14).

HOME FREEZERS. Here there has been a terrific expansion with literally dozens of manufacturers throwing their hats in the ring. In its simplest terms, of course, a home freezer is only a refrigerated chest which can maintain a constant temperature of around Zero (as against the 35 to 45 degrees F. produced by the regular refrigerator). Although some

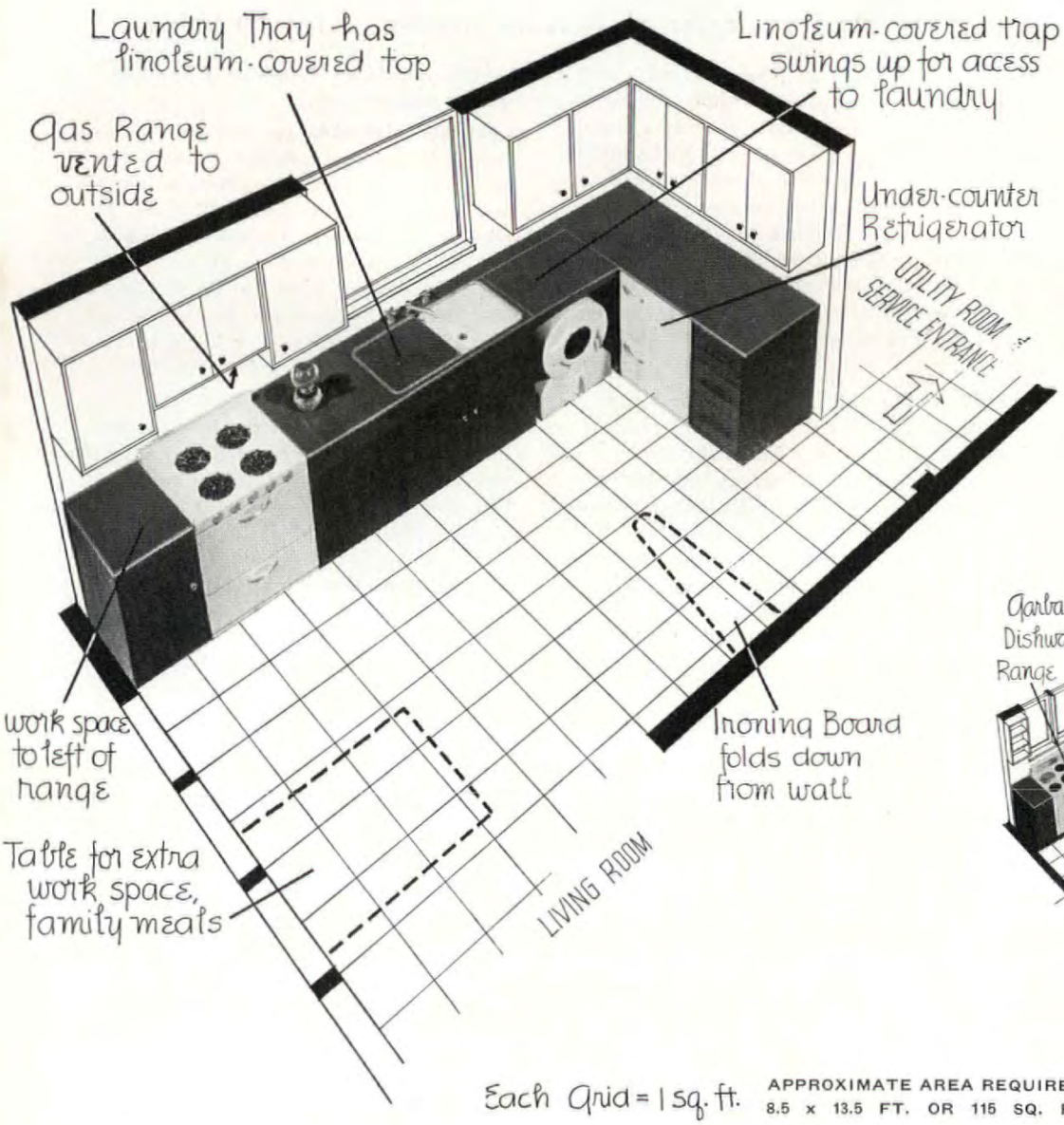
1. 2. 3. 4. 5.

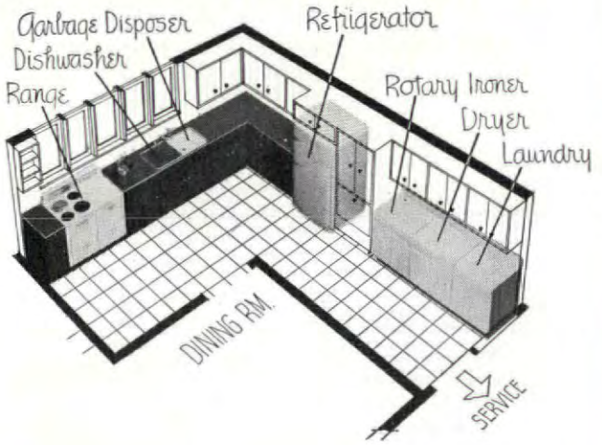



Two variations of L-shaped Work Center show possible application to small and medium-sized houses.

For very small houses, where equipment and space alike are at a premium, the layout shown at left is effective and fairly flexible. Here the placement of automatic laundry and refrigerator under the counter yields some badly needed work space. There is no blinking the fact, however, that such a work center is minimal, and provision should be made for future expansion. In larger houses, all laundry equipment may be grouped together in one leg of the L (below). This isolates the family wash from food preparation—a point many women insist on—and places service entrance through laundry area.





APPROXIMATE AREA REQUIRED: 8.5 x 13.5 FT. OR 115 SQ. FT.

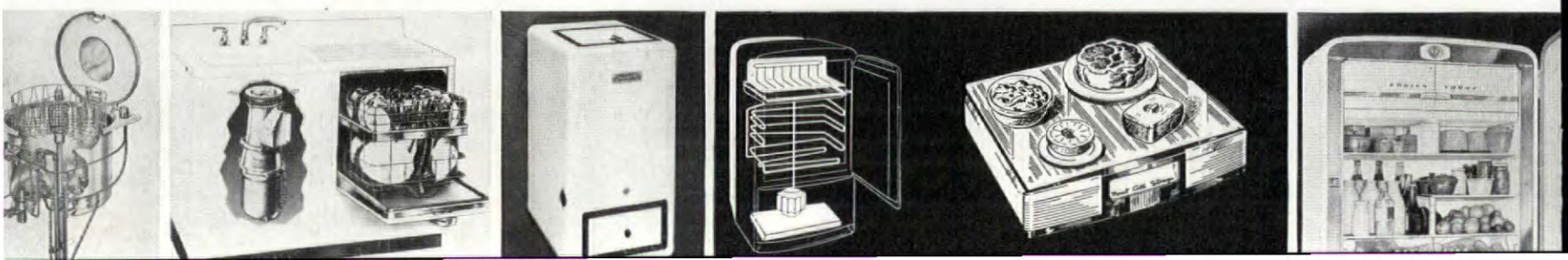
freezers can provide temperatures as low as —20 or —15 degrees F., food technologists seem generally agreed that any unit which can maintain a range of from —2 to +2 degrees F. is satisfactory both for freezing and storing frozen foods. All current freezers can hold this range.

Most freezers are built as top-opening chests for energy conservation (15), although several lines are vertical (Carrier, Wilson, Westinghouse) with glass-fronted compartments (Gibson) or metal-fronted trays (Freeze-All) behind a conventional door (16). The heavy doors of horizontal units have self-balancing hinges as a safety measure. All have special locks to guarantee an air-tight seal. Several (Deepfreeze, G-E) have built-in lighting. In an effort to provide easy access to any part of the freezer, the designers have worked out many ingenious systems of sliding trays and racks. Orley and Deepfreeze include large ice-cube compartments, while several units (Arctic Trunk, Maytag) boast defrosting wells for even thawing of frozen foods.

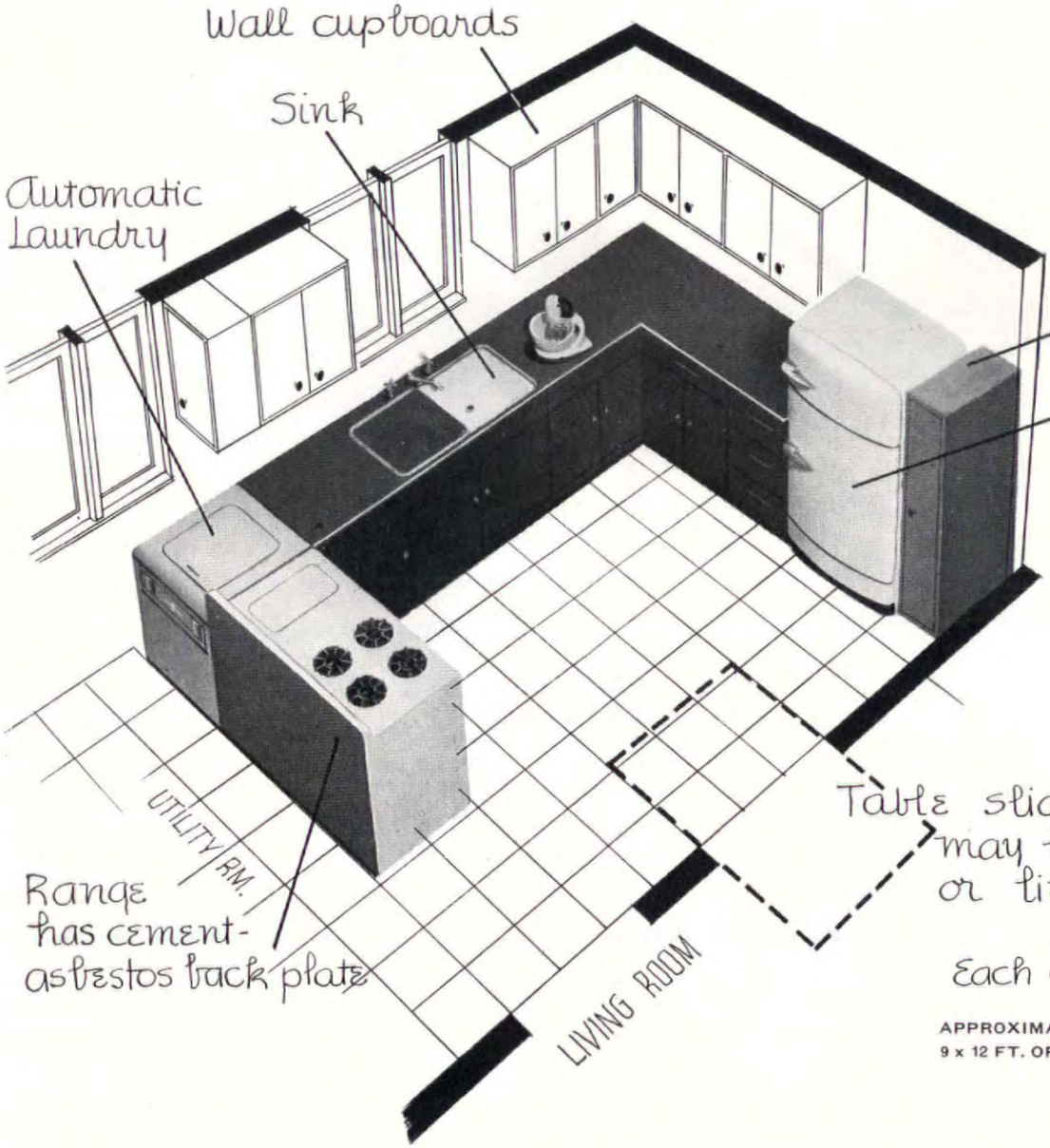
The freezers are available in capacities of from 3.2 cu. ft. and up. Installation and operation differ little from familiar refrigerators, most of them plugging in to any ordinary 110 v. A.C. outlet. Power consumption for each cubic foot of space will run to about 100 kw. per year. Since freezers are opened much less than refrigerators, condensation is less severe. Defrosting is required only twice a year; since they have no drains, however, water must be siphoned or dipped out.

There is considerable variation in design and equipment. Many models have special cold plates for conduction cooling, while Arctic Trunk has an adjustable cold "flue" for freezing (17). Most units rely upon conduction for freezing as well as storage, but Esco adds a fan to accelerate freezing. All units have automatic controls and alarms—Kelvinator and Arctic Trunk having bells as well as warning lights. Most are finished inside and out in

6. 7. 8. 9. 10. 11.



Work Center with U-shaped plan provides economical layout with room for expansion



The scheme below employs a U, one side of which is open to adjacent utility room, with service entrance beyond. The automatic laundry has been reversed to face on this area rather than into the kitchen proper. In this situation, the utility room could be designed to take ironer and dryer along one wall at some future time. Like all plans, the U cannot be indefinitely inflated without loss of efficiency. Hence, in larger houses, two U's placed side by side (literally a double U) will probably prove more satisfactory.

APPROXIMATE AREA REQUIRED:
9 x 12 FT. OR 108 SQ. FT.

enamel, although Eskimo Freeze and American are built entirely of aluminum, and G-E and Frigidaire have aluminum interiors.

Selection of a home freezer is much more a matter of household economics than of technology, however. The size of the freezer should be determined by the use the family plans to make of it—and this is more complicated than at first appears. For out-and-out city families with no desire to do home freezing and with ready access to frozen food stores, there is really no need for a freezer. The zero compartments in the new refrigerators, with capacities of around 2 cu. ft., are adequate. The suburban family wishing to freeze a certain amount of seasonal fruits and vegetables should find a 6 or 8 cu. ft. unit adequate. But if home freezing is to take the place of home canning as a major source of family food, much greater capacities are required. Ten cu. ft. for each member of the family would be a minimum, and up to 15 desirable. Obviously, only large farm families could operate or even afford the units thus implied. Even here, a more economical solution might be a moderately sized unit in the home and a locker in a local freezing plant.

Another factor must be considered in determining freezer size by the family planning to do home freezing. The *storage* capacity of a unit is around nine times as much as its *freezing* capacity—i.e., a unit which can store 270 lbs. of frozen food, can freeze about 30 at any one time.

Kitchen Laundry combination demands skill.

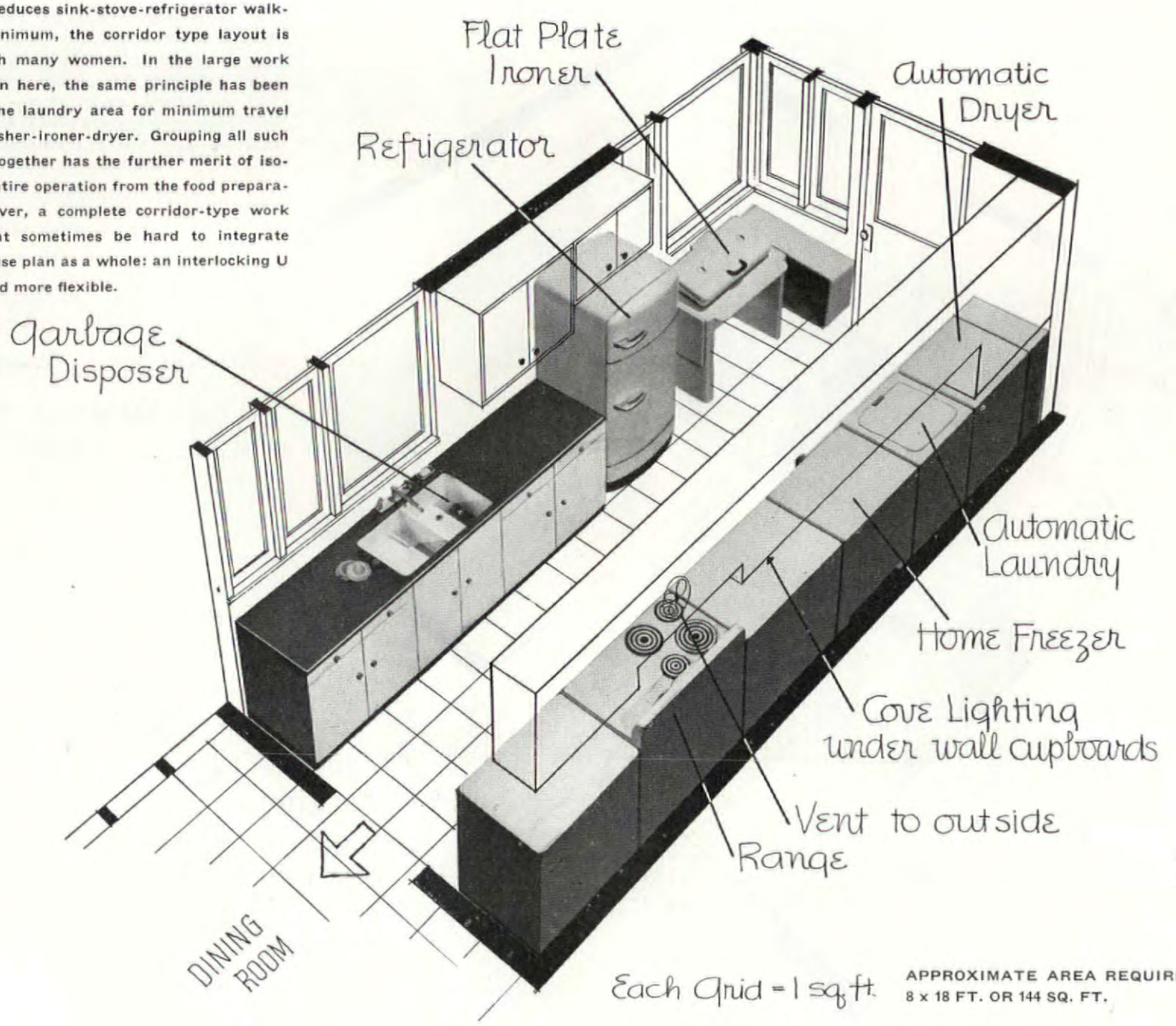
Approximately 70 per cent of all American households do all their laundry at home. Of this washing, the overwhelming proportion is done by the housewife herself, only a small percentage of women having the aid of either family or laundress. There is nothing strange, therefore, in the women's perennial interest in new gadgets for lightening the drudgery of this least rewarding of all domestic chores.

Traditionally, the family wash has been done in the basement. But present-day automatic equipment makes it just as practicable to do

12. 13. 14. 15. 16. 17.

Economical of space and efficient in layout, corridor-type work center is apt to be somewhat inflexible in larger sizes

Because it reduces sink-stove-refrigerator walking to a minimum, the corridor type layout is popular with many women. In the large work center shown here, the same principle has been applied to the laundry area for minimum travel between washer-ironer-dryer. Grouping all such equipment together has the further merit of isolating the entire operation from the food preparation. However, a complete corridor-type work center might sometimes be hard to integrate with the house plan as a whole: an interlocking U may be found more flexible.



it on the first floor or, for that matter, on the second. Since today few houses will have basements, and even fewer a second floor, most designers now face the problem of integrating the laundry into the other service areas.

Most kitchen and laundry equipment nowadays is styled to *look* alike. But this should not blind the designer to the fact that food preparation and clothes washing have only one thing in common; they both require water and heat. Most housewives* still find it distasteful to wash the family linen in the same room as that in which the family food is prepared. With modern laundry equipment, this prejudice may be largely obsolete. Yet it can be met only when good equipment is properly organized with reference to the laundry cycle and when it is segregated as much as possible from food preparation areas of the kitchen.

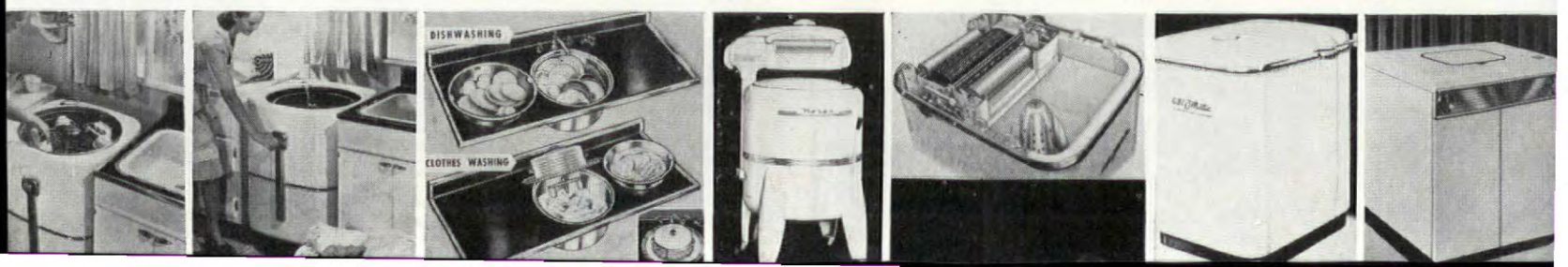
All the operations involved in keeping the family's linen in good condition are hard and unsavory work. Whether washing, rinsing, starching, drying or ironing, real manual labor is involved. But of all the operations, washing and rinsing are undoubtedly most unpopular. It is not strange, therefore, that 17,000,000 American homes have washing machines and most of the rest of them want one.

▶ TODAY'S AUTOMATIC LAUNDRIES have come a long way from the washing machines of yesterday. While the early mechanical washers cleared the first big hurdle (eliminating manual rubbing on a washboard), they still left a lot of bothersome details unresolved. Filling and emptying the machine was by hand or hose to the nearest faucet or drain. The wash had to be removed while water was changed. Precipitation of soap in hard water caused a scum which was very difficult to remove from washed clothes. Mashed fingers and buttons were a hazard of the wringers.

The new home laundries have attempted to overcome all these objections. Behind their streamlined housings—which make them hard

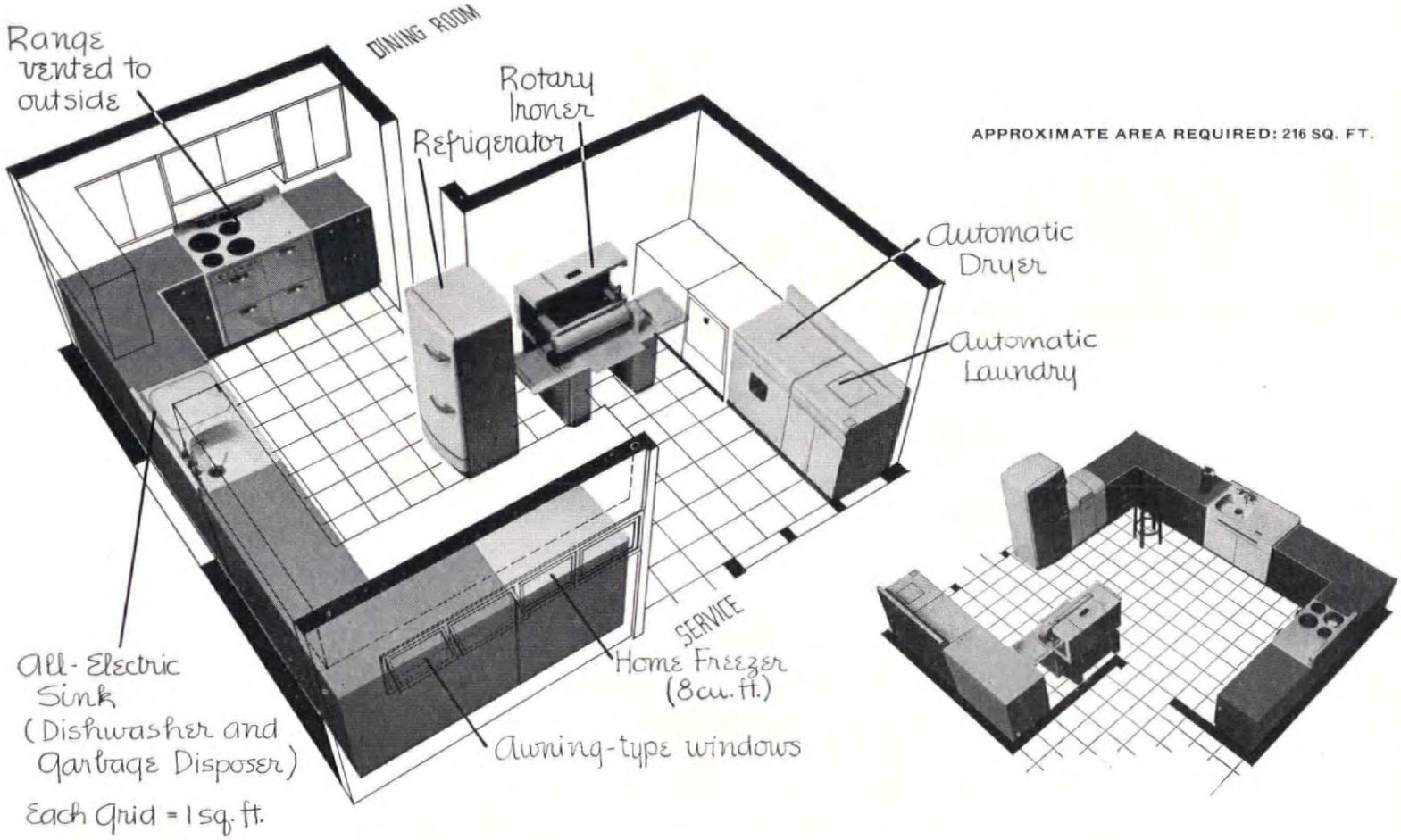
* In a recent survey of 11,000 women, only 6.3% wanted the laundry in the kitchen, while 50% wanted it in a separate room and 43% even preferred the basement!

18. 19. 20. 21. 22.



Interlocking U offers excellent circulation, great flexibility, for larger Work Centers

For a larger house, where adequate space is available for a full range of equipment, the interlocking U plan offers interesting possibilities. It is flexible, efficient and makes a clear separation between food preparation and freezing and laundry. The two versions shown here differ only in placement of refrigerator. In layout at left, refrigerator is well located with reference to dining room but has no adjacent counter space; in plan below, it has been moved alongside home freezer, with adequate counter space alongside. Both schemes employ rubber-wheeled ironer which may be rolled out for good light and elbow room.



to distinguish from ranges or freezers—they display an almost human intelligence.* The entire cycle has been automatized: they can mix water to the right temperature, wash and rinse the clothes in as many waters as desired, flush themselves out. Many ingenious methods for getting rid of the scum have been devised, while the wringer has been replaced with a spinning action which turns out even dryer clothes. ABC-O-Matic still uses the wringer, but places it inside the housing and feeds clothes into it automatically (21).

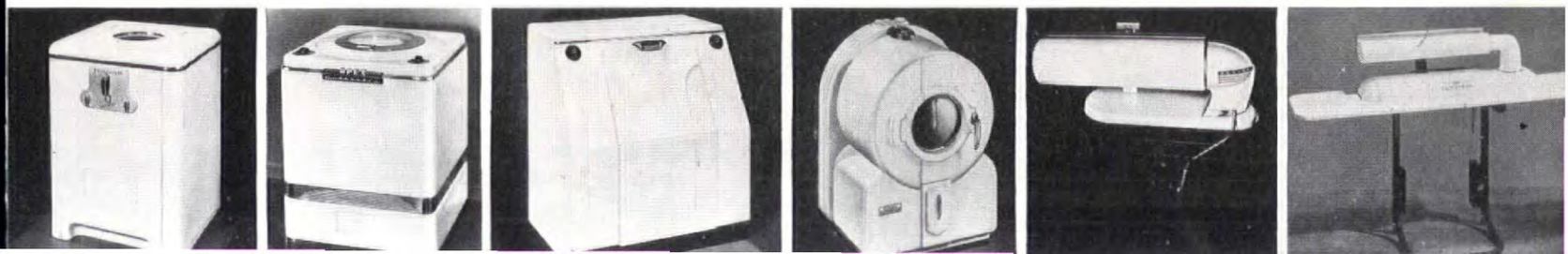
* As distinct from the washing machines, of which there is still a large and lusty family. Much lower in price, these machines are powered by electric or gasoline motors but are not automatic and still employ the wringer (20).

Although most of the new models may be installed in a permanent position, all but the Bendix (26)—which is designed exclusively for fixed installation—are movable. For situations where no floor drain is available, flexible water and electrical connections and evacuation pumps are standard. (G-E uses a separate motor to power its pump.)

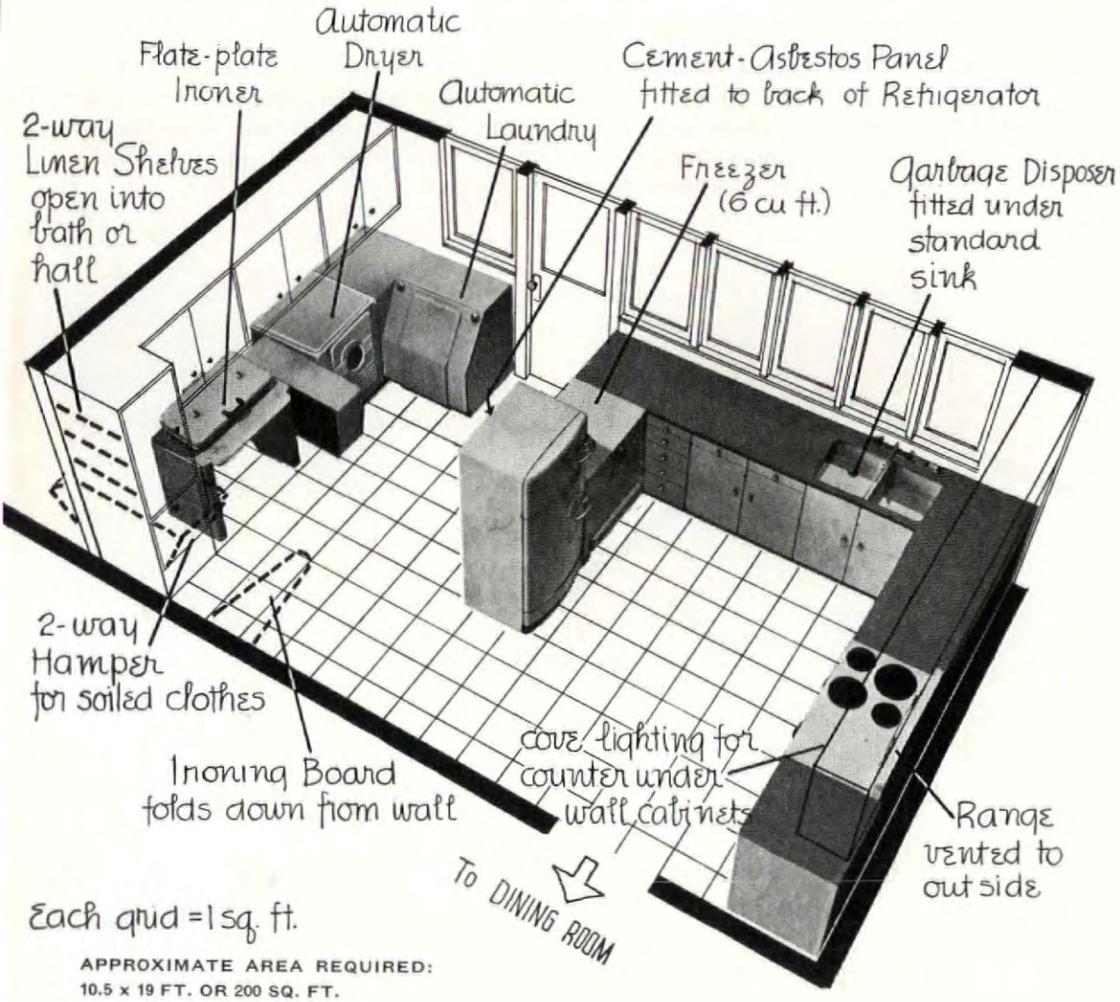
All units employ various shock absorptive devices to reduce noise and vibration. Since efficient operation of the washer requires that it be absolutely level, all units have adjustable legs of one sort or another. Apex boasts a set of hydraulic "feet" which operate as an automatic self-leveling device (24), Laundromat (25) has legs which screw up or down, while the Thor unit uses three adjustable legs with corrugated feet to grip the floor (18).

Washer capacity is rated in terms of dry clothing washable in a single load. (The week's wash for a family of four will run to about 35 lbs., dry.) Most models are designed to handle 8 or 9 lbs. at a load, though midget-sized units are available, and Launderall handles 10 lbs. Time required for a complete cycle (soaking-washing-rinsing-damp drying) naturally varies with the type and quantity of fabrics to be washed. For the wash cycle, which is standard, all machines have automatic controls. On most machines these are electrical and permit the housewife to set water temperatures as well as to lengthen, shorten or skip

23. 24. 25. 26. 27. 28.



Work Center employs two-way linen closet to reduce washday traffic through kitchen



APPROXIMATE AREA REQUIRED:
10.5 x 19 FT. OR 200 SQ. FT.

A favorite of many kitchen experts, the double U work center is, in some ways, the best layout of all. It minimizes confusion between kitchen and laundry, places all major pieces of equipment in good relation to each other. In the scheme shown above, traffic from bedroom section of house to laundry area is considerably reduced by two-way soiled clothes hamper and linen closet. This saves much traffic through kitchen on wash days. Free-standing refrigerator and freezer have cement-asbestos panels applied on back for cleanliness and appearance.

any phase desired. Apparently alarmed by the complexity involved in such electrical controls, Blackstone and Launderall use a geared timing device which is actuated mechanically by the motion of the agitator shaft.

Most of the automatic laundries come in counter-high, rectangular cabinets, and, depending upon their design, are filled either through the top or side. Although they do not actually require a sink, they should if possible be located near one and convenient to counter or table space. In several lines (Frigidaire, Blackstone, Bendix, G-E) launderies are styled to match ironers and dryers, fit together in one counterhigh unit.

▸ **IRONERS.** If a choice must be made between ironer and dryer, most housewives would probably choose the ironer. For sheer physical effort is involved in ironing, whereas time is the principal factor in drying.* The new ironers are designed primarily for heavy flat work (sheets, pillowcases, towels, etc.), although the manufacturers all assert that it is easy to learn to iron any type of clothing on them. They are fairly intricate mechanisms, available in two types. The flat plate resembles the dry-cleaner's presser: the rotary type (apparently the more popular) consists of a revolving padded roll against which presses a curved "shoe" containing the heating element (27-19). Many manufacturers produce them in both portable (or table) and cabinet types and in several sizes. To free the hands, the ironers all employ knee and/or pedal controls for stopping and starting. Speed and heat are also variable.

In some ironers, the cabinet is fixed and the ironer swings out (Blackstone, Apex); in others, cabinet and ironer are all mounted on rubber-tired casters, and may be pushed back against the wall when not in use. (Frigidaire, G-E, Hotpoint, Westinghouse). The portable models should be provided with a free-standing counter or table although a Glad-iron unit has a collapsible base of its own (28). To conserve floor space, such tables could fold out from the wall. Good light and free working space on all sides are essential to operating the ironers.

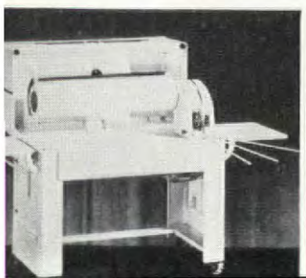
Regardless of the ironer selected, the laundry area should include space for an ironing board and electric hand iron to take care of light and fancy pressing for which neither roll nor plate type machines are suited.

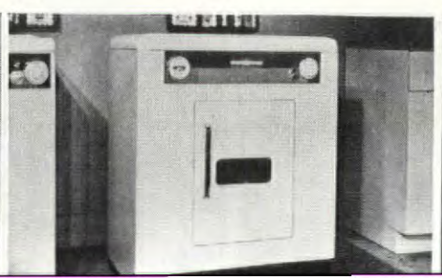
▸ **AUTOMATIC HOME DRYERS** all operate on the same general principle of tossing the wet washing around in a slowly revolving tumbler drum. During the process the wash is bathed in a current of forced air at temperatures of up to 170-190 degrees F. All current models offer fully automatic controls which can be set for any length of drying time. All manufacturers produce an electric model and at least two—Bendix (32) and Hamilton (33) produce a companion model for gas firing. The dryers all come in rectangular, counter-high cabinets, with front-opening, glass-portholed doors. Some of them have lights inside. Capacities are naturally a function of the type of fabrics being dried, but, on the average, a dryer can bring 16 lbs. of wet wash (an average washer load) to bone dryness in 45 min. Most electric models take 208-240 volts, 4500-4700 watts.

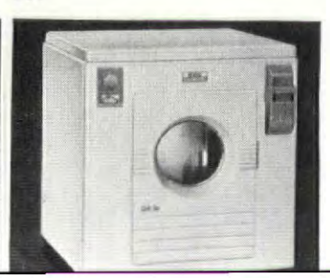
The great merit of the dryer is obviously that it frees the family washing from any dependence upon the weather. It eliminates the necessity for clotheslines, whether indoors or out. However, the housewife with an automatic washer already has the necessary equipment for spinning clothes to the damp-dry state desirable for ironing. The dryer is therefore chiefly useful for fabrics which do not require ironing—toweling, seersuckers, flannels, chenille bedspreads and rugs, etc. Hence, it is probably economically justified only for larger families where such materials form a sizable portion of the washing load.

* Actually, many a foot pound of energy also goes into carrying wet clothes out to a line and later—after the wash has run the hazards of rain and soot—carrying them back in. Measurements of one Minnesota housewife on washday showed that she walked an average of 4,000 ft. just to carry the wash out to the line and back.

29. 30. 31. 32. 33.







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Inspect a Ro-Way Door closely. Notice the excellent millwork of the sections made from first class kiln-dried lumber. Note that all Ro-Way hardware is precision type hardware. See how the sections and hardware are combined to create a more smooth, easy operating overhead-type door. Do this and you will understand why Ro-Way has won the *front place* among the doors for today's "up front" garages. Write for Free Catalog. See our Catalog in Sweet's.

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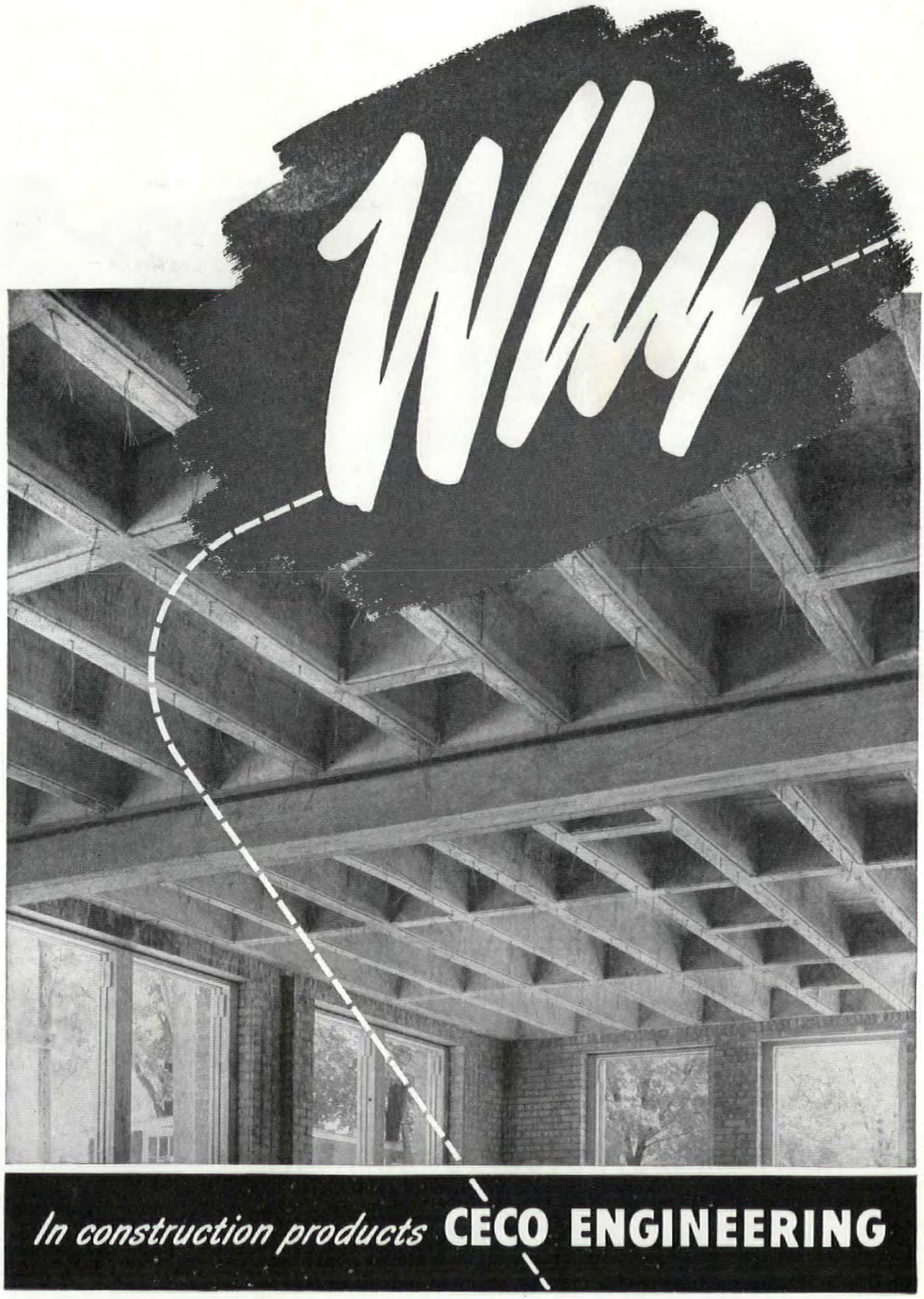
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In these days of high costs, economy in building is important, provided strength and durability are not sacrificed. Here is where concrete joist construction comes in—since it provides rigid, strong, sound-proof buildings which are fire resistive, yet construction cost is lower. That is because the amount of concrete and, consequently, the dead load, are kept to a minimum for any span or live load. The concrete joist and monolithic top slab are formed with cores of removable Meyer steelforms, supported on skeleton centering. Once the concrete has set, the forms are removed and re-used from floor to floor and from job to job. Therefore, a nominal rental charge can be made for each use. Construction is speeded up.

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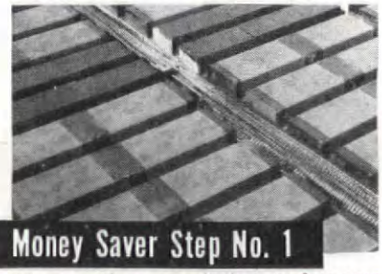
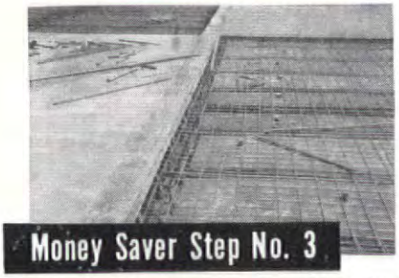


Money Saver Step No. 1

Meyer steelforms completely erected on open wood centering, ready for placement of reinforcing steel and concrete. Note column spirals awaiting installation in columns. Ceco engineers lay out and supervise the complete installation of steelforms on open wood centering.

Money Saver Step No. 2

In this photograph, the reinforcing bars are installed as detailed by Ceco, in proper relation to the erected steelforms. Now the job is ready for placement of the temperature mesh in the top slab. This mesh reinforcement is also supplied by Ceco.



Money Saver Step No. 3

Here the mesh, also known as welded wire fabric, has been placed in correct position and the pouring of concrete for the top slab has commenced. In Ceco-erected jobs such as this, the design is carefully engineered to assure proper reinforcement throughout the structure.

Money Saver Step No. 4

Underneath the concrete joists, Meyer adjustable steel shores support the open wood centering. Forming the floor construction above are adjustable-type steelforms nailed to the centering. Also available are flange-type steelforms, used when plastered ceilings are to be installed.

Partial list of other Ceco Products:

STEEL JOISTS AND ROOF DECK
METAL WINDOWS AND DOORS
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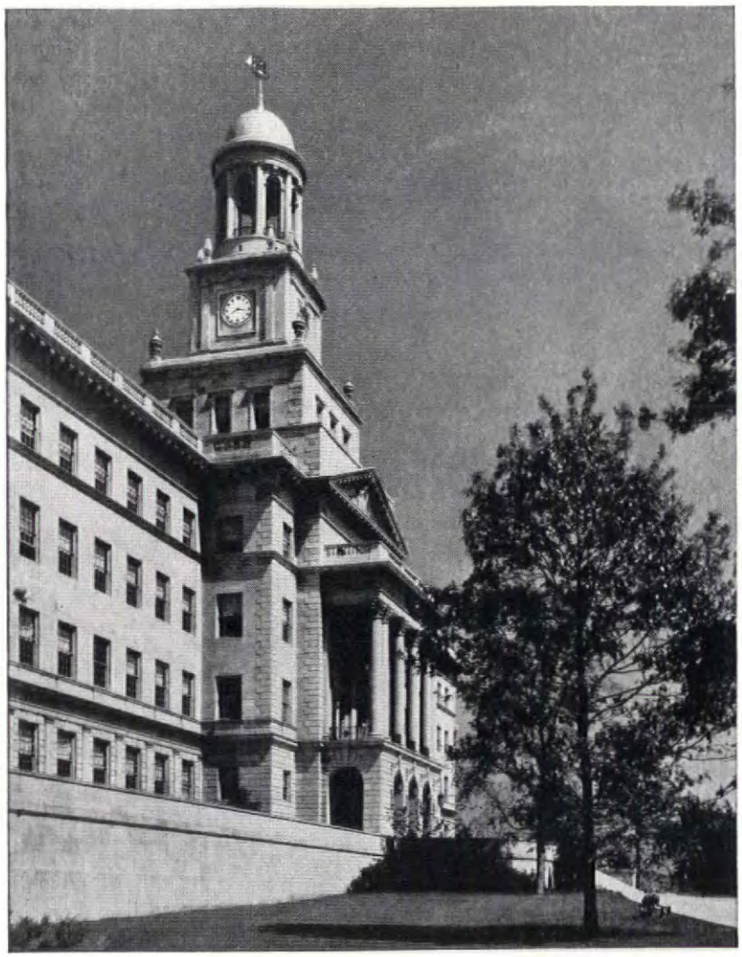
IBM Electric Clock Systems Coordinate Activities in any Building



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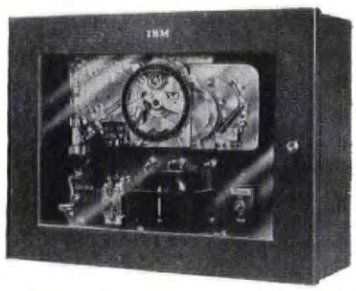

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ANNOUNCEMENTS

THE TENTH ANNUAL CONFERENCE ON CITY AND REGIONAL PLANNING at Massachusetts Institute of Technology September 15-27 will stress technical and administrative procedures of planning. Its sessions are designed for men and women who have had practical experience in planning or related professional fields. Applications to attend may be sent to Prof. F. J. Adams, Massachusetts Institute of Technology, Cambridge 39, Mass. before Sept. 2. The fee of $50 is payable at the first lecture.

THE NEW YORK STATE ASSOCIATION OF ARCHITECTS will hold its annual convention at the Hotel Commodore in New York City, October 22-25.

THE UNITED STATES SAVINGS AND LOAN LEAGUE announces that its 1947 convention will meet in San Francisco, September 15-19.

THE HOME SHOW of Metropolitan Washington, D. C. will take place in the National Guard Armory, 19th & East Capitol Sts. SE., October 11-19.

THE SOCIETY OF MOTION PICTURE ENGINEERS will conduct a Theater Engineering Conference in the Hotel Pennsylvania, New York City, October 20-24, to discuss theater design, equipment and maintenance.

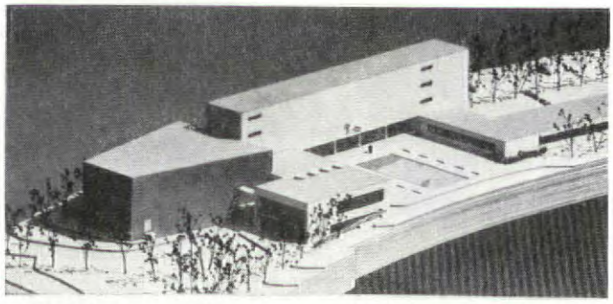
A FOUR-YEAR COURSE IN CITY AND REGIONAL PLANNING leading to a Bachelor of Science degree is being offered by Rutgers University College of Engineering, New Jersey. Its training fits the graduate for work as planning technician in government agencies or with the increasing number of consultants in private practice.

REVIEW COURSES for Architects' Registration Exams will be given during the fall term by Federation Technical Institute, 5 Beekman St., New York 7, N. Y. Earl H. Strunk RA is Director of the program.

SEVERAL CORRESPONDENCE COURSES IN STRUCTURAL ENGINEERING are offered by the Extension Division of Civil and Structural Engineering, University of Wisconsin, Madison, Wis. to assist those whose work calls for an analysis of the forces in simple structures.

THE NEWARK CHAPTER OF THE N. J. SOCIETY OF ARCHITECTS announces formation of an "Atelier" for war veterans interested in architectural drafting and design. Earnest Fougner, John Wassmer and other local architects serve as critic-instructors.

BUILDING PREVIEWS



A $2,000,000 MEMORIAL VETERANS' BUILDING will undergo construction in St. Paul, Minn. early next year. The design (above) by William Brooks Cavin, Jr. of Washington, D. C. won first prize of $5,000 among 87 plans submitted in a recent competition. Notable is its compact provision for three major requirements: General Public Facilities (Auditorium, Museum, and Conference Rooms) *(Continued on page 108)*

Circulation Over

3,000,000

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

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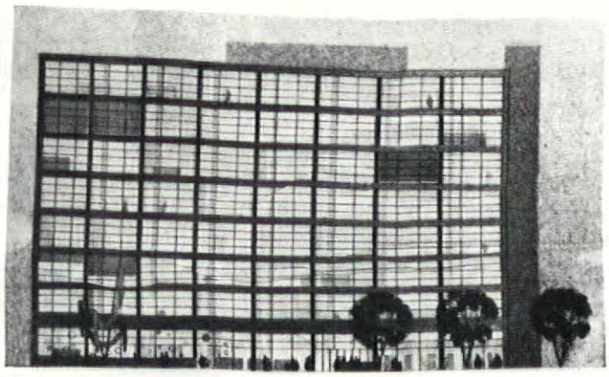
ANNOUNCEMENTS

in the left wing; Veterans Organizations' offices in the central building; and the State Department of Veterans Affairs in the right wing. The ground floor of the central building is an open arcade providing sheltered passage and entrance to all three sections. The reflecting pool lying between the two wings stresses the building's dignity as a Memorial and is appropriate for its location at one end of the Capitol Mall. Mr. Cavin is supervising construction plans as a member of the architectural firm of Ingemann & Bergstedt, St. Paul.

A ONE-STORY CONCRETE BLOCK AND STEEL FACTORY for the Magnavox Co. is under construction at Paducah, Ky. The 105,000 sq. ft. of floor space in this $1,000,000 building will be lighted by continuous windows along all exterior walls and by industrial fluorescent installations. As well as having conventional insulation, the flat roof is designed to hold a 2 in. pool of water for cooling in summer. George Katterjohn & Son have been awarded the general construction contract.

DRYDEN GARDENS, a housing development sponsored by Prudential Insurance Co., is now being built in East Orange, N. J. at an estimated cost of $1,000,000. The four colonial-type, brick-and-clapboard buildings providing a total of 150 apartments (2½ to 5 rooms) are sited on a seven-acre lot—of which three-quarters will be given to lawns and gardens. Emil Schmidlen is architect; Mahieu Construction Co., builder.

AWARDS



WINNER OF THE TRAPHAGEN DESIGN CONTEST sponsored by Beaux Arts for an American School of Fashion was Charles Stade. His design (above) showed most skill in coordinating space needs of various departments: fashion museum; auditorium for 3,000; library; lecture, designing, cutting and sewing rooms; public relations, editorial and business staff offices. Second and third prizes were awarded to William Wilson and John Sinclair. All three were students in Princeton Architectural School.

APPOINTMENTS

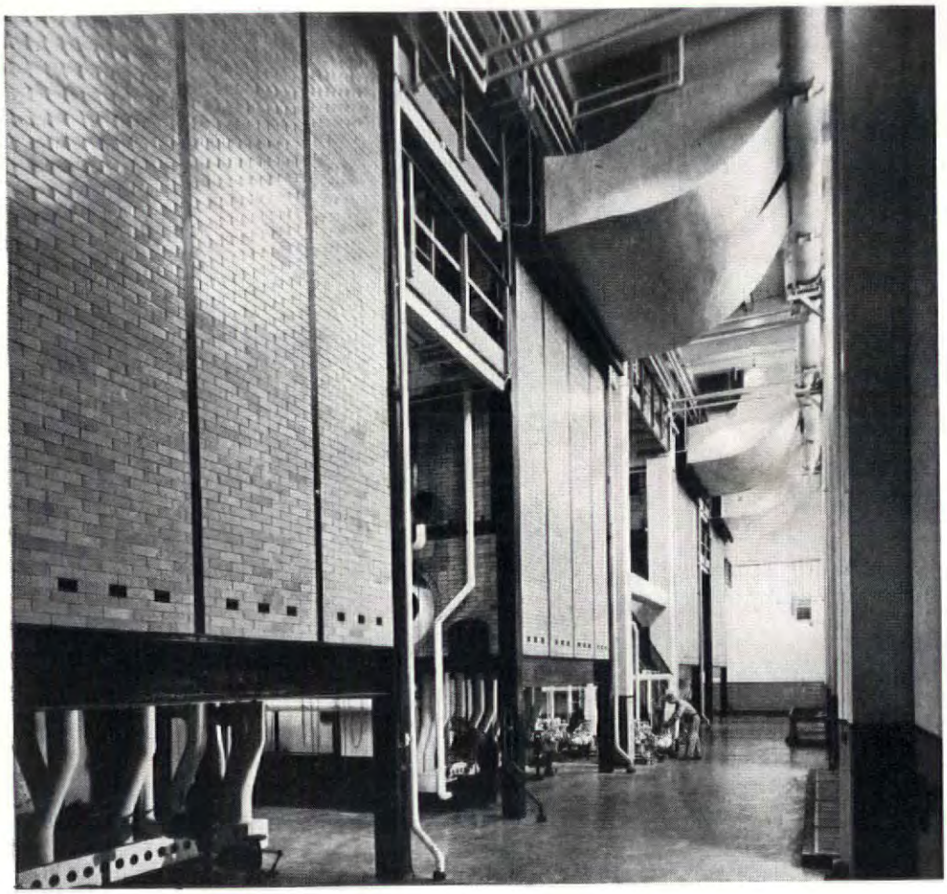
RICHARD BENNETT, former chairman of Yale's Department of Architecture, is now partner in the architectural and engineering firm of Loebl, Schlossman & Bennett, Chicago, Ill.

KINGSLEY DAVIS has been named Executive Committee Chairman of the Urban Research Bureau at Princeton University, succeeding Jean Labatut who is on leave of absence.

PORTER MCCRAY will take over the post of Circulating Exhibitions Director at the Museum of Modern Art, New York City.

T. KEITH GLENNAN has been named president of Case Institute of Technology, Cleveland, Ohio. *(Continued on page 112)*

Facing tile ideal for any industrial interior wall



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NEW MODULAR FACING TILE HANDBOOK. Our new 90-page Modular Facing Tile Handbook showing methods of determining modular layout procedure is now available. FREE to registered architects and engineers who write on their own letterheads; 50 cents to all others. Write to Desk AF-8 of the Institute. Refer also to Sweet's 1947 Architectural Catalog. Any Institute Member will be pleased to serve you.

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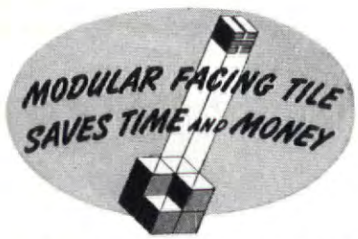

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They said "WoW" because this house was different. This little house had a kitchen with class . . . a kitchen that looked ever so much better than the kitchens in the other little houses . . . because this kitchen had a Tracy sink . . . in lifetime stainless steel.

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Illustrated above: Dahlstrom First Floor Elevator Entrance, United States Envelope Company, Springfield, Mass.

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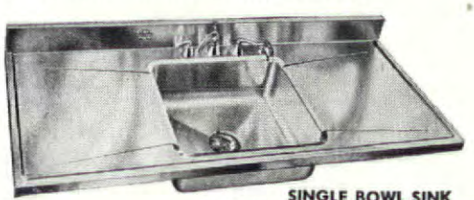

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in 54 inch, 60 inch and 72 inch sizes.
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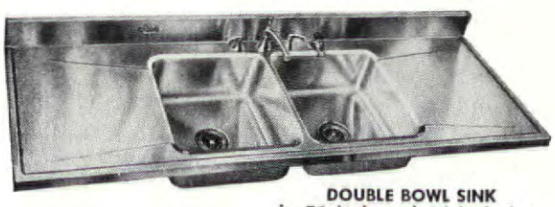
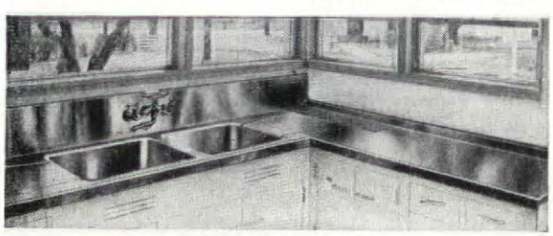


DOUBLE BOWL SINK
in 72 inch and 84 inch sizes.
AVAILABLE FROM STOCK



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WAYNE KOPPES will head the John Pierce Foundation Department of Architectural Design and Housing Research at Raritan, N. J.

VICTOR THOMPSON has been appointed assistant professor of Art at Stanford University, Calif.

JOHN KNOX SHEAR was recently named assistant head of the Department of Architecture at Carnegie Institute of Technology, Pittsburgh, Pa.

NEW OFFICES

FLYNN HUDSON, JR., AIA and J. PAUL GILMORE announce their partnership in architecture and engineering with offices at 203 Bartlett Bldg., Montgomery, Ala.

CHARLES DORNBUSCH AIA is now in private practice at 936 N. Michigan Ave., Chicago 11, Ill.

THOMAS WHAPLES has opened an office of architecture and planning at 120A N. Eighth St., Richmond, Va.

IRVIN MICHAELSON & WILLIAM FEDELI, architects and engineers, will practice in partnership at 905 Fox Bldg., Philadelphia 3, Pa.

HUGH GIFFIN AIA announces the opening of offices for general practice at 7 Hawthorne Lane, Rosemont, Pa.

JOHN O'NEILL, architect, offers complete services in building construction at 625 Hutton Bldg., Spokane, Wash.

HAROLD PERRY, architect, has opened an office at 16 Bloomfield Ave., Flemington, N. J.

ELMER FOX, architect, announces the opening of offices at 220 S. State St., Chicago 4, Ill.

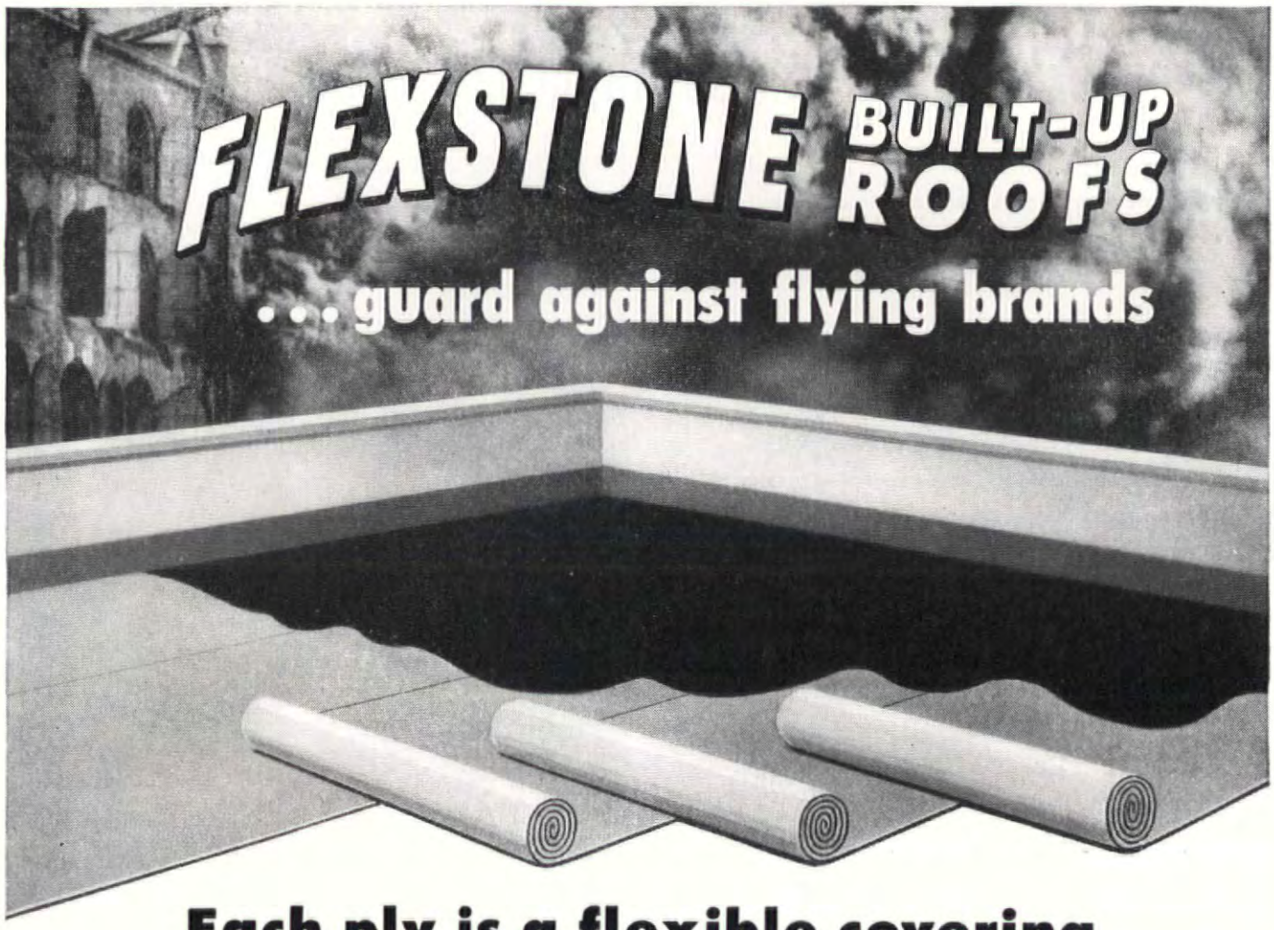
JACKIE PIEPER has opened an office of product design at 2010 W. Foster Ave., Chicago 25, Ill. *(Continued on page 116)*

Scotts SEED and TURF BUILDER
Is Your Best Bet For Outstanding Results

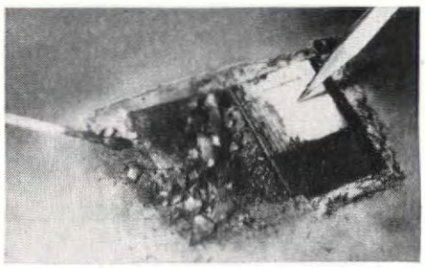
As a builder or contractor, you are aware of the extra appearance and value a beautiful lawn adds to new homes, community developments, and industrial buildings. For making good lawns with a minimum of expense and effort, send today for this FREE volume of lawn building "know how." Don't delay, for fall is the best time to start new lawns. Also tell us about your seeding requirements, and we will include estimates. Use Scotts lawn products this fall and start lawns that will be a boon to your reputation as a contractor. *For beautiful lawns, always specify Scotts.*

O. M. *Scott* & SONS COMPANY
22 Fourth St., Marysville, Ohio

Send For This *FREE* Volume Of Lawn Care Bulletins . . . They Tell How To Make Better Lawns



Each ply is a flexible covering of stone—made of asbestos



Make this Fire Test! The ordinary roofing felt, on the left side, was reduced to ashes by the consuming flame. But the J-M Asbestos Felt, on the right, remained unharmed . . . proving its fire resistance. We'll gladly send you the materials to make this convincing test yourself.

Protect your building from the hazard of flying sparks and burning embers. Insist on a Johns-Manville Flexstone Roof. *It will not support combustion.* That's because the *felts* in a J-M Flexstone Built-Up Roof are made of the magic mineral *asbestos*—fireproof, rotproof, long-lasting.

Flexstone Roofs are *smooth-surfaced*, too—permitting thorough drainage, eliminating the weight of slag or gravel, and making any damage easy to locate and repair. Need no periodic coating. Felts are perforated to insure smooth application.

All Flexstone Roofs are engineered to the particular requirements of your building—whether it's new construction or re-roofing. To insure skilled application, they are applied only by J-M Approved Roofers.

Three types available: Flexstone *Super "A," Standard,* and *Service*—each the finest that can be specified for its purpose. Write for brochure BU-51A, containing complete specifications. Johns-Manville, Box 290, N. Y. 16, N. Y.

• • •

Because of unprecedented demand, there may be times when we cannot make immediate delivery. Please anticipate your needs.

Johns-Manville FLEXSTONE BUILT-UP ROOFS

Do you have one of these air conditioning headaches?

1. You can't keep the room cool enough (or warm enough) with your present air conditioning equipment, and at the same time keep the air comfortably fresh.

2. You can keep the place cool enough (or warm enough) but you have to bring in a lot of outdoor air through the ventilating system or open doors and windows to keep the premises from becoming stale, stuffy and odorous.

3. You can't get outdoor air economically, or you can't get air that's odor-free because of the location of the rooms.

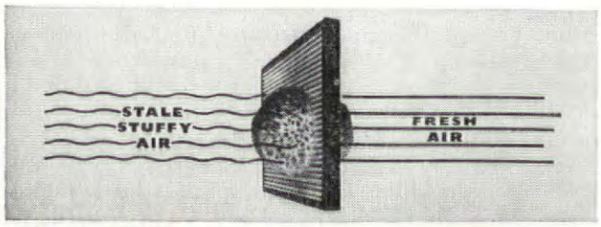
Dorex Air Recovery Units cure such difficulties by this simple method . . . and save you money at the same time.

They change stale air to fresh air. Thus you can *recirculate* more of the air you have already conditioned instead of throwing it away because it is stale and odorous. That means less outdoor air to heat or cool, less costly equipment and smaller operating expenses. Best of all, Dorex adds nothing to the air. It removes odors by soaking them up with activated carbon, one of the most powerful adsorption materials known.

Are you planning to put in air conditioning? Investigate Dorex. It may enable you to keep the premises comfortable and pleasant with smaller equipment, thus saving on installation cost, as well as year 'round operating expenses.

Do you already have air conditioning installed? There are Dorex equipment types and sizes to fit all standard air conditioning installations.

Our trained specialists are at your service to tell you frankly, without charge, whether or not it will pay you to install Dorex Air Recovery Equipment. For full information on Dorex, call the nearest district representative or write Dept. M-50.



Dorex odor filter works like a sponge

Dorex Units are being used in:

Airplanes	Stores	Institutions	Railroad Cars
Banks	Film Mfg. Plants	Laboratories	Refrigerated Storage
Bars	Food Processing Plants	Libraries	Restaurants
Bowling Alleys	Hospitals	Locker Plants	Telephone Exchanges
Breweries	Hotels	Offices	Theaters
Buses	Industrial Plants	Oil Companies	
Chemical Plants		Precision Mfg. Plants	

W. B. CONNOR ENGINEERING CORP.

AIR DIFFUSION • AIR PURIFICATION • AIR RECOVERY

112 East 32nd Street — New York 16, N. Y.

Representatives in Principal Cities • IN CANADA: Douglas Engineering Co., Ltd., 1405 Bishop Street, Montreal 25, P. Q.

EVERYTHING YOU WANT TO KNOW

about Q-FLOOR wiring

Packed into this brand-new Data Manual are answers to all your questions on planning for Q-Floor wiring. In its 92 pages you'll find enough specifications, descriptions, detail drawings, and installation photographs to give you the full story of this completely modern wiring system. The book has been designed throughout to acquaint you with the versatility of Q-Floors and Q-Floor wiring, and to make it easy for you to incorporate it in your plans. For your free copy of the *Q-Floor Wiring*, write on your letterhead to Section C63-84, Appliance and Merchandise Department, General Electric Company, Bridgeport 2, Connecticut.

Contents:

General Data—Ten pages of explanation, telling what Q-Floor wiring is, and what it can do—and a question-and-answer section, giving you down-to-earth answers to your own questions.

Product Listings—Catalog descriptions and photographs of Q-Floor wiring components.

Layout Design Data—Diagrams and photographs explain how to get the utmost in electrical flexibility with Q-Floor wiring; how to fit it into your plans.

Installation Data—Details on construction requirements and on methods of installation.

Dimensional Drawings—Detail drawings of Q-Floor wiring components.

Illustrations—An excellent selection of installation photographs and pictures of new buildings utilizing Q-Floor wiring for flexible, economical electric systems.

ON LARGE PROJECTS OR SMALL BUILDINGS
Q-Floors with Q-Floor wiring offers long-term economies and construction speed. Remember, too, that the General Electric line of conduit products is a *full line* for all construction needs.

GENERAL ELECTRIC

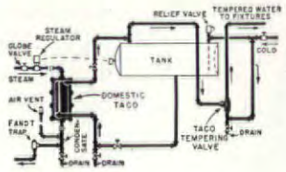
You get a Flexible Choice from **TACO'S COMPLETE LINE OF WATER HEATERS**

Where Steam is Available

for Industrial Plants Commercial Buildings Power Plants

Storage Tacos
26 sizes

Domestic Taco
Multi-Coil Taco
Taco Nos. 4, 5 and 6
HG Taco



6 sizes can be used with high pressure steam

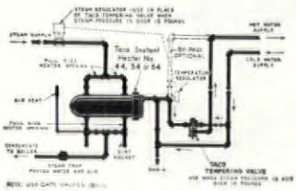
Tankless Tacos
25 sizes

Nos. 12, 14, 15, 18 and 23
Flo-Line Tankless Taco
HT Tankless Taco
Taco Converters

None of these Tankless Tacos can be used with high pressure steam

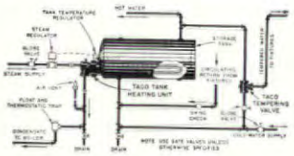
Instant Tacos
20 sizes

Nos. 44, 54 and 64
I type Instant Taco
Can be used as oil preheaters and condensate coolers.
All 20 sizes can be used with high pressure steam



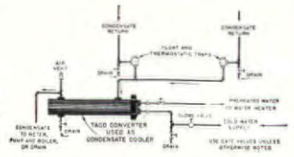
Taco Tank Units
72 sizes

Tank Heating Units
All 72 sizes can be used with high pressure steam



Taco Converters
38 sizes

Can be used as water heaters, condensate coolers, water preheaters and heat exchangers to convert steam to hot water radiation.



All 38 sizes can be used with high pressure steam

For more than a quarter of a century, Taco Heaters, Incorporated has earned the industry's confidence for sound engineering and quality of products.

Write for Taco's recommendation on your installation and see how Taco's complete line can save you both installation and operation costs.

Better Heating — Better with Taco

TACO-ABBOTT SYSTEM Taco

TACO HEATERS, INC.
342 Madison Ave., New York 17

In Canada:
Taco Heaters of Canada, Ltd. 24 Adelaide St., W., Toronto

J. LEE THORNE ASSOCIATES, a new industrial design firm, is located at 1700 Sansom St., Philadelphia 3, Pa.

CHANGES OF ADDRESS

HUGH STUBBINS, JR., architect, has moved his office to 103 Pleasant St., Lexington, Mass.

GREGORY AIN, architect, in association with JOSEPH JOHNSON and ALFRED DAY announces that his new business address is 2404 W. 78th St., Los Angeles 5, Calif.

HENRY GREENE AIA announces that his office is now located at 1741 Broadway, New York 19, N. Y.

GORDON DRAKE announces the removal of his office to 4201 Sunset Blvd., Los Angeles 27, Calif.

G. EVANS MITCHELL AIA is continuing general practice in the B. of L. E. Bldg., Cleveland 13, Ohio.

SHELGREN & WHITMAN, architects, have moved to 110 Pearl St., Buffalo 2, N. Y.

R. BERNARD KURZON AIA is now located at 3839 Wilshire Blvd., Los Angeles 5, Calif.

SIMONS & LAPHAM, architects, announce the removal of their office to 17 Broad St., Charleston, S. C.

FOSTER & YASKO, architects, have moved to 407 Scott St., Wausau, Wis.

THE FRANCIS COMPANY, engineers and designers, are now at their new address, 222 N. Michigan Ave., Chicago 1, Ill.

COOK & ZERN, consulting engineers specializing in the design of structural frames and foundations, have opened an office at 607 Wabash Bldg., Pittsburgh 22, Pa.

ANDREWS & CLARK, consulting engineers, are located at 305 E. 63rd St., New York 21, N. Y.

ADIRONDACK LOG CABIN CO., INC. and U. S. PREFAB CORP. have moved executive offices to 222 E. 46th St., New York, N. Y.

THE COLOR MYSTERY **SOLVED**

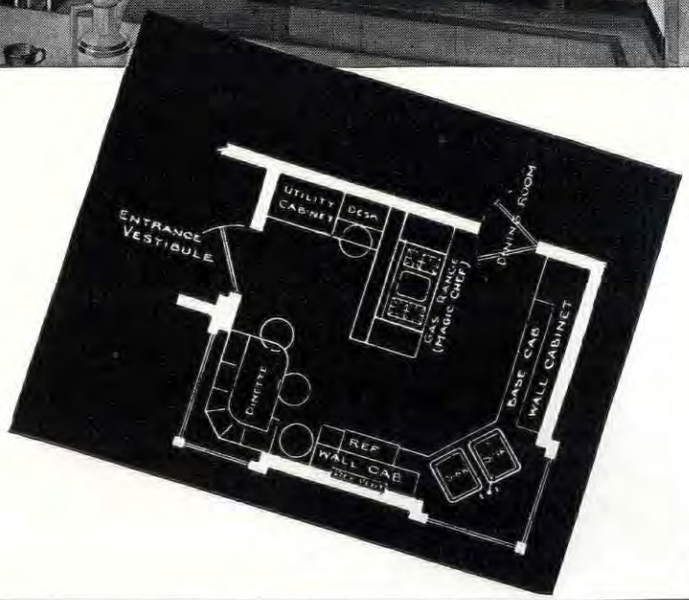
Where, oh where, is the right color? You'll find a quick answer in the Moleta COLOR GUIDE. This handsome COLOR GUIDE gives a selection of 150 beautiful colors to show your clients...each tint displayed on a large page (9" x 15") and shown in true-life, right-on-the-wall effect... every tint from the palest to the darkest. And on the reverse of each sheet is given the exact mixing formula.

Write for your copy of the Moleta COLOR GUIDE—$5.00, delivered anywhere in the U. S. A.
MONROE, LEDERER & TAUSSIG, INC.
606 N. American St. Phila. 23, Pa.

Moleta
ARCHITECTURAL
FLAT OIL PAINT
THE TRULY WASHABLE FLAT PAINT

Send for *Magic Chef*'s KITCHEN PLANNING DATA

In our recent architect and builders survey you told us what you wanted—Here it is!



OUR KITCHEN PLANNING DATA CONSISTS OF:

1 Magic Chef Specification Page. Gives detailed measurements on 5 different models of Magic Chef Gas Ranges.

2 Kitchen Supplement showing 12 different kitchen designs offering a wide variety of arrangements and utility features to choose from.

3 Floor Plan Insert—shows the detailed floor plan of each of the 12 kitchens mentioned in item No. 2 plus detailed plans for other sections of the kitchen.

4 Kitchen Broadside shows 10 New Freedom Gas Kitchens in full color which affords excellent opportunity to study the full effects of contrasting colors in the kitchen.

Your clients can cook with gas wherever they live. Perfect results with "Pyrofax" or other LP (bottled or tank) gases.

MORE WOMEN COOK ON *Magic Chef* THAN ON ANY OTHER RANGE

LOOK FOR THE FAMOUS RED WHEEL — THE MARK OF DEPENDABILITY

AMERICAN STOVE COMPANY
Advertising Dept., 4301 Perkins Ave., Cleve. 3, O.

Please send me items Checked

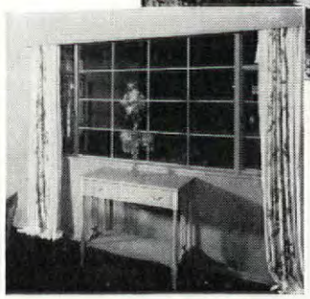
1. Domestic Kitchen Planning Kit ☐
2. Information on Heavy Duty equipment for hotel restaurants ☐

The PLANNING BOARD

The Truscon Planning Board Says,"Normal delivery on many of our Steel Building Products is now possible. In fact, on all material for which raw material is readily available, a normal rate of production and delivery is currently in effect." However, since production and delivery schedules change from week to week, we suggest you contact the nearest Truscon sales office for the latest information.

47,354 Truscon Steel Casements for Stuyvesant Town Apartments

A big dent in the New York City housing shortage situation is being made as unit after unit of the new Stuyvesant Town Apartments is being completed. The entire project will cover 75 acres, with 35 separate buildings containing 8,759 modern apartments.



In every room of each of these many apartments, Truscon Steel Casement Windows will bring the occupants ample supplies of nature's free sunlight and fresh air. The beautiful design of the windows themselves helped achieve outstanding architectural distinction in the structures, both for the exteriors and interiors.

Truscon Steel Casements, due to their individuality and flexibility of arrangement, meet the particular requirements of every type of room. Where windows are opened and closed frequently, or where ventilation needs are great and varied, Truscon Steel Casements fill a definite utilitarian need in addition to being highly decorative. Clean, bright, air-controlled kitchens are possible. The side-hinged casements can be adjusted by fingertip touch to invite or retard the flow of air, to suit the range of requirements in each room.

Truscon heavy steel construction, corner-welding of ventilators and frames, projection-welding of hinges and sturdy hardware assure the home-owner a long-time, trouble-free investment in windows with an economy of maintenance. There is no sagging, binding or warping in Truscon Steel Casements. Perfect fit and uniform contact give complete protection against inclement weather. Truscon's Bonderizing of all steel surfaces and the baked-on prime coat provide an excellent surface for finish coats of paint, and assure maximum protection against corrosion.

Truscon Casement Screens and Storm Sash are available for quick, convenient installation. Write for free descriptive catalog showing complete range of Truscon Steel Casement types and sizes.

Stuyvesant Town Apartments, New York City, a Development of the Metropolitan Life Insurance Company

Roof Jobs Made Easy

Specify Truscon "Ferrobord" Steeldeck to get the quick, economical, permanent answer to any roof problem you may have.

"Ferrobord" Steeldeck consists of a parallel system of strong structural interlocking steel members, which present a smooth surface over which can be applied built-up roofing

Application of "Ferrobord" Steeldeck

of any type, with or without insulation. "Ferrobord" is made from 18-gauge copper-bearing strip steel, having an ultimate strength of not less than 50,000 lbs. per square inch. Each unit is 6 inches wide and has a depth of either 1½ or 1¾ inches.

With these specifications you can design a roof job that's got strength and effective area coverage at reasonable cost. The Truscon Steel Company will be glad to cooperate with local roof companies in selecting the proper type of insulation and built-up roofing to meet certain definite requirements of structures. Write for free catalog.

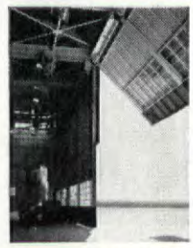
Concrete Reinforcing Bars Proved Worth in 1906

An interesting fact is that the San Francisco earthquake disaster in 1906 served as a proving ground for Truscon's Reinforcing Bars. Among the buildings which did not crack or crumble from the quake were those constructed of concrete utilizing Truscon Bars.

Doorways to Skyways

Truscon Steel Hangar Doors are the product of 20 years of manufacturing experience and research combined with the best engineering skill, workmanship and materials. Their design, manufacture and erection is a highly developed art and must be undertaken by experienced men, in order to attain completely satisfactory installations.

The success of a hangar door installation depends to a great extent on the experience and good judgment of the manufacturer's field organization. Truscon's field crews are comprised of specially trained men who "know how" through years of experience with many installations, to do just the right things to make the job a success.

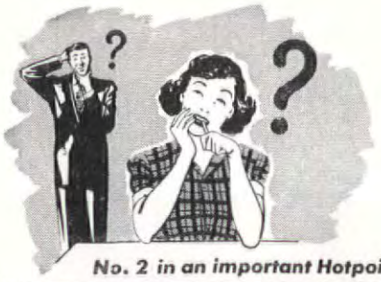


Truscon designs and manufactures Straight Slide Doors; Tail Doors; Braced, Unbraced and Bifold Doors; Vertical Lift Canopy Doors and Three-Section Vertical Lift Type Doors. Write for free descriptive literature.

New Literature

A new 8-page folder on light Industrial Steel Doors, Series 31. Complete with construction and installation details, specifications, sizes and types. Write for your free copy today.

TRUSCON STEEL COMPANY
YOUNGSTOWN 1, OHIO
Subsidiary of Republic Steel Corporation



What are America's FAVORITE KITCHENS?

No. 2 in an important Hotpoint series

Hard-Hitting National Advertising Inspires Thousands of Inquiries about Hotpoint's Famous "Skylark" Kitchen!

JUST as fashion advertising dictates Milady's choice of clothes, so Hotpoint national advertising promotes the all-electric kitchen as the No. 1 choice in America's household heart. Indeed, the popularity of the "Skylark" kitchen indicates a profitable, tailor-made market for builders and architects. Such an estimate is factual — based on thousands of inquiries received by the Hotpoint Kitchen Planning Service about this cheerful, convenient kitchen. Potential customers... whether building or remodeling... are sold on the electric kitchen. *Astute builders will capitalize on this powerful trend.*

LET HOTPOINT HELP YOU. Hotpoint's Kitchen Planning Service is set up for your convenience — to tip you off on the short cuts in installing time and labor saving electric kitchens. The Portfolio of Personalized Kitchen Plans is chock-full of amazing suggestions that make good kitchens better. Send the coupon for this handy booklet. It's a "natural" to help your reputation for producing homes with the most modern kitchens — today and many years to come.

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

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

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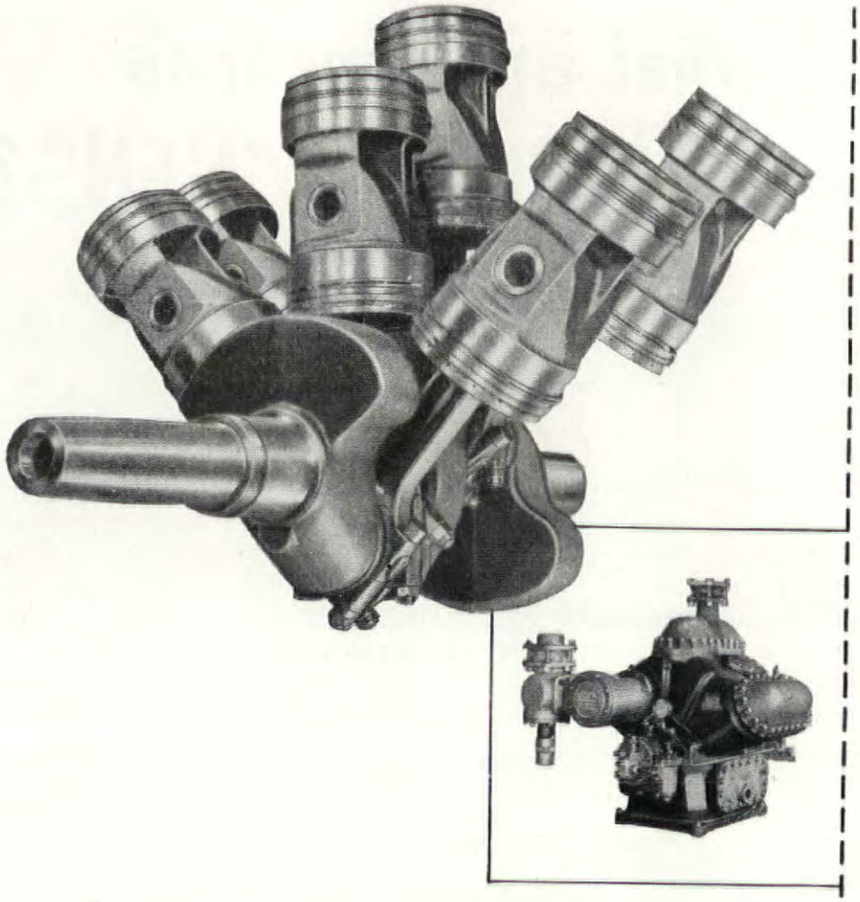
Hotpoint

HOTPOINT INC. A GENERAL ELECTRIC AFFILIATE



V/W "AIRCRAFT BALANCE"

means freedom from vibration

This unique V/W crankshaft and piston assembly is a study in static and dynamic balance and suggests a radial aircraft engine with its lower half placed in line with the upper. In addition to accurate control of the weight of individual parts, the arrangement of rotating and reciprocating parts in this ingenious V/W design results in vibrationless operation. As a result of these innovations, York engineers were able to produce the first refrigeration compressor that could be mounted on upper floors, in roof trusses, that required no special foundation.

Exclusive design is but one of the many features of V/W "the compressor that never wears out," and is representative of the character of York engineering throughout its complete line of refrigeration and air conditioning equipment.

York Corporation, York, Penna.

For Competent, Authoritative Assistance...

QUICK!

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

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

In the Los Angeles area, for example, District Manager Lauer and his staff of 18 sales engineers devote their full time to the problems of York customers in this region.

R. F. LAUER
District Mgr.

Assisted by:

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E. J. Berlet	*M. R. Overbye*
K. G. Blessing	*G. F. Sainsbury*
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F. W. Devers	*C. A. Shapiro*
W. R. Eby	*F. H. Stephens*
Maron Kennedy	*D. D. Stone*
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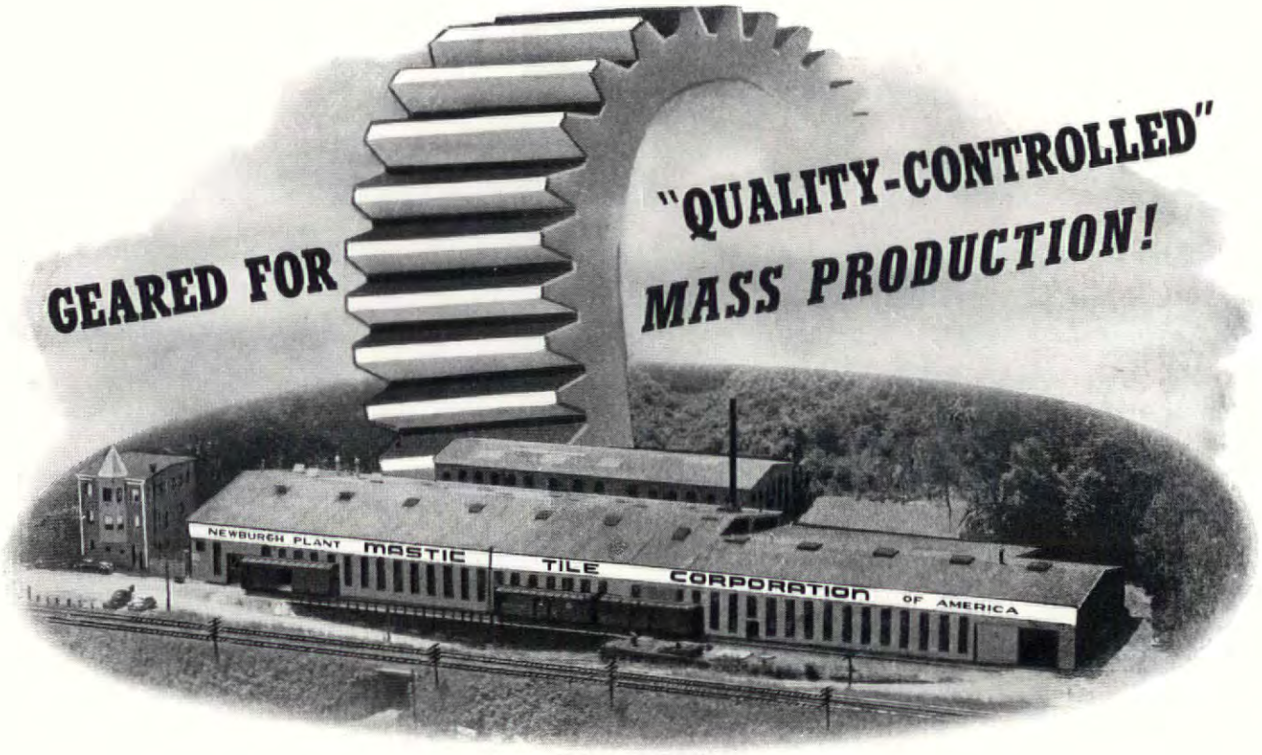
YORK *Refrigeration and Air Conditioning*

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885



MA·TI·CO *Mastic Tile*

24 hours a day — 6 days a week, Mastic Tile rolls from the three production lines at the Newburgh plant of the Mastic Tile Corporation of America — the world's largest, best equipped individual plant for manufacturing asphalt flooring tile.

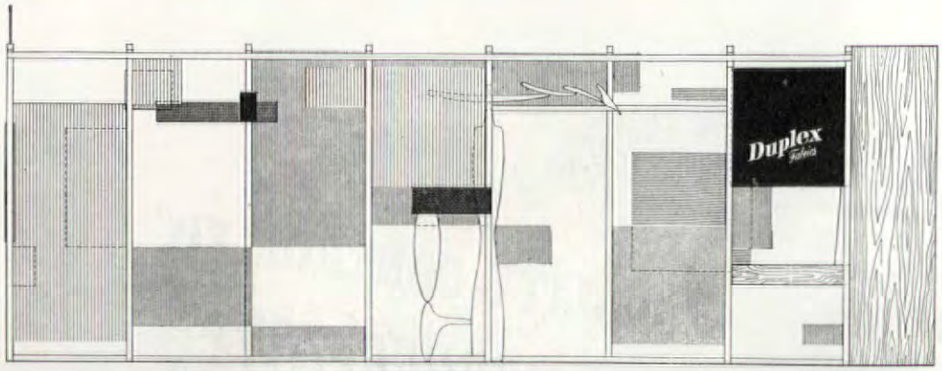
This huge production results from the ever increasing demand for "quality-controlled" MA·TI·CO Mastic Tile — and our established policy of making guaranteed deliveries as promised.

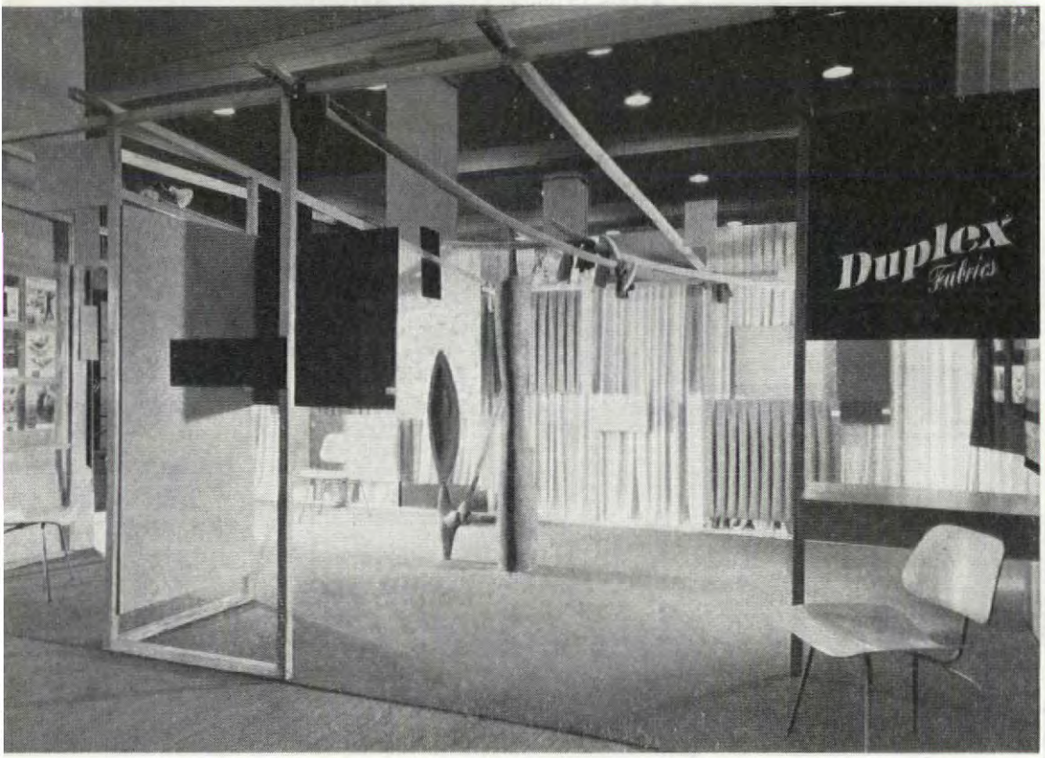
The next time you want asphalt flooring tile famous for its beauty, uniform high quality, and rugged durability—delivered promptly on schedule—play safe—be sure to specify MA·TI·CO!

NEW SAMPLES SHIPPED UPON WRITTEN REQUEST

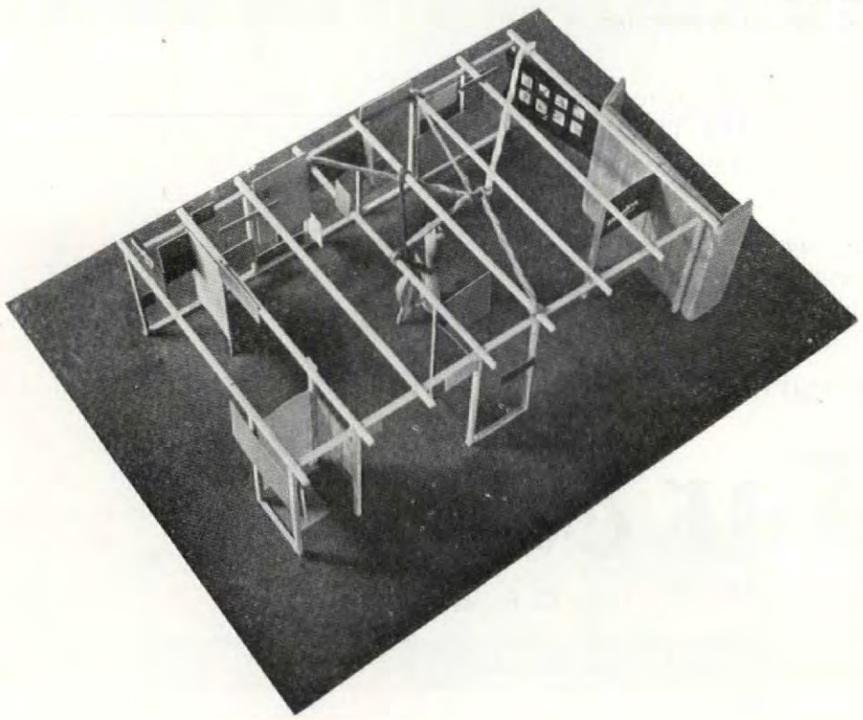
MASTIC TILE *Corporation* OF AMERICA

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



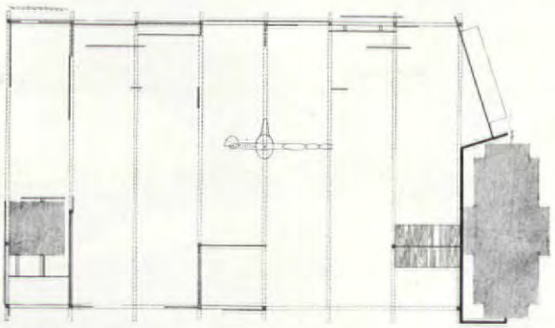


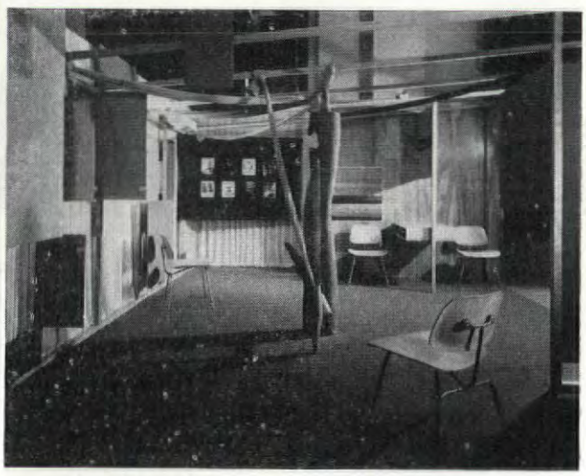
Lionel Freedman Photos



TEXTILE EXHIBIT

At the recent International Textile Show, held in the dank and shadowy void of New York's Grand Central Palace, one lone exhibit indicated that, in the display of their wares, manufacturers have transcended the influence of the oriental market-place. The exception was Duplex Fabrics' installation designed by Warren Nardin and Albert Radoczy of New York. Consisting of an open cage of birch framing supporting brightly coolred, irregularly sized fabric panels, the effect was frankly Mondrianesque. However, adrift in a sea of competition so notably lacking in imagination, this guileless bit of adaptation was not only forgivable but actually refreshing. Aside from excellent proportioning





and visual continuity, lighting and ceiling members succeeded in effectively masking the mausoleum-like surroundings. Fabrics were hung in smooth, tailored pleats, swirls and rosettes of the accepted "dry goods" school mercifully omitted. Instead of the usual intramural conflict of textures and weaves, all fabrics were hung for the benefit of the overall design. Chairs and other pieces of incidental furniture were designed by Charles Eames. The center of the floor, occupied by a single piece of abstract sculpture by Radoczy, was intended to integrate structural and fluid elements. illustrate the close relation of architectural and structural form.

A neat little scale model (left) originally sold Duplex on the idea of a striking, well-designed presentation. Their decision in its favor should serve to fix their firm's name in the mind of the design-conscious public. lay and professional.

(Continued on page 124)

WHY BRIGGS *Beautyware* IS SO POPULAR!

Check these BRIGGS Selling Features . . .

There is no home too small to afford the quality, smartness and design of Briggs Beautyware.

- ✓ **Safety bottom bath tub.**
- ✓ **Leak-proof edges — flashes tub to walls.**
- ✓ **No unnecessary weight.**
- ✓ **Stain-proof (acid resistant) porcelain enamel — no extra cost.**
- ✓ **Exactness of dimensions.**
- ✓ **Up to the minute styling.**

There is only one quality with Briggs—the finest in plumbing ware. Remember, too, to specify Republic Brass Goods for your Briggs Beautyware.

SHORT ON SPACE... LONG ON IDEAS

Just 6' x 7' . . . but who notices size when there are *roses* on the ceiling? And who'd ever guess it's a bath-on-a-budget with all that Briggs Beautyware! For Briggs fixtures have a smartness and a look of luxury you'd expect to see in a "showplace." Yet thanks to Briggs' famous porcelain-enameled *steel construction* they fit into the space and pocketbook of the most modest builder! And how easy Briggs *stainproof* fixtures are to clean! Send for this free booklet and start planning your Briggs Beautyware bath, today. Briggs Manufacturing Company, 3009-H Miller Ave., Detroit 11, Mich.

DESIGNED AND ILLUSTRATED BY BRIGGS DESIGN RESEARCH DEPARTMENT

Briggs exclusive safety-bottom tub! Safer for getting in and out . . . safer for showers and sit-down baths!

BRIGGS *Beautyware*

Briggs now offers the Republic "Afterthought" Shower. Now everybody can have a shower—the real *find* for adding showers over tubs. All that is necessary is to replace the over-the-rim tub spout with the Republic "Afterthought" automatic spout, assemble and install riser, and the shower is ready. Thousands of hotels, homes, and apartments need showers — this is your answer.

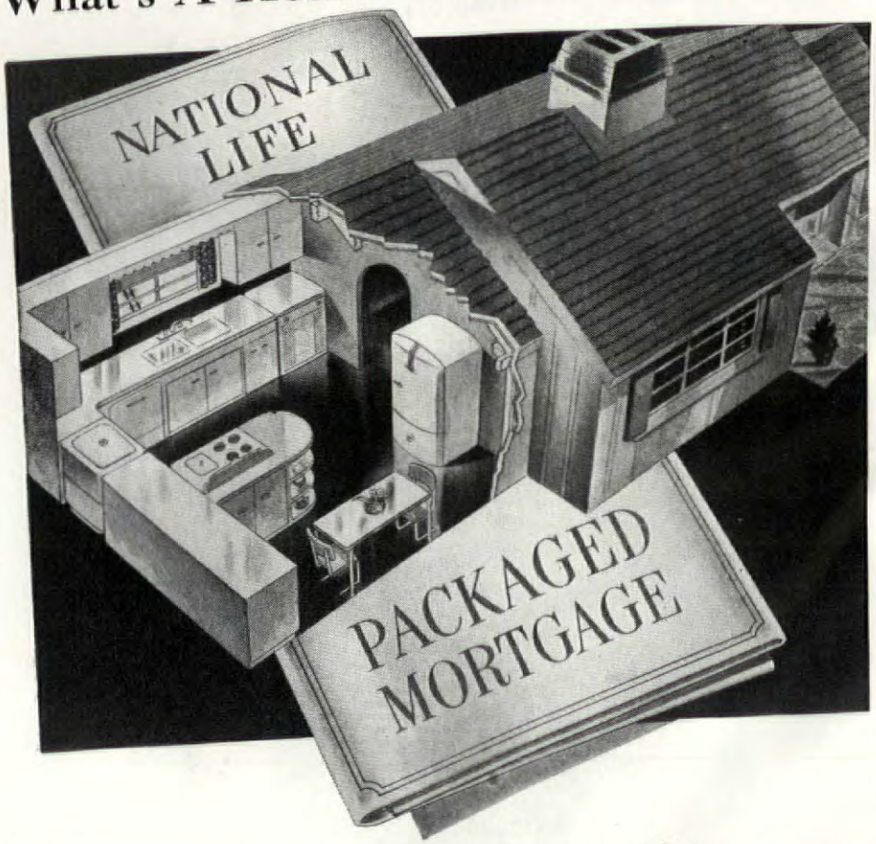
Specify K 1158

Briggs consistently tells its sales feature story to over 5,000,000 readers. Above is reproduction of advertisement appearing in August issues of AMERICAN HOME and BETTER HOMES & GARDENS.

BRIGGS MANUFACTURING COMPANY
3023 Miller Avenue • Detroit, Michigan

SUBSIDIARIES:
Republic Brass Co., Cleveland, Ohio • John Douglas Co., Cincinnati, Ohio

What's A Home Without A Kitchen?



Modern Plan includes Appliances as Real Estate

Now your clients and prospects can include the cost of their major new household appliances in one convenient mortgage contract, along with house and land. Ranges, refrigerators, home freezers, dishwashers, garbage-disposing sinks, and home laundry equipment all come under the lien of National Life's "Packaged Mortgage." Home-buyers deal with only one lender, have no extra bills right at the start, actually save money over conventional installment financing. Get the facts on this new plan that makes houses easier to buy . . . easier to sell. Send coupon below now.

NATIONAL LIFE
INSURANCE COMPANY
HOME OFFICE— MONTPELIER, **VERMONT**

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

CLIP AND MAIL THIS COUPON NOW

NATIONAL LIFE INSURANCE CO., DEPT. M-9, MONTPELIER, VT.

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

Name .....

Business or Home Address .....

MORE NEW FURNITURE

Back to the normalcy of unlimited production and whirlwind competition, the Valley Upholstery Corp. of New York steps into the furniture arena with no less than 150 new pieces designed by Norman Bel Geddes and Norman Fox MacGregor, Jr. Whether it indicates a market trend or whether the designers balked, it is nevertheless worth noting that, despite the number of individual pieces, only four matched sets are included in the line. Though all the furniture comes under a general heading of "modern," it is conservative and opulent in character. The examples shown here were designed by Geddes but, unlike much of his work, do not include plywood, bent metal or plastic in their construction, since the

Valley Corporation prides itself on conventional upholstery of high quality. Geddes did, however, introduce one innovation. By installing additional band steel springs forward of the usual no-sag seat spring, additional support is given to the sitter's legs. This is most clearly illustrated in the lounge chair (top). The S-shaped love seat (below) can also be used as a pair of barrel-back armchairs. Sofa is sectional, desk is fitted with removable file cabinets, coffee table has built-in magazine rack.

In addition to the new furniture, the Valley Corp. is featuring a line of fabrics designed by Artist Elbert M. Jackson and several interiors by Designer Peter Schladermundt.

BOOKS

UN HEADQUARTERS. By LeCorbusier. Reinhold Publishing Corp., 330 West 42nd St., New York, N. Y. 79 pp. Illustrated. 7½ x 10. $3.50.

If a word count is any gauge, LeCorbusier is our 1947 candidate for the author most likely to succeed. Since the first peep of the New Year, volumes of his writings have been flooding the office: first editions and reprints from the U.S., from England, from Switzerland. This latest work is the author's view of a world organization seen through the rosy lens of "urbanism," and is distinguishable from his other writings only because it deals with a supposedly specific set of building requirements. A major portion of the text consists of LeCorbusier's report of last year, made while he was sitting as

(Continued on page 128)

The Time to Catch Your "SHIPPING PLATFORM THIEF" *is Before Building!*

Careful Planning pays immediate profits . . . and pays for years to come

If you are planning to build or remodel, NOW is the time to stop that "shipping platform thief" — costly, antiquated shipping space facilities — the bottleneck of American business.

For instance, *in 1941 a large Army base in the Mid-west was operating with only two spaces for loading and unloading trucks. Minor remodelling gave them 45 tail-gate spaces.* RESULT: terrific savings in both time and money!

GIVE YOUR BUSINESS A CHANCE TO GROW

Slow movement of goods insidiously throttles business unless terminal congestion is corrected.

Many executives and owners are already seeing the handwriting on the wall. BUT THEY ARE DOING SOMETHING ABOUT IT. They know that only too many, in desperation, try to doctor the *effects* rather than remedy the *cause!*

Your architect knows the remedy. Let him show you how to provide for adequate shipping facilities BEFORE you build . . . or WHEN you remodel.

THE AMERICAN TRUCKING INDUSTRY
AMERICAN TRUCKING ASSOCIATIONS, WASHINGTON 6, D. C.

PLEDGED TO COURTESY SAFETY

GOODS CAN'T MOVE FASTER THAN THEY'RE LOADED

Another ☆ in the Kewanee Line

{ for Heating Medium Size Buildings
{ Dependably with High Efficiency }

KEWANEE

SQUARE-HEAT TYPE R BOILER

Reg. U. S. Pat. Off.
MEMBER

● The Kewanee Square Heat Boiler is an improved "streamline" version of previous Type R models, redesigned and simplified in one super-fine series. These eight new 3R units incorporate all the features which have made the 16 sizes of Kewanee Type R so popular during the last seventeen years.

● This Square Heat Series takes in the upper bracket ratings as developed in the Steel Boiler Institute Code for residential boilers . . . making it ideally suited for heating medium size buildings with unusually high efficiency.

● For Oil, Gas or Coal (stoker or hand fired) and easily and quickly converted from one fuel to another. You can switch from oil to gas and back again, and a change to coal requires no alterations in the boiler proper.

Eight Sizes for 740 to 3000 Square Feet Steam, S.B.I. Net Rating.

ARMY-E-NAVY Won For 5th Time

KEWANEE BOILER CORPORATION
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Branches in 60 Cities—Eastern District Office: 40 West 40th Street, New York City 18
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OVER 75 YEARS BOILERMAKERS

modern . . . are you?

■ Before you too quickly say "yea" . . . may we ask: "Do you know about Kencork *today?*" NOT the Kencork that proudly enriched the mansions of Astor and Gould. But the Kencork the modernists use for brilliant, distinctive effects.

Since being released from war-time duty, today's Kencork has achieved a new quality, a new finish—and a new fame. As always . . . it insulates . . . absorbs sounds . . . keeps dry . . . feels good underfoot. And today it's more easily installed and maintained. And today—above all—it's so particularly right with *modern* design . . . infinitely handsome on floors . . . impressive on walls . . . giving heightened flattery to fabrics, draperies, paintings.

So . . . if you'd rate yourself truly modern, learn about Kencork's *new* fame. And know, too, that it's even an attractive, sound buy for moderate priced homes. It takes one minute of your day to write or phone a Kencork dealer or the nearest Kennedy office. You may learn that Kencork is just the answer you are seeking at the moment. But even if you have no particular project in mind, at least have the facts on hand. Phone or write *now*, before you forget.

DAVID E. KENNEDY, INC.
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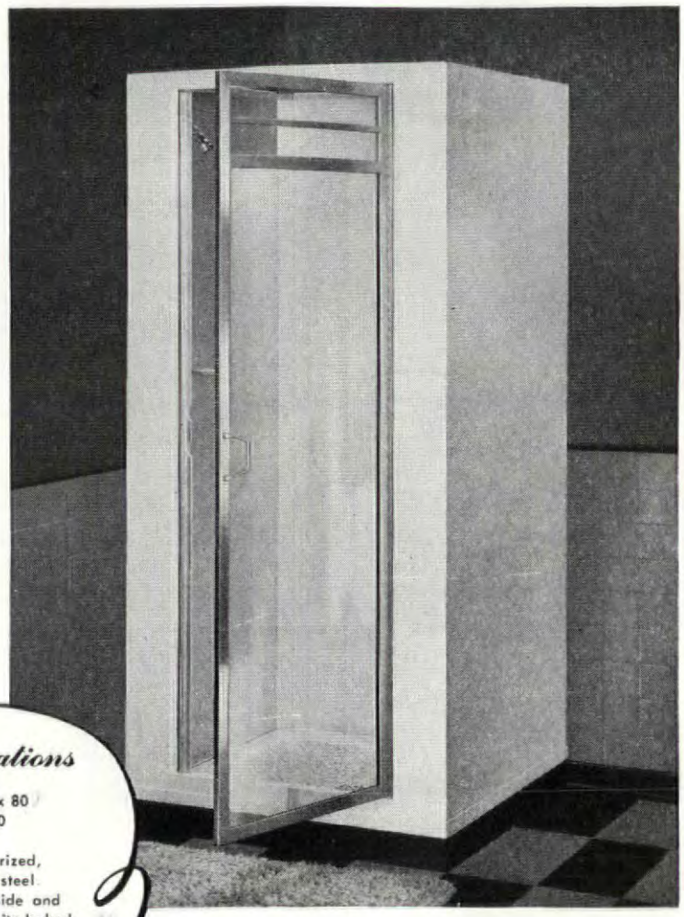
324 Fourth Ave., Pittsburgh 22, Pa. . . . Bona Allen Bldg., Atlanta 3, Ga. . . . 1211 NBC Bldg., Cleveland 14, Ohio . . . 452 Statler Bldg., Boston 16, Mass. . . . 1355 Market St., San Francisco 3, Cal. . . . 58 E. Washington Blvd., Chicago 2, Ill.



Specifications

SIZE—32 x 32 x 80
36 x 36 x 80

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

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

VALVES—Individual compression valves with arm and shower head

FIAT Cadet

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

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

Fiat *Metal Manufacturing Company*

Chicago 13, Illinois

Long Island City 1, N. Y. Los Angeles 33, California

representative of France on the United Nations Headquarters Commission. To this are appended several supplements which become progressively more cryptic and finally bring the reader up to the final acceptance of the Manhattan site. This, one gathers in a definite but politic manner, would not have been the author's choice. Early in the book he states: ". . . the United Nation is neither a dependency of New York, nor of the United States of America. Freedom—not constraint—must at every minute be the dominant feeling. In no case must the United Nations become a corollary to America. To implant its Headquarters in the very shadow of the sky-scrapers of Manhattan is inadmissible. The Manhattan sky-scrapers are by their nature too precarious; New York is a thrilling city but so disputable that it cannot take the Headquarters of the United Nations into its lap. This is a question of moral proportion. In fact a question of 'respectability'." Later, in a speech delivered at the closing session of the Permanent Headquarters Committee in December of 1946, LeCorbusier reveals himself overridden but unscathed. He says: ". . . "France's vote, yesterday, concerning the East River site, explains why my country did not delegate me to your Commission, wishing to give me all power as an expert in architecture and urbanism without entanglements of a political nature . . . From 40 sq. mi. to 20 sq. mi., to 10 and to 5, we arrived at 2½ sq. mi. We recommended White Plains, and immediately following the publication of our Report, Philadelphia, San Francisco, and Boston offered sites of 2 and 2½ sq. mi. Flushing Meadow had an area of one-half a sq. mi.

"I was opposed to settling in Flushing Meadow. Yet today we find ourselves with 17 acres; i.e., one-thirtieth of a sq. mi.

"I took part in editing the report on Mr. Rockefeller's offer . . . however, during the Sub-Committee's discussion, I had presented the question: 'Will this be the cradle of the United Nations? No. This will be its 'Battle-Post'—a post comprising offices and meeting halls which will thus be situated at the very focus of the great international arteries, situated at the most concentrated point of the country, where technical equipment is the most highly perfected. Here you can work out the solutions for our modern world without a single day of delay . . . avoiding what might have been too dangerous and too long an interval, where you to have attempted prematurely to build an ideal World Center. For the problem remains: where might we actually locate this World Center, since the world has not yet attained homogeneity, since it is not yet real, since we do not know its exact geography with its exact coefficient of intensity. It is too soon for a World Center. Therefore, accept in the meanwhile this Battle-Post which is offered to you."

As one might guess, the book inclues a schematic set of one-man proposals for the Headquarters. How much these will influence the final product cannot be guessed until detailed plans and elevations are made public. Characteristically, these schematic drawings and tabulations are impressive and inspiring. But equally true to LeCorbusier's form, they are the products of his "universal philosophy," independent of the limitations of acreage, finance and other bothersome realities.

Not to be outdone by FLW, Corbu includes the design for *A World Museum* which, instead of being a spiral, is in the form of a pyramid. As he describes it: "The Museum has three parts: each aisle contains the object in the history of its time, and in its geographical setting (climate, race, custom). The three aisles are contiguous with one another, marked off by simple columns and varied ceiling heights. The object is situated in the left aisle [a temple, a fortress, a cathedral, a palace, a house], geography in the right aisle, history in the

(Continued on page 132)

When you insulate with FOAMGLAS

...you insulate FOR GOOD !

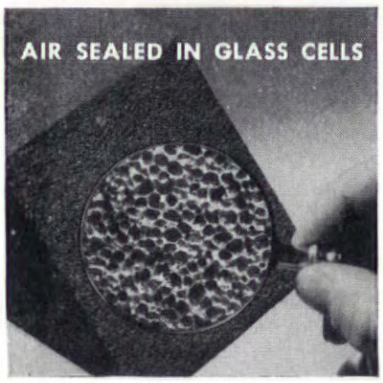
PC Foamglas has won a wide reputation as the *permanent* insulation. And the reason is that Foamglas is just what its name implies: glass foam, made up of millions of air-filled, sealed glass cells.

Being glass, Foamglas is moistureproof and vaporproof. Extensive tests have conclusively proved that water cannot get into it or through it, that vapor cannot penetrate it.

Being glass, Foamglas is unaffected by exposure to extreme humidities, acid atmospheres, wide variations in temperature. It won't check, rot, swell, shift, shake loose or pack down. Rodents and insects cannot eat it or nest in it.

In fact, the elements which so frequently reduce or entirely destroy the insulating efficiency of other insulating materials, are completely powerless to harm PC Foamglas. Foamglas is the one truly permanent insulation . . . for roofs, walls, floors, ceilings of all kinds of buildings. It is the insulation that never grows old. When you insulate with Foamglas, you insulate *for good!*

We invite you to send for complete facts about this amazing material. Just check and mail the convenient coupon. No obligation. Pittsburgh Corning Corporation also makes PC Glass Blocks.



FOR ADDITIONAL INFORMATION SEE OUR INSERTS IN SWEET'S CATALOGS.

Pittsburgh Corning Corporation
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Please send me without obligation, your free booklets on the use of PC Foamglas insulation for: Roofs_____ Walls_____ Floors_____

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PC FOAMGLAS *Waterproof Fireproof* **INSULATION**

T. M. REG. U. S. PAT. OFF.


Hudson River
Central Park

Look again—
of course it's New York!

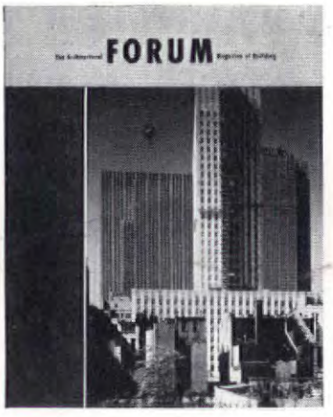
Spotted on the air map are some of the giant new structures which will change the face of New York over the next ten years. And while all this is happening in Manhattan, every other U. S. city will be substantially rebuilt.

Here is the start of a building era without precedent—houses and housing, shops and stores, hospitals, schools, churches, office buildings, factories, apartments, hotels—every kind and size of structure.

How many men do you suppose control this vast enterprise? How many of them could you name? More important if you manufacture building products, how many of building's leaders could name your company, would recommend and buy your products?

This great building program is dominated by the readers of one magazine—the FORUM. FORUM architects and engineers will do the designing. FORUM bankers will do the financing. FORUM contractors will do the construction. And FORUM advertisers will supply a great part of the materials and equipment.

If you manufacture products for buildings and want to "see" these men month after month—if you want to inform them about your products month after month—reach them through the pages of the FORUM, month after month.



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To those regularly engaged in any branch of building—design, construction, financing, distribution, ownership or management—the FORUM *(published monthly) is available at the professional rate of $5.50 (U.S. and Canada). Letterhead or other proof of occupation must accompany orders. Subscription to nonprofessionals, $8.50 (U.S. and Canada). Foreign rates on application.*

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Built Like an Architect Works

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For more than fifty years, Roddiscraft products have been closely identified with architects. Today architect-specified Roddiscraft doors and plywood are the showpieces of many leading architectural firms.

Roddis controls its materials from timber tract to finished product. We know what's inside and out. Roddiscraft quality is more than veneer deep.

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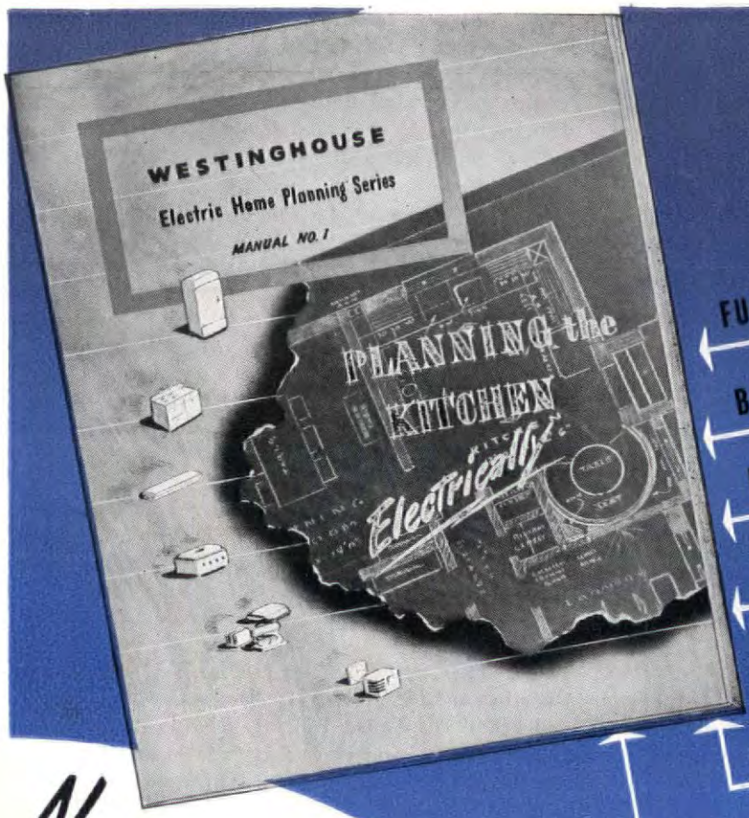

WHAT IT CONTAINS

- FUNDAMENTALS OF KITCHEN PLANNING
- BASIC KITCHEN LAYOUTS
- DESIGN DETAILS
- KITCHEN LIGHTING
- ELECTRIC OUTLETS AND CIRCUITS
- APPLICATION TO SPECIFIC HOMES
- KITCHEN EQUIPMENT

Now-a new book that makes kitchen planning easy!

This new book explains fully the principles of kitchen planning. Eliminates hours of detailing by using the 64 standardized layouts that are adaptable to practically any kitchen. Basic kitchen layouts are clearly indexed so that you may quickly find a design to meet specific requirements.

All layouts are detailed to scale, permitting quick tracing. Elevations and a complete list of materials are included for each design. Four pages of details are given, showing location of doors and windows to assure clearance of kitchen equipment, furring above cabinets, etc.

Efficient methods of lighting and ventilating kitchens are also included. Proper circuits and required number of electrical outlets are specified. Detailed product data, is given along with dimensions and brief specifications. The most unique and practical design book ever produced on kitchen planning. Costs $1.00. Other booklets that may help you are "4 Degrees of Electrical Living" (Free), and "Home Wiring Handbook" ($1.00).

J-91549

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PLANTS IN 25 CITIES... OFFICES EVERYWHERE

BETTER HOMES DEPARTMENT

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Gentlemen: Please send booklets that are checked:

- ☐ Kitchen Planning Manual ($1.00 enclosed)
- ☐ 4 Degrees of Electrical Living (Free)
- ☐ Home Wiring Handbook ($1.00 enclosed)

Name_____

Street_____

City_____ Zone_____ State_____

middle aisle . . . The tripartite aisle is continuous . . . forms a square spiral, winds or unwinds, mounts or descends. This square spiral, four times staggered at each revolution, supplies needed architectural breaks and caesuras; and in harmony with the phenomenon of alteration, so characteristic of human life, these caesuras continuously change, increasing or decreasing."

Although, between the lines, the reader senses the author's profound disappointment and frustration in the final selection of the UN site, one cannot help but be impressed by his unassailable ego and confidence, not only in Corbu, the man, but also in his faithful and unassailable vehicle, urbanism. Together they emerge at the end of the book as vigorous and irreducible as ever. And the reader's impression is that—even if the UN buildings topple into the East River—it would be a small loss and would rate only a sheepish shrug for not having looked to LeCorbusier.

The underlying motive for publishing this series of reports is an interesting matter of conjecture. To date, no architect working on the design of the UN has attempted to thrust his individual personality into the public eye and as a result this international team has work with unbelievable smoothness and coordination. Why, therefore, should LeCorbusier take it upon himself to unearth issues that are past and finished if it is not in part vindication? Who can judge whether his contribution is of greater or lesser value than those of his colleagues? To Wallace Harrison, who has the job of keeping the politico-professional machinery oiled and running, goes admiration; to his international staff, appreciation for their hard work and guarded anonimity. At this time when only one thing matters—the housing and effective operation of the UN as a world organization—the virtue of LeCorbusier's acrimonious account is questionable—genius notwithstanding.

—M.S.

Filtered Tap Water for the Modern Home

Pure sparkling water for drinking and cooking has moved from the "luxury" to the near necessity class for the modern kitchen. Sparkler home type filters provide continuous-flow filtered water at low cost, and are easily installed in either new or old construction.

Sparkler filters completely remove all chlorine and other off-tastes and odors, all sediment, color, pipe rust, algae, etc., and deliver clear, sparkling, pure water for drinking and cooking.

Simple construction; easy to change filter pad.

The Sparkler W-8 and W-5 units, should be installed by tapping the supply pipe at the kitchen or utility sink or laundry and delivering the filtered water through a separate faucet. In this way filtered water is available with the greatest convenience and, by restricting filtration to drinking and cooking, a longer period of continuous flow is possible between filter pad changes. For the average family, a filter pad will last from four to six weeks and replacement can easily be made by any home owner.

The five models listed below are the filters usually selected for home installation; larger sizes up to 10,000 gal. per hr. are available for institutions, hospitals, or commercial requirements.

Model	Filter Area in Sq. in.	Capacity GPH	Height	Diam.	Shpg. Wt.
W-8	100	120	6"	9"	20 lbs.
W-5	19½	60	4"	6"	11 lbs.
SPA	7	30	3"	4"	3½ lbs.

Construction: Solid bronze; SPA is chromium-plated. Filter Media: Low cost preformed pads.

SPARKLER HORIZONTAL PLATE TYPE WATER FILTERS

Model	Area Sq. Ft.	CAPACITY GPH	OVERALL DIMENSIONS Height	Width	Length	SHIPPING WT. (approx.)
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14-W-8	6.4	400	42"	21"	21"	350 lbs.

Construction: Galvanized steel or unpolished stainless steel tank; hard rubber or stainless steel plates.

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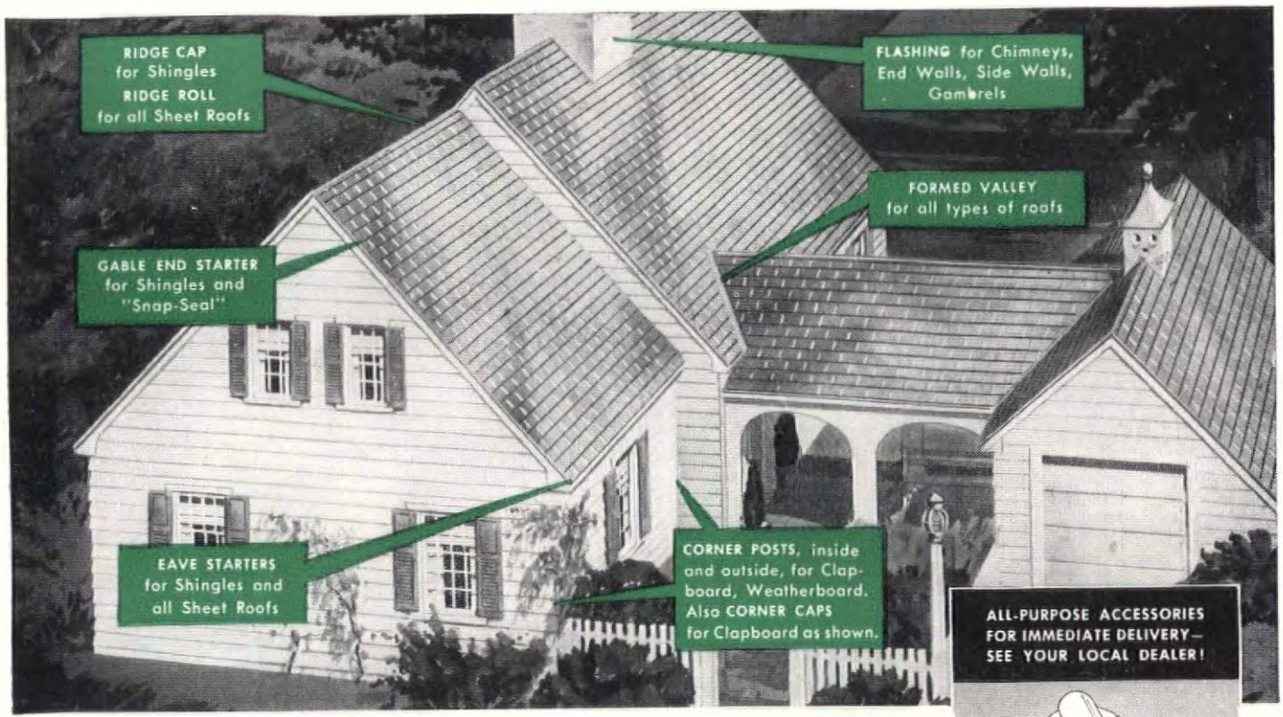

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Soundly engineered accessories like these are an *extra* reason why more and more architects will specify Reynolds Lifetime Aluminum Shingles or "Snap-Seal" Roofing for fine homes . . . and Reynolds Lifetime Aluminum 5-V Crimp, Corrugated and Weatherboard for every type of farm, commercial and industrial building.

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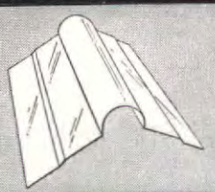
For 100% performance, use only the nails recommended by the manufacturer.

ALL-PURPOSE ACCESSORIES FOR IMMEDIATE DELIVERY—SEE YOUR LOCAL DEALER!



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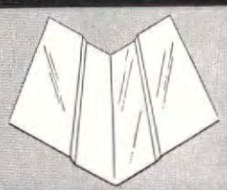

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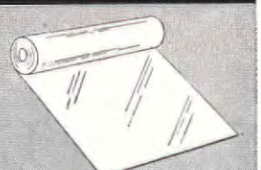

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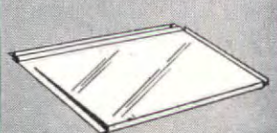

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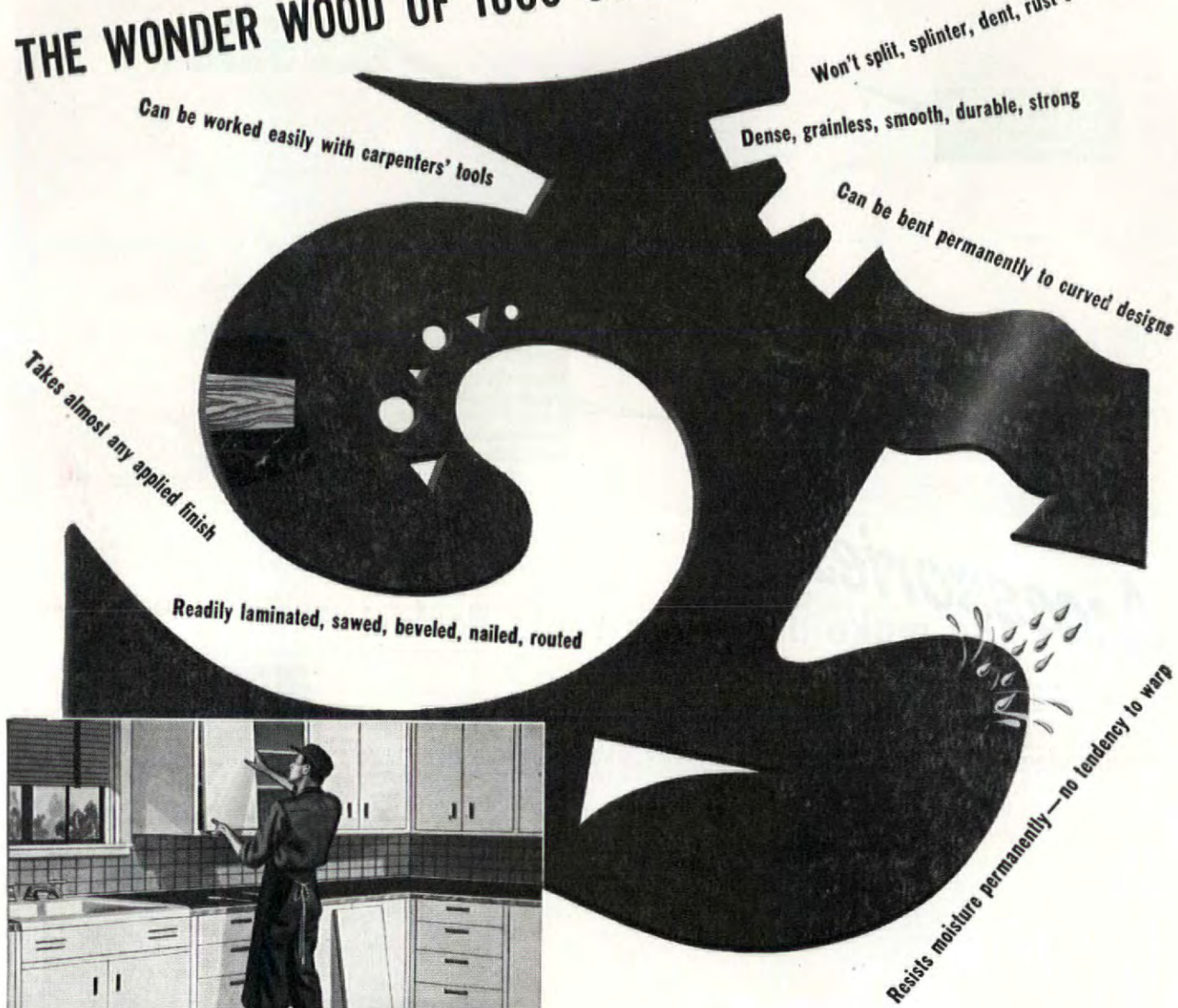
TODAY THE BASE PRICE OF ALUMINUM IS 30% LOWER THAN PREWAR

THE WONDER WOOD OF 1000 USES • MASONITE PRESDWOOD



Presdwood is ideal for all kinds of remodeling from kitchen to bathroom . . . for work surfaces, counter tops, cabinets, and built-in furniture . . . for walls, wainscots, and ceilings.

You can do things easier and better with Masonite* Presdwood* than with any other material. This smooth, strong hardboard is made from natural wood refined to a better, stronger wonder wood that can be applied easily and economically. Presdwood offers unlimited opportunity for handsome, durable construction, both interior and exterior. Use it for both new projects and remodeling jobs. Presdwood comes in large, flat panels — Untempered, or Tempered to extra hardness — at your progressive lumber dealer. For complete technical data write Masonite Corporation, Dept. AF-8, 111 W. Washington St., Chicago 2, Ill.

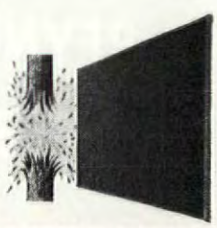
THE LEADING HARDBOARD

MASONITE

PRESDWOOD

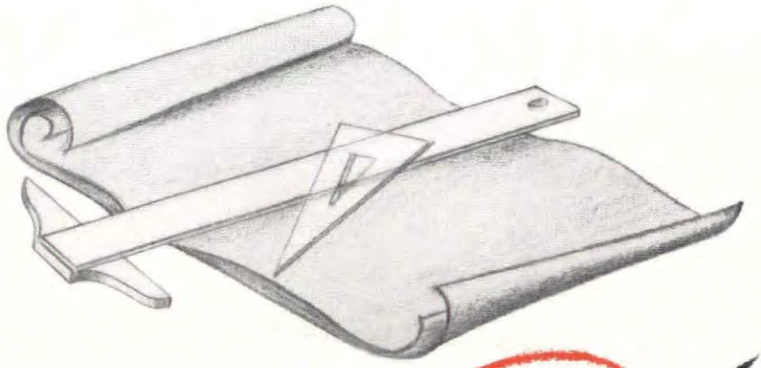
Reg. U. S. Pat. Off.

**Trade-marks Reg. U. S. Pat. Off. "Masonite" signifies that Masonite Corporation is the source of the product.*



FROM EXPLODED WOOD TO VERSATILE HARDBOARD

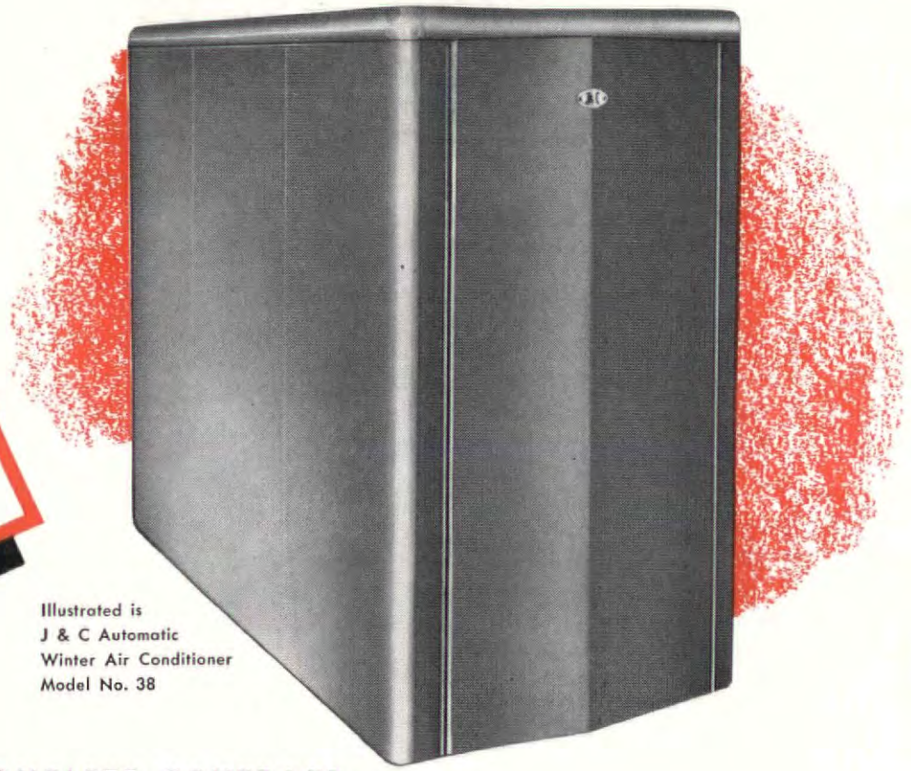
ARCHITECTS ..BUILDERS..



SPECIFY AND PROVIDE J&C

THE J & C LINE*	
MODEL	Btu @ BONNET
G2-70	52,500
OL3-85	85,000
G5-130	104,000
AL590	106,000
MF15	120,000
CO150	150,000
CO195	195,000
MF30	240,000
MF48	350,000
MF63	500,000
MF1000	800,000
CC2500	2,000,000
C4750	3,800,000

*Above are representative models in the J & C line that includes more than 100 types and sizes.



Illustrated is
J & C Automatic
Winter Air Conditioner
Model No. 38

COMPLETE COVERAGE IN THE WARM AIR HEATING FIELD

MEN WHO DESIGN AND BUILD choose heating equipment by matching outputs with specific residential, commercial or industrial requirements.

More and more these busy men are turning to the J & C line and its **over 100 types and models with outputs from 52,500 to 3,800,000 Btu's per hour at bonnet.**

They know that J & C Winter Air Conditioners and J & C "PoweRated" Heaters are adaptable to Panelaire Heating or any approved type of installation. They also refer to J & C when greater Btu outputs are necessary for processing.

Units are coal, oil or gas fired . . . either gravity or forced air . . . and mechanical or hand fired.

Have your architect, builder or J & C contractor engineer the volumetric requirements of your building at the proper temperature rise . . . then select the J & C unit that satisfies your needs.

When J & C is specified . . . there is no substitute!

A PRODUCT OF J&C
JACKSON & CHURCH CO., SAGINAW, MICH.

MEMBER INDOOR COMFORT

WORK WELL DONE SINCE '81

BRUCE FINISHED FLOORS have saved us more than $45,000 since 1942!

—Reports L. H. MILLS

Leading Chicago Home Builder

Here is an outstanding record of economy and performance that speaks for itself. The use of Bruce Finished Floors in 948 units saves $45,000 and 3,792 working days! The reason—the elimination of costly, time-consuming sanding and finishing on the job.

Throughout the country, builders choose Bruce Finished Flooring because it saves them time and money . . . and because it gives home owners more beautiful floors with a superior, longer-lasting finish.

E. L. BRUCE CO.
Memphis, Tenn.

Laurance H. Mills, President
Jack Alan Mills, Vice President
William F. McHugh, Asst. Vice President
Edward B. Balet, Sec'y and Treas.

MILLS AND SONS
and Associated Companies
REALTORS — BUILDERS
Main Office
7610 Grand Avenue : Chicago 35, Ill.
Lackawanna 1402 : Elmwood Park 2500

Brokerage
Management
Home Building
Insurance

June 3, 1947.

E. L. Bruce Co.,
Memphis, Tenn.

Gentlemen:

As you know, we began purchasing Bruce Finished Flooring from Barr & Collins, in 1942, and have been using it exclusively in all of our housing construction. In fact, I understand that we were the first in the Chicago area to change over to this new type of hardwood flooring. Therefore, I am sure that you will be interested in the following data from our records.

(1) Since 1942, we have installed Bruce Finished Floors in a total of 948 individual houses in our projects at Racine, Wis., and Elgin, Franklin Park, Ivanhoe and Elmwood Park, Ill.

(2) On these four and five room units we have realized a saving in flooring costs averaging $45 to $50 per unit through the elimination of "on-the-job" finishing. This totals more than $45,000 on all units completed to date.

(3) In addition to the actual dollar savings mentioned above, we have gained many valuable days' working time ordinarily required for sanding and finishing. I couldn't even begin to estimate the value of this saving alone, but I think it is sufficient to point out that at a minimum average of four days per unit, this amounts to 3,792 working days.

Of course, Bruce Finished Floors have many other advantages, but I think that the above is sufficient to tell you why Mills and Sons have been and will continue to be enthusiastic boosters for these fine floors.

Also, I want to take this opportunity to congratulate E. L. Bruce Co. on their stabilized price policy. I was surprised in looking over my lists the other day to find that the list price of Bruce Finished Flooring is actually less in many cases than that of some unfinished strip floorings.

Keep up the good work.

Sincerely yours,

MILLS AND SONS
BY: Laurance H. Mills,
President.

LHM:EH

BRUCE *FINISHED* FLOORS

a modern building is truly modern...

when pipe joints are SILBRAZ*

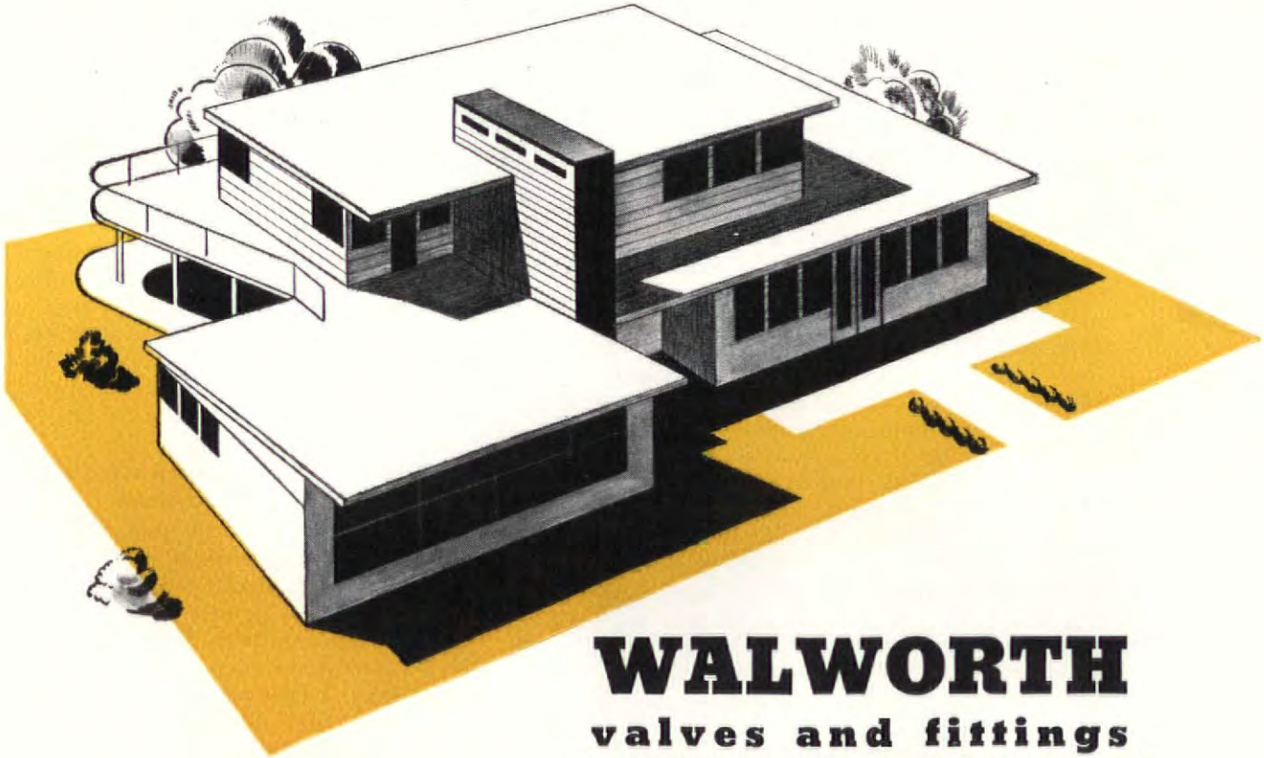
Silbraz joints are leakproof, vibration-proof, and corrosion-resistant. They make the ideal connection for all piping systems where "B" copper tubing or brass pipe is used.

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

Walseal* Valves and Fittings for Making Silbraz Joints

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

**Patented – Reg. U. S. Pat. Off.*



WALWORTH

valves and fittings

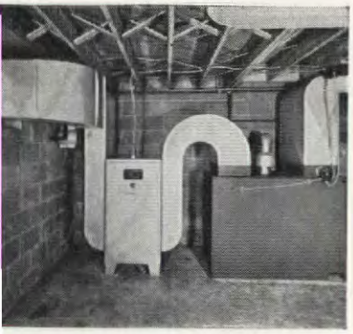
60 EAST FORTY-SECOND STREET NEW YORK 17, N. Y.

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

SEE OUR CATALOG IN SWEET'S

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD

BUILDING REPORTER



DOMESTIC ELECTRIC AIR FILTER removes dirt, dust, pollen, etc., from circulating air system.

Trion Electric Air Filter, designed for use in conjunction with domestic warm air furnaces and air conditioning units, electrostatically removes practically all the dirt, dust, grit, lint, pollen, etc., from the air stream. Thus it helps keep homes cleaner, eliminates dusting, cuts cleaning bills, aids allergy sufferers. Operation of the unit is based on the simple electrical principle that objects with like charges repel each other, and objects with unlike charges attract. Dirt-laden air is passed between electrically charged elements, or a high voltage ionizing screen, where the foreign particles are electrically charged. Air then passes between collecting plates of opposite polarity to which the particles are attracted and adhere. Clean purified air goes on to the furnace to be heated and circulated through the house. Periodically the collecting plates are washed by the integrally constructed jet spray system. Trion Electric Air Filter consists of three assemblies: power pack, ionizing-collecting chamber and water wash assembly. All slide out like drawers, are housed in a metal cabinet 50¾ in. high, 25½ in. wide, 25½ in. deep. The power pack with transformers and rectifier tubes supplies high voltage direct current to ionizing screen and collecting chamber. This chamber consists of a series of 59 parallel aluminum plates, ionizing screen of six fine wires suspended between aluminum tubes. Trion Filters come in two sizes: Model 100 rated at 1200 C.F.M. for homes up to 7 rooms, Model 200 rated at 1800 C.F.M. for average homes up to 11 rooms. Operation cost is said to be about the same as a 40 w. lamp bulb.

Manufacturer: Trion Inc., 1000 Island Ave., McKees Rocks, Pa.

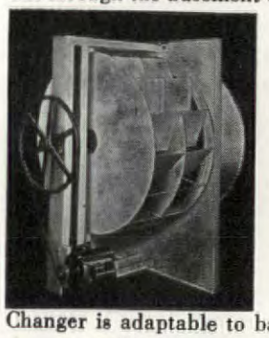
HOME PRECIPITATOR removes 90 per cent of air-borne dirt from circulating air systems.

Employing the latest engineering developments, Raytheon's Precipitator is said to remove 90 per cent or more of all air-borne dirt when used in conjunction with a warm air furnace or air conditioning system. It removes not only visible dirt, dust and soot from the air, but microscopic and sub-microscopic particles of smoke, pollen, etc. The new unit is designed to operate in conjunction with and become an integral part of the air conditioning or warm air heating system. Air circulating through the house system is drawn into it and cleaned before going to the furnace to be heated. Raytheon's Precipitator consists of two principal parts: the power pack, housed in the top compartment, and the ionizer-collector cell, located directly below. The power pack utilizes regular house current to energize the ionizer, thus creating a strong electrostatic field. As air is drawn past the positively charged wires, dust, dirt and other air borne particles become positively charged. Air then passes down between vertical collector plates. These plates exert a powerful electrostatic force, which attracts the charged dust particles in much the same way a magnet attracts metal particles. Collector plates are washed clean by turning on a built-in water spray system. Only one external connection to a 115 v., 60 cycle source is necessary to put the Precipitator in operation, power consumption is only 50 w. per hr. The unit rated at 1200 C.F.M., measures 54 in. high, 28 in. wide, 27 in. deep; weighs 300 lbs; costs approximately $550, exclusive of installation.

Manufacturer: Raytheon Manufacturing Co., Waltham, Mass.

HOME AIR CHANGER provides rapid, quiet, refreshing change of air for summer comfort.

The Air Changer, constructed of aluminum and offering unusual installation adaptability, gives a rapid, refreshing change of air without the noise usually associated with volume ventilation. With windows open, the unit draws cool, fresh air from outdoors into the house, forcing the hot stuffy air out through the basement or attic. According to the manufacturer, a properly insulated house will retain the cool night air throughout the heat of the next day, keeping the house as much as 15 degrees cooler than outside air. Desired degree of ventilation is obtained by adjusting window openings, and individual control can be secured by opening windows in selected rooms. Unlike ordinary attic fans, the Air Changer is adaptable to basement and kitchen floor installations as well as attics. When installed in the attic, it takes only 40 per cent of the ceiling opening and 65 per cent of the gable opening required for the usual propeller type attic fan. Unwanted air infiltration is eliminated by an automatic louvered aluminum grill. Engineered design of the unit minimizes the building up of noise and the overloading of the motor from static pressure. Paddle wheel blades are acoustically treated to reduce sound. The 36 in. Air Changer is powered by a ½ h.p. motor is as mechanically quiet as a refrigerator. It has a working capacity of approximately 7,500 cu. ft. per min., costs about 1½ cents an hour to operate.



Manufacturer: The Eagle-Picher Sales Co., American Building, Cincinnati 1, Ohio.

ALUMINUM WINDOW FILTER for dust-free, fresh air ventilation.

Attractively styled in polished aluminum, the new Badgaire Window Filter insures year around, dust-free, fresh air ventilation. When placed in an open window, its five rustproof layers of metal wire and fine mesh catch the outdoor dirt and grime, allow only clean air to enter the room. Badgaire is lightweight, portable and adjustable; can be used in homes, offices, public buildings, etc. It comes in 7 sizes, can be adjusted by means of sliding end panels to fit securely into regular or odd size windows. A durable rubber edge keeps it airtight against rain or snow. Badgaire is easy to store, can be quickly and easily cleaned under the household hot water tap.

Manufacturer: Badgaire Inc., 2251 South Allis St., Milwaukee 7, Wis.

WARM AIR FURNACE for small homes and individual apartments fits in ordinary size closet.

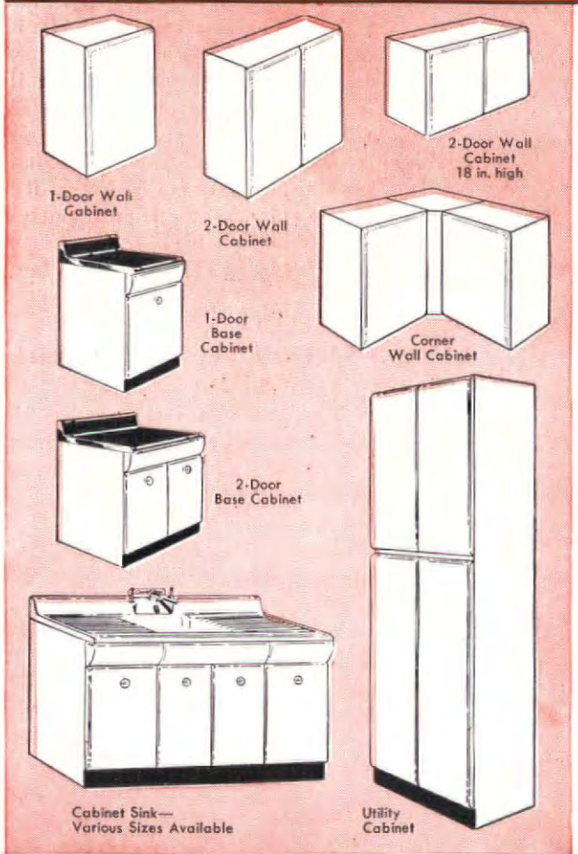
Designed for use in small homes, individual apartments, offices, shops or other places where floor space is limited, Model 14, Superfex Gas-Burning Hi-Boy is an automatically controlled packaged furnace. It requires a floor area of less than 2 ft. square and can be placed in an ordinary sized closet. Hi-Boy operates on natural, manufactured or liquid petroleum gas, employs a three-stage thermostat to maintain desired temperatures. This three-stage fire, according to the manufacturer, assures evenly distributed, balanced heat with a temperature variation at only 4 degrees between floor and ceiling. In operation, the moment temperature falls below the thermostat's setting a constant pilot fire starts a coasting fire. If the coasting fire alone is unable to satisfy the thermostat, a second burner or booster fire starts operating. When the house temperature has leveled off, the fire is cut back to coasting. A two-speed blower quietly distributes the warm air throughout each room. In case *(Continued on page 140)*

There are

60 REASONS

why home buyers want an

American KITCHEN
STYLED IN STEEL



EASY to Plan and Install . . . IDEAL to sell!

60 GREAT ADVANTAGES . . .

Many of them exclusive—provide 60 reasons why Styled-in-Steel American Kitchens are a stand-out favorite with home builders and owners. What's more, American Kitchens are adaptable to every type and shape of room, making kitchen planning and installation simple and easy.

Perfect for New Homes *and* for Remodeling!

Whether you're installing a kitchen in a brand new home or simply remodeling an old style kitchen, American Kitchens Cabinets fit the need. *Know* the American Kitchens Cabinets. Typical cabinets are shown at left, and described fully below. American Cabinet Sinks—Styled-in-Steel . . . are available in lengths of 42″, 48″, 54″ and 66″. American Kitchens are available through dealers and wholesalers throughout the United States. Get acquainted with your local outlet. If you are unable to locate it, write us for his name.

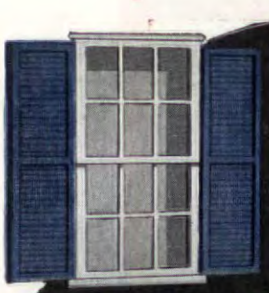
AMERICAN CENTRAL
DIVISION—AVCO MANUFACTURING CORPORATION
CONNERSVILLE, INDIANA

Install One Unit ... or a Complete Kitchen

This Fully Complete Line of Cabinets and Fillers Shows Why American Units Can Be Fitted Perfectly in Any Size or Shape of Kitchen—New or Old.

DESCRIPTION	HEIGHT	DEPTH	WIDTHS					
			15″	18″	21″	24″	30″	36″
Wall Cabinets	18″	13¼″	.....	LW 1818	LW 2118	.....	LW 3018	LW 3618
Wall Cabinets	30″	13¼″	LW 1530	LW 1830	LW 2130	LW 2430	LW 3030	.....
84″ high, 4-door Utility Cabinet	84″	13¼″	.....	.....	LU 2184 LX 100*	.....	.....	.....
30″ high, 2-door Corner Wall Cabinet	30″	13¼″	..... LCW 2730—27″ along each wall from corner					
Base Cabinets	36″	25″	LB 15	LB 18	LB 21	LB 24	LB 30	.....

18″ high WALL FILLERS. Widths and Model Numbers: 1″—LWF 1810...2″—LWF 1820...3″—LWF 1830.
30″ high WALL FILLERS. Widths and Model Numbers: 1″—LWF 3010...2″—LWF 3020...3″ LWF 3030.
40″ high† BASE FILLERS. Widths and Model Numbers: 1″—LBF 10...2″—LBF 20...3″—LBF 30.
40″ high† BASE CORNER FILLER. 27″ along each wall from corner. Model Number LCF 2700.
†Height includes back-splash. *Package of 3 shelves to convert lower section for linen storage.



For better weather protection; for perfect window operation . . . . . .

MASTER NO-DRAFT SASH BALANCE

U. S. PATENTS 2158963 2101577

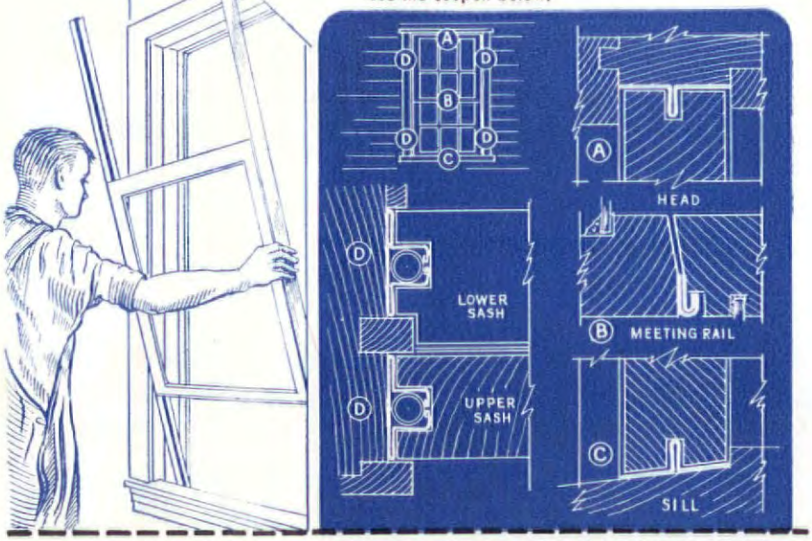
- GIVES SASH FINGER-TIP CONTROL
- ELIMINATES WEIGHTS AND PULLEYS
- PREVENTS BINDING AND STICKING
- PROVIDES PERFECT WEATHER-STRIPPING

Here is the modern, patented and time-tested equipment which provides the most practical and economical protection and operation for double-hung windows. For any window, old or new, Master No-Draft Sash Balance can be installed quickly and easily for life-time service and satisfaction.

Properly tempered, correctly tensioned springs give upper and lower sash perfect balance. Metal housing, self-adjusting to the shrinking or swelling of the wood, provides metal runways for the sash that never need painting. They will not rust. They eliminate sticking, binding and rattling.

Master No-Draft Sash Balances act as a perfect weatherstrip for both sides of the window. For the top, bottom and meeting rail, Master cross strips are recommended as shown below.

For new, plank-frame windows or old box-frame windows of any size, save money, time and labor . . . get the facts now about Master No-Draft Sash Balance. Use the coupon below.



MASTER NO-DRAFT SASH BALANCE

MASTER METAL STRIP SERVICE,
1724 N. Kilbourn Ave.,
Chicago, 39, Ill.

Please send me, without obligation, complete information about Master No-Draft Sash Balance.

Name.....
Address.....
City.....
State.....

MAIL THIS COUPON TODAY

the pilot goes out a safety Pilotstat prevents the flow of gas. A limit control cuts off the burners if the plenum chamber exceeds a certain temperature. Hi-Boy's two gas burners have a combined maximum input of 75,000 BTU with an output of 60,000 BTU at the bonnet. Unit measures 22 in. wide and 25⅝ in. deep, is available in an oil burning model of the same size.

Manufacturer: Perfection Stove Co., 7609 Platt Ave., Cleveland, Ohio.

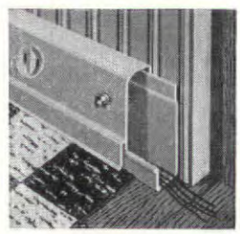
PLASTIC FLOOR COVERING has increased wearing qualities, is easily laid and cleaned.

A new durable floor covering made of Vinylite plastics, Flor-Ever, is said to have infinitely greater wearing resistance than present hard surfaced floor coverings. Tests indicate that it is superior to inlaid linoleum in flexibility, that it possesses exceptional ability to withstand abrasion or wear, and that it will not crack or chip. Non-porous and resilient, it can be easily cleaned and requires no waxing. Due to the characteristics of the plastic, Flor-Ever resists staining, is not slippery, is impervious to water and is unaffected by alkalis or acids such as found in soaps and cleaning agents. It has a waterproof felt back and is laid similar to linoleum. The new covering will be available in approximately a dozen marbelized combinations and 8 plain colors, including those of the Basic Home Furnishing Series. Flor-Ever will come in 60 yd. rolls, 6 ft. wide, will retail for approximately $2.69 per yd. Flor-Ever tiles will be available later.

Manufacturer: Delaware Floor Products, Inc., Wilmington, Del.

RACEWAY BASEBOARD providing concealed wiring facilities, serves as trim.

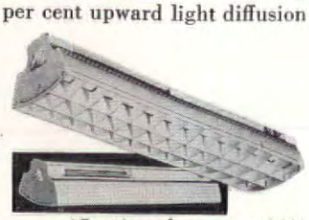
The Barnes Wire-Hiway Base (Despatcher Model) consists of two extruded aluminum, interlocking elements: a bottom that screws to the floor and a removable top which slips into place. It serves as a neat base and shoe mold, provides readily accessible, concealed wiring facilities and conveniently located outlets and switches. The front panel is removable by lifting a half inch, thus wiring is always accessible yet concealed. As outlets and foot-operated switches are cut into the panel on the job, they can be placed wherever desired. The new raceway measures 3½ in. high, is coved top and bottom. Easily installed, 10 ft. of it can be placed with only 4 screws in the rear member.



Manufacturer: Charles E. Barnes & Son, 4320 Osage Ave., Philadelphia, Pa.

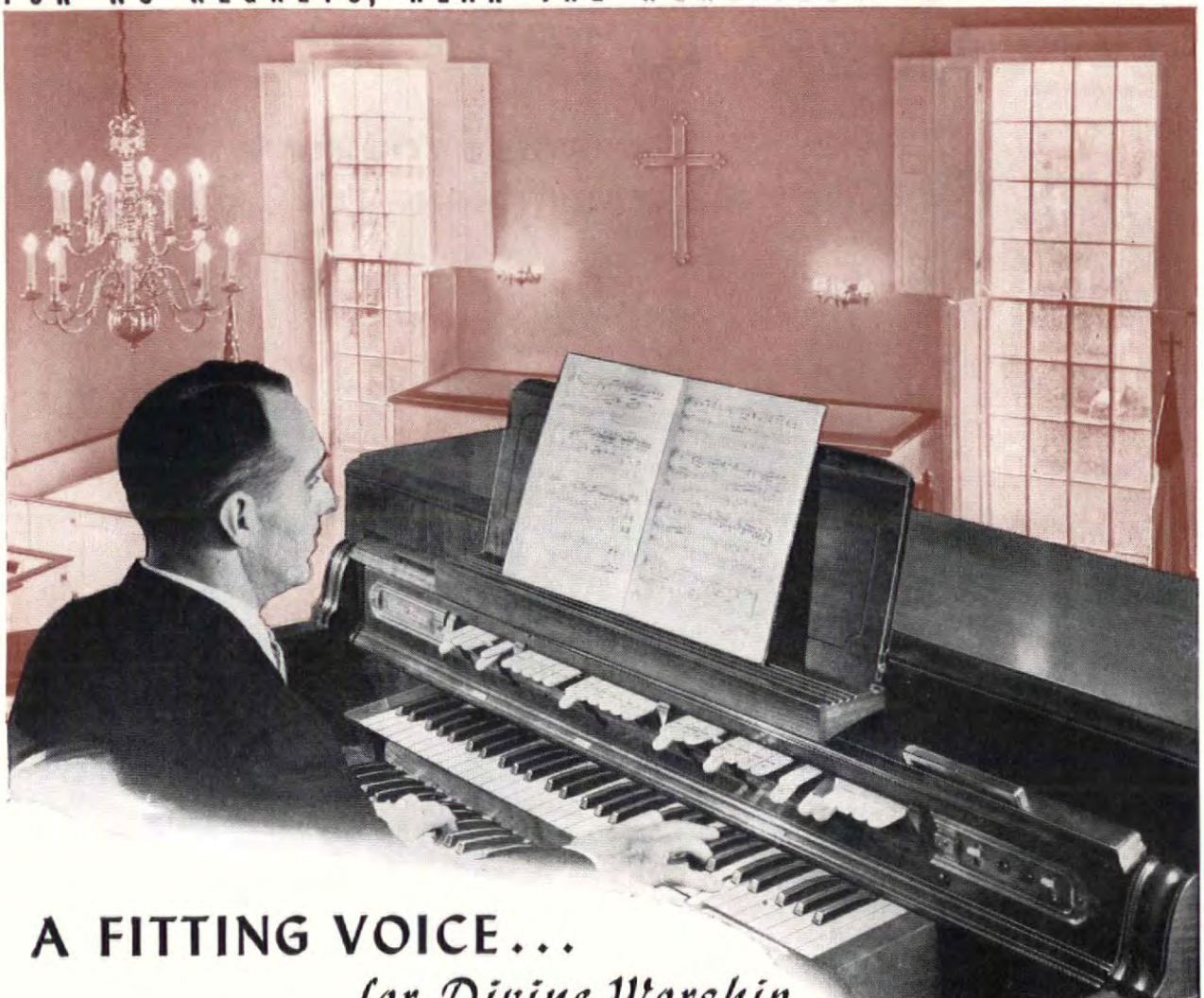
FLUORESCENT LIGHTING FIXTURE for classroom use, incorporates built-in germicidal unit.

The Schoolmaster is a new combination fluorescent fixture designed especially for efficient use in classrooms. Providing 60 per cent downward and 40 per cent upward light diffusion for comfortable schoolroom illumination, it features a built-in germicidal lamp for killing air-borne bacteria. Not visible when the fixture is hung at ordinary lighting levels, this ultra violet unit is designed into the fixture in



(Continued on page 144)

FOR NO REGRETS, HEAR THE WURLITZER ORGAN FIRST!



A FITTING VOICE...
for Divine Worship

● The Wurlitzer Organ Series 20 is truly a church organ. To the church or church commitee contemplating the purchase of an organ, this furnishes food for serious thought. For the Wurlitzer Organ draws its wide variety of stops from the four traditional tone families of the true organ, the distinctive diapason, the warm and mellow flute, the brilliant strings, and the plaintive reed. On the Wurlitzer Organ, organ music is played as written. No special scorings are required. Thus you achieve the true majesty of the music as originally scored by world-famous composers.

All this, plus amazing economy of space and cost, is yours because the Wurlitzer Organ utilizes sound electronic principles. Before you buy . . . for no regrets . . . see and hear the classically beautiful Wurlitzer Organ first.

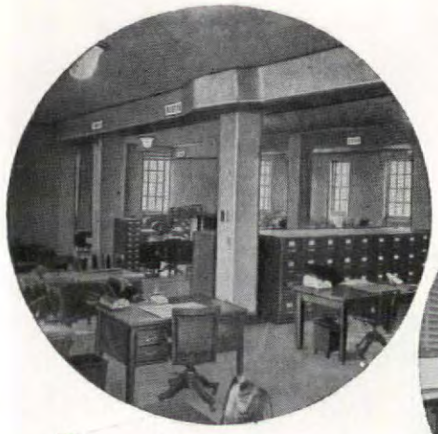
For further details and the name of your nearest dealer, write Dept. FO-8, Organ Division, The Rudolph Wurlitzer Company, North Tonawanda, N. Y.

There is no substitute for **TRUE CHURCH TONE**

The WURLITZER ORGAN Series 20—Two-Manual

Five things to remember

WHEN YOU PLAN AIR CONDITIONING FOR AN OFFICE

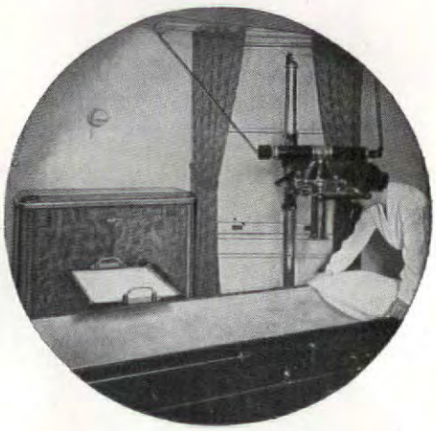


1. COOLING*

Not too cold nor too warm —cool comfort even on hottest days.

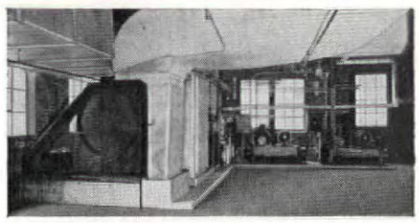
2. DEHUMIDIFICATION*

Wrings mugginess out of the air. Proper humidity level all year round.



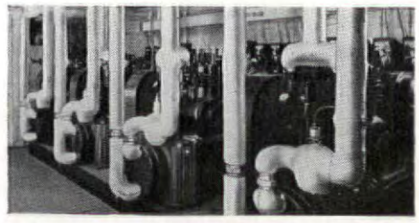
3. CIRCULATION

Air is gently circulated for uniform coolness throughout the conditioned area.



4. FILTRATION

Dust and dirt are removed by large, efficient filters.



5. VENTILATION

Maintains fresh atmosphere by introducing plenty of outdoor air.

FEW THINGS in your plans for an office can bring you more day-to-day customer good will . . . or provide more employee health and satisfaction than Better Air Conditioning.

That is why General Electric Better Air Conditioning is engineered for comfort rather than *just cooling*. Based on years of field and laboratory tests, General Electric air conditioning equipment combines adequate Cooling* with Dehumidification*, Circulation, Filtration and Ventilation. To be certain your client will get *all five benefits*, specify and insist on General Electric.

Your General Electric distributor or contractor will be glad to help you with cost-reducing layouts and designs. Call him . . . or the local representative of the General Electric Air Conditioning Department today. For summary specifications see Sweets, Section 29A-6. *General Electric Co., Air Conditioning Department, Section 1.38, Bloomfield, N. J.*

* In winter Better Air Conditioning includes controlled heat and humidification.

GENERAL ELECTRIC

Better Air Conditioning

UNITED STATES RUBBER COMPANY

SERVING THROUGH SCIENCE

Some people are just different!

And the same goes for electrical wire. Laytex (Type RU) branch circuit wire stands out from the mob because it is the world's smallest diameter, lightest weight natural rubber-covered building wire.

The small diameter of Laytex permits more circuits per conduit. The 90% unmilled, grainless natural rubber insulation is applied in laminated walls that form an electrically safe sheath. The conductors are perfectly centered, eliminating chances of thin spots. Dielectric and tensile strengths are high.

Laytex (Type RU) is more than just different. In physical and electrical qualities, there is no other wire to compare with it.

UNITED STATES RUBBER COMPANY
1230 Avenue of the Americas • Rockefeller Center • New York 20, N. Y.

Specify RU **Laytex**

ELECTRICAL WIRES AND CABLES

SAFETY FACTORS THAT PUT *RU* OUT IN FRONT

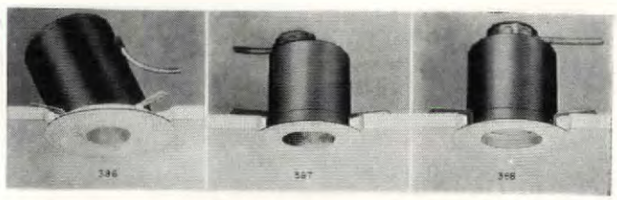
BULL'S EYE
The conductor is on dead center throughout every inch of the wire.

ELEPHANT INSULATION
Laminated walls of natural rubber insulation mean Laytex (RU) is safe.

SMALLER O.D.
Allows more circuits per conduit than in ordinary wire. Lighter weight.

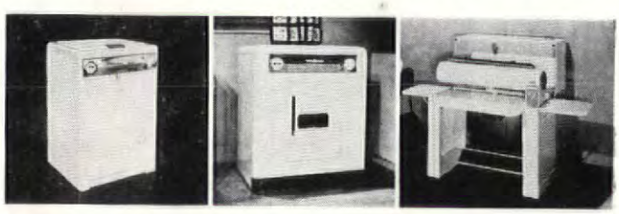
such a way that room air, circulated by heat from the ballast, passes freely over it. Other features of the fixture include a free-swinging louver for easy maintenance and a unique coupler button for simple continuous row mounting. The Schoolmaster is expected to be in production by early fall, will be offered with and without the germicidal unit.
Manufacturer: Leader Electric Co., 6127 North Broadway, Chicago 40, Ill.

DOWNLIGHT FIXTURES for use in functional lighting systems.
These three Century downlights, known as No. 386, 387 and 388, are designed to provide controlled illumination with low brightness and without glare. Each answers a specific lighting problem. No. 388, a baffle downlight, is designed for general lighting from an inconspicuous source. Spaced on



appropriate centers, it provides nearly shadowless illumination. No. 386, a directional downlight, may be used either for an angular beam through 360° horizontally or as a vertical accent. No. 387, a counter downlight, projects a long, narrow, uniformly distributed elliptical beam pattern to conform to the outline of a counter top. All units mount flush with the ceiling. Relamping and maintenance is done through ceiling port without removal of cover plate. A range of clip-on filters are available for use with the fixtures.
Manufacturer: Century Lighting Inc., 419 West 55th St., New York 19, N. Y.

HOME LAUNDRY LINE announced by Frigidaire.
The Frigidaire Division of General Motors Corp. has announced its entry into the home laundry field with the introduction of three new pieces of equipment: an automatic electric clothes washer, an automatic electric dryer and an electric ironer. The vibration-free, flexible, automatic washer

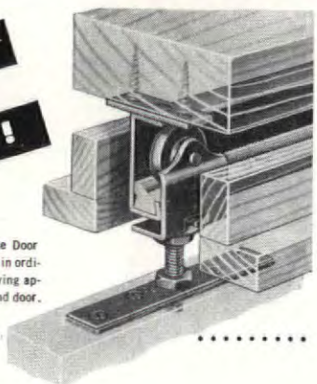


is the result of ten years of research. Featuring a new 'live-water action" principle of washing and rinsing, it is said to automatically wash clothes cleaner, rinse them brighter and damp dry them drier than ordinary washers in less than 30 minutes. The new principle utilizes a Pulsator which provides 330 up and down motions a minute. This pulsing action circulates water from the top to the bottom of the tub and at the same time flexes clothes so that hot soapy or fresh rinse water is forced through them. The Pulsator is powered by an exclusive Unimatic mechanism which also spins the tub at 1130 r.p.m. and pumps out the water. Motor and Pulsator mechanism is sealed and self-oiling, pump is clog-proof. Vibration in the spinning cycle is eliminated by the incorporation of a balancing mechanism which automatically compensates the unbalanced condition. To operate the washer, up to 8 lbs. of clothes are loaded: washer then automatically fills, thoroughly washes clothes, rinses them twice, spins them damp dry and cleans itself. Fully flexible, the washing and rinsing operations can be started, stopped, lengthened, shortened or skipped at any time. Washer price is $299.75.

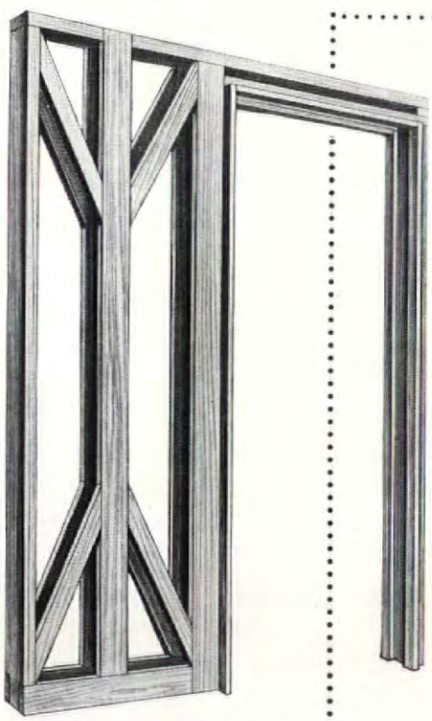
▸ Frigidaire's new dryer is also completely automatic. Clothes from the washer are tossed into the dryer and a single dial set for desired drying time. As the dryer drum revolves (50 r.p.m.), clothes are tumbled through fresh, warm air currents. A washer load of clothes can be completely dried in 20 to 30 minutes or damp dried for ironing in 15 to 25 minutes. Electric heating units, fan circulated hot air and a revolving clothes tumbler provide the fast drying operation. Dryer requires 115/120 v.-230/240 v., 3 wire, single phase service, has a connected load of 4.7 kw. Retail price is $229.75.

▸ Simplicity of operation is the *(Continued on page 148)*

More USABLE floor space at LESS COST!



Richards-Wilcox No. 719 Vanishing House Door Hanger and wood lined track installation in ordinary 2 x 4 studded house partition, showing application of hanger and track to header and door.



(Above) Mill construction of R-W designed "Ordinary Wall" pocket for installing vanishing house doors operating on R-W No. 719 house door hangers in ordinary 2 x 4 studded partition. This construction, developed by Richards-Wilcox engineering department, solves the problem of builders and architects who desire to get the advantages of "Richards-Wilcox" Vanishing House Doors without increasing the width of the ordinary 2 x 4 studded partitions.

with R-W Residential Vanishing Door Hangers

Designed for use in 2" x 4" Studded Walls!

Present-day home building costs require maximum use of *all* available floor space. That is why Richards-Wilcox Vanishing (sliding) House Doors are now more popular than ever. Floor space "wasted" due to the swinging arc of hinged doors can be fully utilized with vanishing doors . . . furniture, pictures, lighting fixtures can be located conveniently and correctly.

And with R-W Vanishing House Doors there is no extra construction cost! The R-W "Ordinary Wall" pocket permits installation of vanishing doors in standard 2" x 4" studded partitions. Get complete details from your nearest Richards-Wilcox office—free consultation available without obligation.

1880 RICHARDS WILCOX R-W AURORA 1947
OVER 67 YEARS

Richards-Wilcox Mfg. Co.
"A HANGER FOR ANY DOOR THAT SLIDES"
AURORA, ILLINOIS, U.S.A.
Branches: New York, Chicago, Boston, Philadelphia, Cleveland, Cincinnati, Washington, D. C., Indianapolis, St. Louis, New Orleans, Des Moines, Minneapolis, Kansas City, Los Angeles, San Francisco, Omaha, Seattle, Detroit, Atlanta, Pittsburgh

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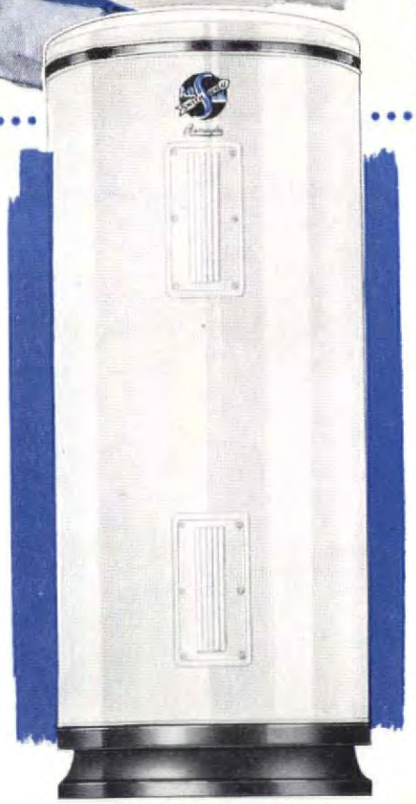
NEW DISCOVERY about Hot Water!

"PACKAGED-IN-GLASS" HOT WATER!
Always *clean* . . . because it's water heated and stored in a glass "package"... sanitary as a clean drinking glass.



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The strongest, most sustained national advertising program in water-heater history is telling your clients the advantages of "packaged-in-glass" hot water . . . in Better Homes & Gardens, American Home, Life, The Saturday Evening Post, Good Housekeeping, Small Homes Guide, and other publications.

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...Modular Brick and Tile

A public building—whether school, church, hospital or other institution—demands the utmost in service, in quality and in economy. This applies to the materials that go into the building, the architects and builders who design and construct it, and the officials who operate it. Brick and tile, especially in modular sizes, meet these demands, particularly... help you design and build even finer public buildings. For two free booklets, "Modular Sizes of Brick and Tile," and "The ABC of Modular Masonry," write Structural Clay Products Institute, Dept. AF-8, 1756 K Street, N. W., Washington 6, D. C.

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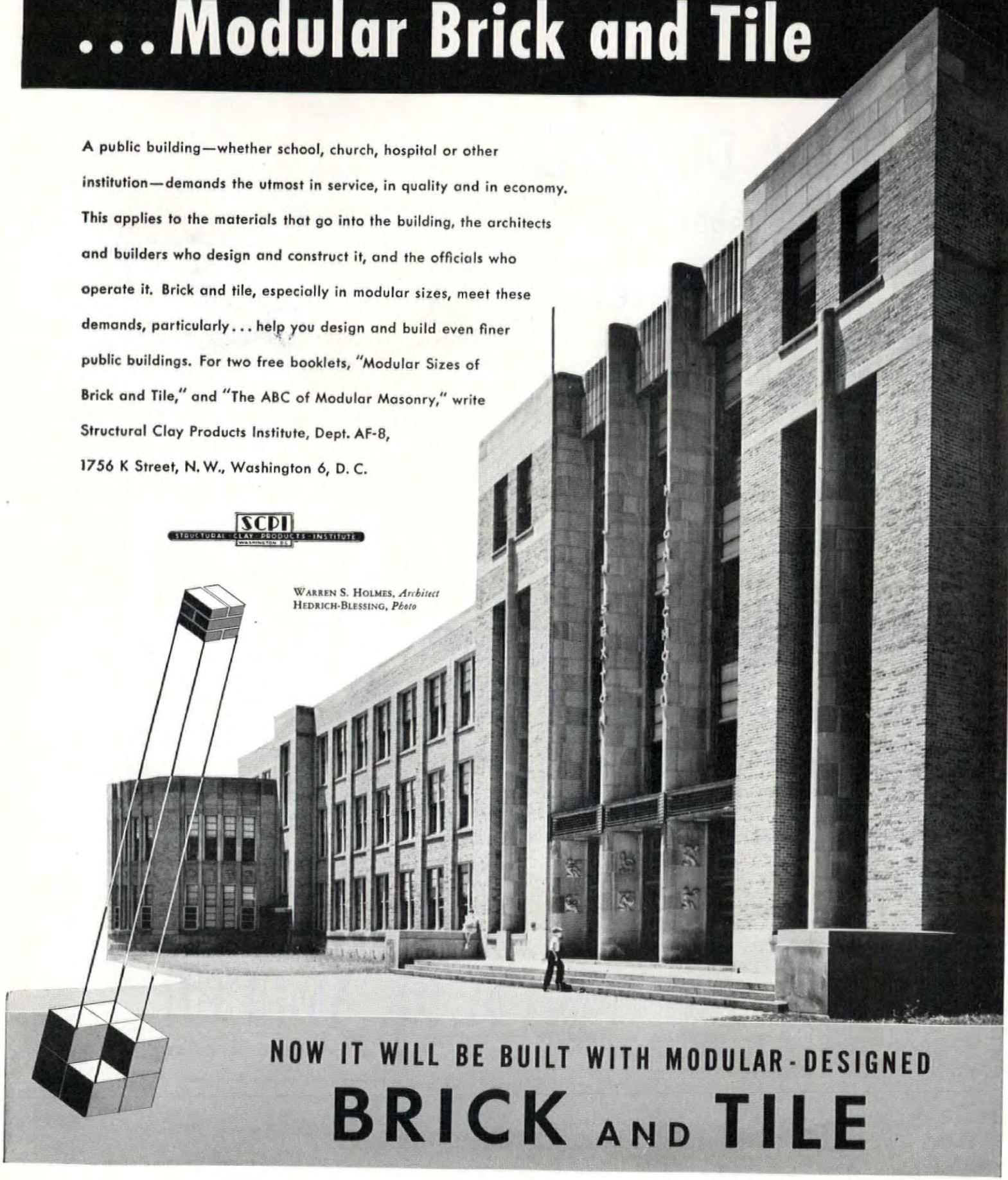
WARREN S. HOLMES, *Architect*
HEDRICH-BLESSING, *Photo*



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BRICK AND TILE

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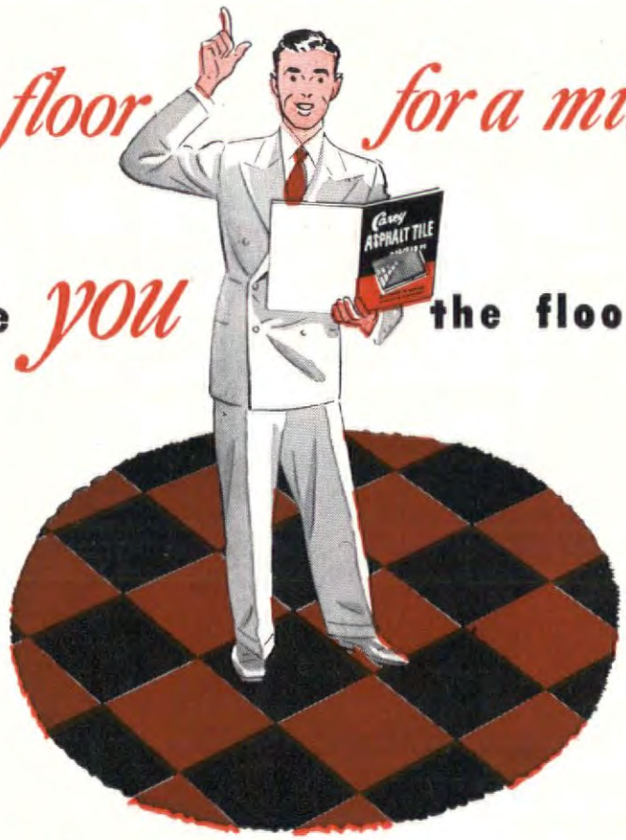

to give *you* the floor for years!

it's Carey asphalt tile flooring

If you're looking for an attractive, durable, long-wearing flooring you'll be time and money ahead to read this: Carey Asphalt Tile provides versatile, low-cost flooring to meet a wide range of requirements under greatly varying conditions. From offices to residences . . . from restaurants to retail stores—that's the scope of installations where these advantages pay off for users:

IT'S LONG WEARING—High quality asphalt, selected mineral fillers and asbestos fibres form this tough, durable flooring that wears for years and years.

IT'S RESILIENT—The smooth surface has sufficient "give" to cushion loads—makes for greater comfort, less traffic noise.

IT'S FIRE RESISTANT—Carey Asphalt Tile is highly fire-resistant . . . also electrical and chemical resistant.

IT'S DAMPPROOF . . . VERMINPROOF . . . DUSTPROOF — Non-absorbent qualities give excellent protection against dampness . . . this flooring is also vermin and termite-proof . . . the smooth surface does not "powder" under traffic, is easily cleaned.

COLORS . . . SIZES—Carey Asphalt Tile is available in black and red . . . in two thicknesses, 1/4" and 1/2" . . . and in two sizes, 12"x12" and 12"x24". Industro-Tile, for extra heavy duty, comes in 1/2" thickness, black only.

WRITE FOR THIS FREE FOLDER—All the information you'll want to help settle your next decision on flooring is contained in this helpful folder. Whether you have a flooring installation coming up for consideration now or six months from now, you'll save time and trouble by writing for your free copy *today*. Address your request to Dept. A8.

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Corrugated Asbestos Roofing and Siding
Miami-Carey Bathroom Cabinets & Accessories

feature of the electric ironer. Equipped with an exclusive new foot control it allows the operator to use both hands for ironing. The 30 in. roll has open ends to allow easy ironing of large articles, can be operated at high or low speed or for pressing. It will retail for $189.75.
Manufacturer: Frigidaire Division, General Motors Corp., 300 Taylor St., Dayton, Ohio.

DISPLAY FIXTURES, composed of expanded metal frame with interchangeable supports, are extremely flexible.
Expo-Net display fixtures are versatile units for exhibiting various types of merchandise. Composed primarily of three principal parts—an expanded metal frame, specially designed brackets and interchangeable horizontal supports—the same fixture can be easily changed to display a variety of goods ranging from cosmetics to men's clothing. Crux of the fixture system is the special bracket which attaches the various horizontal supports to the mesh-like surface in a flexible yet rigid manner. These brackets, factory-fastened to the various horizontal supports simply hook into the expanded metal fixture. Thus the supports which have been worked out in various wood, metal and Lucite shelves and brackets to meet the needs of the different trades, can be placed on the fixture at any desired spot. In the new line of Expo-Net Fixtures, designed by Felix Augenfeld, there are hanging shelves, drum-shaped display units, exhibition screens, window backdrops, plantstands, etc. Some of these units particularly the plantstands and hanging shelves, although intended for commercial display purposes, can be nicely used in the home. Fixture prices vary, but typical examples are the drum-shaped plantstand, priced at $7.50, and the hanging wall shelves at $11. Attachments are extra.
Manufacturer: Austen Display Co., 31 West 31st St., New York, N. Y.

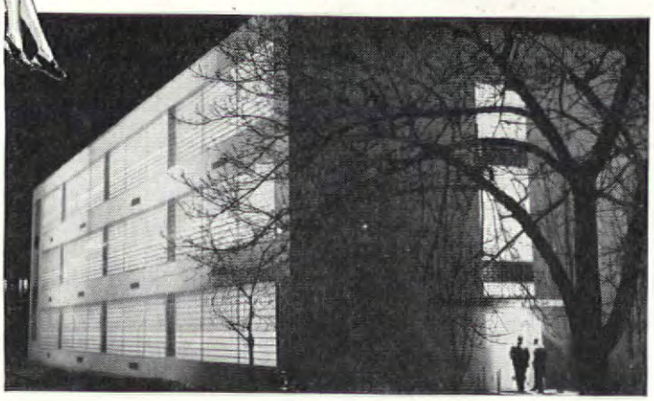
TRIANGULAR DESK for office use saves floor space.
Fletcher's postwar triangular office desk, measuring 6 ft. across and 54 in. down the sides to its apex, offers new functional and space-saving advantages. Streamlined with rounded corners, it provides an efficient working area, readily available, standard-size drawers and greater privacy for the executive during meetings. Well suited to conferences, center of the desk is equidistant from any of five persons sitting around its perimeter and the executive in his private area. With the new triangular desk, numerous arrangements are possible. In multiple installations four Fletcher models take up no more floor space than three conventional desks. Two desk models and a harmonizing table are available in many attractive woods. Desks range in price from $335 to $385, table retails for about $195.
Manufacturer: Desk Div., Fletcher Aviation Corp., 190 West Colorado St., Pasadena, Calif.

MOBILE POWER SAW for site cutting speeds construction.
Nall Mobil-Shop is a radial arm-type woodworking saw mounted on wheels. The first portable shop of its kind, it can be attached to any car or truck and taken to the building site for fast, on-the-job cutting. By making the automatic precision cutting, versatility and production speed of this type saw available at the job, the Mobil-Shop increases manpower output, speeds construction, lowers costs. It allows power cutting to be done on the job that would otherwise be held up awaiting deliveries of materials from central yards. Nall Mobil-Shop rolls through any standard door, affords a weatherproof storage place for tools and hardware. Standard model has a heavy duty tarpaulin cover, deluxe model, a metal housing.
Manufacturer: Equipment Engineering Co., St. Charles, Ill.

(Technical Literature, page 152)

From the cradle to the grave...

HERMAN NELSON PRODUCTS SERVE MILLIONS IN AMERICA



"Whitehall" Classroom Building at Brown University, Providence, R. I. Architects—Perry, Shaw & Hepburn, Boston, Mass. Engineer — Office of Hollis French, Boston, Mass. General Contractor—Gilbane Building Co., Inc., Providence, R. I. Heating Contractor — Joseph P. Cuddigan, East Providence, R. I.

IN some of the finest college and university buildings . . . as well as modern grade and high schools all over the country . . . Herman Nelson Heating and Ventilating Products are maintaining comfortable and healthy air conditions.

Because the average man spends about 80 per cent of his entire lifetime indoors, it is important that all buildings in which he goes to school, works and plays be properly heated and ventilated.

For over 40 years, The Herman Nelson Corporation has been building quality heating and ventilating equipment for public, industrial and commercial buildings. Leading Architects, Engineers and Contractors, as well as Owners, know that the use of Herman Nelson Products will assure maintenance of desired air conditions.

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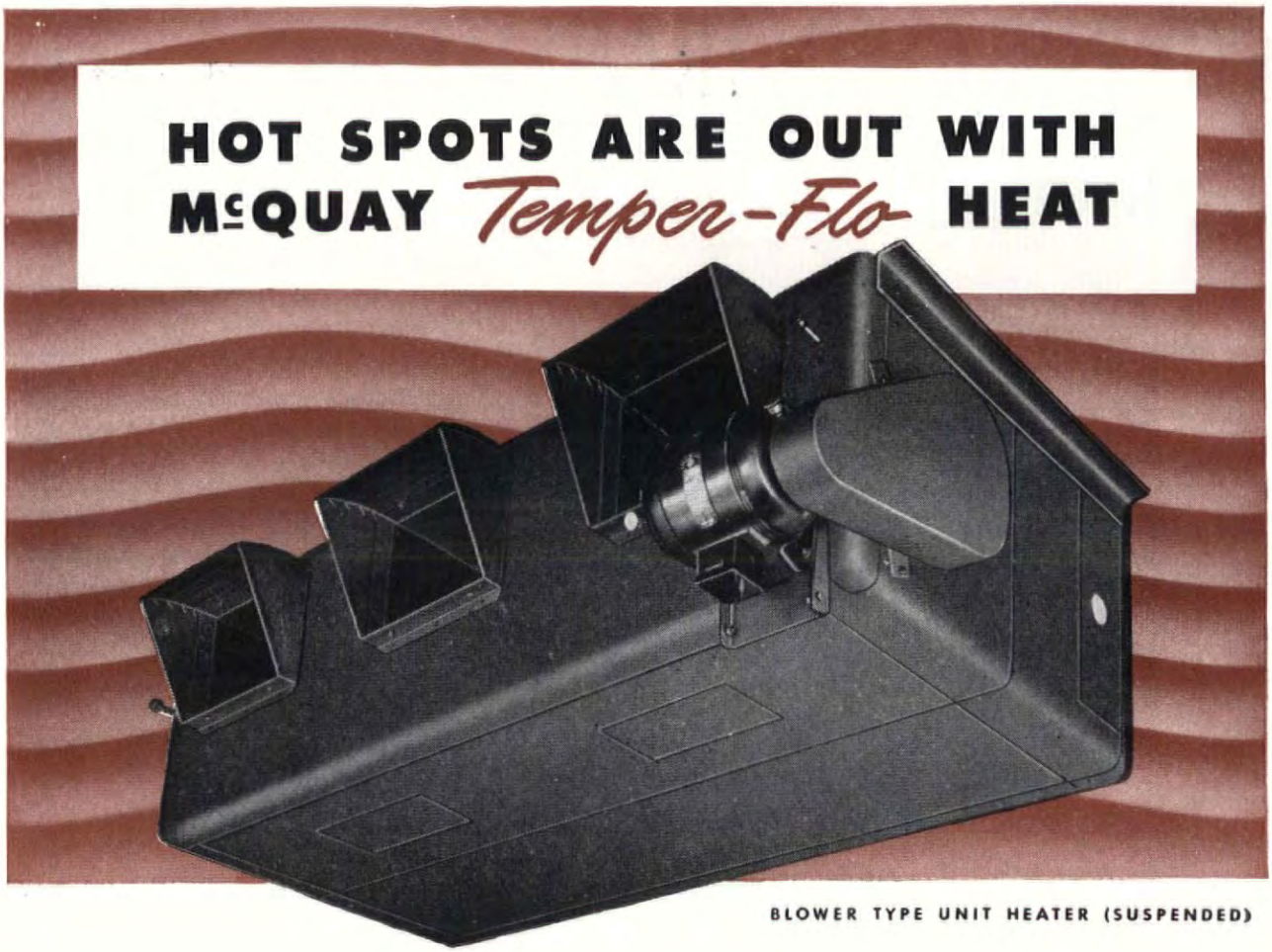
HOT SPOTS ARE OUT WITH McQUAY *Temper-Flo* HEAT



BLOWER TYPE UNIT HEATER (SUSPENDED)

Automatic by-pass puts room heat back to work!

Smooth, even heat distribution over large areas is a feature of McQuay blower type unit heaters. Automatic controls recirculate varying amounts of room air through the blower section, by-passing the heating coil. The resulting mixture of air at room temperature and heated air produces a tempered flow of heat that keeps uncomfortable "hot spots" from developing. Keeps temperatures more uniform over the entire area.

Basic in McQuay blower heaters is the famous Ripple Fin Coil with tubes hydraulically expanded into wide spun fin collars. Permanent metal-to-metal contact between primary and secondary surfaces plus greater area of contact are Ripple Fin exclusives that mean high heat transfer efficiency.

McQuay blower type unit heaters are available *now* for floor, or suspended installations with standard or "non-freeze" coils. See your McQuay representative today or write McQuay, Inc., 1609 Broadway Street N. E., Minneapolis 13.

Representatives in Principal Cities

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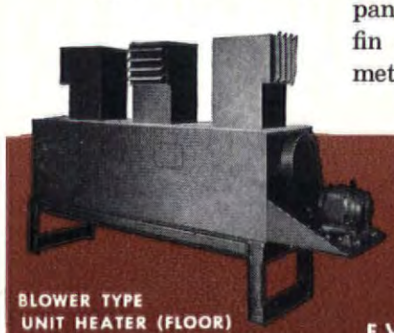

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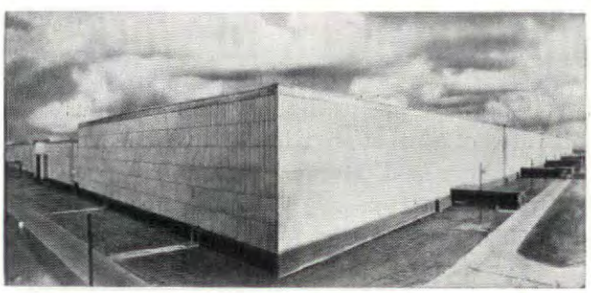
MAKE THE SEASONS COME TO YOU

EVERY PHASE OF AIR CONDITIONING

CORRUGATED TRANSITE* ... as modern as tomorrow

*Transite is a registered Johns-Manville trade mark

From smart shops on Main Street to gigantic "shops" of industry, Corrugated Transite is being used to streamline construction and reduce costs. Transite sheets can't rot . . . can't rust . . . can't burn



The corrugations in Transite increase the unusual strength of the asbestos-cement sheets—thus allow minimum framing. But the corrugations also serve as an important element of design in modern construction.

• The surprising news about Johns-Manville Corrugated Transite is not the fact that it is fireproof and weatherproof . . . or that it needs no preservatives, and practically no upkeep. Those and other advantages have already become widely appreciated through the years.

But look at the striking lines of the store front above . . . and the attractive, streamlined simplicity of the industrial giant shown at left. In both cases, versatile Transite provides *attractiveness* as well as utility. Yes, architects, engineers, and builders are discovering that Corrugated Transite lends itself effectively to modern design.

Use it on roofs or sidewalls . . . on both new or remodeled structures. Transite sheets are easily applied . . . cover large areas quickly because of their size . . . and can be completely salvaged when alterations are necessary.

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Because of unprecedented demand, there may be times when we cannot make immediate delivery. Please anticipate your needs.

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Johns-Manville *Asbestos* **CORRUGATED TRANSITE**

"There's more to fluorescent lighting performance than meets the eye!"

The BALLAST, the heart of good fluorescent fixture operation, is something the user *doesn't see,* and *shouldn't hear.* He's interested in trouble-free, satisfactory lighting performance. He doesn't want his fixtures to overheat . . . or hum like a belligerent mosquito. He wants his money's worth.

The use of the *right* ballasts—CERTIFIED BALLASTS—mean protection and satisfaction not only for the user, but for the lighting people who supply him. Built to rigid specifications, CERTIFIED BALLASTS are tested, checked and re-checked by famous Electrical Testing Laboratories, Inc., to assure longer lamp life, most light from the lamps, and greater economy. Insist on the familiar ETL CERTIFIED Label on your ballasts!

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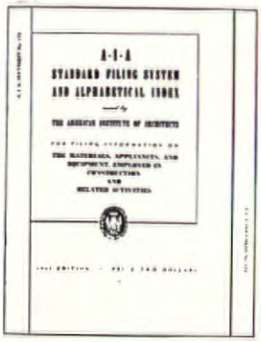
Jefferson Electric Co.
Bellwood, Illinois

Sola Electric Co.
2525 Clybourn Avenue
Chicago 14, Illinois

Starring and Company
Bridgeport, Conn.

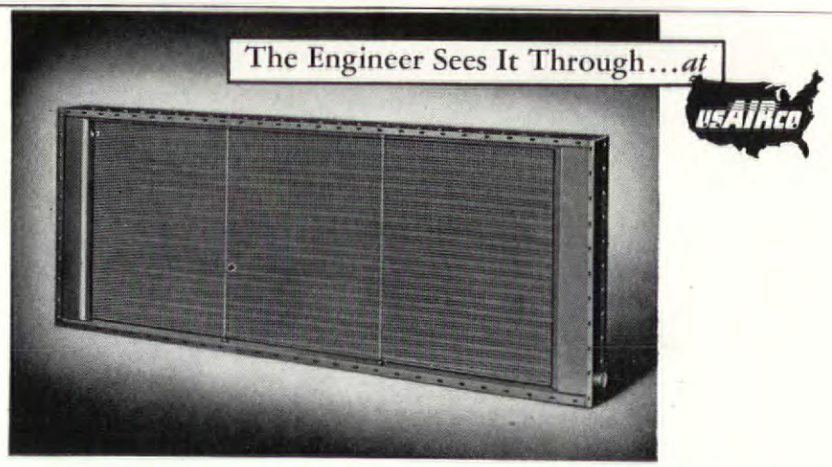
Wheeler Insulated Wire Co., 378 Washington Ave., Bridgeport, Conn.

TECHNICAL LITERATURE



FILING. A.I.A. Standard Filing System and Alphabetical Index, 1947 Edition. The American Institute of Architects Filing System for Architectural Plates and Articles, Second Edition. The American Institute of Architects, The Octagon, 1741 New York Ave., N.W., Washington, D. C. 63 pp. 18 pp. 8½ in. x 11 in. Price $2, $1.

Superseding the 1942 edition, the 1947 *A.I.A. Standard Filing System and Alphabetical Index* (for filing information on materials, appliances and equipment employed in construction) has been revised and amplified to keep step with recent technological advances and developments. Classifications have been expanded and new file numbers and classifications have been assigned to meet current filing requirements. Second edition of *The American Institute of Architects Filing System for Architectural Plates and Articles*, in addition to providing a simple method for filing material of this character, incorporates a new detailed alphabetical index.



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The complete line of usAIRco coils includes steam coils for heating, standard and non-freeze type, water coils for heating and cooling and direct expansion coils. These coils are properly designed, skillfully manufactured, and expertly engineered to the job requirement.

The usAIRco engineer follows through from design board through the installation. He specifies that coils are constructed for heavy service and dependability—he sees that you get a mechanically efficient tool. And most important, the usAIRco engineer helps you put the coil to work on your specific job.

Get acquainted with helpful usAIRco engineers on your next air conditioning job.

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Cooperative Engineering Counsel

Available to your air conditioning, heating or ventilating problems is the advice and counsel of the engineering staff of usAIRco. With a background of nearly twenty-five years, it is one of the most experienced in the industry. We invite you to use it freely and fully.

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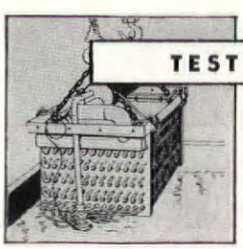
Minneapolis 14, Minnesota

Factory Representatives in Principal Cities



TESTED.....AND PROVED

Every coil takes a final plunge before going off to work for you. High pressure is applied to show up weak spots in construction. This test, and others, assure dependable performance on the job.

CONDENSATION. Moisture Condensation, Circular Series F6.2. Small Homes Council, Mumford House, University of Illinois, Urbana, Ill. 8 pp. 8½ in. x 11 in.

This circular on moisture condensation discusses the cause of excessive moisture, its condensation, and effective methods for its control in homes in cold climates. Tracing the evolution of such troubles in frame houses, it covers the factors affecting condensation: humidity of air within a building, temperature and climatic conditions, constructions of exterior walls. It offers helpful suggestions on where condensation is likely to occur in the various parts of the house, why, and how to correct the condition. Other sections are devoted to suggestions for avoiding condensation in new construction; the problem as related to basementless houses, the use of vapor barriers to eliminate moisture inside the walls.

PAINT. Quiz Book on Reardon Products. The Reardon Co., Second & Clinton Sts., St. Louis 6, Mo. 105 pp. 4½ in. x 7⅛ in.

Complete, concise booklet contains valuable information on the advantages, uses and application of Reardon Water Paint products. Beginning with a brief discussion on color, a helpful reference chart shows which products are used for decorating, waterproofing, patching, sizing and priming the different types of exterior and interior wall surfaces. Indexed sections then provide pertinent data on uses, application, preparation of surface to be painted, amounts of paint needed, etc., for each of the following materials: Bondex, Bondex Hydraulic Waterproofing, Firex, Modex, R.W.K. Casein Paint, Venostone Primer, Reardon's Joint Cement, Plastex, Vintex, Whiticide, Solarite, Quick Cresto, Lumnite, Alfresco, patching and sizing materials.

LIGHTING. All-Bright For The Bright Spot Where You Need It. All-Bright Electric Products Co., 3917 N. Kedzie Ave., Chicago, Ill. 4 pp. 8½ in. x 11 in.

Eight "Right Spot" units, combination fluorescent lighting and incandescent flood lamp fixtures, are adequately described in this folder with good photographs and catalog data. Both surface mounted and recessed type luminaires are featured along with several commercial installations.

PLUMBING. Water Hammer, Its Cause and Cure. Bulletin 120. Wade Manufacturing Co., Elgin, Ill. 6 pp. 8½ in. x 11 in.

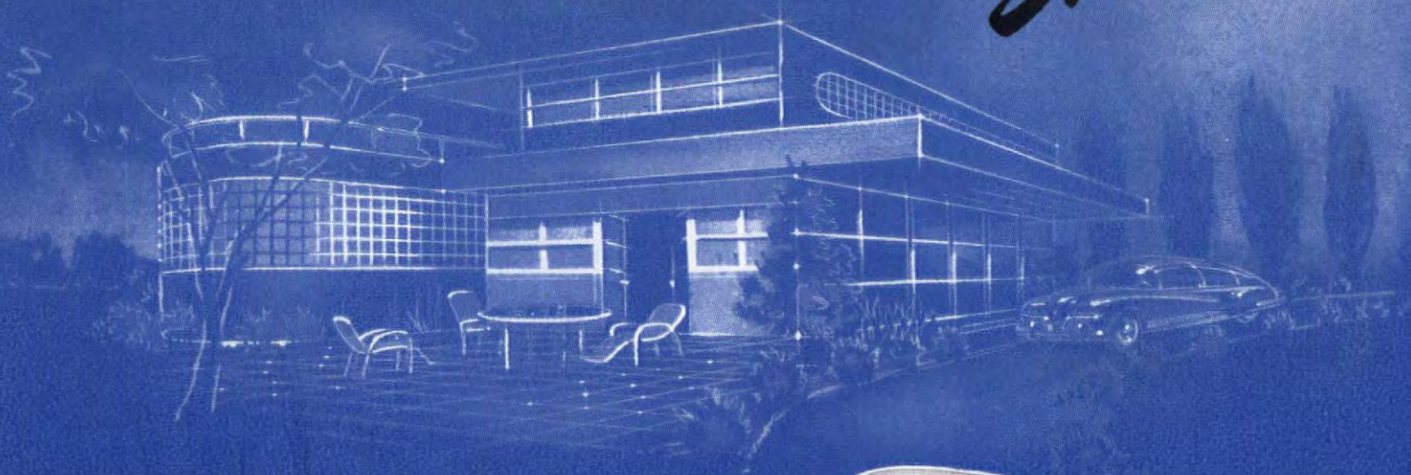
Facts about the sources of water hammer, its damage and the way it can be prevented are presented here in simple, easily understood language. Introducing the Wade Sealed Air Chamber as the answer to the problem of water hammer in home, farm, institutional, commercial and industrial water supply systems, booklet includes handy selector tables and pressure flow charts. Selector tables provide a means for determining correct size of Sealed Air Chamber needed for each particular job. Pressure flow charts show pipe sizes and pressures necessary for required gallons per minute water flow in buildings, and other authoritative piping information.

GLASS SHOWER DOORS, TUB ENCLOSURES. Gulfspray Shower Doors, Tub Enclosures, Shower Enclosures, 1947. Binswanger & Co., 207 North Main St., Houston, Tex. 12 pp. 8½ in. x 10 15/16 in.

Many Gulfspray glass shower doors, tub and shower enclosures are illustrated and described in this brochure. These include: plain, grille and scroll top shower doors; shower door with stationary panel; recess, special shaped, corner and neo-angle tub enclosures; recess shower, daylight angle and square type shower enclosures. *(Continued on page 156)*

BENEKE CSC*

Seat with a Satin Skin



*Celluloid Sheet Covered

A beautiful, smooth, lustrous finish that will not peel, crack or discolor.

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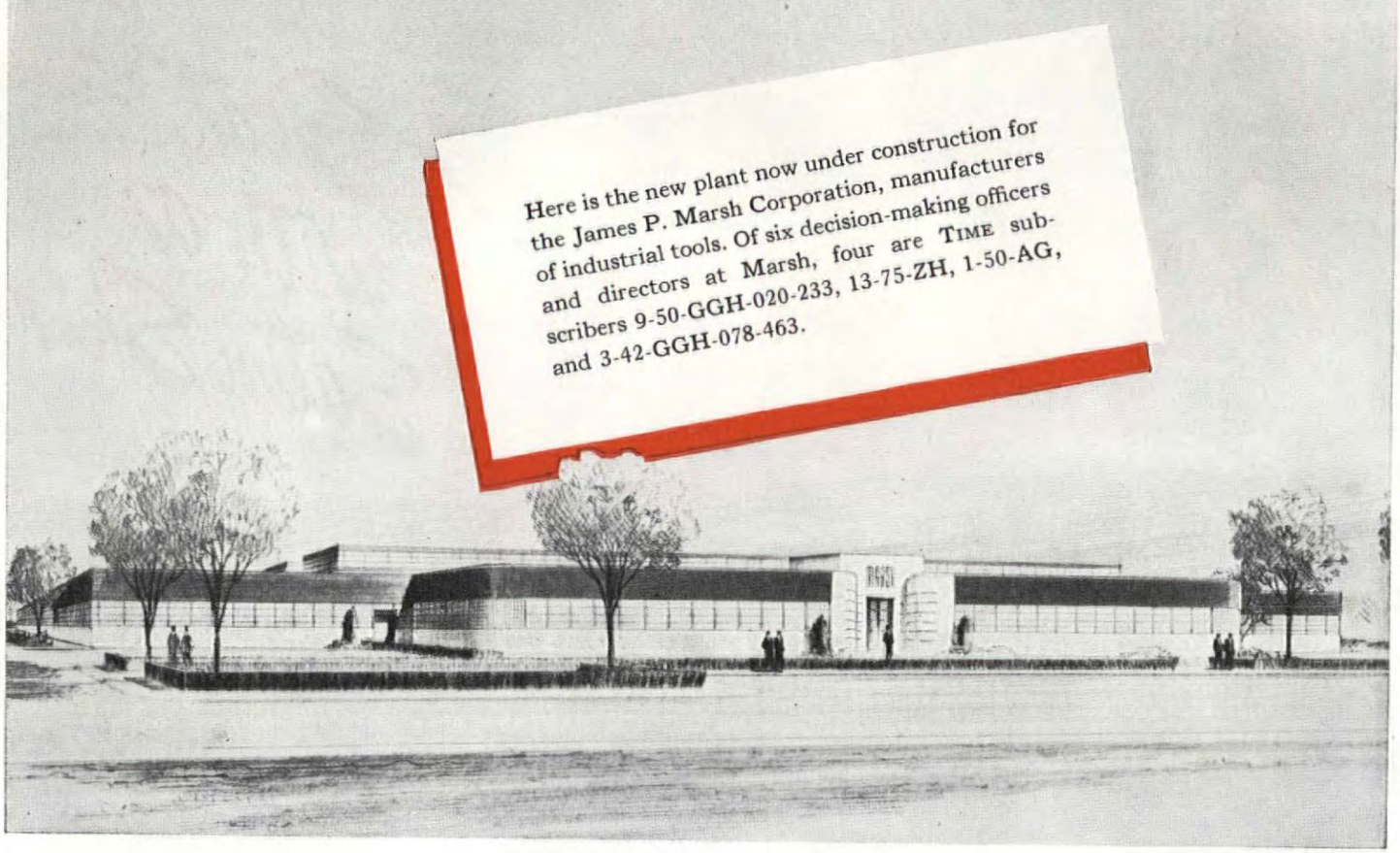
Who are the Men who'll OK the Plans for the GREAT NEW PLANTS of Tomorrow?



Graham, Anderson, Probst & White, Architects—Chicago

TO get your materials and equipment into new buildings like this one, you usually have to collect not *one* "OK", but *several*.

For construction decisions these days aren't up to one man in the top office, as they once may have been. They're the consensus of a *group* of top men—executives in many different departments with many different interests. And one proven way to see that top men see your story regularly is to tell it in TIME.

Almost half of all the officers and directors of 588 major U. S. companies are TIME-subscribers of record. And TIME is regularly voted the "first choice" magazine of groups like leading U. S. purchasing agents, subscribers to industrial trade papers, engineers, bankers . . . key businessmen whose *collective* "OK" across a board-room table is the "OK" that puts the order in your pocket.

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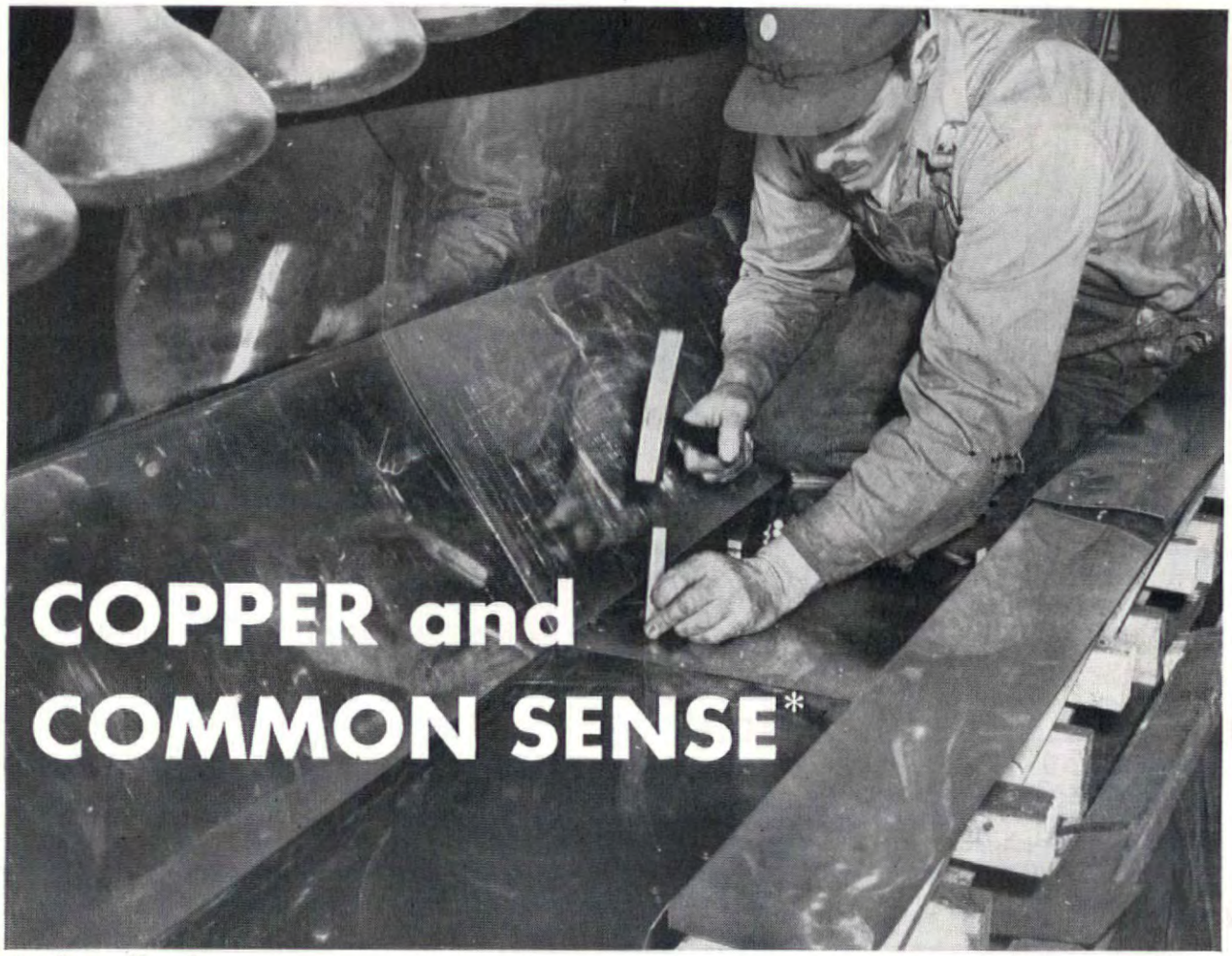

*See Revere Manual:
"Research Solves Problem of Stress Failures in Sheet Copper Construction"

Photographed at Revere Research Laboratories

QUESTION: Where can you get data on any phase of sheet copper construction?

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IN order to help you provide the finest sheet copper construction, Revere Research takes nothing for granted. The *whole subject* is constantly under study in the Revere Research Laboratories; and important new facts are available which enable you to design or install copper gutter linings, flashings and roofs that give *extra* years of service.

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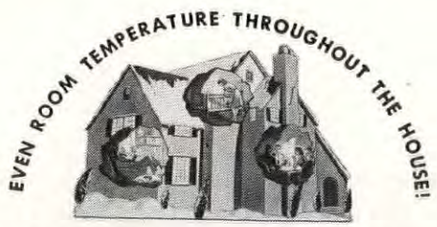

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REQUESTS FOR INFORMATION

DR. L. G. AUSTIN, 40 Wright St., Wellington, New Zealand, requests information on domestic water softeners for iron and temporary hardness; plans or layouts for modern domestic laundries.

L. E. MCMANIS, architectural student, 1822 Thackery Rd., Manhattan, Kansas, desires information on materials and equipment for churches.

REQUESTS FOR LITERATURE

ALPHA ENGINEERING CO., civil, mechanical and architectural engineering & design, P. O. Box 475, Baton Rouge, La.

BEN O. DAVEY & ASSOCIATES, architects & construction managers, 1323 Comstock Drive, Las Vegas, Nev.

A. C. HOWE, architectural student, 352 Moseley Rd., Balsall Heath, Birmingham 12, England.

J. L. SIBLEY JENNINGS, architectural student, P. O. Box 242, Milledgeville, Ga.

HENRY F. MANGANIELLO, architect, First National Bank Bldg., Mount Vernon, N. Y.

THE OFFICE OF JOHN BURNET PARKIN, architect, 648 Church St., Toronto, Canada.

ROGERS & LINDE, architects, 56 Main St., Ware, Mass.

WAR DEPARTMENT CORP OF ENGINEERS, Att: Architectural Design Section, Office of the District Engineer, Albuquerque District, P. O. Box 1538, Albuquerque, N. M.

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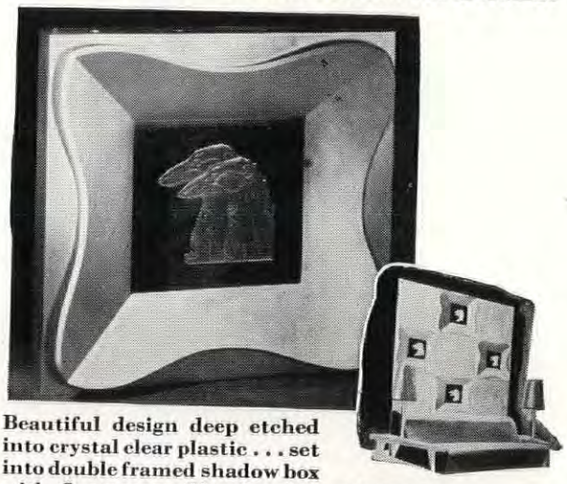

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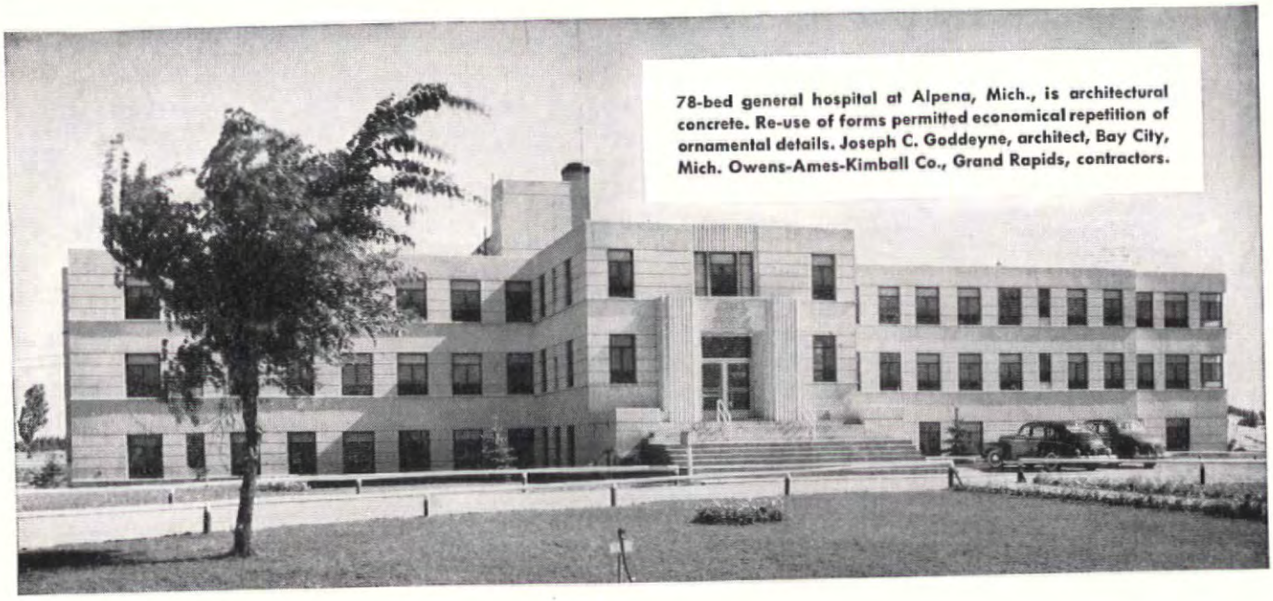
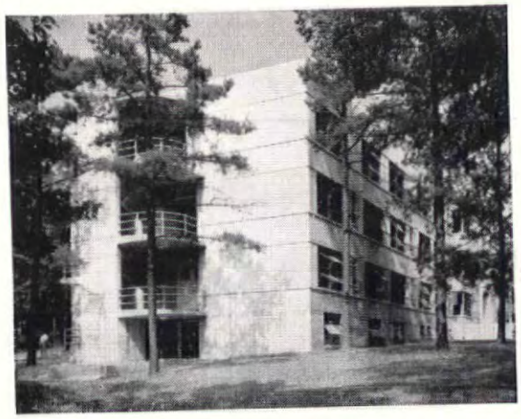


78-bed general hospital at Alpena, Mich., is architectural concrete. Re-use of forms permitted economical repetition of ornamental details. Joseph C. Goddeyne, architect, Bay City, Mich. Owens-Ames-Kimball Co., Grand Rapids, contractors.

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.

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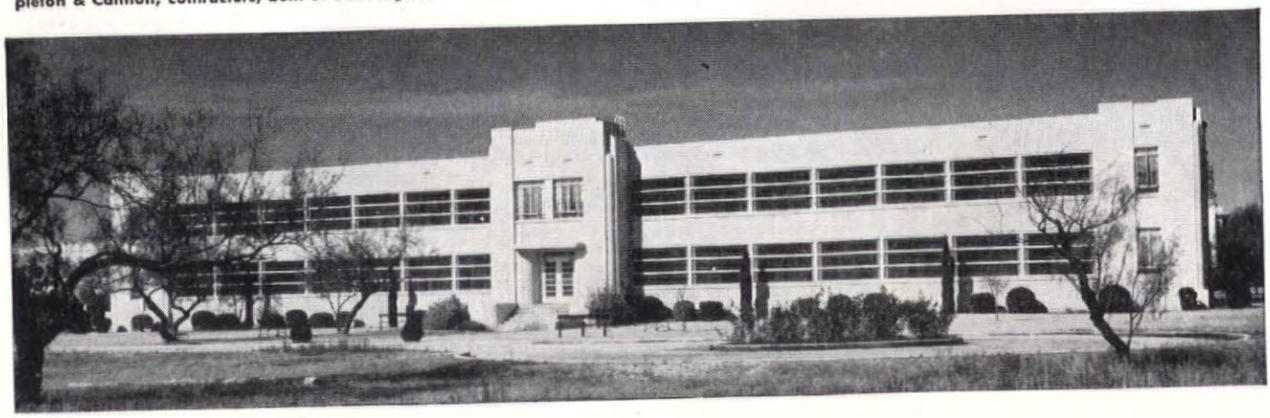

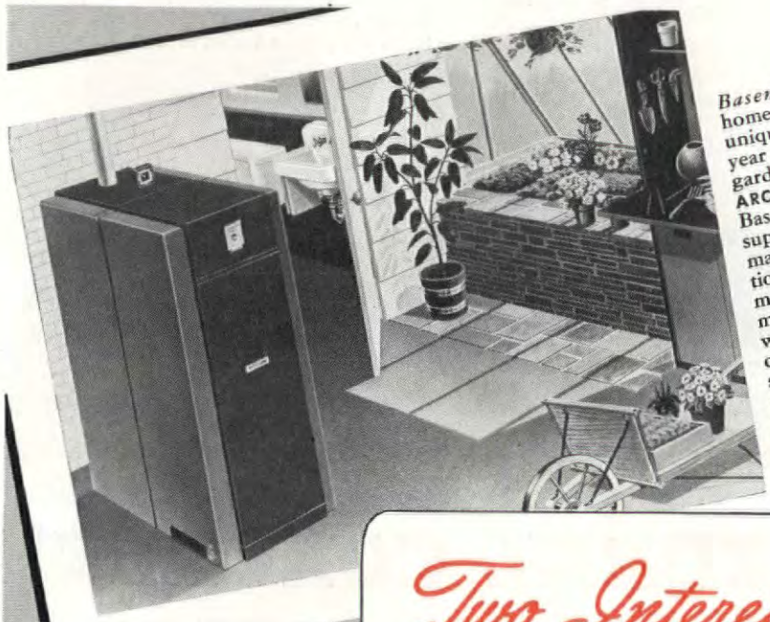

Basement Conservatory. For homes built on sloping lots, this unique downstairs room is a year 'round hobby corner for garden enthusiasts. The new **ARCOLINER** Oil Boiler (Wet Base), provides an abundant supply of clean, efficient, automatic heat. Correctly proportioned heating surfaces with multi-finned flues insure maximum heat absorption. Waterways that extend below fire chamber provide extra heating surface and help keep floor cool, thus making this model also ideal for first floor installation. For use with the Arcoflame or any other standard burner.

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■ Both of these rooms owe much of their attractiveness and functional fitness to the American-Standard products they contain. Their modern styling and exceptional efficiency are two good reasons why more American homes have heating equipment and plumbing fixtures by American-Standard than by any other single manufacturer. Why not use these finer products in the homes you design, build or remodel? For complete information contact your Heating & Plumbing Contractor. **American Radiator & Standard Sanitary Corporation,** P. O. Box 1226, Pittsburgh 30, Pennsylvania.

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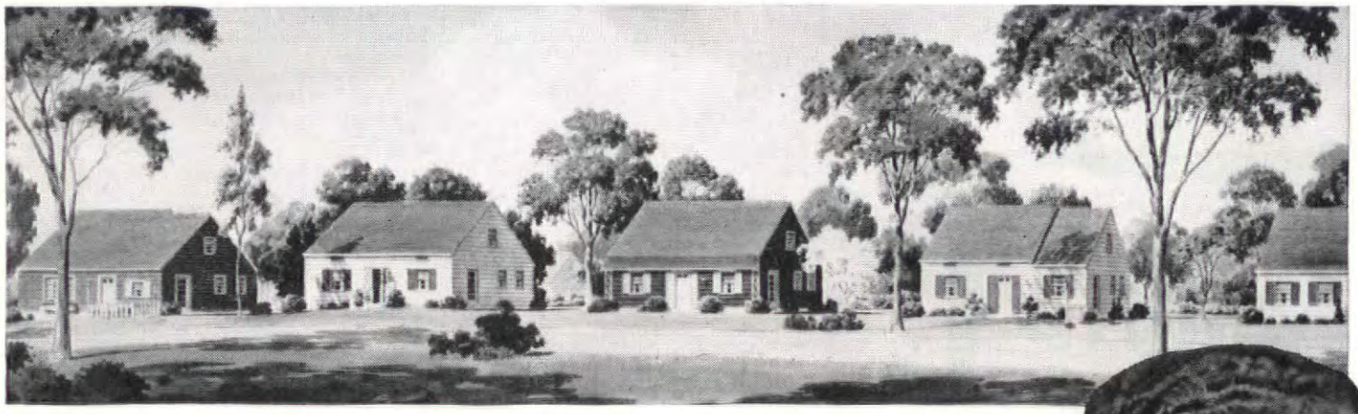


3000 BENDIX WASHERS BOUGHT FOR LEVITT HOMES

Leading Long Island builder sells complete homes as fast as he can build them!

Levitt and Sons, Manhassett, L. I., one of the nation's foremost operative builders, offer *complete* homes that include items usually listed as extras. As noted in the May ARCHITECTURAL FORUM, a test group of thirty Levitt homes were recently offered to the public. That same day, without benefit of advertising, those homes were eagerly bought. Three thousand Bendix Washers recently purchased by Levitt will make more *complete* homes available soon on a "package mortgage" basis.

To the builder, the Bendix is a natural for making a home "complete"—and worth a premium price. It has tremendous appeal, yet is simple to install, and requires only 4 square feet of space. To the housewife, it's the world's most wanted washer, does all the wash while she isn't even present—and saves her half the soap other washers require.

Let the "Sign of a Smart Builder" tell customers that your house is complete!

This lawn sign is available through your local Bendix dealer or distributor. To your customer it means that the house is planned for her convenience, ready to live in, and worth a premium price.

BENDIX WASHER A "MUST"
***Says* ALFRED S. LEVITT**

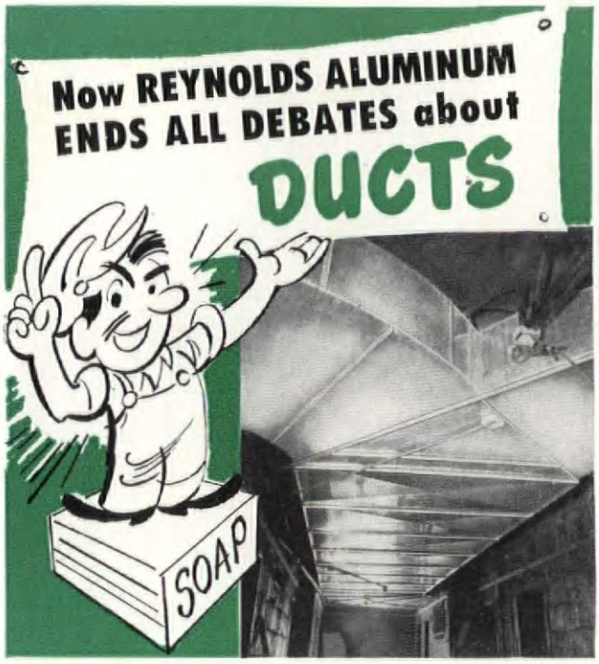
"The finest appliances for making life easy are made in this country, but darn few of us have been able to afford the most important ones. We've built thousands of homes and we think that by this time we know what people want and need.

"This year, in every one of the 3,000 dwellings to be built by us, we shall install Bendix automatic Home Laundries. Each goes into a package mortgage, and the home owner has the luxury, ease, and convenience without feeling the payment for it.

"A year ago we decided that the Bendix was a 'must'; today we have more than 10,000 families on a waiting list."

BENDIX
automatic
Washer

BENDIX HOME APPLIANCES, INC., SOUTH BEND, INDIANA



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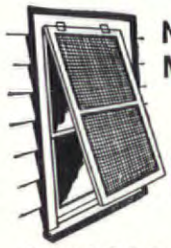
BUYING INDEX

Century-Old Doorways helped create these MODERN toxic standards

The standards which NDMA has developed for testing the effectiveness of toxic preservatives for millwork did not grow up overnight. Years of research and testing were necessary. Pathologists and non-commercial research technologists studied century-old doorways to learn the secret of the remarkable lasting qualities of wood. The results of extensive laboratory and field tests were carefully tabulated and analyzed.

Today, NDMA Standards for the toxic preservative treatment of woodwork such as doors, screens and windows are accepted as meeting the most rigid requirements of modern home construction. Here are the six steps which NDMA takes to make wood a better building material than ever:

1. An efficient test for measuring effectiveness of toxic preservatives.
2. Minimum standards governing the toxic preservative treating of woodwork products.
3. A seal identifying products treated in conformity with NDMA Toxic Preservative Standards.
4. Mill inspection of treating equipment and practices.
5. Laboratory check-tests of preservative solutions.
6. Educational effort in the public interest.



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The New "Dutch Boy" Paint is Blended

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

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

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

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

3 Blends for 3-Way Beauty Protection

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

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

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

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

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

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

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

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

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